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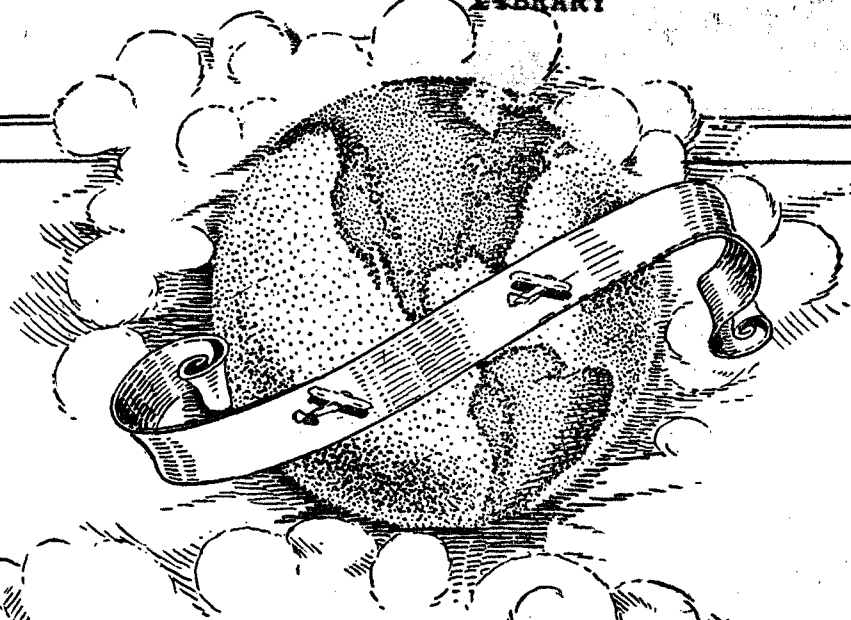

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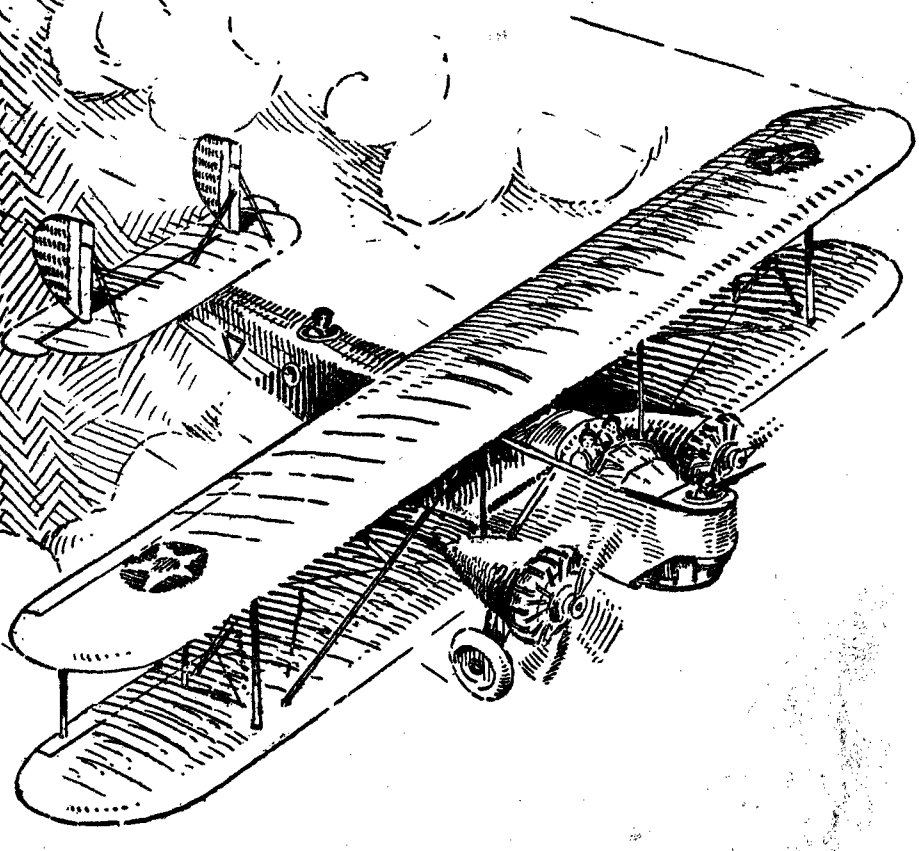

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Air Corps

January 25, 1932.

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The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

Publishers are authorized to reprint material appearing in this publication.

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RESUMÉ OF MATERIEL DIVISION ENGINEERING ACTIVITIES FOR 1931

By Major C.W. Howard, Air Corps,
Chief Engineer, Materiel Division.

DURING 1931, the Materiel Division has seen a slight curtailment of its original research program, since a larger portion of its effort has been expended on experimental projects coming from the aircraft manufacturers. This is explained by the adoption of a new policy in connection with experimental airplanes and engines. The industry is furnishing without immediate cost to the Government both complete airplanes and engines. The Division acts in an advisory capacity up until the time the airplane or engine is delivered for test. This system has the advantage over the old policy of contracting directly for an experimental airplane or engine in that it allows the projects to start at least one year earlier. It also has the advantage in utilizing and directing a large number of trained engineers throughout the aeronautical industry to military developments. An analysis of the expenditure of labor charge for personnel allotted to the Engineering Section shows the following:

Work in connection with experimental articles from the aeronautical industry: - 1930 - 26% 1931 - 38%

Research, experimental and development projects carried on at Wright Field:
1930 - 40% 1931 - 27%

Engineering in connection with service test projects:
1930 - 6.25% 1931 - 6%

Engineering in connection with standard equipment, which includes airplanes, engines, and their accessories, administered by Procurement Section of this Division
1930 - 26% 1931 - 25%

Engineering on unsatisfactory performance reports submitted through Field Service Section:
1930 - 1.6% 1931 - 4%

It will thus be seen that under the direct supervision of the Chief of Division, the Chief Engineer is charged with all projects involving technical control and administration. This involves the preparation and execution of experimental and service test programs; preparation of engineering data of various categories for circulation to manufacturers and Service activities, including specifications for airplanes, engines, and their accessories, as well as lighting equipment for airdromes, motor vehicle transportation peculiar to the needs of the Air Corps, and numerous minor projects not associating directly with the building of planes.

The experimental articles obtained from the industry include primarily airplanes and engines, but there are certain accessories that the Division can draw upon the manufacturers for, such as propellers, navigation instruments, engine instruments, and various items that have a commercial as well as a military application. The work of the Engineering Section on these items include planning, engineering supervision and administration, the preparation of specifications and requirements, the testing, and in many cases the redesign of the completed article. In the case of the experimental airplane, the general specification must first be approved. This is a document that transmits to the manufacturer any engineering detail, and the requirements of the Service as covered by the Directive initiated in the Office of the Chief of the Air Corps. The stress analysis has to check, and individual drawings must be approved before the airplane is submitted for test. Upon receipt of the airplane at the Division it undergoes what might be termed an X-ray analysis by a score of specialists. This is followed by the actual performance testing of the airplane. The same procedure applies to engines, propellers, and accessories.

There are numerous Experimental and Service Test airplanes on our books. These are in various stages of development and test. A few of them, such as certain Pursuit and Primary Training types, will die in the embryo stage. In some

instances the types are basically identical except for power plant and equipment. Examples of this are the XO-35 (Douglas) and B-7 (Douglas), the XA-9 and YP-24 (Lockheed Attack and Pursuit) and the PT-9 (Stearman), 10 (Verville), and 11 (Consolidated) with various engine combinations, but we must assign each a Type Number and designation in order to maintain the necessary engineering records of test and design data. From this amazing list of airplanes that have come from the industry as a result of direct Government purchases, the Air Corps has a group of airplanes that are now in the service test stage and under actual construction that are outstanding both from a standpoint of their present actual performance with existing engines and from their potential possibilities when the present engines are replaced with those that are now under development and which have lagged behind the airplanes for which they are intended. This position in regard to the airplanes themselves will enable us to devote a great deal more attention to refinements and maintenance problems this coming year than we have been able to do in the past. That is, I now can definitely state that we are through the transition stage from wood to metal. We now have all-metal structures to refine that are as far in advance of the Curtiss O-1 and O-2 as those airplanes were in advance of the DH-4 in 1925. Among the airplanes now undergoing construction for service test are the following:

The YP-24 (Lockheed) is a low-wing all-metal monoplane. Under certain conditions and using certain methods of rating performance, this airplane is considered to be the fastest two-seater airplane in the world, notwithstanding the fact that it is powered with a direct drive, non-supercharged engine. With the same engine installation and the addition of the side type supercharger, a still greater proportional increase in performance may be expected of the YP-24 up to and including all altitudes at which it will be called upon to function.

It is appropriate at this time to mention the fact that there are several methods of "attaining the maximum" in airplane performance. It is the practice of one nation to rate their engines and design their propellers for a normal and maximum r.p.m. This maximum r.p.m. (called by some the "Super-max") can only be utilized for periods not exceeding 5 minutes in level flight. Again, if it is desired to use the rated horsepower of the engine in the climb, the propeller pitch is increased, and an increased climb performance results. Several miles per hour in cruising speed in level flight may be thus sacrificed. The increased pitch results in an increase in airplane speed in level flight; the engine racing with a loaded propeller undergoes such stresses that it is unwise to keep it at full throttle for more than several minutes at a time.

To return to our airplane classification,- the YP-16 (Beliner-Joyce) is a two-place Pursuit of conventional structure, and the first service test article will come out with the direct drive, non-supercharged V-1570 engine. Later, these engines will be equipped with the side type supercharger, or replaced by an entire new engine of slightly larger piston displacement and power.

The P-12-E (Boeing) is a refinement of the P-12D and differs only in the fuselage construction, which is metal monocoque. The P-12F will be used to service test the SR-1340, P & W "Wasp" engine with a 14:1 gear ratio on the supercharged blower which will increase the optimum altitude of the airplane from 7,000 feet to 10,000 feet. Concerning this airplane we can, without challenge, state that it has the highest rate of climb and is faster than any single-seater air-cooled Pursuit type in the world.

There is also a P-12D now under test with a geared SR-1340E engine. The advantage of the geared propeller has been definitely proved abroad and in some installations here at the Division. However, it now appears we have a problem of propeller design before us in applying it to the P-12. Tests indicate a loss of 20% of the rate of climb with little or no gain in high speed with propeller blade settings that develop the rated engine horsepower in level flight.

The P-6E (Curtiss) which is a refinement of the P-6 is in the same category as the P-12E (Boeing). It is simply a standard type with a few refinements. Provision is being made for the installation of the side type supercharger which will enable it to meet the requirements for a high-speed, high-altitude, single-place Pursuit airplane. This will be followed shortly by the XP-23 which is now under construction and is similar to the P-6E except for a geared engine.

The XO-36 (Douglas) is now at the Division. This is the sister ship to the B-7 (Douglas) except for geared engines. The service test articles will have a smooth skin fuselage, and it is possible that the gull wing will be replaced by a straight wing. Wind tunnel tests are now in progress and it is hoped to gain an increase in speed.

A service test quantity of the YO-31's (Douglas) will be ready early this coming year. Like the YO-35 (Douglas), they will have the smooth skin fuselage covering which, with other minor changes over the airplane now at the Division, should increase performance. On the other hand, the O-31 (Douglas) was laid down around a 600-h.p. engine, and with the thought of an engine developing 700 h.p., so that it can be expected to obtain the same increase in performance with this series as we have with the O-1 series through minor refinements and increase in power.

The outstanding development for military airplanes is the B-9 (Boeing). Two of these airplanes are now on the flying line undergoing performance tests with a view to obtaining data upon which the final decision for the power plant can be made. This is a case where the geared, Prestone-cooled V engine is pitted against a worthy opponent. The Pratt & Whitney "Hornet" in one of these airplanes is geared and supercharged, and the preliminary high speed run gave astounding results when compared with the performance of the following foreign planes, whose speeds are quoted for your information. The Italians have a heavy Bomber with a high speed of approximately 140 m.p.h., while the British and French standard Bombers with similar bomb loads are in the 110 m.p.h. range. The Vickers Company in England has a Bomber with fully supercharged Rolls-Royce Kestrels, which is in the experimental stage, which has a high speed of 137 m.p.h. at 10,000 feet, and Boulton & Paul's latest model of the Sidestrand, with fully supercharged Bristol air-cooled engines, has a high speed of 167 m.p.h. at 11,000 feet. The B-9 is manufactured by the Boeing Company; is all metal, has a retractable landing gear and many novel features.

The service test Training airplanes have all proven to be a great improvement over the PT-1, two new types being especially satisfactory - the YPT-11 (Consolidated) and the YPT-10 (Verville). The matter of a suitable power plant, however, has complicated this development. The original idea was to use a low powered cheap engine. All available engines of the 150-horsepower class were tested, but none have proved satisfactory to the Training Center. This was partly due to inherent characteristics of the engines and partly due to the fact that light commercial trainers which would give the desired rate of climb with a 150-h.p. engine were unsuitable for use as military trainers. Engines of 200 h.p. (Kinners and Lycomings) were recently installed in these airplanes, and the final selection of an engine will be made at an early date.

It is the policy to depend upon commercial types for Transport purposes, and there are a number of these airplanes on service test. The most promising of these is the Fairchild 100, reworked for the Air Corps by the American Airplane and Engine Corporation. The Ford has also been accepted by the Service as meeting requirements. Experience with Training and Transport airplanes indicate that the application of commercial types for military purposes is extremely limited, nor is it likely that these would be successfully converted in emergency to combat types.

For Attack the Division has a service test order of an XA-8 (Curtiss). This airplane has met the requirements of the Specification in practically every respect. From a technical standpoint it is difficult to draw definite conclusions as to the merits of slots and flaps. The XA-9 (Lockheed), a sister ship to the YP-24, will not have them, so that there will be an opportunity for comparisons. The XA-9 is coming out direct as a service test article owing to its similarity to the YP-24. This development represents a record in the time required for the conception and design of an experimental and service test article.

Experimental work on power plants other than that connected with a group of engines procured for service test has been largely limited to devices and accessories. Development of a 1,000-h.p. engine, however, has been prosecuted. Many of the service test engines are designed for the use of Prestone for cooling, and incorporate centrifugal superchargers.

The fuel injection system, a means of increasing both the power and efficiency of conventional engines, make it possible to do away with the carburetor entirely. This project has progressed very satisfactorily from a technical standpoint and is still under test on both air-cooled and liquid-cooled engines.

The development of special fuel is being continued, with the object of developing substitutes for tetra-ethyl lead. It is gratifying to be able to announce that our expectations in connection with the acceptance of special fuel by the commercial industry is far more than we had anticipated. Certain of the aircraft corporations engaging in transport service have installed "knock-testing" equipment and are specifying fuel of much higher rating than a year ago. The refiners are, on their own initiative, specifying a minimum limit of knock rating which corresponds to the best fuel obtainable two years ago. If you will notice, fill-

ing stations advertise 72 octane fuel for automobiles. We have not tested these products, but at least it is very encouraging for the Division to see its work in this connection reflected in the automobile industry as well as the aircraft industry, for in a time of emergency it will be a tremendous advantage. In this connection, it is to be noted that leading engine manufacturers in Great Britain and France have gone on record stating they cannot possibly compete with the engine development in America unless they go to ethyl fuel.

Considerable attention is being directed to the possibility of substituting battery ignition for magneto ignition, as an analysis of unsatisfactory performance reports and experience with equipment during the annual maneuvers point to the magneto as causing more trouble than any other single item of equipment. Moreover, the use of radio on practically all types of airplanes and the more extensive use of supercharged engines, the requirement for night flying equipment, and electric starters, all require a source of direct current.

A new type of fuel pump has been developed and tested and is being specified for airplanes now being built on current contracts. This pump (Romec) is adapted to remote drive, thereby making possible an installation that will insure gravity feed to the inlet in many airplanes and a minimum lift in all cases.

It is desired to reduce the size of Prestone radiators. For years it has been the practice to use a core depth not exceeding nine inches. With higher speeds and greater temperature differences it appears feasible to reduce the cross section area by increasing the depth of the core but first it is necessary to obtain tubes of greater lengths, as this product has long been manufactured best to meet the requirements of the automobile. During the past few months the entire industry has been circularized, with the result that the desired product will soon be forthcoming.

Evaporative cooling for water-cooled engines has become an actuality in England which has resulted in a saving in weight and flat plate area in the order of 20 percent. This is being given serious consideration in the Division.

Ramming manifolds, which make possible the transformation of velocity to pressure on high speed airplanes, are being designed for many of the experimental and service test airplanes. This affects the carburetor settings, however, so that a new setting has to be worked out for each installation.

The effect of oil viscosity on piston sticking and oil cooling is being studied in view of using oils of lower viscosity than are now used. There are many minor investigations which include fuel lines, engine controls, and various accessories in addition to the calibration and testing of engines. The refrigeration installation in the Power Plant which is nearing completion will make possible the testing of supercharged engines under the same condition of temperature and pressure as encountered at high altitudes.

Under materials and processes the Division has a new carburetor alloy that is practically immune from the white powdery deposits that have caused so much trouble in carburetor screens in the past. Investigations of the fatigue resistance of propeller alloys at both normal and sub-zero temperatures have resulted indirectly in improving the quality of our propellers.

The funds allocated to the development of equipment and aircraft accessories are being devoted mostly to the problem of navigation equipment. Blind flying instruments and equipment for fog landing constitute the most important projects of the Equipment Branch. There is, of course, the continuation of night photography projects, projects in connection with the refinement and improvement of the present seat-type parachute and flying clothing.

The Sperry artificial horizon and the gyro compass were inherited from the Guggenheim researches. These instruments have been under test for over a year and are now being released as standard. This equipment has not reached the stage of perfection desired, but it is felt that more rapid progress can be made toward the elimination of faults by giving it to the Service at this time.

For fog landing there are the sonic altimeter and the sensitive altimeter, the latter a development of the conventional type altimeter which may be useful for landing through fog on an airport when the ground barometer reading is transmitted to the airplane by radio. This instrument also may be useful for precision bombing and photography. For airdrome installation the Loth system is progressing satisfactorily. A model has been completed and tests so far have shown that the inventor's claims can be substantiated. A full-scale installation is under way.

For radio there are now three command sets,- Western Electric, R.F.L., and the SCR-167. The latter is a receiver only. The two former sets provide for both transmitting and receiving, with a total weight of less than 50 lbs., including

power supply. The Western Electric and the R.F.L. can be used for picking up weather reports by the insertion of a special coil. The SCR-167 has sufficient range of kilocycles to permit picking up commercial stations. The range in miles with the command set is in the order of 50 miles under favorable conditions. The requirement is 15 miles.

The new B-10 two-piece flying suit is a distinct advance over anything we have had in the past.

Controllable pitch Propellers are under service test and results are promising. There are in addition the Automatic propellers in which the pitch angle is automatically set. The advantages of the reduction propeller gear on aircraft performance has been shown to be in the range of 8 and 10 miles per hour for certain types of airplane. Owing to the reduction of propeller speeds, however, the propeller diameter or the number of blades from two to three must be increased. This introduces the problem of increase in weight, to meet which magnesium alloy and hollow steel blades have been under development. The magnesium alloys most suitable for this purpose have been found in Germany, but it is expected that our domestic manufacturers will meet the quality of the German product within the year.

In addition to the work on propellers, the Aircraft Branch is carrying on the stressed-skin all-metal wing development which will form the basis of wing design on two of the new experimental airplanes.

Stainless steel structures are being investigated in view of adapting the spot welding process to the fabrication of these structures. There are developments on skis, wheels, and tires. The streamline tire has been shown to have considerable merit. On the O-31, tests indicate that with this type of tire and wheel the pants with which this airplane is equipped can be removed without an appreciable loss in speed. The gain in speed, by the way, due to pants or streamline on wheels is in the order of 3 to 6 miles per hour for airplanes with a high speed in excess of 150 miles per hour.

All work pertaining to unsatisfactory performance reports has been placed on first priority during this last year, and it is believed that this policy, together with the diligent effort toward the improvement of airplanes, power plants and accessories, must lead to noticeably improved equipment throughout the Air Corps in the year to come.

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GENERAL FOULOIS TAKES OATH OF OFFICE AS AIR CORPS CHIEF

The pioneer Army aviator who, over twenty years ago, when a Lieutenant in the Signal Corps, practically learned the art of flying by himself, is now Chief of the Army Air Corps - Major General Benjamin D. Foulois. The press of the country, touching on General Foulois' recent appointment to succeed General Fechet, were unanimous in the thought that it was particularly fitting that this veteran flyer, who grew up with Army aviation, should be the leader of the Air Corps.

General Foulois, whose military history is well known to Army personnel as well as to those interested in aviation, took his oath of office as Chief of the Air Corps on December 22, 1931. In extending to General Foulois his best wishes for a successful tour of duty as chief of the finest corps in the world, the Hon. F. Trubee Davison, Assistant Secretary of War for Aeronautics, remarked that he felt perfectly confident that under the General's inspiring leadership the Air Corps would be one of the leading factors in the country's national defense.

General Foulois, expressing his appreciation to Mr. Davison for his good wishes, stated: "I wish to assure you that I shall endeavor in the next four years to live up to the reputation that has been established by my predecessor and give to you and the Army loyal and efficient service. It shall be my endeavor at all times to work to build up the Air Corps in the interests of the national defense and make it a credit to the Army and worthy of the high ideals which have inspired our Army pilots."

It goes without saying that the entire Air Corps feels that the General will do his utmost to live up to his "platform" and that they extend to him their best wishes for a successful tour of duty as their Chief.

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The 91st Squadron, Crissy Field, Calif., is now entirely equipped with O-25C's, the last ones having just recently been received from the Douglas Plant at Santa Monica, Calif. Practically all defects present in the O-25a's were remedied in the new ships, and all pilots in the Squadron swear by the "C's."

THE 1931 CHENEY AWARD

Two outstanding acts of valor performed by Army Air Corps personnel during 1931 were of such a high order and equally meritorious that the Board of Air Corps officers, convened to make recommendations as to the disposition of the Cheney Award for that year, reached the decision that it be given to two heroes of military aviation activities - to the late Lieut. Robert D. Moor (posthumously) and to Private John B. Smith.

The conduct of Lieut. Moor was that of "noblesse oblige" of an officer pilot toward an enlisted passenger dependent upon him for security. During a flight, when his plane became disabled, Lieut. Moor, disregarding his own safety, managed to keep it under control long enough for his passenger to jump with his parachute but too late to save himself.

With Private Smith it was a case of loyalty and devotion towards an officer of his service. Trapped in the burning wreckage of a crashed plane, the helpless pilot was released therefrom only through the valiant efforts of this enlisted man, who slid headfirst into the blazing cockpit and unfastened the pilot's shoe which was tightly wedged in the rudder bar.

Each year the Cheney Award is given the officer or enlisted man of the Regular Army Air Corps or Air Corps Reserve performing the outstanding act of valor, or extreme fortitude or self-sacrifice, in a humanitarian interest in connection with flying. The award consists of a plaque, a certificate of award, and a substantial cash contribution or other gift or gifts at the discretion of the Board.

Established in 1927 in memory of 1st Lt. Wm. H. Cheney, Air Service, killed in an air collision at Foggia, Italy, Jan. 20, 1918, announcement of the award is made each year on that anniversary. The donors of the award fund are Mrs. Mary L. Scofield, of Peterboro, N.H., and Mrs. Thomas W. (Ruth Cheney) Streeter, of Morristown, N.J., mother and sister, respectively, of the late Lieut. Cheney.

The specific acts performed during the past year which the Board considered as meriting the Cheney Award were as follows:

Lieut. Robert D. Moor, Air Corps, on duty as Regular Army Instructor of the Michigan National Guard Air Unit, was leading a 3-ship formation, Aug. 23, 1931, when a sudden "bump" of air caused one of these planes to strike Lieut. Moor's plane, disabling the tail group and throwing it partially out of control. The shock of the collision threw the enlisted passenger down into the cockpit. When he regained consciousness he was dazed and frightened. Repeatedly ordered by Lieut. Moor to jump, the passenger finally did so when the plane was at an altitude of only several hundred feet. With the loss of weight in the tail of the plane, it started diving to the ground. It was then too late for Lieut. Moor to escape the crash. The passenger landed safely with his parachute. The collision occurred at an altitude sufficiently high to have enabled Lieut. Moor to make a safe parachute jump had he elected to leave his passenger to his fate.

For this act of self-sacrifice, Lieut. Moor was recently awarded the Distinguished Flying Cross posthumously. The Cheney Award plaque and the citation certificate will be presented to his next of kin, his mother, Mrs. Agnes W. Moor, of Holland, Ohio. In pursuance to a previously expressed wish by her, a modest memorial will be erected to her son's memory.

Private John B. Smith, Army Serial No. 6360521, then a member of the 90th Attack Squadron at Fort Crockett, Texas, was working on January 27, 1931, in the target supply house as a member of the target range detail, when he observed a low-flying airplane approaching towards the building. Shouting a warning to two fellow soldiers working with him, he escaped from the building as the airplane crashed into it and then fell to the ground, bursting into flames. The observer in the plane was thrown out, but the pilot, Lieut. C.W. Causey, Air Corps Res., was unconscious and still in his cockpit. Although dazed through being struck by flying debris and injured when an ammunition box dropped on his foot, Private Smith went to the pilot's rescue. Finding that the pilot's shoe was jammed in the rudder, Smith slid into the cockpit and unfastened it. The pilot's

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clothes were already ablaze. Smith and one of his companions then lifted the still unconscious pilot from the wreckage. For this act he was awarded the Soldier's Medal last July. He is now a member of Flight "B," 16th Observation Squadron, at Fort Benning, Ga. His home is at Winnfield, La. Besides the plaque and the citation, he will be given a substantial award of cash.

There was no Cheney Award made for 1930, as the several acts of heroism for that year in connection with military aviation did not measure up to the standard of previous acts for which the award had been made. Previous winners of the award were Master Sergeant Harry Chapman, for conspicuous bravery in the airship "Roma" disaster of February, 1921, this award, the first made, being in 1927. In 1928, Lieut. Uzal G. Ent received the award for his heroism during the National Elimination Balloon Races when he rode down a burning balloon, after it had been struck by lightning, in an attempt to save his companion, Lieut. Paul Evert. In 1929, Lieut. Wm. A. Matheny received the award for rescuing a companion, Lieut. Dwight Canfield, from the burning wreckage of their bombing plane which had crashed in the Nicaraguan jungles while enroute to Panama.

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COLONEL WESTOVER RECEIVES PROMOTION

Lieut.-Colonel Oscar Westover, Air Corps, was appointed Assistant Chief of the Air Corps with the rank of Brigadier-General for four years beginning January 13, 1932, with rank from December 22, 1931, to fill the vacancy created through the retirement of Major-General James E. Fechet as Chief of the Air Corps and the appointment of Brigadier-General Benjamin D. Foulois as Major-General and Chief of the Air Corps. General Westover has been relieved from duty as instructor at the Command and General Staff School, Fort Leavenworth, Kansas, and is under War Department orders to report to the Office of the Chief of the Air Corps for duty on February 1, 1932.

General Westover was born at West Bay City, Mich., July 23, 1883. After graduation from High School, he entered the Army, serving for a brief period as an enlisted man in the Engineers until he was appointed to the Military Academy. Graduating in 1906 and commissioned a 2nd Lieutenant in the Infantry, he served in this grade for five years, as 1st Lieutenant for another five years and as Captain for one year, being transferred to the Signal Corps in September, 1917, with the temporary rank of Major, after having served at the Military Academy as Assistant Professor of Drawing. In March, 1918, he was placed in charge of the Signal Office at the Port of Embarkation at Hoboken, N.J.

For the remainder of the War until the present time, his duties have been as follows:

June, 1918, in charge, Storage and Traffic Department, Bureau of Aircraft Production. Promoted to Lieut.-Colonel, Air Service, August 14, 1918.

Nov. 19, 1918, to June 30, 1919 - Assistant Executive, Bureau of Aircraft Production, Washington, D.C., and then in Office, Director of Air Service, Washington, D.C., during which time, May 24, 1919, he received emergency promotion to Colonel, Air Service.

July, 1919, to October, 1920, Executive, Air Corps, Washington, D.C., and Chairman, U.S. Claims Board, during which tour of duty he relinquished his wartime rank of Colonel and reverted to his Regular Army status of Major.

Attending the Balloon School at Ross Field, Calif., in 1921 and the Airship School the following year, he received in turn the rating of Balloon Observer and Airship Pilot. He won the National Elimination Free Balloon Race at Milwaukee in June, 1922, and, as a result, was the Army entrant in the International Balloon Race at Geneva, Switzerland, in August of that year.

In 1922 he was Director of Aircraft Production in Washington. In 1924 he graduated from the one-year course at the Advanced Flying School, Kelly Field, receiving the rating of Airplane Pilot. Several years later he was rated as Aerial Observer.

In 1924 he was Executive Officer at Langley Field, Va., later in that year becoming the Commanding Officer of that post and the Commandant of the Air Corps Tactical School which was then located there. After two years in this post, he entered the Tactical School as student, graduating in 1927. His next school tour was at the Command and General Staff School at Fort Leavenworth, Kansas, from which he graduated in 1928, being retained as a member of the faculty there.

In January, 1930, he received his promotion to Lieut.-Colonel. In addition to the four aeronautical ratings he holds, General Westover was awarded the Distinguished Service Medal for meritorious wartime service.

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NEW FOG-LANDING SYSTEM INSTALLED AT MATERIEL DIVISION.

Two years ago, Lieut. James H. Doolittle, U.S. Army Air Corps, working with the Guggenheim Fund for the Promotion of Aeronautics, demonstrated the possibility of bringing an airplane safely down on a landing field in dense fog. The cockpit of his plane was hooded, his sole dependence being placed upon his instruments. He was "landing blind." Concluding his report upon his feat at the time, Lieut. Doolittle said: "Although the results of these tests showed conclusively that it is possible to land by instrument alone, the procedure is still in a highly experimental state and it now remains for some interested agency to continue the tests and develop this or some improved process to a point where it is commercially applicable."

Since the World War, the Materiel Division of the Army Air Corps, which cooperated with Lieut. Doolittle in these tests, had been an interested agency in the development of instruments and equipment to make avigation practicable in fog and bad weather. The radio beacon is an example of one of its commercially applicable projects. In the past few years it has placed special stress on by far the most difficult phase of the problem-blind landing. It is quite natural, therefore, that the Materiel Division should be the seat of the first experimentation in this country with a new system for the solving of blind landing problems which holds more than the usual amount of interest and promise.

Conceived originally by Societe Industrielle des Procedes Loth of France and known as a system of energized cables for landing aircraft in fog, two installations were made by the Air Corps, with the American Loth Corporation cooperating, at Patterson Field, Dayton, Ohio, in May, 1931. Flight tests by Air Corps pilots carried out over these cables were the first ever made in any country for any installation of this kind.

The installations consist of a series of cables laid in concentric circles beneath the surface of the airdrome and energized by low frequency currents. Through the electric currents a magnetic field is established within a definite radius of the airdrome, extending five miles from the center. The pilot upon entering this magnetic field with ground, horizon, and sky shut off from view, may be informed by a combination of distinctive audible and visual signals, first, when he is in the vicinity of the airdrome and the direction to its center; second, when he has crossed the boundary of the landing field; third, when he has come above the landing area; and fourth, when he has descended sufficiently low over that area to level off and land. That is, as far as five miles from the center of the airdrome he will pick up in his earphones a distinctive dash-dot-dot signal (Morse letter D). This will inform him that he is within the vicinity of the airdrome but outside the limits of its boundary lines. At the same time, should he be headed toward the center of the airdrome, an indicator needle placed on an instrument board dial will point to zero, while should he be headed to the left or right of it, the needle will swing to an "L" or "R" reading. Keeping the needle on the zero reading will bring him toward the center of the airdrome from any direction of approach. Shortly he crosses the boundary line. The signal in the earphone changes to an uninterrupted dash sound quite different from the one he has previously heard. A dot-dot-dash signal (Morse U) indicates that he has crossed the field boundary and is within the field, approaching the landing zone. Crossing the boundary of the field he has nosed down gradually. As he comes within the area in which he should level off for landing, the signal again changes, featuring a sharp "dot-dot" (Morse I) which becomes sharper as he nears the ground. Hearing this he knows it is time to pull slowly back on the stick for contact with the ground. These indications are clear, distinctive and unmistakable as picked up in the earphones and may be heard to a height of 3,000 feet.

Of the two installations in operation at Patterson Field, one is a working miniature of the complete system, 1/50 of the full size. It has proved most useful for demonstration and experimental purposes. Just as in wind tunnel practice, great amounts of money have been saved by performing experiments on small-sized models, so this miniature will permit of the study of modifications and experimental changes at small cost. A small car or airplane equipped for the reception of signals is moved around one installation for exploring the electrical pattern in space. The full-size installation is at present but partially complete. It consists of the two outside cables enclosing an area 3,000 feet in diameter. The distance between the two cables is 150 feet. The cables, necessary to energize the leveling and landing surface of the field, are expected to be laid later. From indications obtainable with the outside cables, the pilot is informed of his

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approach to the field, the direction to the center, and the crossing of the boundary line into the field. Many successful tests have been flown with this equipment, and Materiel Division pilots have evinced great interest in it.

Although audible signals in aircraft usually are suggestive of radio, the system under discussion is purely electro-magnetic in nature, lacking the need of the delicate adjustments necessary for radio and possessing all the advantages of the ruggedness of construction possible with purely electrical installations. The cables are energized by means of an alternating current at an audio frequency between 500 and 3000 cycles per second. The current generated passes through balancing units and keying devices, then is fed through the cables, the variations of current and keying giving the changes in signal described. Reception in the airplane is obtained by means of two loops mounted on the aircraft through which current from the magnetic field passes. The current thus set up in the loops is amplified by means of an ordinary audio amplifier and transmitted to the earphones and visual indicator. One loop is placed in a horizontal position in the airplane, giving the audio signals, the other is placed vertically along the longitudinal axis and gives the directional visual indication. The visual indication results from the fact that when the plane is flying toward the center of the circles the vertical loop is parallel to the lines of magnetic force and no current is set up. When the plane heads away from the center, magnetic lines of force will cut the surface of the loop and current will be induced.

If the pilot wears a standard radio helmet, the throwing of a switch as he nears his destination will cause the transfer from cross-country radio to landing cable reception in the earphones. The system is simple from the point of view of operation and maintenance, and due to the low frequency, static and ignition noises which are inimical to radio are not problems of electro-magnetic installations.

Should the new system continue to hold its present promise through the tests and further development planned by the Air Corps, a solution of one of the most serious problems of the air, that of flying and landing under low visibility conditions may result, a solution that may be applicable to the general airdrome and practicable for the use of the general aircraft pilot.

Recently the Liaison Committee on Aeronautical Radio Research held a meeting at Wright Field at the invitation of the Air Corps, the members witnessing a demonstration of the miniature and making flights over the full-scale installation.

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DAYTON TO WASHINGTON IN 86 MINUTES

Flying in bitter cold five miles high, on the wings of a 70-mile wind, Capt. Reuben C. Moffat, Air Corps, on January 18th, flew from Wright Field, Dayton, O., to Bolling Field in 86 minutes, at an average speed of 266 miles an hour. Capt. Moffat had to take oxygen from a flask throughout the flight, which was made to test the power plant of a new Curtiss P-6D Army Pursuit plane. Although Captain Moffat required but 86 minutes to make the trip from the time his wheels left Wright Field until they touched Bolling, he took 20 minutes to climb to the 25,000-foot level at which the flight was made. The temperature there averaged 28 degrees below zero Centigrade.

Captain Moffat was able to locate Washington while over the Blue Ridge Mountains and began dropping from his five-mile height while still 50 miles away. His plane, just adopted for Army Pursuit work, is powered with a 660-horsepower liquid-cooled engine, driving a geared three-bladed propeller. The engine is highly supercharged for altitude flying.

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FOOD DROPPED FROM BOMBERS TO SHIVERING INDIANS

Six Army Bombing planes from March Field, Calif., took the air January 17th on a mission of mercy to snowbound Navajo Indians in the district of Winslow, Arizona. By noon, 10,800 pounds of rations had been dropped at widely separated points and the work continued. The hungry and shivering red men rushed eagerly to each spot the instant the bundles of provisions struck the snow-covered earth. The parcels were torn open with ravenous haste and their contents distributed. Each plane carried 900 pounds of food, divided into ten bundles of equal weight, the packages containing beans, flour, sugar, salt pork and dried fruit.

It was stated that delivery of additional supplies would be slower as the more remote settlements were visited. The delivery of food on Jan. 17th followed survey flights in which "distress points" were designated over the reservation, and experiments were conducted in dropping food. It soon became plain that the bundles must be wrapped in many thicknesses of heavy paper and burlap.

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COLONEL ARNOLD ASSUMES COMMAND OF MARCH FIELD

"With the arrival of Lieut.-Colonel Henry H. Arnold and family at March Field, Riverside, Calif., we find the Commanding Officer's quarters once more occupied and the driver's seat in Headquarters well filled," says the News Letter Correspondent. "The well known Arnold smile has beamed down upon many old acquaintances, as well as a large number of new ones. A reception, dinner, and dance held in the Officers' Club in honor of Colonel and Mrs. Arnold successfully opened up the winter season of local entertainment."

Major Carl Spatz, who was succeeded by Colonel Arnold as Post Commander, has actively taken over command of the First Bombardment Wing and is welding into shape the newly organized 7th Bombardment Group and 17th Pursuit Group.

Both Groups are steadily increasing their quota of airplanes and equipment by ferrying; the 7th Bombardment Group, commanded by Major Joseph T. McNarney, drawing its planes from Langley Field, Va., and the 17th Pursuit Group, commanded by Captain F. O'D. Hunter, from the Boeing Aircraft Company in Seattle, Washington.

The training of these Groups has been somewhat hampered by lack of equipment, but very satisfactory results are being obtained with the airplanes on hand. No loss of flying days has been caused by weather conditions, although plenty of cold weather was experienced, including light snow - which, of course, is very unusual for March Field and Southern California.

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RELEASING DEVICE FOR GIANT 'CHUTE

Major E. L. Hoffman, in charge of the Parachute Branch, Materiel Division, Wright Field, reports the development of a quick releasing device by which, when he is running drop tests on the 80-foot triangular parachute with weight, the weight upon striking the ground automatically releases the parachute which collapses immediately without dragging. Since the fabric of the 80-foot 'chute is liable to injury in being dragged, and since any mere man or group of men who tried to stop it by catching at the shroud lines were liable to injury also, some such device was considered highly necessary.

The device is a simple pole arrangement which extends through the bottom of the weight, and upon striking the ground is pushed up through the weight, releasing a pin which holds the parachute. In a former test, Major Hoffman and his automobile had to be untangled from the shroud lines of the giant 'chute as from a web.

In the last test, the parachute, greatly strengthened in design, withstood a drop with a 1400-pound weight suspended, for the first time without the slightest evidence of failure. Further tests are planned in which a delayed opening with the 1400-pound weight will be made. This will produce the greatest shock ever attempted on any parachute known.

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TWO OFFICERS DIE IN CRASH OF BOMBER

There have been some fatal airplane accidents in the Philippines since Air Corps units have been stationed in these Islands, but, it is gratifying to note, they have been few and far apart. . January 14th, however, was one of those unlucky days, and the crash of an Army Bomber proved fatal to 1st Lieut. Raymond Zettel and 2nd Lieut. Elmer L. Meguire.

At 5:30 in the morning, Lieut. Zettel was piloting a B-3A Bomber during the course of the Philippine Department maneuvers, with Lieut. Meguire and three enlisted men as passengers. When about three miles north of Malabon, Rizal, P.I., the right motor ceased functioning and the heavy Bomber landed in a mud bank. Fate was kind, we are glad to say, to the three enlisted men - Staff Sgt. Albert Norich, Corporals William B. Plockman and James G. Lambert, who were slightly injured. The fact that the two officers lost their lives through drowning leads to the belief that it was just one of those strokes of misfortune that the malfunctioning of one of the motors occurred at a time when the plane was flying over a locality devoid of a safe landing spot.

Lieut. Zettel was born at West Branch, Mich., March 6, 1894. After graduating from Campion College and attending the University of Detroit for two years, he enlisted as a Flying Cadet (Private, 1st Class, Aviation Section,

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Signal Enlisted Reserve Corps) on November 15, 1917, and was called to active duty on December 29th of that year, being sent to the ground school at the School of Military Aeronautics, Austin, Texas. Upon the completion of his ground training at Austin, he learned to fly at Call Field, Wichita, Texas, and Wilbur Wright Field, Dayton, Ohio. He was then ordered to duty overseas and received advanced Pursuit training at the Training Center at Issoudun, France. Later he served with the Army of Occupation in Germany from January to July, 1919.

Following his return to the United States, Lieut. Zettel saw duty on the Mexican Border with the famed Border Patrol, and later served a year in the Infantry. He subsequently transferred back to the Air Corps, taking a refresher course in flying in 1922. After service with the 3rd Attack Group, when it was at Kelly Field, Texas, he served four years as Chief of the Armament Branch, Engineering Experimental Section at McCook Field and at Wright Field, Dayton, Ohio, being transferred to duty in the Philippines in June, 1930.

Lieut. Zettel had about 2500 hours in the air and held the ratings of Pilot and Observer. His home town was given as West Branch, Mich. He is survived by his wife and two children, a boy of eleven and a girl of four years of age.

The Air Corps was not afforded much of an opportunity to become acquainted with Lieut. Meguire, since he was only a bona fide member of this branch of the service since December 22, 1931. The deceased young officer was born in Ohio, June 4, 1905. He graduated from Portal, N.D., High School in 1922. He enlisted in the Army January 25, 1926, and served as a member of the Signal Corps Detachment until June 30th of that year, when he was appointed a cadet at the United States Military Academy. After his graduation, four years later, he was commissioned a 2nd Lieutenant in the Signal Corps. He was detailed to the Air Corps for flying training, and graduated from the Advanced Flying School, Kelly Field, Texas, October 10, 1931. Immediately thereafter he was assigned to duty in the Philippines

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A LITTLE "DOPE" ON WAR TIME FLYERS

Serving with the Air Corps at the present time are eight officers who, by virtue of having achieved five or more victories in aerial combat during the World War, carry the unofficial designation of "Ace." The leading "Ace" now in active service is Lieut. John S. Griffith, a member of the First Pursuit Group at Selfridge Field, Mt. Clemens, Mich., who is credited with nine victories. Due to the fact that Lieut. Griffith's service during the war was with the British Royal Air Force, he was not listed among the American "Aces."

Captain Frank O'D. Hunter is credited with eight victories; Captain Arthur E. Easterbrook and 1st Lieut. Martinus Stenseth with six each; Captains Clayton L. Bissell, Harold H. George, James A. Healy and Victor H. Strahm with five each.

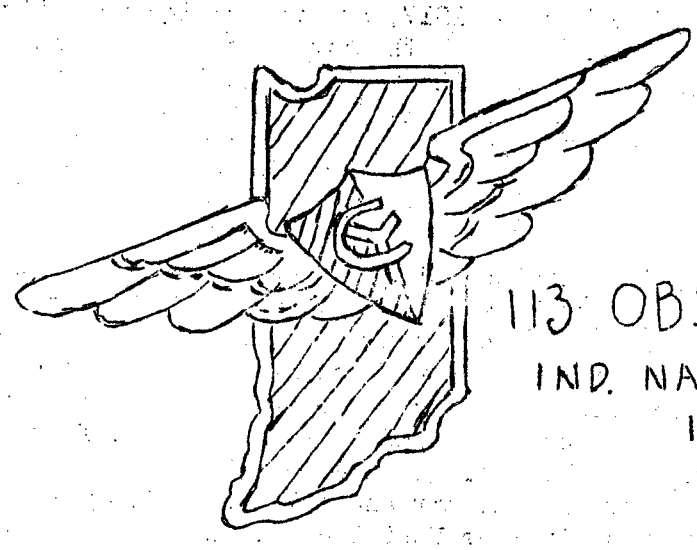
Officers still in the service who are credited with four victories are Captain Russell L. Maughan and 1st Lieut. Leo H. Dawson. The unfortunate death in an airplane crash on July 15, 1930, of Captain Frank B. Tyndall, removed him from this little group.

Major Carl Spatz, Captains Christopher W. Ford and Thomas M. Jervey are credited with three victories each. The last named officer is a member of the Ordnance Department, but is on duty with the Air Corps as Ordnance Officer at Kelly Field, Texas.

Officers credited with two victories each are Majors John F. Curry, John N. Reynolds, Captains Benjamin F. Giles, George C. Kenney, Edward M. Morris, Victor Parks, Jr., and 1st Lieut. Reuben D. Biggs. Captain Parks holds a commission in the Chemical Warfare Service.

Only four officers now serving with the Air Corps are credited with one victory each, viz: Majors Maxwell Kirby, Asa N. Duncan, Captains Edward C. Black and George L. Usher.

Stationed at Randolph Field, Texas, are Captains Ford, Giles, Healy and Lieut. Biggs; at March Field, Calif., Major Spatz, Capt. Hunter and Lieut. Dawson; in the Philippines, Captains Easterbrook, Black and Maughan; in Panama, Captain George; in Hawaii, Major Kirby; at Langley Field, Va., Captains Kenney and Usher; at Maxwell Field, Ala., Major Curry and Capt. Strahm; at Fort Sill, Okla., Major Reynolds; at Fort Crockett, Texas, Capt. Morris; at Selfridge Field, Lieut. Griffith; at Ft. Leavenworth, Kansas, Capt. Bissell; on staff duty in Washington, D.C., Major Duncan and Lieut. Stenseth.



113 OBSERVATION SQD.
IND. NAT. GUARD. STOUT FIELD
INDIANAPOLIS, IND.

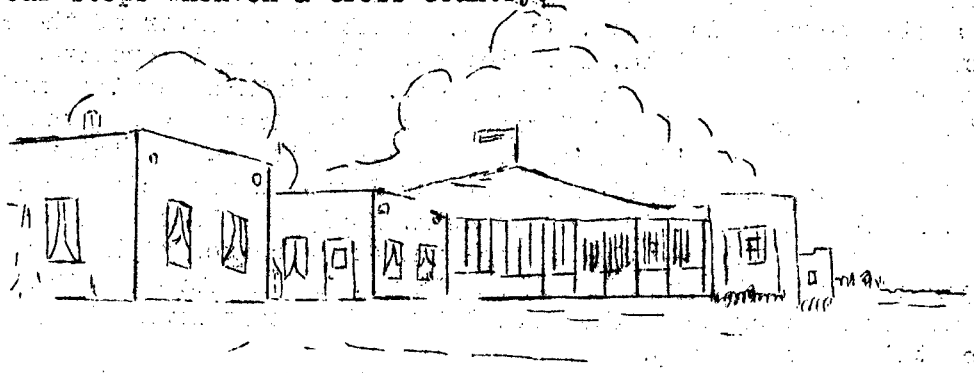
HAPPY LANDINGS FOR 1932.

The 113th Observation Squadron has just completed a very successful year in flying. The total hours for the squadron is about 5,000 for the year. Lt. H.H. Maxwell, photographic officer, was high man with 365 hours; Lt. Matt C. Carpenter, operations officer, was second with 335 hours. Major R.F. Taylor, commanding officer, and Lt. N.E. Brown ran a close race for third place with 215 and 220 hours, respectively.

The Squadron is becoming very fond of our new Instructor, Captain Guidera, recently of Panama. Lt. Sidney Stout from the Reserve Squadron at Schoen Field, has been commissioned in the Guard.

Major Taylor is becoming an expert at interior decorations, for he has personally supervised the redecorating of the administrative offices and club rooms, and the results speak for themselves of his ability to make the greatest improvements with the least cost.

Keep in mind that Indianapolis is the crossroads of America and make Stout Field one of your stops when on a cross-country.



LANGLEY FIELD PLANES BURN

Recently, at about one o'clock in the morning, a Bombing plane belonging to the 49th Squadron, was discovered afire. The plane with two others was parked for the night between two hangars. Before the fire alarm could be responded to or any emergency measures taken, the plane had set its two companions ablaze and in the high wind nothing could be done to save them. The Fire Department, however, managed to prevent the flames from spreading to the nearby hangars. No cause for the fire could be found. The radio installation was checked back and given a "clear bill," so that any other probable causes had to be classed as theory. A great many civilian workmen have been employed on construction work at Langley Field, and the possibility exists that one of them may have secreted himself within the big fuselage to sleep and he may have lit a cigarette and set the plane on fire. Another theory was that a passing motorist may have thrown a cigarette butt out and the wind carried it to the plane. The cause of the fire will probably remain a mystery.

The 49th has had bad luck from fires during the past year. Some of this Squadron's planes caught fire in a hangar several months ago.

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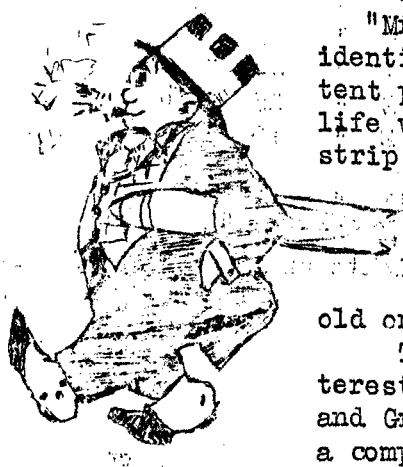
ORIGINAL "JIGGS" PROPOSED FOR 11TH SQUADRON



"Mr. Jiggs," who for fourteen years has faithfully identified the 11th Bombardment Squadron by his persistent presence on its ships, received a new lease on life when his originator, George McManus, of comic strip fame, drew an original for the Squadron. The painting was unveiled at a party at the Officers' Club the day it arrived at Rockwell Field.

If approved by the War Department, it will be adopted as the official insignia to replace the old one.

The evolution of the "Jiggs" insignia has been interesting. The "Jiggs" submitted by Privates Larsen and Green, and adopted at Maulan, France, in 1917, was a comparatively slender fellow of serious mien and warlike expression, but the latest insignia depicts a more rotund "Jiggs" with a reckless and carefree attitude, although the omnipresent bomb is as much in evidence as ever.

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EXPERTS - ALL OF THEM!

"Inasmuch as the past several issues of the News Letter have carried gunnery and bombing scores of various tactical units," writes the News Letter correspondent at March Field, Calif., "the 11th Bombardment Squadron takes cognizance of the old Japanese proverb, i.e., and to wit: 'He that tooteth not his own horn, that horn is not tooted.'" He then goes on to list the final scores of the 16 officers and one enlisted pilot of that Squadron obtained during the record course in bombing, viz:

Name	Rank	Score	Qualification
Munson, Russell W.	2nd Lt. Air Reserve	1947	Expert
Mills, John S.	2nd Lt. Air Corps	1935	"
Lyon, Donald R.	2nd Lt. Air Corps	1929	"
Snavely, Ralph A.	1st Lt. Air Corps	1925	"
Bunker, Howard G.	2nd Lt. Air Corps	1912	"
Thornton, Rubbis M.	2nd Lt. Air Reserve	1905	"
Blackburn, Harold F.	2nd Lt. Air Reserve	1900	"
Bowman, Harold W.	2nd Lt. Air Corps	1894	"
Scott, William L., Jr.	1st Lt. Air Corps	1884	"
Watkins, Keene	2nd Lt. Air Corps	1883	"
Parker, Lewis R.	2nd Lt. Air Corps	1873	"
Wetzel, Emery S.	2nd Lt. Air Corps	1859	"
Hoyle, Gerald	2nd Lt. Air Corps	1850	"
Howard, Charles H.	1st Lt. Air Corps	1836	"
Wells, Leslie L.	Master Sergeant	1822	"
O'Daniels, Wallace J.	2nd Lt. Air Reserve	1752	"
Ronin, James A.	2nd Lt. Air Corps	1679	"

Average score - 1869.7

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ORGANIZATION OF FLIGHT "E", 16th OBSERVATION SQUADRON

November 4, 1931, witnessed the departure of the 88th Observation Squadron for Brooks Field, San Antonio, Texas, leaving the newly organized Flight "E", 16th Observation Squadron, to carry on the work for the field Artillery School. The following is the organization of the new flight:

Captain Frank H. Pritchard.....Commanding.
1st Lieut. William L. Ritchie.....Operations, Communications and Liaison.
2nd Lieut. Claire Stroh.....Engineering and Photography
2nd Lieut. Douglas T. Mitchell.....Air Corps Supply.
22 enlisted men from Flight "D", 16th Observation Squadron, Ft. Riley, Kans.
3 enlisted men from the 88th Observation Squadron.

The new flight, with its ears scarcely dry, has performed the following work

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for the Field Artillery School in the first month and a half of its existence:

Demonstration Artillery Adjustments	10 hrs.	35 min.
Artillery Adjustments	20 "	30 "
Cooperation in Field Exercises	15 "	30 "
Orientation of Students, F.A.S.	11 "	-- "
Attack Demonstrations	2 "	55 "
Photographic Work	2 "	15 "
Towing sleeves for Infantry AA fire, (Service Test of Boyd-Green AA Machine Gun Sight)	11 "	-- "
Night Flying	2 "	35 "

This work is in addition to the routine test flights and ferrying of aircraft and personnel.

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EXCITEMENT FOR ATTACK GROUP PERSONNEL

The norther which swept down upon Galveston Island on Sunday, December 13, furnished three members of the 60th Service Squadron, 3rd Attack Group, with a harrowing experience when the halyards on their small sailing boat broke with the force of the wind while they were fishing off the north jetties.

The crew of the disabled craft consisted of Pvts. Spud Murphy, Harold Guedel, and Leo Taylor. In a short time they were well out in the Gulf with the wind astern pushing them along at a fast clip. Although somewhat experienced with the maneuvers of an A-3B, the trio were no match for the angry seas which had the poor soldiers in a bad way. Seems as if it was a case where nature couldn't be denied, and the crew became disabled.

Just as they were preparing to sing "Beyond the Blue Horizon," a pilot boat cruising just in sight of land came to the rescue and obligingly returned the victims to terra cotta, or sumpin'.

Three times last year pilots of the Third Attack Group answered calls for assistance in finding lost hunters in the vicinity of Galveston Bay. The latest call for help was made Tuesday, December 15th, and concerns a party of sportsmen who went duck hunting on December 10th and have been missing since that time.

Lieuts. Walter L. Wheeler and Eric G. Danielson took off on Tuesday afternoon to search for some trace of the men. They returned with word of having sighted a boat answering the description of the one used by the missing men. No trace, however, was found of the hunters. Subsequent investigation revealed that the boat sighted on Tuesday as belonging to another party of hunters.

At the time the above was written, the News Letter Correspondent stated that the search for the missing men is continuing despite threatening weather.

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PURSUITERS TEST SONIC ALTIMETER

The 17th Pursuit Group, stationed at March Field, Riverside, Calif., recently conducted service tests on the Browning Machine Gun, Calibre 30, M-2, and the Sonic Altimeter, Type G-1. The Browning Machine Gun, M-2, is lighter and smaller than previous models, and tests to date indicate that part failures are practically eliminated.

The Sonic Altimeter is designed to measure the distance between the airplane in which the instrument is installed and the ground. As the airplane flies along, a whistle is blown at intervals by this instrument. The pilot hears the whistle as it is transmitted and then its echo as it is received. Sound travels about 1,100 feet per second. A two-second interval between whistle and echo indicates (on a dial) that the airplane is 1100 feet above the ground, the sound of the whistle reaching the ground in one second and echoing back in another second. Below 50 feet, the pilot relies on his oral senses to "feel" the nearness of the ground by the closeness of the whistle and its echo.

The service test is to determine the relative accuracy of the Sonic Method over the Barometric Method in obtaining the exact (tapeline) distance between the airplane and the ground, and particularly over hilly terrain.

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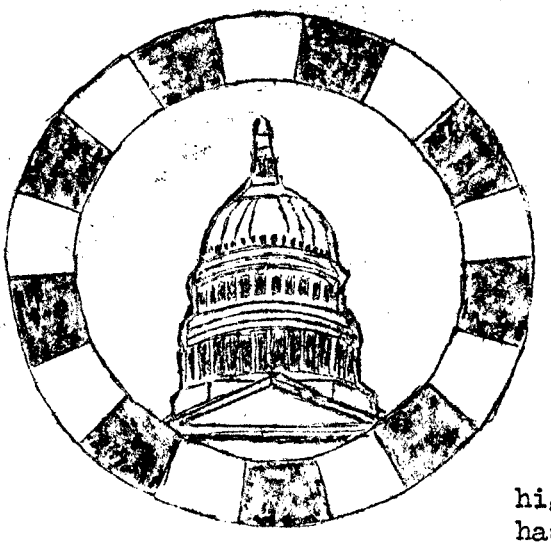
Forty boys from the Automotive Trade School of Cincinnati visited the Materiel Division, Wright Field, recently, and evinced great interest in the many activities featuring the Army's big experimental aeronautical engineering plant.



NO PEACE FOR MR. HURLEY

By the News Letter Correspondent

When as busy a man as the Secretary of War goes afield these days, it is important that every facility be provided for keeping him in touch with official Washington. However, when almost one hundred percent of his journeying is by air, and when, as is often the case in Mr. Hurley's extensive travels by plane, his desire to get to a destination in the shortest possible space of time invokes many 1,000-mile hops, non-stop, special problems in communication are encountered.

For the greater part of a year now, the high speed Ford Transport at Bolling Field, which has been designated the Secretary's personal ship, has carried radio equipment enabling two-way communication between his plane and ground stations.

Regularly at 15-minute intervals during any flight on which the Secretary has been carried, communication was established by radio with the nearest Army or Department of Commerce radio station. Thus, any messages for Mr. Hurley radioed from WAR, the War Department radio communication center in Washington, had only a 15-minute wait, therefore, until they were relayed to the Secretary's plane in flight. Not satisfied with this near perfect service, however, Bolling has sent the Secretary's Ford to Wright Field where a special Westinghouse radiophone transmitting and receiving unit of unusual power and range is being installed. This new installation will enable the plane to maintain direct radio communication with WAR from any part of the United States either while in flight or when on the ground. Thus, Bolling does its bit to serve Mr. Hurley. We can't help but wonder, though, if the Secretary won't wish occasionally that the darned radio was overboard, so that in all the war he might have a little peace.

It is not generally known that since taking office the Secretary of War has put in well over 1,000 hours in the air. His first trips were made in a Curtiss O-13B. Later he used a Fleetster, and now the high-speed radio-equipped Ford is carrying him over the nation's airways. Nor do all of his trips follow established air routes. Lieut. Cousland, of Bolling Field, who has been the Secretary's personal pilot now for nearly two years, tells us that for a six-week period during the past summer, in order to make a personal survey of the waterways of the United States, Mr. Hurley flew to the headwaters of practically every creek in the United States. The Mississippi and its many tributaries, the Columbia River System, the Great Lakes, and other waterways seemingly without end, were flown over. Inspection of out-of-the-way Army posts which the Secretary invariably makes via air, has also taken him over aerial byways from the Atlantic to the Pacific and from the Gulf to Canada.

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THE VERY LATEST IN CRASH TRUCKS

Officers assigned to the Office of the Chief of the Air Corps in Washington get their flying time at Bolling Field. "We trust, however," says the News Letter Correspondent, "that this has nothing to do with the advent on the field of a new and shiny red crash truck, which with all its glowing color is a very efficient piece of machinery.

Manned by a crew of three, it can travel at high speed over rough ground to the scene of a crash, and by means of a special foamite generator and pumping unit, spray fire suffocating foam in quantities sufficient to extinguish in short order even the most ambitious gasoline blaze.

Hack saws, bolt clippers, acetylene cutting equipment, and a variety of grappling hooks, wrecking bars, etc., complete the truck's businesslike accouterments. Its debut at Bolling Field was marked by a practical demonstration of its efficiency when on a hurry call it traversed the length of the field at a 50-mile per hour clip to make short work of a very satisfactory fire fed by old airplane wings, rubber tired, cracker boxes, gasoline soaked excelsior, much engine oil, and other inducements towards a healthy blaze.

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HOW LONG CAN A PURSUIT PLANE FLOAT?

Contrary to popular belief, a Pursuit plane landing on the water does not sink at once. To determine how long such a plane may be expected to float after a forced landing at sea, a demonstration, under the supervision of the Commanding Officer of the 18th Composite Wing, was recently conducted in the Hawaiian Department, during the course of which a P-12B was dropped into Pearl Harbor. It floated in the water twenty minutes while Lieut. George P. Tourtellot, on duty at Wheeler Field, performed experiments with rubber life rafts.

Lieut. Tourtellot demonstrated that life rafts may be launched quickly either from the life raft carrier he has invented for Pursuit planes, or from a carrier placed inside the fuselage. The experiments indicated that the raft may be launched more quickly from the carrier which is attached to the upper wing, but that either method is feasible.

While personnel looked on, Lieut. Tourtellot demonstrated how to launch the raft, and then rowed one ashore. The plane showed no signs of sinking after 20 minutes in the water. It was suspended by a boom over the water and thrown into the water from a height of several feet. The plane was due for major overhaul and, aside from damaged wings which had already been condemned, the plane was not injured by its plunge.

Supplementing the above data, which was submitted by the Correspondent of the 18th Composite Wing, Fort Shafter, T.H., the following was submitted by the News Letter Correspondent from Wright Field, Dayton, Ohio:

"Word has recently been received at the Materiel Division of an interesting test in connection with service testing of life rafts on P-12 airplanes conducted by the 18th Composite Wing stationed at Fort Shafter, T.H. This Wing had been informed that they would be supplied with life rafts in sufficient number for the equipment of each airplane in their possession. No question arose as to the adaptability of this equipmentto the Observation, Attack, and Bombardment types, but information had been received from Selfridge Field that the P-12 types on landing in the water immediately turned over on their backs and remained in that position, which resulted in considerable discussion as to the best location for carrying the life raft on such an airplane. It was finally decided to test a P-12 airplane in a normal water landing and learn its floating characteristics.

The following is quoted from the description of the test: 'The airplane selected for this demonstration was one scheduled for overhaul at the Hawaiian Air Depot. All instruments and other accessories were removed, condemned wings and a condemned engine installed, the tank half-filled with gasoline and all joints, etc., flushed with heavy oil. The airplane was then slung from a derrick at topmost speed, and catapulted into the water.'

With the P-12 construction in mind, the Materiel Division at the request of the 18th Wing, suggested a design for a life raft container for this airplane in which the turtle-back would be cut, the container being placed underneath.

In the test the P-12 dove nose on into the water, remaining in that position for about five minutes. After being in the water about ten minutes, as the lower wing filled, the plane gradually assumed a horizontal position. After about twenty minutes, the plane ceased to sink, probably due to the wings and buoyancy of the gasoline tank which was but half full, and floated in the horizontal position, right side up. The life raft was taken out of the container, spread on the top wing for filling and rowed to shore.

The results of the test indicated that only when landed in shallow water, so that the landing gear touched the bottom would the P-12 go over on its back. If landed normally in deep, comparatively smooth water, it would at first dive beneath the surface, then come up in the floating position and remain so. Thus inadvertently in a life raft test was information contrary to prevailing impressions of the P-12 airplane water characteristics gleaned."

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RETRACTABLE LANDING GEARS

A study is being made at the Materiel Division, Wright Field, of retractable landing gears to determine the best retracting mechanism for low and high wing monoplanes. Study to include consideration of stainless steel and cantilever landing gears applied to both monocoque and frame structures, comparison of weights, and estimate of performance change.

HAZARDOUS FEAT BY NONCOMMISSIONED OFFICER

The history of the Air Corps, both in war and during peace time, is replete with incidents where officers and men, at great risk of life, performed heroic acts above and beyond the call of duty. The conduct of Sergeant Frank D. Neff, 2nd Balloon Company, Fort Bragg, N.C., in making his way on the outrigger of an airship during a violent storm in order to start a refractory engine, is an outstanding example of courage and devotion to duty.

The Airship TC 71, stationed at Langley Field, Va., had been flown to Pope Field, Fort Bragg, N.C., and was secured to the mooring mast at that post. When an airship is secured to a mooring mast, it is the practice, of course, to have a crew aboard, and midnight December 3rd - 4th, happened to be the turn of Lieut. John G. Salsman to take command of the ship.

"There was a rather heavy rain at that time," Lieut. Salsman stated in his report of the incident. "Aboard as crew were myself, Technical Sergeant Merian, Sergeant Richardson, Sergeant Neff and Private Henson. At about 1:00 a.m., the wind started to freshen from the east, with no decrease in rain. At about 1:40 a.m., the wind having further increased in velocity and becoming gusty, I decided it would be better to fly out the storm. Accordingly, Private Henson was dispatched to telephone the organization, and Technical Sergeant Merian left the car to check on the mooring.

"It was but a short time later that he called out that the ship had broken its moorings. With only three men aboard, the ship was barely able to rise due to being heavy by the constant rain. Sergeant Neff had the right motor going almost constantly. After Sergeant Richardson and myself had taken our places on altitude and direction control, respectively, I looked back and could not see Sergeant Neff. Shortly afterward, I saw a light out on the left outrigger and assumed that he was out there. Almost ten minutes after the breakaway, he came in and reported that he had had trouble in starting the left motor and had to hand crank it.

"He had to do the work on the unprotected outrigger with no parachute, it being difficult to get on the outrigger with a parachute attached, and the wearing of same would have hampered him in his movements. (With one motor only, the ship was being carried backward and not under full control). Sergeant Neff, with no orders from me, grasped the seriousness of the situation and understood that the starting of the left motor was necessary to save the ship. He therefore went out in the rain and wind in a most precarious position and worked under most adverse conditions when a slip would have been most disastrous.

"It is my opinion that, had Sergeant Neff not assumed the risk that he did, the airship most undoubtedly would have continued to be driven back over the reservation and would then possibly have been wrecked, with injuries to the crew and loss of government property.

"The actions of Sergeant Neff show a very high standard of training and a very high sense of initiative and duty. His actions at that time were responsible undoubtedly for the protection, if not the saving of government property and lives of the crew."

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DO OLD BOMBS EXPLODE?

Authority having been received to drop two 2,000-pound demolition bombs, an Ordnance demonstration test was recently conducted at the Maili Range in the Waianae Mountains, near Schofield Barracks, Honolulu, T.H. The 72nd and 73rd Bombardment Squadrons of Luke Field carried out the exercise, in order to ascertain whether bombs which had been in storage 10 years would explode. Two 25-lb. bombs were dropped from an altitude of 800 feet, and from an altitude of 5,000 feet there were dropped two 100-lb., two 300-lb., four 600-lb. and two 2,000 lb. bombs. All bombs exploded, except the first 2,000-lb bomb, which was a dud. A second attempt with another 2,000-lb. bomb, from 6,000 feet, resulted in a low order explosion. The cause of the malfunctioning of these big bombs has not yet been determined by the Ordnance experts.

Military and civilian personnel observed the demonstration from the rifle range about half a mile from the target.

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The 18th Composite Wing, Fort Shafter, T.H., started the new year with four enlisted pilots on duty therewith, in addition to officer pilots, viz: Master Sgts. Bernard Wallace, John L. Waugh, Arvin E. Miller and Staff Sgt. M.M. Beach.

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A TALE OF HIGH ADVENTURE

The following letter was received by the Commanding Officer, Headquarters Squadron, Randolph Field, Texas. As a matter of propriety the name and signature is omitted. This letter is believed to be self-explanatory:

"M.S. City of San Francisco
December 7, 1931.

To: Captain Earl Tonkin, Headquarters Squadron,
Randolph Field, Texas.

Subject: Return to Military Authorities.

From: _____A.W.O.L. from Hq. Sqdr.
Aboard M.S. City of San Francisco off Coast of Mexico near port of Manzanilla.

On or about September 16th while on pass I unavoidably absented myself by being caught out in the Gulf of Mexico near Galveston in a rowboat. A 'rum-runner' rescued me from being drowned. A Coast Guard boat gave chase and the 'rum-runner' ran to sea as means of escape. Engine trouble developed and after several days of drifting a Swedish copra 'tramp' bound for a Central American port, offered me aid to a port where a north bound ship could be boarded. After five days aboard this Swedish 'tramp' I was put ashore at a small port in Honduras that was not a port anything other save a few coast wise boats.

Due to various diseases native to the land it was impossible to stay along the coast where it might have been possible to board a ship bound for the States. I headed for the highlands but due to a revolution (these are quite regular) I had to make a quick march for Guatamala, the closest peaceful country. I entered Guatamala after much difficulty but due to the fact that I had no letters or papers of identification, let alone a passport, I was deported without a chance to talk with the council. The Immigration Authorities thought I came in from El Salvador and there I was returned. In El Salvador I asked the council (American Council) for aid and was refused every request, even that of stationary on which to write to Military Authorities in the States.

I boarded the City of San Francisco at La Union. I am bound for San Francisco. The Master of this ship has sent two radiograms to the Commanding Officer for verification that I was a soldier at that station, at present the answer to the first radiogram was that the simple code words could not be decoded. An answer to the second radiogram has not been received. If the answer to the second radiogram is not received before this ship reaches the Port of Manzanilla I will be transferred to the Santa Catalina (same Company) and returned to El Salvador. From La Union El Salvador the only aid that I can possibly hope to obtain is from the Marine Commander located in Manague, Nicarague, some 23 days by foot from La Union. If I am returned to El Salvador, which will necessitate my crossing the hostile line of Sandino and brother outlaws (the life of an American is worthless on sight) I have one chance in a hundred of reaching the Marine Commander in Managua.

Please radio the Santa Catalina if the second telegram of December 5th is not answered by 8:00 A.M. PST, to verify my identity.

(Signed) _____."

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DISAPPEARS AFTER PROMOTION

The 20th Bombardment Squadron, Langley Field, Va., announced the strange disappearance recently of a soldier, Private George Hallis, who dropped from sight a few hours after his promotion to Acting Mess Sergeant. The service record of this enlisted man showed 14 years' service, with "Excellent" discharges, and no reason could be discovered for his leaving.

Army officers are accustomed to seeing soldiers desert or go absent following a reduction in grade, but for a soldier to leave upon promotion is something new.

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Flight tests of three bomb sights sent the 2nd Bombardment Group, Langley Field, Va., from the Materiel Division, Wright Field, about three months ago, were recently completed. The sights were installed in planes and bombs dropped from various altitudes to test the accuracy and ease of operation of the different sights. Written reports on the work were compiled and forwarded to the Materiel Division.

LOST AND FOUND

By the Langley Field Correspondent

Gliding down from the midnight sky into the lights of his home airdrome after having been checked off as "lost," 2nd Lieut. Wycliffe E. Steele, 96th Bombardment Squadron, Langley Field, caused exclamations of surprise and joy one night recently. Steele had been lost on a night flight for four hours when he made his dramatic return.

As part of the Bombardment training, night flights were being conducted at ten-minute take-off intervals between Langley Field, Jamestown, Surrey, Suffolk, Newport News and back to Langley, a flight taking approximately 50 minutes. On this night flight, Lieut. Steele, with Lieut. H.G. Montgomery, Jr., and two enlisted men, took off at 6:50, and nothing was heard of him until five hours later. When the plane did not return after an hour had elapsed, questions began to arise as to what had become of it. After another hour, officials of the airdrome were plainly worried.

The possibility that the pilot had wandered off the course occurred to nearly everyone, because experienced flyers know how easy it is to get lost at night. As time passed and the plane did not return, it was feared a landing had been made in a river or forest. Conditions were not particularly bad for night flying. There was rain up the James River below Richmond, and fog was scattered around in patches, but the larger stars still blinked overhead, and the ground visibility was only slightly below average. At about eleven o'clock, it was figured that the gas supply of the plane was practically exhausted, if the pilot was still flying, and preparations were made to close the hangar. Lieut. G.C. Jamison had gone over the course with another Bomber and dropped numerous flares over isolated areas in the hope of seeing Steele's plane if it happened to be down. Rain, however, drove Jamison back after about 45 minutes, and the search was abandoned for the night.

But as the hangar doors were being closed and most of the watchers had gone to their quarters, the lost plane returned, and the pilot reported that he had been actually lost - and how! Lieut. Steele said that while in the vicinity of Suffolk (the Dismal Swamp area), he saw he was a few minutes ahead of his schedule and decided to fly around a little while before heading back to Langley Field. He felt he knew the country and the course so well that he couldn't get lost. After making a few circles he saw what he took to be the flash of Langley Field's beacon low on the horizon.

Heading forthis beacon, he discovered to his surprise that the lights of such localities as Norfolk, Portsmouth, Newport News and Hampton had disappeared. This experience, however, was not unheard of during these days and nights of treacherous fogs, but the situation was most uncomfortable. When Lieut. Steele arrived at the beacon, however, he found it to be just a flashing light and the locality anything else but Langley Field. Ahead on the horizon flashed another beacon and, thinking that this one must be the Langley beacon, he headed for it. The same experience, however, awaited him there, and another beacon was coming up on the horizon.

He now realized he was off the course and calculated he had gone too far northwest. Setting a compass course back toward the southeast, he came upon a body of water and followed it for about two hours without seeing a sign of a landmark. Deciding to turn northward again, he picked up the beacon lights and, recognizing them as night airways beacons, he started following them, keeping on this course until he arrived at an emergency airways field south of the Potomac River at the town of Haynesville, near Warsaw, Va. He landed here, ascertained his location, pumped extra gas in the upper tanks of the plane and headed back to Langley Field.

Here Steele admits pulling a "boner" for not telephoning to Langley Field. He said he did not realize just how long it would take him to return to Langley and thought he could return before a telephone call could be put through the country towns at that late hour.

Aside from the error of not telephoning, many comments were made by old experienced pilots over the good judgment and level headedness shown by this young pilot in the emergency. Getting completely lost at night, following airways and landing in a strange field by flare, taking off again and returning to the home airdrome without slightest injury to plane or personnel is evidence of skill probably much above average. Incidentally, there is a pilot who will be hard to

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lose - next time.

The enlisted passengers, Technical Sergeant Alfred Bernier and Private H.L. West, did not know what the flight was all about until the landing was made to find location. They thought they had happened to get in a plane which was making a whale of a long night flight.

Lieut. H.G. Montgomery, Jr., co-pilot, said that this was his first night flight around Langley Field and he was not worried the least bit, because he was "lost" the first few minutes after taking off.

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SELFRIDGE FIELD HARD HIT BY ACCIDENTS

By the News Letter Correspondent

The entire personnel of the 1st Pursuit Group of Selfridge Field grieves the unfortunate and untimely passing of three of its members, 2nd Lieuts. Lawrence W. Koons, Air Corps; Charles W. Wilson, Air Reserve, and Sergeant Walter W. Lauver, Air Corps, all members of the 17th Pursuit Squadron, which occurred in an airplane accident on December 17, 1931, near New Baltimore, Mich.

The accident was the result of a collision between Lieut. Koons, piloting a Boeing P-12 airplane, and Lieut. Wilson, piloting a PT-3A Training plane, in which Sergeant Lauver was riding as a passenger. A flight of six Pursuit planes was engaged in attacking a two-seater Observation plane represented by the PT-3A. One attack, consisting of a timed element attack with the leader going underneath, had been successfully completed by the first element and it was on the first attack of the second element, led by Lieut. Koons, that the crash occurred.

A simple and very effective ceremony was held at Selfridge Field on the morning of December 19th. A short ceremony was conducted by Rev. Schollhase, Chaplain, Reserve Corps, and taps blown, while the entire command of Selfridge Field stood at salute to their fallen comrades. A memorial flight from the 17th Squadron which was planned for that day was called off on account of weather. However, a formation of four planes, with a blank file, was flown over Ann Arbor on the afternoon of Monday, December 21st, when services were held for Lieut. Wilson at his home.

The command of Selfridge Field and the entire Air Corps has suffered irretrievably by this loss.

Adding to our sorrow of the fatal accident of December 17th, we now have 2nd Lieut. E.H. Bobbitt, Air Reserve, missing. Lieut. Bobbitt departed from Selfridge Field on the morning of December 25th for his home at Hot Springs, Va., via Uniontown, Pa. He arrived at Uniontown and departed at 12:20 P.M. This was the last seen of him or his ship. An exhausting search was made by a flight of six officers from Selfridge Field, namely, Captain Ennis C. Whitehead, 1st Lieuts. Harlan T. McCormick, Raymond E. Culbertson, 2nd Lieuts. Thayer S. Olds, Bryant L. Boatner and Carl R. Feldmann.

Many false reports received from various sources were checked and run down by automobile when cold weather, fog and snow made flying conditions impossible. Airplanes from Bolling Field assisted in the search, but to date the plane or the pilot has not been found.

Ed. Note: Wedged in the cockpit of his wrecked plane, Lieut. E.H. Bobbitt was found dead on one of the highest peaks of the Cheat Mountains, near Elkins, West Va., on January 6th. M.S. Simmons, a farmer, and Carl Reefer, a trapper, came upon the wreckage while tramping through the hills in search of the missing aviator, who disappeared on Christmas day. The airplane apparently struck a tree on Fools Knob and crashed, bottom down, in the bushes. The peak there rises almost 4,000 feet. Three miles south Lieut. Bobbitt would have found a clearing on which he could have landed - the only one in that part of the mountains.

Funeral services for the departed Air Corps officer were held on Saturday, January 9th, at Arlington National Cemetery, Va. The pallbearers, all of them on duty in the Office of the Chief of the Air Corps, Washington, were Captains H. M. Elmendorf, Edward E. Hildreth, Lieuts. Evers Abbey, William M. Lanagan, Charles W. Sullivan and Elvin F. Maughan.

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The 75th Service Squadron, Wheeler Field, T.H., recently completed a .22 calibre pistol shooting gallary and, by the amount of business done, it would seem that the gallery is very popular with the men of the 18th Pursuit Group. Some very good scores have been made, such as laying 10 shots in a one-inch bulls-eye at 15 yards.

MANEUVERS BY 18TH PURSUIT GROUP

Just a few interesting lights on the recent maneuvers, wherein the 18th Pursuit Group, Wheeler Field, T.H., participated, may give one some idea why preparation is paramount prior to all major engagements.

The entire Group went on the alert at 6:00 p.m. on Wednesday and remained as such until 6:00 a.m., on Friday. During the entire 36 hours, all departments on the field functioned in a very efficient manner. All officer and enlisted personnel remained on the field throughout the alert period, with the exception of one officer who was on temporary duty at Wing Headquarters at Fort Shafter. Pilots bunked in the hangars near their airplanes.

At 2:04 a.m., Thursday, a call-to-arms was sounded, and at 2:14 a.m., all pilots were in their ships with motors warmed up and in position to take off. At 2:13 a.m. the same day, a P-12B airplane from the 19th Pursuit Squadron was delivered to the 75th Service Squadron for motor change. The change, including running time on the ground, was completed at 4:45 a.m. Request was made for the field to be lighted and the airplane was flight-tested for 15 minutes. The plane was turned back to the 19th Squadron, ready for flight, after an elapsed time of 2 hours and 52 minutes. The 75th believes this to be a record for motor change and test, particularly in view of the fact that it was accomplished at night.

A crash was simulated on the field during the night. The crash crew was notified, and the "crashed" airplane was removed from the flying field in four minutes. At 3:00 a.m., an open parachute was received by the Parachute Department. It was repacked and returned to the organization to which it belonged in 15 minutes.

Four missions, two of them at night, were performed by the Group during the period. In every case the ships were all in the air within eleven minutes after orders were received to take off. Eleven minutes from slumberland to the upper air required some fast moving by both pilots and mechanics.

Telegraphic and telephonic communication was maintained with 18th Composite Wing Headquarters at Fort Shafter during this alert period.

The personnel of the 18th Pursuit Group received valuable training during this maneuver which will be of material benefit during the coming Army-Navy maneuvers in Hawaiian waters in February, 1932.

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GENERAL MALONE INSPECTS LANGLEY FIELD

Major-General Paul B. Malone, commanding the Third Corps Area, inspected Langley Field on December 10th. While at the Field, the General, who was accompanied by Lieut.-Col. Ned B. Rehkopf, General Staff, was the guest of Lieut.-Col. Roy C. Kirtland. Lieut. Marion L. Elliott was the General's aide during the time the latter was at Langley.

Promptly at nine o'clock, General Malone began his inspection with the Second Bombardment Group. Following the Group inspection, the General gave the Group Commander, Major H.A. Dargue, a tactical problem wherein it was assumed that a hostile force was crossing the James River Bridge. The mission of the Group was to repel this force. The Group got under way a short time following the announcement of the problem, and in about 45 minutes the mission was completed.

In the afternoon of December 10th, General Malone directed his inspection to the rest of Langley Field, particularly the new buildings under construction.

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31st SQUADRON (Bomb.) HISTORY DESIRED

The historian of the 31st Bombardment Squadron, March Field, Calif., is busy as a bee these days. The 31st has a long and brilliant history and preliminary investigation was it that among its war time members were Captain St.Clair Streett and Charles S. (Casey) Jones of Curtiss fame.

During the 1931 maneuvers, Mr. Walter C. Davis, of the Davis Aircraft Corporation, Richmond, Indiana, and a war-time member of the 31st Aero Squadron, made himself known to Captain Earle G. Harper, then Commanding Officer of the 31st. The meeting took place at Wright Field. Mr. Davis furnished Captain Harper with a copy of the war-time "skull and bones" insignia of the 31st and, as a result, permission was requested from the Chief of the Air Corps to register this as the insignia of the "rejuvinated" 31st. Any former members of the Squadron who have data on its history are assured that the historian will appreciate receipt of such information.

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WAR DEPARTMENT ORDERS AFFECTING AIR CORPS OFFICERS

CHANGES OF STATION: To Bolling Field, D.C.: 1st Lt. Francis B. Valentine from Philippines.

To Chanute Field, Rantoul, Ill.: 2nd Lts. A.J. Kerwin Malone from Philippines, Milton M. Towner from Panama, F. Edgar Cheatle from Hawaii.

To Crissy Field, Calif.: 1st Lt. Bushrod Hoppin from Philippines.

To Barksdale Field, Shreveport, La: Capt. John P. Temple, from Scott Field.

To Brooks Field, Texas: 2nd Lt. Edward A. Dodson from Hawaiian Dept.

To Langley Field, Va.: 1st Lt. Mark R. Woodward from Aberdeen Proving Ground, Md.; 2nd Lt. Willard R. Wolfinbarger from Philippines.

To Kelly Field, Texas: 2nd Lt Fred S. Stocks from Hawaiian Department; 1st Lieuts. Wilfred H. Hardy and Walter C. White from Philippines.

To Hawaiian Department: 2nd Lt. Hanlon H. Van Auken from Selfridge Field; 2nd Lt. Robert B. Davenport from Mather Field, Calif.; 2nd Lt. Joseph W. Baylor from Mitchel Field, N.Y.; 2nd Lt. LeRoy Hudson from Brooks Field, Texas; 2nd Lt. Charles D. Fator from March Field, Calif.; 2d Lt. Casper P. West, Chanute Field.

To Panama Canal Dept.: 2nd Lt. Herman F. Woolard from Scott Field, Ill.

To Philippines: Capt. John G. Whitesides from Wright Field, Ohio; 1st Lt. Leon W. Johnson from Mitchel Field; 2nd Lts. Walter R. Agee and Richard D.Reeve from Chanute Field; 1st Lt. Oscar L. Beal and 2nd Lt. Ford L. Fair from Fort Crockett; 1st Lt. Alfred L. Jewett from Kelly Field; 2nd Lt. Gerald G. Johnson from Fort Sill, Okla.; 2nd Lt. David R. Gibbs from A.F.S., Kelly Field, Texas.

To Fort Sill, Okla.: 1st Lt. Rowland Kieburtz from Hawaiian Dept.

To Maxwell Field, Ala.: 1st Lt. John A. Case from duty with 37th Division Aviation, Cleveland, Ohio; Capt. Aubrey Hornsby from Philippines.

To Rockwell Field, Calif.: Capt. Harvey H. Holland from foreign service.

To Newport, R.I.: Major Follett Bradley, Army War College, Washington, to Naval War College, as student 1932-1933 course.

To March Field, Calif.: 1st Lts. Kirtley J. Gregg and Milton M. Murphy from Philippines.

To Hqrs. 9th Corps Area, San Francisco, Calif.: Lieut.-Col. Lawrence W. McIntosh from Crissy Field, Calif.

RELIEVED FROM DETAIL TO AIR CORPS: 2nd Lieuts. Andrew J. Adams, Van H.Bond, James H. Carlisle, Howard H. Dudley, Charles E. Hoy, Earle B. Leeper, Victor J. McLaughlin and Harold R. Uhlman to Fort Francis E. Warren, Wyo.; Wm. J. Mahoney to Infantry, 2nd Div., Ft. Sam Houston, Texas; 1st Lt. John H. Hinds and 2nd Lt. Robert J. Cardell to Field Artillery, 2nd Div., Fort Sam Houston; 2nd Lt. John F.M. Kohler to 13th Cavalry, Fort Riley, Kansas; 2nd Lt. Stephen R. Hanmer to 7th Engineers, Fort Benning, Ga.; 2nd Lt. Chester J. Diestel to 6th Coast Art., Fort Winfield Scott, Calif.; 2nd Lt. Robert Bard to 6th C.A., Ft.Winfield Scott.

TRANSFERRED TO THE AIR CORPS: 2nd Lts. Harry G. Montgomery, Inf. and Harold Q. Huglin, Field Artillery, with rank from June 13, 1929.

PROMOTIONS: 1st Lt. Charles H. Dowman to Captain, rank from Dec. 12th; 2nd Lts. Shelton E. Prudhomme and Leon W. Johnson, rank from Dec. 1, 1931; Guy B. Henderson, rank from Dec. 3, 1931, to 1st Lieutenant.

RETIREMENT: 2nd Lieut. Frank L. Skeldon, Station Hospital, Ft. Sam Houston, Texas, to proceed to his home to await retirement.

ORDERS REVOKED: Assignment of 2nd Lt. John C. Crosthwaite to March Field.

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COLONEL LONGANECKER GOES TO SAN ANTONIO.

Lieut.-Col. Ira Longanecker, for the past four years Chief of the Information Division of the Office of the Chief of the Air Corps in Washington, was transferred to Fort Sam Houston, Texas, to assume the duties of Air Officer of the Eighth Corps Area. The Colonel left for his new station the first of the year.

During his tour of duty in Washington, Col. Longanecker supervised the photographic, press relations and foreign liaison activities of the Air Corps, and in 1931 headed the Intelligence Section of the Staff of the 1st Air Division during its extensive air maneuvers throughout the northeast.

Col. Longanecker's departure occasioned much regret. Best wishes are extended him for success in his new assignment.

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General Henry C. Pratt, Col. A. W. Robins and ten other officers on duty at the Materiel Division, Wright Field, paid a visit to Selfridge Field, Mich., on January 8th. The General and his party made the visit an occasion for a series of consultations regarding engineering and supply matters and of visiting and looking over the new construction at the field. The party made the trip in a C-4A (Ford tri-motor) airplane, piloted by Lieut. H.G. Crocker, of Wright Field.

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NOTES FROM AIR CORPS FIELDS

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WALKER

Air Corps Tactical School, Maxwell Field, Montgomery, Ala., Jan. 1, 1932:

The Tactical School was recently honored by a visit of Assistant Secretary of War for Aviation, F. Trubee Davison, and General Fechet, Chief of the Air Corps, en route to New Orleans, where Mr. Davison was scheduled to make an address.

The outbreak of promotions continues, with Lieuts. Harold George and Emil C. Keil, receiving the coveted honor with the usual appropriate ceremonies rendered more amusing by the unwonted bashfulness of the recipients. Officers who have never seen a promotion list are now inquiring as to where such a thing may be found.

Maj. G.E. Lovell, Jr., notified of his award of the decoration as an "Officer of the Order of St. Maurice and Lazarus" by the Italian Government in recognition of services rendered by him while Assistant Military Attache for Air to Italy during the period 1927-1931.

The construction of permanent buildings continues despite a few unbelievers, the new Post Exchange building being the latest accepted. It has not been occupied yet, so no one knows what is wrong with it.

The construction of a new water tower of 300,000-gallon capacity insures bigger and better baths for Maxwell Field, but throws the old 50,000-gallon one on the market. Someone bid $5.00 for it for a bird bath, provided the Government would take it down. The offer was referred to the higher authorities for instructions.

Hunting prospects in this vicinity are rapidly being classified as the well-known so-and-so rumors, and would-be Nimrods are losing enthusiasm. The latest unsuccessful one was a daybreak squirrel hunt staged by three officers and a sergeant. Their first mistake was hunting in the woods instead of the school. But be that as it may, one captain, who is turning gray, failed to shave and as a result was wearing an airedale fringe of soft gray. On entering the woods, he was startled to have a very young gray squirrel rush forward in welcome, squeaking "mamma". He was so startled that his gun went off and killed the young offspring. This officer has now lodged the grave accusation that the sergeant lured him on the expedition for use as live bait.

Rotten flying weather handicapped flying activities of the school but resulted in a number of welcome visitors being rained in, among whom was Capt. H.W. Flickinger, who came down to ferry a P-12-C back to Dayton. Then Lieuts. Halverson, Arnold, Vandenburg, Nowland, Wertzsmith and Mower, ferrying training planes to Randolph Field, were delayed two days. Maj. C.F. Bevans, M.C. and Capt. Myron Wood, en route to Bolling, were also delayed.

One of the interesting annual events of the Army was completed with the conclusion of the inspection of Maxwell Field by Col. C.A. Bach, I.G.D., Inspector General of the Fourth Corps Area. The aftermath of this inspection will probably be still more interesting for the individuals concerned.

Orders assigning 1st Lieut. K.C. McGregor to Maxwell Field were greeted with delight, for the shortage of officers for staff and post duties insures every officer's having enough to do to keep him from growling about the weather. Every chance to share these duties with anyone else is a source of pleasure; generosity is personified here.

The arrival of three B-6 airplanes gives the students more things to fly with no place to go. These arrivals more than conterbalance the loss of an O-25 that flopped Lieut. J.W. Persons in a muddy corn field. Our record of success with O-25's averages exactly fifty per cent casualties on cross-country missions.

Major Curry, A.C., Commandant, and Maj. Hume Peabody, A.C., Assistant Commandant, ferried two BT-2B's from Bolling.

Social activities of the School continue in full swing and include many functions given by the residents of Montgomery. The present popularity of the Air Corps promises to be increased by the publication of the Junior League edition of the Montgomery "Advertiser" of the impressions of the city by officers of the school. Capt. Don Wilson contributed: "Montgomery, a genial village that has not outgrown its cobblestones", while Major Burwell contributes: "September Morn!!!" Use your own judgment on the last.

V-6227, A.C.

Randolph Field, Texas, December 18th:

Second Lieut. John E. Barr, student officer at Randolph Field, was critically wounded as the result of a gun battle which terminated with the death of Thomas Bemus, 18, San Antonio High School student, who with two masked companions held up Lieut. Barr and his companion, Miss Jane Cohee, as they were returning early Sunday morning, December 13th, from a dance at the Saddle Club.

While one youth remained at the wheel of an automobile, his two masked companions walked up to Lieut. Barr's car. With threats of a beating to be administered, Bemus ordered Lieut. Barr to get out of the car. As he stepped from the car, Barr removed a pistol from the door pocket, and one of the masked boys fired at the officer, striking him in the chest. Lieut. Barr returned the fire, and his assailant fell. Several other shots went wild.

The other youth then fled to the car and the automobile roared away. With Miss Cohee, Lieut. Barr drove to the Olmos Drug Store. There, it was found that the bullet had penetrated his chest just under the right lung. He was treated by a physician and sent to the station hospital at Ft.Sam Houston.

William Duke, 19, hotel bellboy,and Milton Ellis, another High School student, were apprehended when they arrived at the Robert B. Green Memorial Hospital, with the body of Bemus. Not knowing that their compaion was dead, they had returned to the scene to remove him to a hospital. Later, it was learned that the same youths had participated in several other holdups Saturday night, when some of the stolen articles were discovered on their persons.

An inquest into the death of Bemus was conducted by Justice of the Peace Shook, Monday, December 14th. Funeral services for the dead youth were held that afternoon. Bemus is survived by his mother, one sister and one brother, all living in San Antonio.

Latest reports from the hospital state that Lieut. Barr's condition is improving.

Maj. Martin recently entertained the Justices of the Peace and constables in order to become acquainted and to establish proper coordination with peace officers of the surrounding community. A luncheon was served at the Bachelor Officers Quarters at 1:00 P.M., after which a tour of inspection was made of the entire post.

In the afternoon and evening of November 21st, the Officers and non-commissioned officers and their wives and children were guests of the Seguin Chamber of Commerce. There was a well-filled program of entertainment, which started with a football game between Randolph Field and a Lutheran College team at 3:30. Both teams played excellent football. The Lutheran College won with a score of 7 to 6, after the referee disallowed an additional touch down claimed by Randolph Field.

A barbecue was served to some 600 visitors, after which a theater party was enjoyed. The Seguin Elks Club was host to the commissioned officers with a dance beginning at 8:30. The American Legion was host to the non-commissioned officers at the Seguin Bowling Club. Many officers and their wives expressed themselves as highly pleased with the courtesy extended by the Seguin Chamber of Commerce. Classes were suspended during the afternoon to enable student officers and non-commissioned officers to attend the entertainment.

March Field, Riverside, Calif., December 16, 1931:

Shortly before the departure of the 7th Bombardment Group units from Rockwell Field for their new home at March Field, they were unfortunate in losing the following able officers of the Air Corps Reseve who reverted to inactive status: 2nd Lieuts. Wallace J. O'Daniels, Rubbis M. Thornton, Russell W. Munson, Edward F. Kiessig, James A. Fisk, James D. Kregesher and Richard M. McGlinn.

Maj. G.H. Brett, Commanding Officer of Selfridge Field, stopped off en route to the East and tried out one of the new P-12E's. He was very favorably impressed with the plane.

Major Leo Walton, Lieuts. Barney Tooher and Homer Chandler recently returned from the Engineering Conference held at Wright Field. Maj. Walton went on to the office of the Chief of the Air Corps on official business for the Commanding Officer, and thereby avoided the experience of a rather exciting train wreck in which Lieuts. Tooher and Chandler participated. Lieut. Chandler stated that three train wrecks were too many and Lieut. Tooher said one was

enough. Both declared that from now on they prefer to travel by air.

Shortly before the departure for March Field, more or less as a farewell gesture, the Rockwell Field Tennis Team took the Naval Air Station Team into camp. Score: Army 5, Navy 3. One match unfinished. Lieuts. J.E. Briggs, J.N. Stone and S.K. Robinson, 95th Pursuit Squadron; Lieuts. C.H. Howard and R.A. Munson, 11th Bombardment Squadron and Pvt. Dolf Muehleisen, 7th Bombardment Group Headquarters, comprised the victorious Army team.

Among the passengers on the new U.S.A.T. REPUBLIC, when it sailed November 25th from San Francisco, was Sgt. J.E. Koziak, 11th Bombardment Squadron, who for the past several months was NCO. in charge of the Squadron Armament Section. Sgt. Koziak goes to the 4th Observation Squadron, Luke Field, T.H., as replacement for Sgt. Andrew J. Levesque.

March Field's supply of Bombardment ships was increased by ferry trips performed by Capt. James L. Grisham, Lieuts. Charles H. Howard, John M. Davies, F.W. Ott, C.D. Fator and J.L. Magden. These officers piloted O-38's East and picked up Keystone B-3A's at Langley Field for delivery to the 7th Bombardment Group.

The 11th Bombardment Squadron suffered the loss of 1st Lieut. William L. Scott, Jr., for the past three years squadron Operations Officer, when orders were received for his transfer to the Panama Canal Department.

Fourth down and goal to go! The fourth officer, within recent date, has filled a blank file by taking unto himself a "ball and chain". The uninitiated and the experienced are - Captain Miles W. Kresge, Capt. Earl G. Harper, Lieut. Lewis R. Parker and Lieut. T.E. Nettleton.

<u>7th Bombardment Group</u>: Coincident with the publication of the Surgeon General's annual report, stating that automobile accidents constitute the leading cause of the 533 deaths in the Army last year, March Field personnel seemed to be the victims of an epidemic of automobile accidents.

On the evening of November 23d, Pvts. 1st Cl. William Huber and Charles A. Lyons, both of Headquarters, 7th Bombardment Group, were among a party of four in Lyon's Ford Roadster when it left the highway and overturned. Huber, the driver, who was blinded by the lights of an oncoming truck, suffered injuries, necessitating the immediate amputation of his left arm. The rest of the party escaped with slight injuries. Huber was taken to the Hospital at Palmdale, Calif., near the scene of the accident, and later removed to Letterman General Hospital, San Francisco, in the 64th Service Squadron's big Ford Transport, piloted by Mr.Sgt. Boyd Ertwine and attended by Maj. Lewis E. Browne (MC) of the March Field Post Hospital.

On December 5th, Pvts. Walters, Stackwell and Boston, 11th Squadron, and Mathews, 9th Squadron, miraculously escaped serious injury when their car skidded off the snow packed road in the San Jacinto mountain district near the field and came to a stop astride a huge boulder, the only thing which prevented a further descent to the foot of a very steep canyon.

On December 6th, Cpl. Yeager and Pvt. 1st Cl. Frank, Headquarters, 7th Bombardment Group, accompanied by Pvt. Garretson, 70th Squadron, all homeward bound from a week end in Los Angeles, were severely cut and bruised when their car left the highway between Pomona and Puente and crashed into a row of trees. The accident was caused by Garretson's effort to avoid an oncoming truck. All three were treated at Pomona Hospital for minor injuries.

Any traveler in the vicinity of March Field, on the evening of Nov. 18th, was a witness to a very realistic mock war staged through the cooperation of pilots and ships of the 7th Bombardment Group and a detachment of officers and enlisted men from the 63d Coast Artillery (AA) from Ft. MacArthur, near Los Angeles, Calif.

Three Curtiss Condor bombers of the 11th Bombardment Squadron operated from a two-mile altitude over the Riverside-March Field-Winchester Area, for a three-hour period. With Lieut. Charles H. Howard (Squadron Commander) leading the three-ship element, and Lieuts. Snavely and Ronin flying the wing positions, the ships left the ground at 6:30 P.M. and were soon lost from sight. Over Riverside the ships separated and, following a carefully pre-arranged schedule, flew over the field at ten-minute intervals and at altitudes ranging from 6,000 to 10,000 feet. As soon as the sound detectors of the Artillerymen picked up the drone of the huge Conqueror motors, long figures of light combed the sky, groping for the mock enemy. The efforts of the Artillerymen met with success in most cases, in so far as keeping the ships "on the spot" was concerned.

Despite the fact that all the flying personnel wore over 50 pounds of additional clothing, they reported upon their descent, that this "Sunny California" stuff does not apply at this time of the year.

An unusual number of large black cigars was noted among the officers of the post on December 1st. The occasion was the promotion of Lieut. Younger A. Pitts to Captain. Captain Pitts is at this time in command of the 9th Bombardment Squadron. Congratulations were extended upon the deserved advancement of this popular and efficient officer.

The 11th Squadron has for the time being, a new squadron Commander in the person of 1st Lieut. Ralph A. Snavely, due to the temporary absence of 1st Lieut. Charles H. Howard on an extended cross-country trip to Langley Field, in connection with the ferrying to this station of new Keystone B-3A's.

Two new non-commissioned officer replacements from foreign service joined the 11th Bombardment Squadron on November 15th. Staff-Sgt. Roy Medcalf, 28th Bombardment Squadron, Camp Nichols, and Sgt. Andrew R. Levesque, 4th Observation Squadron, Luke Field, were the two new "Jiggs Squadron members".

Lieut. Charles H. Howard recently flew to Alhambra, Calif., to address the student body of the Abraham Lincoln High School. His subject was "The Modern Airplane", and his talk was received with interest and enthusiasm. The gathering of 2400 students made this evident. Lieut. Howard spoke at the invitation of Capt. Wing (Retired), R.O.T.C. instructor at Lincoln High.

From November 13th to November 24th, certain personnel of the 7th Bombardment Group, received a taste of the difficulties under which a "commuter" lives and works.

Service test on the L-1 type bomb sight was begun at Rockwell Field on November 16th. Because of the unavailability of a suitable bombing range near March Field, it was necessary to conduct the test at Rockwell. B-2 bombers from the 11th Squadron were used throughout the test. Two bombing teams were furnished by the 11th Squadron and one by the 31st Squadron. Enlisted personnel were furnished by the 9th, 11th and 31st Squadrons. A total of 116 bombs (100 lb. and 300 lb.) were dropped from altitudes of 6000, 9000 and 12,000 feet. Test was completed on Nov. 24th. Bombing teams flew daily to Rockwell, rationing at noon at the Rockwell Officers' Club and the 76th Service Squadron Mess, and returning home in the late afternoon.

The personnel of the 23d Photo Section (assigned to 7th Bombardment Group) has been making the proverbial busy bee look like a sloth and a dullard in comparison. Their activities in the past month included a great deal of mosaic work, the biggest part of which was a photographic mosaic of the terrain West of Los Angeles, covering approximately 40 sq. miles, for the Olympic Games Committee. This project was carried out by 1st Lieut. Donald G. Stitt, Commanding the Section and Tech. Sgt. S.A. McAlko.

The 23d Photo Section will probably have a new "in command" in the near future. Lieut. Donald G. Stitt, at present in command, leaves soon for the Hawaiian Department. Lieut. Minton Kaye just arrived from service in Hawaii and received assignment to the 23d Photo Section.

The personnel of the 9th and 31st Bombardment Squadrons have been meeting with unexpected success in tracing the wartime and succeeding histories of their respective organizations.

A letter was received from Capt. St.Clair Streett of Wright Field, a wartime member of the 31st, which aids that squadron considerably in its historical research.

The 9th Bombardment Squadron recently had word from a former member of the Squadron, who was with the organization almost all through the war, and he is expected to be of material assistance in verifying part of that squadron's claim to a niche in the hall of illustrious organizations.

17th Pursuit Group: Capt. Frank O'D. Hunter, Group Commander, and Lieut. David D. Graves, 95th Pursuit Squadron, returned Nov. 25th, from Seattle, after inspecting a new high speed Pursuit airplane of the Boeing factory. This airplane is expected to be ready for production in February.

Capt. William C. Morris, who reported to March Field from the Philippine Department, where he was Adjutant of the 3rd Pursuit Squadron at Clark Field, Fort Stotsenburg, was detailed as Group Operations Officer, vice Lieut. Joel E. Mallory. The latter was assigned to the 34th Pursuit Squadron, where he will be a Flight Commander.

Three officers who recently reported for duty with this Group from Wheeler Field, Hawaiian Department, First Lieuts. Joel L. Loutzenheiser, John H. Dulligan and Stewart W. Towle, were assigned as Assistant Group Operations Officer, Engineering Officer of the 73d Pursuit Squadron and Group Supply Officer, respectively.

Lieut. Clarence M. Sartain, Air-Res., was married Nov. 25th, at Santa Maria, Calif., and left soon after for his home in San Antonio, Texas, where he was called by the death of his father.

Lieut. Leo H. Dawson, Commanding Officer, 95th Pursuit Squadron, departed Nov. 18th on ten days' leave of absence. Lieut. James E. Briggs commands the 95th during the absence of Lieut. Dawson.

Tech. Sgt. Glenn E. Freshwater, 70th Service Squadron, received orders transferring him to the Hawaiian Department, and to depart on the December 30th transport.

Since November 9th, guard mount was a formal ceremony conducted at this station daily. This Group and the 7th Bombardment Group furnish the guard and perform the ceremony on alternate days. There is a keen rivalry between the two groups as to which performs the smartest ceremony. The music, as well as the rivalry, attracts quite a number of spectators to the parade ground, which is located between the Hospital and Post Exchange. Regulations governing Formal Guard Mount and the Manual of the Sabre have been working overtime. Adjutants, Officers of the Day and Officers of the Guard have discovered that wearing white lisle gloves are no help to them in manipulating their sabres. To date, however, no accidents of a serious nature were reported.

Scott Field, Belleville, Ill., December 26, 1931:

Staff Sgt. Max Bronkhurst, Signal Corps pigeoneer at Scott Field for the past 18 months, departed for his new station at Ft. Sam Houston, Texas. With the financial assistance and cooperation offered by the Commanding Officer, Lt.-Col. John A. Paegelow, the Scott Field loft has made an excellent showing during Sgt. Bronkhurst's tour of duty. Birds from the loft entered all the big races in the central part of the United States and won numerous awards. In the many pigeon shows the past two seasons, Scott Field homers have usually carried off the major portion of ribbons in their classes, and Col. Paegelow was beginning to wonder whether he would have to enlarge his office in order to make room for the trophies.

Pvt. Harry Meyer, whose home was in St.Louis for many years, replaced Sgt. Bronkhurst as pigeoneer. Pvt. Meyer has been at the Ft. Monmouth lofts for nearly three years, where he has received valuable instruction under Thomas Ross, the Army pigeon expert.

Maj. Lyle C. White, Medical Corps, reported for duty at Scott Field, replacing Maj. Harrison H. Fisher, who was ordered to Dayton.

Selfridge Field, Mich., Dec. 15, 1931:

Maj. George H. Brett, Commanding Officer of Selfridge Field, returned Dec. 13th, after having enjoyed two weeks' leave of absence at Menlo Park, Calif.

Maj. Brett left by rail Nov. 17th to the West Coast to secure and ferry an O-38B from the Douglas Aircraft Co., Inc., Santa Monica, Calif., to Wright Field, Dayton, Ohio, for delivery to the 107th Observation Squadron, 32d Division Aviation, Michigan National Guard.

Arriving at Santa Monica, Nov. 20th, he proceeded to Menlo Park, where he spent his leave of absence.

The O-38 was received from the contractor on Dec. 7th, and Maj. Brett commenced his long journey homeward, via March Field, Riverside, Calif.; Tucson and Phoenix, Arizona; Fort Bliss and Sweetwater, Texas; North Kansas City, Mo.; Scott Field, Ill. and Dayton, Ohio, arriving thereat on Dec. 12th. The trip from Wright Field to Selfridge Field was made by rail during the night of Dec. 12th. The only incident which marred the trip was a delay of one day at Sweetwater, Texas, due to inclement weather.

Maj. Brett had the pleasure of conducting Jean de la Cierva, inventor of the Autogiro type of airplane and party on an inspection trip around Selfridge Field. After seeing the new buildings, etc., the party proceeded to St.Clair,

Mich., where Cierva inspected the new pusher type of Autogiro, made by the Buhl Aircraft Corp.

General Mitchell, former Assistant Chief of Air Corps, visited Selfridge Field, Jan. 2nd. He was conducted around the post by Major Brett. The General was keenly interested in the new construction and remarked that the hangars were the most complete he had ever seen. General Mitchell was impressed by the new type of planes and inquisitive of future development of Pursuit.

Third Attack Group, Fort Crockett, Texas, Dec. 15, 1931:

Two Attack planes, belonging to the 90th Attack Squadron, were damaged by fire the night of Nov. 18th, in the large hangar at Ft. Crockett. The fire was discovered at about 10:00 o'clock by the airdrome guard, when he saw smoke issuing from the hangar in which the planes of both the 8th and 90th Attack Squadrons are kept.

Help was quickly summoned from the Post, and in a very short time the flames had been checked, but not before most of the fabric on one, and part of another plane had been destroyed. Luckily, the two Attack planes were right next to the hangar doors enabling the men to stop all danger immediately.

The first of a series of radio broadcasts this season by the Third Attack Group Orchestra was given on Dec. 9th over radio station KFUL, Galveston, Texas. The band, under the direction of Warrant Officer Carl Mueller, played overtures, marches and popular pieces. This program has been made a weekly feature of the radio station.

The duck season in Texas came to a close Dec. 15th. All in all, it was only a fair year for the officers and men who made use of the Third Attack Group duck camp at Matagorda.

Second Lieut. Walter S. Lee departed Dec. 16th on 12 days' leave prior to sailing from San Francisco on Dec. 30th, for Hawaii, to begin a tour of duty.

Lieut. Lee was a member of the 60th Service Squadron, since his graduation from the Air Corps Flying School at Kelly Field in 1928. The officers and men of the Third Attack Group wish him cloudless skies and happy landings.

Lieut. and Mrs. Robert K. Taylor received the congratulations of all their friends over the birth of a son, Robert Kinder, Jr., on Monday morning, Dec. 14th, at the John Sealy Hospital.

Three squash courts recently completed are kept busy most of the time by the officers and enlisted men. The officers are required to take a certain amount of instruction in the game, and then a prescribed amount of exercise each week in the courts.

The enlisted men are given the use of the courts from six to nine in the evening.

A balcony was constructed to enable spectators to watch the players. A shower room and a locker room were constructed to add to the convenience of the players.

Bolling Field, Anacostia, D.C., December 24, 1931:

One flight from Bolling during the month of December was posted at the Operations Office with considerable regret, when General Fechet took off for New York on his last flight as Chief of the Air Corps. Incidentally, the farewell party given the General at the Army and Navy Country Club near Washington, is still being discussed as one of the best parties held in these parts in recent years, which, considering Washington's extensive social calendar, means that it was quite a get-together.

The Field's holiday plans this year featured the annual Children's Christmas Party. This party has become an affair of considerable importance to the Air Corps' younger generation in and around Washington. Last year, over 60 children attended and old Santa himself, whiskers, pantaloons and all, following the best traditions of the Air Corps, arrived via plane personally to present each youngster with a nice present. Bolling Field, by the way, is quite proud of its junior showing. A roll call of the officers' families on the Post discloses the very satisfactory total of 18 children. Major Davidson, as C.O., sets a splendid example in this regard, and is justly proud of the latest addition to the Davidson household - twin girls, Frances and Julia by name.

Although Lieut. Giovannoli is not registered as yet on the exclusive roll of the Caterpillar Club, it can not be said that he isn't giving the matter due consideration. In conducting tests on the new Hoffman triangular parachute he has already made one jump during the month. Four of the men working with him have followed his example with the result that Bolling Field is becoming quite the training center for embryo caterpillars.

The latter part of December witnessed much cleaning out of desks and files in the various offices on the post. Unfortunately, it was not prompted by high and worthy resolves to turn over a new leaf with the New Year, but by a general swapping under orders, of jobs among the younger officers, viz:- Lieut. Stranathan as Post Exchange Officer; Lieut. Yeager, Assistant Engineering Officer; Lieut. Willis, Mess Officer and Assistant Operations Officer; Lieut. Robertson, Personnel Adjutant; Lieut. Giovannoli, Detachment Supply Officer and Assistant Operations Officer and Lieut. Pugh, Assistant Engineering Officer.

Pilots who are so taken with the scenery, or otherwise wander so far afield that they fail to arrive at Bolling before the shades of night have fallen, will welcome the news that a blinker system is being installed for the field's boundary lights. These, no doubt, will wink quite confidentially at late arrivals and their excuses.

Possibly Capt. Baker's beaming countenance upon his return to the Post from his honeymoon in Panama, was the link in the chain of circumstances which led up to Lieut. Stranathan's downfall. At any rate, the bachelors and ladies of Bolling Field (and elsewhere) received quite a shock in the announcement of "Pinky's" engagement to Miss Anne Butler Patterson. As is usual in such cases, the patient is in very high spirits.

Whether it was actually the fog over western Ohio or the resolve upon the part of the particular Bolling 038 in question to have a good joke on the field's new crash truck, we will leave to Lieut. J.P. Ryan, of Langley Field, to answer. At any rate, his cross-country to Indianapolis from Bolling Field ended in a Buckeye pasture, some 60 miles from Fairfield, with the 038 minus a landing gear and one wing.

18th Composite Wing, Fort Shafter, T.H., December 10,1931:

The first half of a transportation problem was successfully completed when, on Nov. 27th, the Wheeler Field Sikorsky, piloted by Lieut. E.B. Hoffman, was flown to the Island of Maui, carrying as passengers Col. J.P. Barney, 8th Field Artillery; Capt. R.H. Finley, Adjutant, Wheeler Field; Capt. L.M. Dyke, Medical Corps, and Mr. R.C. Turner, civilian observer. The plane landed at the field near Lahaina and departed the following day.

This wing participated in several missions during the month, preparatory to the maneuvers in February, 1932. Inshore and offshore patrols, range finding and spotting missions, bombing, drop messages and photographic missions were successfully carried out. It is believed that these preparatory maneuvers will enable personnel of this Wing to perform successfully any mission or missions which may be requested of them during the February maneuvers.

Lieuts. Nick Craw, Otto Weyland, Guy F. Hix and H.L. Smith, having arrived on the U.S.A.T REPUBLIC, were immediately taken over by their many friends and given a taste of Hawaiian hospitality. Lieut. Craw was assigned to Wheeler Field and Lieuts. Weyland, Hix and Smith to Luke Field.

Fifth Composite Group, Luke Field, T.H.: On November 11th, one plane was dispatched from this airdrome for the purpose of dropping leis on the water of the Natatorium at Waikiki Beach, in commemoration of those members of the military service from the Territory of Hawaii who gave their lives during the World War.

November 21st, the Sikorsky rescue airplane, with 2nd Lieut. Robert E.L. Choate, pilot; Pvt. 1st Cl. Charles F. Bibbs, crew chief; and Pvt. Morley S. Roberts, radio operator; made a training inter-island flight, transporting Capts. B.T. Burt and Carl F. Greene, A.C. and Mr. D.L. McClelland, Civil Service employee, to Upolu Point, Island of Hawaii, for the purpose of inspecting service tanks recently installed at Upolu Point, and the warehouse at Homestead Field, Island of Molokai.

The 72nd Bombardment Squadron now holds first place in the Inter-Squadron Boxing with a lead of 55 points over its nearest rivals, the 4th Observation Squadron.

On Nov. 28th, the Post Volleyball Team defeated the Ft. Kamehameha team to win the Sector Championship. Lieut. Pryce is to be commended on the way he brought us our second Sector Championship this year. The team lost but one contest.

The Luke Field glider, which was entered in the National Glider Meet, held at the Galt Glider Airport, was definitely put out of commission when it crashed during its second trial flight. Lieut. Thompson, pilot of the glider at the time, suffered no more than a heartache at seeing four months of hard work go "boom" in as many seconds. Luke Field wishes the Wheeler Field entry the best of luck.

During the period Oct. 27th to Nov. 6th, the 4th Observation Squadron was engaged in practice maneuvers, in preparation for the actual maneuvers to be held in February, 1932. The Squadron performed artillery adjustment, reconnaissance, photography and drop message missions.

On Nov. 4th and 5th, this Squadron performed continuous night patrols of the northern shores of Oahu from 6:00 PM. to 6:00 AM. daily. The maneuvers were carried on successfully throughout the entire period. Accurate firing data was furnished the Coast Artillery, and enemy fleet locations were reported immediately to Headquarters, Hawaiian Department by radio. The time flown by the personnel of the Squadron during these maneuvers totalled 33 hours and 50 minutes. The remainder of the month was spent in aerial gunnery on tow-targets and instrument flying missions.

Boxing now holds the limelight at this station. The Group keenly feels the loss of "Al" Story and "Shanty" Kregan, both masters of the art of fisticuffs, who could always be depended on to chalk up scores for the Group.

Fist Lieut. Edgar T. Noyes who with his family departed for the mainland on the U.S.A.T. GRANT on Nov. 3d, was assigned to duty at March Field, Riverside, Calif.

Three popular bachelor officers also departed for stations on the mainland on Nov. 3d:-2nd Lieuts. Tallmadge L. Boyd and Joseph B. Stanley, Jr., Air-Res.; and Mark D.S. Steenson, A.C. Lieuts. Boyd and Stanley were ordered to Mitchel Field, Long Island, N.Y. to await orders to proceed to their homes after two years on Extended Active Duty Reserve status. Lieut. Steenson was assigned to Mather Field, Calif.

In accordance with the provisions of Training Regulations 440-40, the annual Aerial Gunnery and Bombing Course was conducted during the training period Nov. 1, 1930 to June 30, 1931, for officers of this Command. A total of 38 officers qualified as follows: Expert Aerial Gunner (Pilot's Course) 9; Expert Aerial Gunner (Observer's Course), 26; Aerial Sharpshooter (Pilot's Course), 3.

Hawaiian Air Depot, Luke Field, T.H.: The Engineering Department was exceedingly busy during November, keeping up with the airplane overhaul schedule.

In the Aero Repair, major overhauls were accomplished on 7 airplanes, including 3 A-3B, 2 O-19B, 1 LB-6 and 1 P-12C. In addition to routine work orders, the carpenters from the Aero Repair worked on a new sand blast building which is rapidly nearing completion. The equipment for this new building is being constructed by this Department.

In the Engine Repair Section, a total of 13 planes were overhauled. Major overhauls were made on 3 V-1150, 5 R-1340 and 2 R-1750 engines, and minor overhauls on 3 V-1150 engines.

A flight to the Island of Kauai was made Nov. 25th by Capts. Byron T. Burt and Carl F. Greene, A.C., flying an O-19 airplane; Lieut. Charles G. Williamson, A.C., and Major Brooke, M.C., in a Bomber; escorted by Lieut. Robert E.L. Choate flying the Sikorsky. The purpose of the flight was to deliver the caretaker and supplies to Port Allen Airport, and to make formal acceptance of the fueling installations at that field.

The Good Ship, "Republic", brought in on Dec. 8th, Messrs. J.P. Baird, A.W. Lorain and L.R. Jackson, civilian employees; who were given the old Hawaiian Hospitality upon arrival.

This Department received 8 P-12E airplanes on the U.S.A.T. MEIGS on Dec. 21st. After being assembled, these planes will be assigned to Wheeler Field.

18th Pursuit Group, Wheeler Field, T.H.: Night flying has started again and the 6th Pursuit Squadron is putting them up in elements and flights these nights in preparation for the February maneuvers. The beauty of Hawaii in the moonlight makes night flying a delight. On the occasion of our last flight at night, we were treated to a rare spectacle - a lunar rainbow - which remained

arched over the Waianae Mountains all evening.

An exceedingly interesting and instructive Ordnance demonstration, involving maximum machine gun fire and bombing upon silhoutte targets, was given by the 26th Attack Squadron on Nov. 12th. Results obtained clearly displayed the power and effectiveness of an attack offense, and certain conclusions of tactical and mechanical natures were obtained. Led by 1st Lieut. Nathan F. Twining, the following pilots participated in the demonstration:- 1st Lieut. Leonard H. Rodieck, 2nd Lieuts. George McCoy, Jr., James L. Majors, John C. Horton, John W. Stribling, Jr., William R. Graham, John E. Nuhn and Nelson B. David.

Lieuts. S.W. Towle and J.H. Dulligan and families departed for March Field and we certainly were reluctant to see them go. The Group flew an "Aloha" mission that deeply expressed our regret. We hope that their tour of duty at their new station is a pleasant one.

The accidental death of Lieut. Clapper, while horseback riding in the mountains near Wheeler Field, was deeply felt by all members of this Group. Lieut. Clapper was very popular here. His loss was quite a shock to his comrades.

San Antonio Air Depot, Duncan Field, Texas, Jan.4th:

Congressman and Mrs. Richard M. Kleberg of Corpus Christi, Texas, on a recent visit to the various Army activities of San Antonio and vicinity, paid a visit to this Depot on December 23d. They were accompanied by Brigadier-General C.H. Danforth, Commanding General of the Air Corps Training Center. Congressman Kleberg is the new representative from Texas, succeeding the late Congressman Harry M. Wurzbach.

Lieut.-Col. A.G. Fisher, Commanding Officer, Capt. Warner B. Gates and Lieut. C.E. Thomas, Jr., of this Depot, flew cross-country to Dallas, Texas and return, Dec. 21st. While there they visited the shops of American Airways, Inc., and were highly impressed with the efficiency and exceedingly up-to-date methods and machinery used therein.

Capt. William K. Ennis, 36th Div. Aviation, Texas National Guard, Houston and passenger, on a cross-country trip from Houston to Dallas stopped overnight Dec. 29th-30th.

The holidays passed very quitely and pleasantly at this Depot, with sunshine and balmy weather. On New Year's Day the Commanding Officer and Mrs. Fisher held open house for the officers and ladies of the Post.

36th Div. Aviation, Texas National Guard, Huston, Jan. 10th:

The 111th Observation Squadron sends Holiday greetings and best wishes for continued success for the year of 1932.

Winter activities are under way again after the slack period caused by the aforementioned holidays.

All of the officers are now capable of carrying on two-way radio missions.

To date, those officers who have engaged in puff target work have had considerable success. Before the end of this type of training, we hope to have all officers capable of bracketing a target and then heading for home. Everyone is very enthusiastic about this type of mission, as its value can easily be discerned.

Photographic work has lagged due to inclement weather. Just as soon as the sun decides to shine uninterruptedly for an hour at least, we shall carry on with it.

Various cross-country trips were made during the last month. The major trip (to Kilgore, Texas) was made at the request of Col. J. Lewis Thompson to celebrate the first anniversary of the discovery of the first oil well in that district. Three ships, piloted by Lieuts. Gregg, Eagle and Thompson, made the trip.

Five ships piloted by Capt. Aldrich, Lieuts. Showalter, Austin, Haldane and Eagle scoured the territory around Galveston Bay in a vain search for the bodies of two Houston hunters who disappeared while on a hunting trip.

For the second season the squadron entered a basketball team in the Service League. We had remarkable success with the team last year despite the fact that it was composed of men who hadn't played the game for a number of years. However, we have only one man from last year's team playing this year, but those playing will endeavor to uphold the standards of the squadron.

Fort Sill, Okla., Dec. 26, 1931:

As the Field Artillery School classes gather headway, the activities of both the 1st Balloon Company and Flight "E", 16th Observation Squadron, show a marked increase in cooperative work. It is gratifying to note the increasing interest of the Field Artillery classes in Air Corps tactics and technique, and the corresponding interest taken by air pilots and observers in artillery tactics and firing.

Two Navy pilots, Lieut. W.M.McDade and C.A.P. Brannon, landed at this station with two TG-2 Torpedo planes and mechanics, Aviation Machinist Mates Grimes and Logan. The following day they departed for Midland, en route to Naval Air Station, San Diego, Calif.

Maj. Davis of Crissy Field with Maj. Sanger, of Ft. Bliss, Texas, passenger, in an O-25A serviced here recently while en route to Wright Field, Ohio.

Maj. H.A. Strauss, recent graduate of the A.C.A.F.S. at Kelly Field, serviced an O-25A here, en route to Wright Field, his present station.

Lieut. L.V. Beau of Lowry Field, Colo., ferrying an O-2H from Duncan Field, landed at the Lawton Airport instead of paying us the usual visit. He was forgiven, however, when it was discovered that he had thrown a prop about 3 miles South of Lawton and was unable to make the last 4 miles to Post Field. A new motor and prop from the San Antonio Depot sent him on to the Mile High City a week later. Not to be discouraged, however, Lieut. Beau ferried another O-2H through here on Nov. 24th.

Lieut. Hudson in a C-7A, brought ferry pilots Creech, Kesler and McKinnie to this station to return O-19B's left here by the 88th Observation Squadron on their move to Brooks Field. Lieut. Tidwell flew an O-19B, equipped for towing targets, from Brooks Field to this station on the same day. All four Brooks Field pilots were delayed here several days on account of bad weather.

On Dec. 4th Capt. Grisham and Lieut. Magden landed two B-3A's at this station. They departed the following day for Midland, Texas, en route to March Field, their home station.

The following cross-country flights were made by personnel of this station in the past month: Capt. Frank H. Pritchard with passenger, Lieut. T.B. Whitted F.A., to Kansas City, 1st Lieut. Wm. L. Ritchie returned a borrowed tow-target ship to Brooks Field; Lt. D.T.Mitchell flew to Brooks Field and returned Lieut. Ritchie to this station; Lieut. Stroh, with passenger, Capt. R.E. O'Neill, to Denver, Colo.

Advanced Flying School, Kelly Field, Texas, January 11th.

Congressman Kleberg made an inspection of Kelly Field with General Danforth on December 23rd.

Capt. A.B. McDaniel from the Chief's Office spent the Christmas holidays with his parents in San Antonio and with friends at Kelly Field.

Lts. Levi Beery, J.G. Parker and R.L. Williamson flew here from Dayton in a Y-1C and a Ford Transport, bringing winter flying equipment for Cadets.

Major C.L. Tinker, former Asst. Commandant of the A.C.F.S., stopped here recently on his way to New Orleans from Mather Field, Calif. Lt. D.V. Gaffney piloted Major Tinker from Kelly Field to New Orleans and return.

Capt. Auby C. Strickland, formerly instructor in the Pursuit Section at Kelly Field, was ordered here for duty.

Chaplain Edward R. Martin arrived at Kelly Field for duty.

On January 7th, Flying Cadet Robert J. Potter made a successful parachute jump from 1,000 feet from a P1-D plane in which he had been practicing acrobatics. Attempting a rool, the plane got on its back and went into an inverted spin.

Lieuts. Max Schneider, A.L. Jewett and W.D. Old made ferry trips to Middletown, Pa.; Langley Field, Va., and Dayton, Ohio, respectively.

Privates 1st Cl. William H. Tompkins and Earl L. Wild returned to the 41st School Squadron from the Air Corps Technical School.

Master Sergeant John A. Downey, line chief of the 41st School Squadron for about seven years, was transferred to March Field, Calif. He is due for retirement in about eight months.

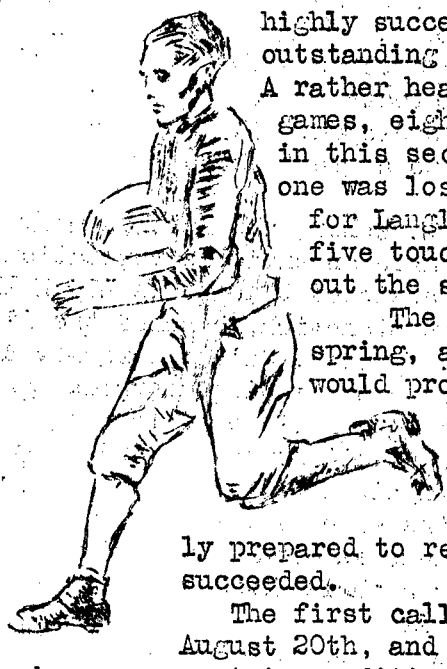
Master Sgt. Conrad L. O'Briant, who spent the past four years on detached service in Havana, Cuba, returned to the 40th School Squadron for duty.

Private Mayo, 40th School Squadron, returned to duty from the hospital.

Pvt. John W. Jackson, 40th School Sqdn., left on an emergency furlough Jan. 7th for Herrin, Ill., where he was called due to the illness of one of his family.

Private Wood, 40th School Squadron, returned from Furlough and states he enjoyed the change.

Lieuts. H L. Boyden and Wm. D. Old were ordered to foreign service, the former to Panama and the latter to the Philippines.



Football at Langley Field during the 1931 season was again highly successful, the team representing the post having been outstanding among the football teams of the State of Virginia. A rather heavy schedule was played, consisting of eleven games, eight of which were against teams representing colleges in this section. Eight games were won, two were tied, and one was lost. The total score for the season was 197 points for Langley Field against 36 for the opposing teams. Only five touchdowns were scored by Langley's opponents throughout the season, while Langley scored a total of 29.

The schedule was prepared during the last winter and spring, an effort having been made to secure teams which would provide fast games. Six teams, including the Quantico Marines and the Naval Apprentice School of Newport News, had been on the 1930 schedule, and these teams were again included for 1931. Four of them had defeated Langley in 1930, and they were evidently prepared to repeat their success in 1931. All tried hard but none succeeded.

The first call was made for candidates for the team to report on August 20th, and more than 100 men answered the call. The first two weeks were spent in conditioning exercises and fundamentals, and with this grueling work under a hot Virginia sun, the squad was reduced in number until about 50 men remained. The first game with William & Mary College, champions of the Virginia Conference in 1930, was scheduled for September 19th, and there was much to be done to prepare the squad for this game. A majority of the members of the 1930 team was on hand and, in addition, some promising material among the newcomers to the post. The 1930 team was almost always out weighed, and an effort was made to find heavier men of the required football ability to add weight and power to the team. Such promising players as Cornwell, a former Langley back; Boynton, from a Western college; Haug from Fort Sill; and Camper, a former Apprentice School fullback, were added to the squad. In addition, Lieut. Frank Smith, former Kentucky fullback, and Lieut. Hugh Worthington, a Texas star, both Reserve officers on active duty, added a great deal of power and experience to the back field. The result was a smooth working, fast, alert team, that gave promise of winning a lot of football games.

The season opened as usual against William and Mary College, which won the 1930 game 19 to 6, at Williamsburg. They wtill had the famous "Red Maxey," who scored 99 points in 1930, and whose 1931 motto was "100 points or bust." During the first quarter, William & Mary outplayed Langley and scored a touchdown on a blocked punt. The second quarter saw Langley improving, and during the third and fourth quarters William & Mary was decidedly outplayed. Langley tied the score by blocking a punt which was scooped up by an alert linesman who scored on the play. On two other occasions Langley was within a few yards of scoring, but lacked the final punch to put the ball across the line. In the meantime, William & Mar 's offensive could not get started. "Red" Maxey and William and Mary's great fullback, Constantino, were repeatedly tackled behind the line of scrimmage for losses. The game ended in a 6 - 6 tie.

The home season started on September 26th against Campbell College, a team which Langley defeated in 1930 by 7 - 0. This game was a 20 - 0 victory for Langley. This game was followed by one with the powerful All-Coast Guard team, President's Cup contenders. The Coast Guard presented a very heavy, powerful, alert and well drilled team. Langley was outweighed 15 pounds per man and was obliged to play a defensive game throughout. The final score, 13 to 0 in favor of the Coast Guard, is only a fair indication of the hard fought game it was. The Coast Guard team later defeated the Quantico Marines 13 - 7 to win the President's Cup.

On Sunday, October 11th, the Quantico Marines brought a heavy, powerful team to Langley, determined to defeat Langley and justify their designation as contenders for the President's Cup. A scoreless tie resulted.

The following Saturday saw the beginning of a long strong of victories for Langley. Gallaudet, which defeated Langley in 1930 by 13 - 7, lost a hard game, 18 - 0. Atlantic University was defeated 39 - 0, and Appalachian State was licked in a tight game, 6 - 3. This was one of the best games of the season, the winning score coming on a forward pass late in the game. Potomac State was one of the few to defeat Langley in 1930 and tried to repeat this year, but without

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success. Langley won 20 - 0 on a game full of fast, tricky football. Guilford College was the next victim, losing 21 - 7, but they had the distinction of crossing the Langley goal line, being the first team to accomplish this in the last six games. The Apprentice School team was defeated 41 to 7, indicating the speed and driving power the Langley team had developed. The final scheduled game with High Point College was a fitting climax to a great season, with Langley defeating the college team 25 to 0.

The team was coached again by Captain George L. Usher, who has had many years of experience as a player and coach and has made an enviable reputation for turning out successful service teams. He was assisted by Captain L.T.Miller, a former Ohio linesman, who with 1st Sergeant Steve Stanovich, coached the line; Lieut. T.R. Lynch, former West Pointer, and Lieut. Frank P. Smith, a former All-Southern Fullback. Particular stress was laid upon conditioning exercises and fundamentals in order that the players should be in the best possible condition to play throughout a hard schedule. The relatively small number of injuries throughout the season testifies to the excellent physical condition of the men. The spirit and drive they developed testifies to the excellent coaching they received and to their interest in the game. There were few individual stars throughout the season, the team working so well as a whole that team work rather than individual playing was the great characteristic.

To name players who did great work during the season would be to list most of the men on the squad. Reiter and Soult at center were again towers of strength on offense and defense. Cargo, who has developed greatly during the 1931 season, played in several games and showed great improvement over last year. The old reliable Fosse and Jeanette as first string guards were always on the job. Piper and Holmes, tackles, always outweighed as they were last year, smashed up many an opposing offensive play. Coveleski, another old reliable, and Donn on the ends were in everything. These linesmen, with Brewer, Trexell and Mason to fill in at guard; Hainley, Boynton and Keys to relieve the tackles, and White and Moore to replace the ends, formed a line that pound for pound would be hard to equal.

The backfield had such men as "Doggy" Korr, the 140-pound "fightin' fool," who was responsible for many a long dash off tackle; Howard, who specialized in powerful line plunges and long well-placed punts; Lieut. Worthington, who made several long runs for touchdowns; Owens, another powerful line plunger; Lieut. Smith, who was powerful both on offense and defense; Cornwell, a shifty, fast broken field runner, and the reliable Hetrick and Tyrell. Hunt, a former Carlisle Barracks player, and Sagon from Fort Washington, newcomers to Langley Field, were added to the squad as backs.

All of these men made a hard playing, hard, clean tackling combination that made a record any team should be proud of. An outstanding characteristic of the Langley team was its clean and sportsmanlike conduct on the field. Visiting teams with no exceptions were high in their praise of the clean football played by the Langley team, and some stated that the cleanest game of their season was that played against Langley Field. This did not interfere with the playing of a hard game of football. Any team which opposed Langley Field will testify that they were in a hard game and opposed to a fighting, hard tackling team.

Plans are now under way for the 1932 season, and the schedule promises to be as hard as that for this year, and perhaps a little harder. Many veterans of the 1931 team will be available, and with the new material that is being attracted to Langley Field on the strength of the football reputation that has been established, prospects for a successful season are very bright. An effort is again being made to have the Langley team designated as a contender for the President's Cup in 1932, and if this effort meets with success the Langley team will have an opportunity to win national prominence.

No resume of the football season would be complete without mention of the Langley Field band which performed at each game. This band, trained and drilled by Warrant Officer Michael Quinto and dressed in snappy uniforms, put on a drill and music that caught the fancy and interest of the spectators and invariably won their applause.

The Fort Crockett Flyers played their last game of the season December 5th against the 23rd Infantry eleven, at League Park in San Antonio. This game was part of the elimination series for the championship of the 8th Corps Area.

The powerful Infantrymen smothered the Flyers with a 34 - 0 score. The Fort Crockett team was not as strong as the one in 1929, when they defeated the

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23rd for the championship of the Corps Area.

In a series of thrilling and hard-fought games, Kelly Field became the local Army League football champions for 1931.

In the first game, Kelly defeated the 23rd Infantry, Corps Area champions for 1930, to the tune of 14 to 6. Lieut. Harding, coach and quarterback of the Kelly Field team, was the mainstay for the Flyers. The brilliant generalship and playing of Harding was reminiscent of his football days at the Academy.

In the second game, Kelly came through with flying colors to win over the 9th Infantry, 21 - 10, after trailing 7 - 2 at the half. Lieut. Harding again showed his caliber and won the game with his passing to Cundiff and Parton. After receiving a 25-yard pass from Harding, Cundiff raced 60 yards for a touchdown. Kelly made three touchdowns in the last 12 minutes of play, and Harding's passes were responsible for each one.

In the third game the supposedly weak 2nd Field Artillery Brigade put up a good fight, and Kelly was forced to play hard to win 14 - 0. Kaufman and Mylanczak carried the brunt of the attack.

On Thanksgiving Day, Randolph Field bowed in defeat at the hands of Kelly, 14 - 0. The line smashing of Mylanczak and Son, and the passing and kicking of Parton featured the game. This was the fourth and last game of the series for Kelly Field, making them champions for 1931 in the local Army Football League.

First round basketball games in the Scott Field championship league resulted in a surprising upset when the 24th Airship Service Company turned in a clean slate of wins. Last season the 24th team won but a single league game and before the season their chances had been rated as very poor. In the opening games, the 24th cleaned up on the 15th Squadron, the present champions, and the 9th Airship Company took the Staff five by a one-sided score.

Play in the second round was much improved, but again the 24th and 9th teams scored wins against the Staff and 15th, respectively.

The games in the third round were as closely fought as could be wished. The 15th and Staff went nip and tuck from the first whistle, with never more than a three point difference until the last two minutes of play, when the final basket gave the Observation team a win by a 24 to 20 score. The "by" game to decide the leadership between the 24th and 9th Companies was another ding-dong battle. The first quarter ended in a 5 to 5 tie and in the next two quarters neither team could get over two points ahead. Starting the final quarter a point behind, the 24th sharpshooters dropped in two quick baskets to take a three point lead. Twice the 9th pulled up to a point behind, but the Service Company was not to be denied and a last minute basket put the game on ice with a 22 to 17 count.

Play in the series was interrupted by the Christmas holidays, but the second and third rounds of play will take place in January and early in February.

Lieut. Cousland, Athletic Officer at Bolling Field, D.C., can well be proud of the showing of the post basketball team this season. In 20 games played, they have finished with the long end of the score tucked under their belts every time, and 20 wins out of 20 games is a real record in basketball these days. Moreover, in these 20 games they have piled up 740 points against their opponents' 386. Nor have all these games been windfalls. Fort Myer, last year's Third Corps Area champions, fell before the attacks of the Bolling Field squad to the tune of 60-32.

After a hotly contested series, the 23rd Bombardment Squadron defeated the 4th Observation Squadron by the score of 42-41, to win the Inter-Squadron Basketball championship at Luke Field, Hawaii.

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Scott Field received its annual inspection, December 12th to 15th, from Lt.-Col. Charles A. Thuis and Major Ernest J. Carr, Inspector General's Department. While the official report of the Inspector will not be received for some time, it is believed that, in general, the conditions at the field will receive little adverse criticism.

INSPECTION DIVISION NOTES

SUGGESTIONS FOR THE IMPROVEMENT OF AIRCRAFT MAINTENANCE AND TECHNICAL RECORDS, REPORTS AND FILES.

The last pages of the Air Corps News Letter are now being utilized by the Chief of the Air Corps to bring to the attention of all Air Corps activities and personnel various suggestions for the improvement of aircraft maintenance and more accurate preparation and maintenance of technical records, reports and files. This is done to permit interested activities and personnel to detach these pages and maintain them in a separate folder for their own information, reference and application, where desired.

This is the fourth article published to date. Comments and recommendations of all interested personnel are desired. Suggestions for their improvement and complete information on station and organization methods or systems employed to facilitate operations and engineering work are especially desired. Correspondence reporting the above information should be addressed to: Chief of the Air Corps, Attention, Chief Inspection Division, Washington, D.C.

AIRCRAFT MAINTENANCE DEFICIENCIES

Recent technical inspections of Air Corps activities, conducted by representatives of the Chief of the Air Corps, indicated the following as the most common aircraft maintenance deficiencies and that the exist at practically all stations:

Aircraft batteries poorly maintained and the cell reading taken during the inspection seldom corresponding with that shown on the form 41.

Compasses not compensated during a 28-day period and this fact not shown by a red dash on form 41. In some cases mechanics had initialed the form 41 to indicate compass compendation without actually doing the work. Compasses seldom contained the proper amount of liquid.

Oleo cylinders, both tail wheel and landing gear, were in need of oil.

Hose connections, fuel, oil and water, loose and many defective.

Leaks in gasoline pressure release valves, wobble pumps and primers.

Safety belts installed the reverse of that prescribed by TO 01-1-54.

Engine hold down and exhaust stack bolts loose.

Fuel strainers dirty, particularly carburetor strainers.

Spark plug nipples rotten and in some cases where gap is less than 3/4", not installed.

In practically all cases the discrepancies in aircraft maintenance found to exist during technical inspections were not recorded on forms 41 with the result that these forms did not indicate the true condition of the aircraft. Defects noted by pilots on forms 1 were not always transcribed to forms 41. In some cases where these defects were correctly transcribed to form 41, no corrective action was shown. A specific example is: Pilot reports on form 1, "missing on left switch." This remark is properly transcribed to form 41 in column 10, but no red diagonal is entered in column 59 to show the defect reported, nor is any remark entered in column 116 to otherwise explain such defect and its correction.

In all cases where pilots report defects on forms 1, such defects should be accurately transcribed to forms 41 and necessary correction thereof shown.

MAINTENANCE OF PERMANENT FILE OF STRIP MAPS

Air Corps activities are now utilizing various methods for the purpose of maintaining the permanent file of strip maps of the latest revision consisting of one copy each of Air Corps, Department of Commerce and Hydrographic Office strip maps as required by Air Corps Circular 90-2. Many such files are being maintained in file cabinets which necessitates the folding of the maps and increases the work incident to the entry of necessary changes.

The following system, in use at Bolling Field for some time, has proven satisfactory:

All strip maps of each classification are mounted in numerical order on an aluminum sheet the width and length of the largest strip map. Maps are fastened by a clip to one end of this metal sheet and this sheet hung on the wall of the Operations Office to conserve space. When changes to maps of any particular class are required, the metal sheet, to which is attached the particular class of maps affected by the changes, is removed from the wall and laid on a flat surface or desk where the maps can be turned as the pages of a book.

Due to the simplicity of the above method, the limited wall space required

and the ease with which corrections may be entered on a strip map, the above system is recommended for all Air Corps activities.

METEOROLOGICAL DATA

Recent inspections of Air Corps activities revealed that in many instances meteorological data available in the Operations Office is entirely inadequate, insufficient and stale. With the system of broadcasting weather conditions now in operation by the Department of Commerce, such condition should not exist. The Department of Commerce stations broadcast on a frequency between 237 and 350 kilocycles on an average of three times during each hour. Stations are very numerous and so located that one or more is within range of each Air Corps station in the United States. All Air Corps stations have radio equipment which will receive these broadcasts readily, as any set which works on a frequency of between 237 and 350 kilocycles may be used for this purpose.

This office is making every effort to cooperate with the Department of Commerce in order to furnish all data in connection with aids to navigation. In this connection see Department of Commerce Airway Bulletin No. 1, dated September 1, 1931, as amended by Air Commerce Bulletins issued semi-monthly, which particularly cover broadcasting by voice.

All that is necessary on the part of station commanders in order to utilize this service fully is to designate radio operators to copy the data at the time desired and post it where it will be available for the information of pilots.

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The following Technical Letters have been distributed by the Materiel Division, Wright Field, Dayton, Ohio, since the last issue of the Air Corps News Letter on December 28, 1931:

Date and No.	Subject	Distribution
11/17/31 TL-31-270	Reinforcement of Aileron Spar - Boeing P-12B, P-12C, P-12D and P-12E airplanes.	Bolling, Chanute, France Luke, March, Mather, Maxwell, Selfridge, Wright, all Depots.
(This Technical Letter replaces Technical Letter Serial No. 31-270, dated October 15, 1931, and accompanying drawing.)		
12/23/31 TL-31-287	Surge chamber for Dampening Out Oil Pressure Fluctuations on all types of V-1150 and V-1570 engines.	General
(This Technical Letter replaces TL 31-287, dated Nov. 21, 1931).		
12/31/31 TL-31-300	Instructions for Operation and Identification of Prestone Cooled Engines.	General
12/14/31 TL-31-301	General Information on the Maintenance and Operation of Douglas O-25C Airplanes	Chanute, Crissy, Mitchel, Wright and all Depots except foreign.
12/14/31 TL-31-303	Replacement of Magneto Drive Shaft Screw Part No. 1175, made of Dural with a screw made from Steel in Pratt & Whitney Engines	All Depots.
12/28/31 TL-31-306	Leakage of Vellumoid Gasket Under Cap of Relief and Bypass Valve Assembly No. 0153547.	General
12/17/31 TL-31-307	Change on Fokker Y1C-14 and Y1C-15 airplanes to correct Wing Heavy Condition.	Chanute, Crissy, Maxwell, Kelly, March, Mather, Wright, Selfridge, FAD, MAD, RAD, SAAD
12/17/31 TL-31-308	Replacement of Lever, Front Rudder Pedal Pull, and the Installation of Pedal Stops, Curtiss A-3, O-1B, O1-E, O-11, O-13C and O-26 Airplanes.	Chanute, Wright, Hawaiian AD, RAD, MAD, FAD, SAAD.
12/21/31	Modification of Grip, Parachute Rip-cord, Part No. 0158987.	General
12/21/31 TL-31-310	Packing Parachutes	General
12/21/31 TL-31-311	Inspection of Cabin Heaters (All Airplanes so Equipped).	Bolling, Brooks, Chanute, Crissy, Ft. Crockett, France, Kelly, Langley, March, Mather Maxwell, Mitchel, Randolph, Scott, Selfridge, Wright, Panama AD, MAD, RAD, FAD, SAAD
12/23/31 TL-31-312	Change in Method of Attaching Brace Cables to Fin - Ford C4A and C-9 Airplanes.	Bolling, Chanute, Langley, Ft. Crockett, France, March, Randolph, Selfridge, Wright, MAD, FAD, SAAD, RAD and Panam A.D.

Date and Number.	Subject	Distribution
12/23/31 TL-31-313	Reinforcement of Radiator, Douglas O-25A and O-25B Airplanes.	Ft.Benning,Chanute,Ft. Leavenworth,Chicago, Langley,Marshall,Maxwell, Wright, MAD,FAD,RAD,SAAD.
12/23/31 TL-31-314	Installation of Spacers Elevator Hinge Attachment on Stabilizer Rear Spar of Thomas Morse O-19B, O-19C,O-19D and O-[illegible] Airplanes	Brooks,Chanute,France, Hatbox,Hensley,Kelly,Luke Langley,Pope,Post,Scott, Selfridge,Wright, all Depots.
12/28/31 TL-31-316	Removal of Fairing Tail Wheel, Fokker C-7A, Y1C-14 and Y1C-15 Airplanes.	Brooks,Chanute,Selfridge, Crissy,Kelly,March,Mather, Maxwell,Mitchel,Randolph, Wright,MAD,FAD,RAD,SAAD.
1/5/32 TL-32-1	Pratt and Whitney and Wright Engine Air-Cooled Cylinders.	General
1/5/32	Removing Push Rods on SR-1340-F Engines,Air Corps Nos. 32-45 to 32-69 Inclusive.	March and Wright,RAD,FAD.
1/4/32	Change in Position of Type A-2 Bomb Release Handle, Dwg. No. 0154-393, on Models O-1E, O-1G, O-13C,O-26 and O-39 Airplanes.	General

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The following Air Corps Cieculars and Air Corps Circular Letters have been published and distributed by the Office of the Chief of the Air Corps since the last issue of the Air Corps News Letter on December 28, 1931:

AIR CORPS CIRCULARS

Number	Subject	Date
Cir. 15-38-A	Air Corps Forms Nos. 49, 50, 51 and 83	12-31-31
Cir. 35-3	Ferry Pilots	1-5-32

AIR CORPS CIRCULAR LETTERS

Stencil No.	Subject	Date
W-2025,A.C.	Circular 40-3,OCAC, dated Nov. 30, 1931	12-28-31
W-2029,A.C.	Shipment of Baggage of Enlisted Men Ordered to the Air Corps Technical School, Chanute Field, Rantoul, Ill.	1-4-32
W-2030,A.C.	Operation of Airplanes	1-6-32
W-2027,A.C.	Ferrying of Aircraft	1-7-32
W-2032,A.C.	Gasoline Storage and Servicing	1-13-32

SERIAL NO. 313 LIST OF NEW MATERIAL ADDED TO INFORMATION DIVISION FILES
Dec. 29th to Jan. 23d Incl.

Available for loan to Air Corps Organizations only upon request to the Air Corps Library, Munitions Building, Washington, D.C.

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DOCUMENTS

A 00.5/U.S./10 Extent of Power of Congress over Aviation, by Alonzo H. Tuttle and Dale E. Bennett, University of Cincinnati, May, 1931.

A 00.51/39 Revue Aeronautique Internationale; Editeur Albert Roper. Liege, Imp.G. Thone, Sept. 1931.

A 10/53 Progress in Aeronautical Science, by Brig.Gen.Benjamin D. Foulois. Air Corps,Washington,Dec. 22,1931.

A 10/192/#650 Development of a Non-autorotative airplane Capable of steep landing, by Wilhelm Schmidt. Wash.N.C.A.C. Dec. 1931. Nat. Advisory Committee for Aero. Tech. Memo. #650.

A 10/192/#651 Wind Tunnel of the Bucharest Polytechnic Institute, by Nat. Advisory Committee for Aero. Tech.Memo. #651. Wash.N.A.C.A. Dec. 1931.

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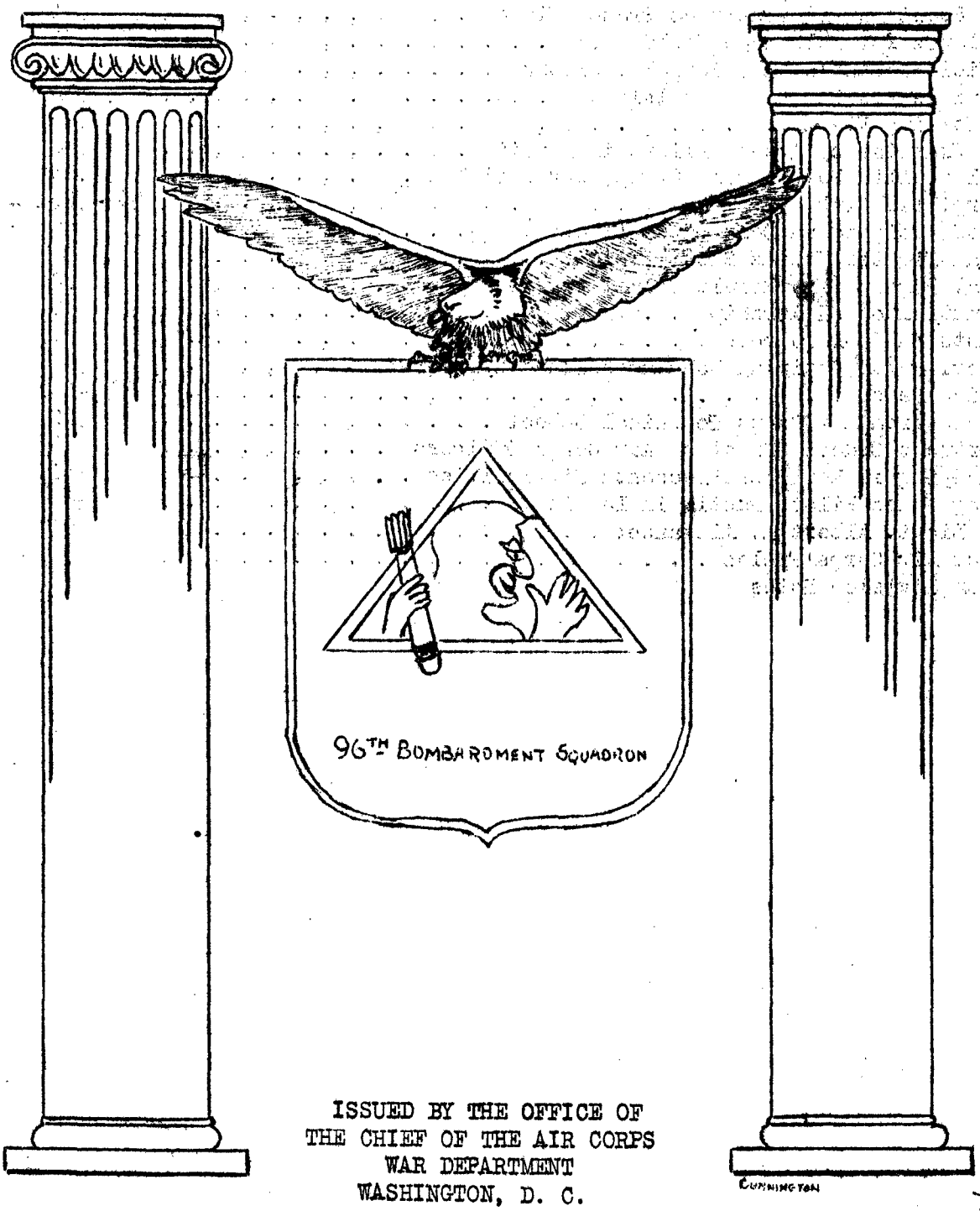

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The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

Publishers are authorized to reprint material appearing in this publication.

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ARMY AIRPLANES PROVE SALVATION OF RED MEN.

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King Winter, in one of his ugly moods, played a mean trick on a tribe of original Americans - Red Men - inhabiting the reservation in the northern portions of New Mexico and Arizona. A storm, severe in its intensity and most unusual for that portion of the country, descended upon this tribe of Indians and, being totally unprepared to cope with rigorous weather of that sort, suffered hunger and other privations.

Ever ready to render prompt aid to those of its citizens in distress, the government took prompt measures to dispatch a relief expedition - a flight of Army planes, loaded with food supplies, which reached the abodes of the duffering Indians in a fraction of the time any other agency of transportation could have accomplished the task.

That this relief expedition was successful in every way is attested by the following letter received by the Hon. F. Trubee Davison, Assistant Secretary of War for Aeronautics, from Mr. C.S. Rhodes, Commissioner of Indian Affairs, Department of the Interior, under date of January 22nd:

"It would be impossible for me to adequately express my deep appreciation for the splendid relief work which has been done by the Army Air Corps in relieving the distressful conditions which exist among the Navajo Indians in Arizona and New Mexico.

The reports which I have received from our Superintendents at Winslow indicate that your speedy action has resulted in the saving of thousands of lives.

The Navajo are a great race. They have just been visited by terrible tragedy. They had done their uttermost to help themselves to combat the elements when this last storm, a week ago, broke over them. It rendered them helpless. The members of the Indian Service also tried to carry on but found it impossible and were forced, through necessity, to call upon you. The ready response which we received and the wonderful work done by the pilots of the planes will remain in our memory as long as we live. I am sure that the Indians and the personnel of the Indian Service in the southwest are as fully appreciative as we are here in Washington.

Please send my appreciation both on behalf of myself and in behalf of those people who have been aided to all members of the Army Air Corps who have taken prominent parts in this great drama."

The flight of Army airplanes, which was sent from March Field, Riverside, Calif., under the command of 1st Lieut. Charles H. Howard, comprised six B-2 Bombers, a Ford C4-A Transport and an O-38 Observation plane, these eight planes carrying, in addition to food supplies, a total of 15 officers and 25 enlisted men, viz:

Pilots - 1st Lieuts. Charles H. Howard, Ralph A. Snavely, 2nd Lieuts. John S. Mills, Lewis R. Parker, Donald R. Lyon, Emery S. Wetzel, Stanley K.Robinson, Charles W. Haas; Co-Pilots, 2nd Lieuts. Ivan L. Farman, Harold W. Bowman, Joseph A. Miller, Air Corps, George A. Smeltzer, Harold F. Blackburn, Frank E. Wittenberg, Reserve; Flight Surgeon, Major L.E.J. Browne, Medical Corps; Master Sergeant Leslie L. Wells; Technical Sergeants Stephen McAlko, Peder Berg; Staff Sergeants Paul S. Patterson, Henry V. Puzenski, Mervyn P. Merrick, Anton F.Gill, George S. Dooley, G.R. Blunden, Michael B. Kieado, Alvin G. Blum; Sergeants C.R. Sellers, Ludwig Kurrle, Everett F. Waid; Corporals George W. Hallowell, Jr., Edward Martin, Rua C. Hayes, William O. Miller, Cecil L. Lowery, John O.Fleming; Privates, 1st Class, Charles L. Hunley, Ray H. Coulter, Charles E. Ralph, Lee E. McAltee; Private Robert A. Tuck.

The flight left March Field at 7:15 a.m., January 16th, and arrived at its destination, Winslow, Arizona, some 3½ hours later. Between noon of January 16th until the return of the planes to March Field at 2:50 p.m., January 21st, various local flights for the purpose of distributing food supplies were made

between Winslow, Tuba City, and Holbrook.

A letter recently received from Lieut.-Col. Henry H. Arnold, Commanding Officer of March Field, contains the following paragraph:

"Our relief expedition in Northern Arizona was highly successful, so much so, that we believe everyone was pleased with our efforts. Some 30,000 pounds of food were dropped on the various Navajo and Hopi Indian villages, and the flying was done over some of the roughest country in the United States. The Indians were very appreciative, but the pilots were glad when it was over, for they could then get back to their home station where the climate was less severe and flying less strenuous."

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EDDIE STINSON GOES TO HIS LAST RESTING PLACE

Seldom was the name of Eddie Stinson, that sterling veteran pilot, associated with an airplane accident of any sort. He was one of the real "Early Birds" of aviation, and during the twenty years he spent in the flying game it was stated that he had exceeded the mark of 14,000 hours in the air - more than had been accumulated by any other man in the history of aviation, and that he had covered nearly 1,500,000 miles.

Fate was unkind to this veteran of the air, so skilled in the flying art, and he succumbed on January 26th to injuries received when the Stinson-Detroiter he was piloting developed motor trouble while over Lake Michigan, a short distance off shore, and in the darkness in attempting to maneuver it to a safe landing on a golf course unfortunately struck a flag pole, shearing off the right wing. Despite severe internal injuries, Stinson walked away from the wrecked plane. He was immediately taken to the Illinois Central Hospital, where he died early the following morning. His three passengers were seriously injured.

The passing of Eddie Stinson saddened the hearts of the thousands who knew him and left a great void in the ranks of the flying fraternity. Born at Fort Payne, Alabama, July 4, 1893, Stinson learned to fly in 1915 at the Wright Flying School at Dayton, Ohio. During the World War he left a very remunerative position with the Curtiss Aeroplane Co. to "do his bit" for Uncle Sam. At that time, his physical condition was such as to defeat his ambition to become a military flyer, although he was most highly recommended by officers in the Aviation Section, Signal Corps, one of whom stated that "He is by far the best flyer in this country, and I doubt if he has any superior in any country."

Appointed a civilian flying instructor at Kelly Field, Texas, Stinson served in that capacity for a number of months. Later, when his physical condition improved, he was commissioned a 1st Lieutenant in the Air Service, and assigned to duty at Dorr Field, Arcadia, Fla. He requested and received his honorable discharge from the military service on January 7, 1919.

Back in civil life, Stinson founded the Detroit-Stinson Co. He designed the transatlantic planes of Ruth Elder and George Haldeman, the globe-circling ships of Brock and Schlee, and numerous others.

Thousands attended Stinson's funeral at Detroit, braving the drizzle and chill wind. Leading up to the high, open spaces of ground in which his body was laid to rest, stretched the lines of automobiles, six miles long, in the funeral procession. Overhead circled pilots from nearby airports who braved the risks of the lowering sky, among whom were Army flyers from Selfridge Field.

Among those present at the last rites, in addition to his parents, his brother Jack, his sisters, Margaret and Mrs. Katherine Stinson Otero, were Col. Edward V. Rickenbacker, Major Reed Chambers, Major Rudolph W. Schroeder, famous Army flyers in war days, also Bert Hassell, William Brock and others who made names for themselves in aviation.

---oOo---

All of Mitchel Field mourned the death of Lieut. Francis X. Kelly, Air Reserve, who was killed in a commercial ship shortly after his tour of active duty at this field had ended. "He had been with us for more than a year," says the News Letter Correspondent, "when he stepped back into civilian life and was one of the finest young officers any of us have had the pleasure of knowing. Most of the junior officers attended his funeral and the others flew a funeral formation of four ships in a Vee with a blank file in number two position. The formation followed the funeral column through Brooklyn to the cemetery and after circling once cut their throttles in a silent gliding salute to a gallant comrade."

DURATION RECORD FOR GLIDER FLIGHT ESTABLISHED BY AIR CORPS
By the News Letter Correspondent

The Glider Contest which was held in this Department (Hawaiian) last month terminated when Lieut. William A. Cocke, Air Reserve, brought the "Nighthawk," (sailplane) down to the starting point after 21 hours, 34 minutes and 15 seconds in the air, covering a distance of approximately 600 miles and reaching an altitude of 3400 feet. In a letter of commendation to Lieut. Cocke, Major-General B.H. Wells, commanding the Hawaiian Department, is quoted as follows:

"On December 18, 1931, you terminated a spectacular flight in a motorless sail-plane or glider, after remaining in the air for 21 hours, 34 minutes and 15 seconds, and covering a distance of approximately 600 miles, thereby establishing two new official world's records - that of endurance and distance, respectively.

In making these records, you have not only brought new honors to the Territory of Hawaii, but to the Army in general and to the Air Corps in particular, and your comrades are duly proud of your extraordinary achievement.

Your perseverance and your continued efforts for the advancement of Aviation reflects great credit upon you and I therefore, as Department Commander, wish to tender my sincere congratulations."

Lieut. Cocke received a total of four awards for his record flight in a glider, which were presented by Mr. John R. Galt, President of the Hawaiian Chapter of the National Aeronautic Association, "For courage, initiative, fortitude and skill." He then presented the following trophies:

Event 1 - Endurance with return to starting point: Silver and gold cigarette case - donated by Inter-Island Airways.

Event 2 - Distance with return to starting point: Silver trophy, donated by members of the Territorial Aeronautical Commission.

Event 3 - Altitude above starting point: Silver trophy, donated by Mr. A.W. Van Valkenburg.

Grand Prize - Greatest number of points scored for all events: Silver trophy, donated by the Honolulu Chapter, N.A.A.

He also announced the official records made by Lieut. Cocke:

First, endurance: 21 hours, 34 minutes, a new World and American record, breaking the previous world record held by Ferdinand Schulz of Germany of 14 hours and 7 minutes by 7 hours and 27 minutes.

Second, distance: 600 miles, a new World and American record, breaking the previous world record held by Ferdinand Schulz of Germany of 283.22 miles by 316.78 miles.

Third, altitude: 3400 feet. This is 270 feet better than the American record, but not enough for an official new record, as the previous mark must be exceeded by at least 200 meters, or 656 feet. The world's record is 8,494 feet, held by Robert Kronfeld of Germany.

The pride which the Wing feels in the achievement of Lieut. Cocke cannot efface the sorrow which we share in the tragic death of Lieut. W.J. Scott, who was killed during the contest. Both pioneers of daring and intelligence, it was Lieut. Cocke's lot to succeed and Lieut. Scott's to die. One gambled and won, the other gambled and lost. So it goes with the men who are exploring new fields for the advancement of the twentieth century's most fascinating science - aviation. They take their risks as the forerunners of civilization have always done.

It was not only the ability of the men who constructed the glider and the skill of Lieut. Cocke, but the peculiar air conditions which prevail on the north side of Oahu that made it possible for Lieut. Cocke to remain aloft for 21 hours and 34 minutes to establish a new world's record. This promises much for the future. To have stationed in these Islands men of the enterprise and ability, who are responsible for the great glider performance, and a location which gives them unusual opportunity to carry out their purposes, is very properly a source of satisfaction.

Lieut. Cocke has brought new honors to Hawaii, the Air Corps and the Department, as well as to himself. The community is proud of him. He has earned our sincerest congratulations.

Ed. Note: A Bulletin issued by the National Aeronautic Association, Washington, D.C., states that the official report on the flight was approved by the Contest Committee of the N.A.A. for forwarding to the Federation Aeronautique Interna-

tionale in Paris for homologation as the official international record in that category. It is further stated that reports from the Bureau of Standards on the calibration of Lieut. Cocke's barograph will determine whether he was successful in exceeding the present altitude mark by the required 656 feet. The Contest Committee has ruled out the distance attempt, since it was made by shuttling back and forth between two pylons and not in accordance with F.A.I. regulations governing distance with return to starting point which recognize only the straight line distance from the point of take-off to farthermost turning point and return.

Perhaps one would be justified in asserting that the satisfaction Lieut. Cocke derived from his glider flying achievement was overshadowed by his recent initiation into the Caterpillar Club. This young Reserve officer had been transferred from the Hawaiian Department and assigned to temporary duty at Crissy Field, Presidio of San Francisco, Calif., until the time he was slated to be relieved from active duty along about the middle of February. The story of how he joined the Caterpillar Club is related by the San Francisco CHRONICLE, as follows:

"Plunging over the side of a blizzard-racked plane to fall more than two miles through blinding snow and then to alight in about the only safe spot in Sequoia National Park - that was the thrill related last night (February 2nd) by Lieutenant William A. Cocke, Jr., reserve flyer, who 'bailed out' of the Army observation plane which was lost last Monday (February 1st) on its way from Glendale to Crissy Field.

Park rangers considered it a miracle that the Lieutenant was still alive, for besides his 13,000-foot parachute leap, he wandered for nearly twenty-four hours in the drifts and bitter cold before they stumbled across him and carried him to the park headquarters.

Lieutenant Cocke's companion, Lieutenant Edward D. Hoffman, who was piloting the plane, apparently refused to take a chance with the parachute, for when Cocke gave the signal for bailing out, Hoffman shook his head. The last Cocke saw of the plane before it was swallowed up in the dense curtain of snow, it was plunging ahead toward the southwest on the wings of a screaming gale.

Lieutenant Cocke told his story just before he boarded a San Francisco-bound train at Visalia. According to the Associated Press, he said the plane was forced to an altitude of 18,000 feet on the flight to Crissy Field in an endeavor to ride above the storm. This proved futile. The flyers had lost their bearings, the wings were being weighted down with snow and sleet and the engine was sputtering.

It was then Lieutenant Cocke decided to take a chance. Without the slightest idea of his whereabouts he cut loose. The gale whipped and tugged at his swaying chute, but by the greatest of good luck he alighted within 200 yards of one of the park roads. That was at 11 o'clock Monday morning. All that day and throughout the night he wandered in the forest, fighting the drifts and the blizzards. He had about given up hope, when he came out on the road and encountered the rangers.

After he was warmed and fed at the park headquarters, he was taken by automobile to Goshen Junction, where he boarded the San Jaquin Flyer on the Southern Pacific for this city.

The last he saw of the plane and Lieutenant Hoffman, he said, they were being swept to the Southwest. They were headed towards Hockett meadow, according to the park rangers. There, in an isolated, almost inaccessible section about fifty miles east of Visalia is a level spot at 9,000 feet altitude, where Hoffman might set down his plane."

The Army Air Corps immediately instituted a wide search for the missing Army Reserve flyer. A telegram received from Major Michael F. Davis, Commanding Officer of Crissy Field, states that approximately 70 airplanes from March, Mather and Crissy Fields made a coordinated search between February 2nd and 5th, inclusive, over area believed most likely to contain Lieut. Hoffman and his airplane. Estimated 500 flying hours expended. Searching parties then returned home station on decision of senior officer present with searching party. Terrain extremely rugged with thick forest and brush, generally impassable except on main road. Snow depths up to 20 feet. Since February 5th air operations impracticable due to unfavorable weather. Contemplate further search by airplanes from Crissy Field to include photography as soon as weather permits. All action and decisions relative to search coordinated with and confirmed by Headquarters Ninth Corps Area.

CHEMICAL WARFARE DEMONSTRATION AT BROOKS FIELD

By the News Letter Correspondent

"The use of airplanes delivering gas attacks will greatly increase the effectiveness of this weapon in warfare, placing even the reserve troops far behind the lines within range of its attack and ravages," said Captain John McCoy, Chemical Warfare Service, Fort Sam Houston and Second Division, in a series of illustrated lectures to the officers and men of Brooks Field, Texas, who were assembled in the Service Club at that station on two consecutive days recently.

Following the issue and fitting of gas masks to the personnel of Brooks Field, Captain McCoy, assisted by Technical Sergeant Samuel A. Denton and Private, 1st Class, Adolph R. Kubicek, Chemical Warfare Section, demonstrated most effectively the use of gas in modern warfare. Captain McCoy said, among other things, that "Gas is one of the most effective weapons of modern warfare, but is also one of the most humane. A smoke screen laid over an enemy artillery battery, by airplanes, reduces its effectiveness to only four percent, while friendly fire is almost twelve percent effective through smoke."

The troops of the field were assembled in two waves. Major Frank D. Lackland, Air Corps, the Commanding Officer, and all of the officers of the field, in a splendid spirit of esprit de corps, took their positions on the right of the first wave and accompanied the men through each concurrent gas attack. While the first wave was undergoing the instruction, the second wave was held in reserve and interest and desire were at peak. Figuratively speaking, it was indeed "zero hour."

An unusual incident happened upon the terrain spread with tear gas. A large rattlesnake with four rattles and a button hastened out of its hole and attempted to seek safety, but it was discovered and promptly dispatched by the men in the midst of the gas attack, proving beyond reasonable doubt the truthfulness of the lecturer's statements - "That one load would cover an area of 1,000 square yards and was capable of placing hors de combat or eliminating a regiment of men." This incident particularly emphasized the lecturer's statements to the effect that "planes equipped with tanks filled with mustard or Lewisite gas can operate far from a central base and with one load an airplane thus equipped can perform the work of a whole company of the Chemical Warfare Service."

It was interesting to watch the dogs of the various squadrons accompanying the men through the gas attacks and to note their antics in their attempts to clear their nostrils. One of the smaller pets sank down on his front quarters and scratched his nose with his paws.

To satisfy the Doubting Thomases of the effectiveness of the screen through which they had passed and the utility of the gas mask, it was suggested by the instructor that each of the waves march through the smoke screen without the gas mask. This was done. Many men lost their sense of direction. Veterans coughed and allowed the tears to dampen their ruddy cheeks and declared that this mask was a great improvement over the one used in the trenches in France.

It was evident to all that the demonstration was quite instructive and that gas masks are sufficient to protect against gases which only affect the lungs.

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MAJOR DOOLITTLE TAKES ACTIVE DUTY AT SELFRIDGE FIELD

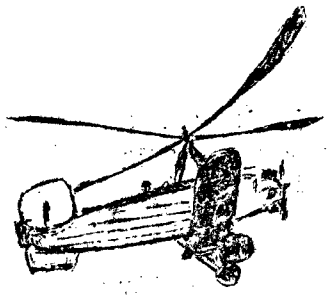
Major James H. Doolittle, better known to his friends as "Jimmy," reported to Selfridge Field, Mich., for a tour of two weeks' active duty, January 17 to 30, 1932. Major Doolittle was formerly a Regular Army Air Corps officer, and took keen pleasure in getting back into uniform, flying service type airplanes and communing with his old friends and fellow officers.

During his tour at Selfridge Field, Major Doolittle, in addition to his regular duties, superintended cold weather tests of aviation fuels and oils at this station. Unfortunately, cold weather did not arrive until the day of his departure, so the tests were not as comprehensive as they might have been.

The Major reported for active duty in his own airplane, bringing with him Mrs. Doolittle, who has many friends and acquaintances on the post. Both Major and Mrs. Doolittle, individually and together, were much feted during their stay at Selfridge, and their friends among the members of the command were sorry when "Jimmy's" short two weeks of active duty were over.

MR. ALFARO LECTURES ON AUTOGIRO ROTOR

By the Wright Field Correspondent



Mr. Heraclio Alfaro, a native of Spain, whose work in this country embraces a number of years in autogiro design, recently addressed the officers and engineers of Wright Field, Dayton, Ohio, his subject being the Autogiro. Mr. Alfaro explained that, since the autogiro itself had been so ably explained in several recent instances, he would confine his discussion to one of its most distinctive features, the rotor. A brief resumé of the talk follows:

This revolving affair, the rotor, looks odd because of its substantial departure in appearance from natural flyers and seems flimsy because of its hinged and flexible blades. Frequently it is compared to a windmill. In a windmill, however, the most desirable characteristic is torque and in the rotor the torque is zero and the blades are allowed to revolve freely with the double purpose of obtaining great parachute effect when in vertical descent and lift-over-drag ratio when in horizontal flight. Moreover, the blades of the autogiro are longer and narrower than those of the windmill, fewer in number, more flexible and are set in slight positive angles to their plane of rotation. Also, in nearly all instances these blades are hinged. Four is the number at present generally employed, but a three-bladed rotor which materially increased the speed has been developed.

The most frequent question propounded the autogiro designer is: "What makes the rotor spin?" The rotor spins for the same reason that the windmill spins, except that the former has its blades set at a positive angle of pitch in a manner which would seem to indicate that they could not rotate as they actually do in operation, and the latter has its blades set at a negative angle. Due to the streamlined shape of the rotor airfoil, the flow of air travels around the leading edge more easily than around the trailing edge and produces a forward force to start rotation. The best lift is obtained when the blades have a slight positive angle of pitch. Mr. Alfaro here went more technically into the details of this rotation, with the mathematical basis of equations.

Autogiro experts claim that the most striking feature of the invention lies in the articulated connection of the blades to the hub. These hinges allow the blades to move freely up and down and to have great freedom in the plane of rotation. Rubber shock absorber blocks at the root of the blades and interbracing cables restrict this latter freedom to the extent of preventing jerkiness of the blades in rotation and cause a certain "self-centering" of the blades as they go round. That is, the blades will climb or dive out of their original plane of rotation in order to maintain their original positions relative to the axis of rotation. This self-aligning of the blades happens so quickly that the eye cannot detect lag in the blades in following the maneuvers of the aircraft. Another advantage attributable to the hinged blades is the stability of the craft in bumpy air. The blades give up and down slightly in the presence of gusts or pockets. Stability in vertical ascent is also improved by their action.

Since too long a time is required to start the rotor and work up sufficient speed for take-off, a mechanical starter has been developed to put the rotors in motion. As soon as sufficient speed has been accomplished for take-off, the starter system is disconnected. At no time is it used during flight. A brake is installed in all rotors for the purpose of stopping the rotation when taxiing in winds sufficiently strong to lift or overturn the aircraft with rotors revolving, and for stopping them to avoid an accident with field personnel.

The blades are subject to a very high tensile stress, due to centrifugal force, which depends on the rate of rotation. Mr. Cierva has evolved a relatively simple method of figuring the bending for various blade plan forms.

Three major structural requirements for the design of rotor blades are flexibility in plane of lift, rigidity in plane of rotation, and rigidity in torsion. The second is easy to obtain, but the first and third are difficult to combine and require considerable engineering ingenuity.

In closing, Mr. Alfaro referred to the possible future use of the autogiro, stating that as a military machine its value at the present stage of development is not particularly apparent. Its safety, slow landing and non-spin characteristics point to private ownership and commercial purposes as its immediate best fields.

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MISCELLANEOUS NOTES FROM HERE AND THERE

Early in January, Crissy Field was visited by 30 planes from March Field. The famous 95th Pursuit Squadron, together with 9 B-2's and a 3-ship formation of P-12's landed at the Field on a training flight. The Pursuiters left for their home station early in the afternoon, while the Bombers waited until late in the afternoon so that part of their flight back to March Field would be made in darkness. Crissy Field pilots were quite impressed with the way in which the Bomber pilots handled those apparently cumbersome B-2's on their small airdrome, especially when the majority of them had never before landed at Crissy. Col. H.H. Arnold, Major Carl Spatz and Capt. F. O'D. Hunter piloted the P-12's.

Operations of the 77th Pursuit Squadron, Mather Field, Calif., constructed and installed an elaborate time chart, which is proving most useful in maintaining a record of the flying status of each pilot in the Squadron. This master chart shows at a glance the number of hours during the year which each officer had devoted to any particular type of mission.

Ten of the new duplex noncommissioned officers' quarters were recently occupied at Selfridge Field, Mich., housing on the post 20 additional noncommissioned officers and their families. The occupancy of these new quarters improves the housing conditions of the enlisted personnel at Selfridge Field in great measure.

Lieut. L.M. Williams (of the famous Williams and Williams) stationed at Mather Field, Calif., experienced a novel sensation recently when he landed a P-12B in a gale which the anemometer recorded as 55 miles an hour. The plane descended like an anchored brick and was then pushed back on its tail skid by the force of the wind. It was with the utmost difficulty that the ship's crew got their charge safely into its hangar.

Captain A.W. Stevens, Air Corps, temporarily attached to Crissy Field, recently produced another bit of the unusual aerial photography for which he is noted. This time he succeeded in photographing, on a single negative, an area comprising more than 1,000 square miles, including San Francisco, Mount Shasta and Mount Lassen.

"Considerable trouble developed lately with the lubrication system of the Conqueror engines installed in our O-25C's," says the Crissy Field Correspondent. "It seems that due to the fact that we do most of our flying without a full military load, the attitude of the ships at cruising speed is that of 'tail high' and, as a consequence, certain parts in the rear of the engine are not properly lubricated. However, we are fortunate in having Captain B.M. Giles from Rockwell, and Mr. Birren from the Curtiss plant here to make an estimate of the situation, and we are confident that they will solve our difficulties."

Once upon a time there was a young lieutenant who was a practical joker par excellence. During his student days at Kelly Field, he amused himself in such divers ways as filling boots with plaster paris and other pranks. The lieutenant was at last awarded his wings and assigned to the Hawaiian Department.

He took unto himself a bride and, noting on his orders that he was to be stationed at Wheeler Field, the couple sent out cards to the effect that they would be "at home" there after such and such a date. Now, the said practical joker did not know there were no quarters at Wheeler Field, and much was his dismay when he learned this sad fact while enroute to Honolulu. One of his student pals, however, already in Hawaii, received one of the "at home" cards and with true brotherly spirit expended every effort to solve that might have been an embarrassing situation. Rounding up all those who had been victims of the lieutenant's jokes, he explained the situation and asked the group to do something about it.

When the couple arrived at Wheeler Field, the gang appointed themselves a committee of welcome and escorted the bride and gloom to their happy home - two pup tents, complete with clothesline, washing machine, stoves, cots, etc., right out in the center of the landing field. An old fashioned galvanized iron tub, full of ice water, was indicated as the bath, and it was forcibly demonstrated to the erring jokester, uniform and all!

Such is the way the Air Corps handles its problems, practical jokers included.

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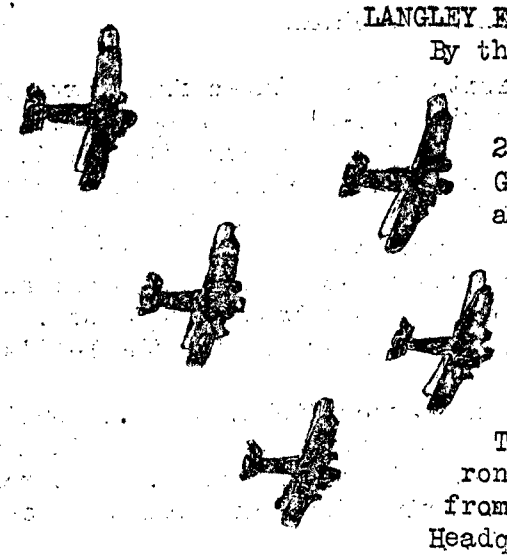
LANGLEY FIELD BOMBERS FLY TO MIAMI RACES

By the News Letter Correspondent



Ten Keystone Bombers, with 22 officers and 20 enlisted men of the Second Bombardment Group, departed from Langley Field, Va., shortly after eight o'clock on the morning of January 5th and, like so many migratory birds, headed southward. The flight was on its way to Miami, Florida, for the annual Air Races and general aviation meet.

The Commanding Officer of the flight was Major Herbert A. Dargue, with Captain Robert T. Cronau, Commanding Officer of the 20th Squadron, second in command. Nine of the Bombers were from the 20th Squadron. One Bomber from Group Headquarters was flown by Captain Robert Olds and Lieut. George C. McDonald. Captain Olds and Lieut. McDonald were the Operations Officer and Adjutant, respectively, of the Group. Major Dargue flew in the leading plane of the 20th Squadron with Capt. Cronau.

The flight stopped at Pope Field for lunch and gas. Shortly after noon, the flight again took off and headed straight for Savannah, Georgia. When the flight left Langley the weather was cold, and at Pope Field the cold became severe, but after getting under way for Savannah, the air became warmer at each ten-mile check point. Numerous rains were encountered on this leg of the flight. Some of the rains were plowed through and others skirted. The flight beat a heavy general rain into Savannah by about a mile. At Savannah the weather was warm and balmy, and winter flying suits were locked up in the steel chests carried in the rear of the planes and were not brought out again until the returning flight reached Jacksonville.

A big welcome was received at Savannah. Headquarters were established at the Savannah Hotel, and that night the city entertained the visiting flyers at their hotel with a well planned dance.

The next morning the flight took off for Jacksonville. Flying conditions were again bad, numerous rains and a low ceiling being met most of the way. The flight was just barely beating a streak of bad weather. Southbound planes which did not get through from the Carolinas within an hour or two after the Bombardment flight were detained nearly a week by storms.

The flight put in at Jacksonville for fuel and lunch. Upon landing here the first warning of trouble came. One of the motors in the plane flown by Lieuts. J.F. Biggerstaff and Lionel H. Dunlap temporarily cut out. A safe landing was made, however. During the stop, the gasoline was inspected and about eight gallons of water were found in the tanks. The tanks were drained and the motor run up on the ground for over fifteen minutes, and it was thought that all the trouble was over. After lunch, a take-off was made for Miami. But while getting into position in the formation, the motor which had given trouble before suddenly cut out again. With about only 200 feet altitude and the terrain below covered with trees and stumps, the pilot had time only to swing the plane around into the wind and land. The plane was demolished. Its wheels struck against stumps and turned over, the fuselage breaking in two. The two mechanics, Sergeant Paul Knoppke and Private Zetwo, were catapulted about forty feet. Lieuts. Dunlap and Biggerstaff braced themselves and took a severe jolting. The former sustained a sprained ankle and the latter received painful injuries to his legs. Fortunately, everybody was able to walk away from the wreck.

The flight returned to the airdrome and remained overnight in Jacksonville. The crash took place about a mile from the edge of the airdrome. Lieut. Biggerstaff was left in a hospital and the two mechanics remained to help salvage the Bomber and crate the valuable parts.

The next morning the flight took off for Miami in the face of strong head winds which were encountered all the way. The 340-mile hop from Jacksonville to Miami consumed five hours. Jacksonville has only a two-way field, and planes which got off the cinder path had to be pulled from the sand with a tractor. The tractor at this airdrome does a big business. The most impressive thing about the Jacksonville airdrome is the heavy traffic of the Eastern Air Transport Company. This Company has a fine office and organization. The office is far better than the average railroad office. The meteorological station at

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Jacksonville also does a big business.

The long trip down the coast of Florida was full of interest for most of the personnel, as very few of them had been to this State before. Civilian airplanes were common sights down in this State of perpetual summer. Some of the pilots flew down low along the coast and saw many civilian planes land with fishing parties. The coast line was followed all the way down.

The flight landed in Miami early in the afternoon. The City of Miami had made reservations for the visiting flyers and shortly after landing everybody was settled. A formation was flown for the big Show that afternoon, and the newspapers and spectators praised the remarkable flying of the bombers in close formation.

On Thursday night, January 7th, all the war time flyers who were not too tired gathered under the banner of Colonel William G. Schauffler and his organization of War Birds. Colonel Bill Schauffler is organizing the war time aviators of all the fighting countries, friends and enemies, into an International Club, with Miami as Headquarters. He now lives in Miami, and every aviator who visited there decided that Miami should by all means be the logical place for the Headquarters of the Club. Club members wear elephant hunter hats, and by these hats the members can be easily found wandering around lost in Miami. One of the distinguishing things about the visiting War Birds in Miami is that they never roost. The first night's meeting was devoted to music and games, telling riddles, etc. All the war time flyers and observers are eligible to Colonel Bill's Club, and no one should miss their meetings in Miami.

On Friday, January 8th, the Bombardment Squadron again put on a big formation flight over the city and around the airdrome. The Navy and Marines were also putting on shows at the Races, as well as the Army Air Corps, and it seemed that nearly all the famous civilian flyers were present and "doing their stuff." Nearly all the "babes" or women flyers had flocked to Miami for the Races, too. The autogiros were objects of constant attentinn with their no-run landings.

The officers were quartered at the Colonial Towers Hotel in Miami, and the mechanics at the Cortez Hotel. The best kind of treatment was afforded by the people in Miami.

On the night of January 8th, the Arsnicker Club, which is one of the prongs of the Anglers' Club, held a memorable session during which Major Dargue was elected and crowned High, Wide, Chief and Supreme War Hawk of the Club with Capt. Earl S. Hoag, Commanding Officer of Chapman Field, the local and working Secretary. The crowning took place amid colorful ceremonies. There was a golden throne with palms and other tropical flora scattered around. The feasting and tumult began shortly after the crowning and the speeches. This was one of the biggest get-together meetings the Air Corps has had for some time. Among the well known faces seen through the haze that night at the Arsnicker Club were those of "Jimmie" Doolittle, Colonel Jack Jouett, Johnnie Corkille, Hez McClellan, Red Seamon, Willis Hale, Bill Flood (of course), George McDonald, Bob Olds, Pete Melville, C.D. McAllister, Bill Schauffler, and many, many others. The 20th Squadron, Bombardment, was there to a man, of course.

The next afternoon, the 20th Bombardment again flew a formation which evoked exclamations of admiration. Then on Saturday night all the Army, Navy, Marine and civilian flyers were entertained at the Coral Gables Country Club with a whale of a dance and general "blow-out." Sunday was a day of rest.

On Monday morning the Bombers took the air and flew to Jacksonville, where the planes were refueled and investigation made of the crating progress on the wrecked plane. Lieut. Biggerstaff was not quite able to make the return trip by plane at that time, so he was left to return later. The two mechanics, however, were taken aboard.

From Jacksonville a flight was made direct to Columbia, S.C., where an official reception was held and the flyers were given the keys to the City. On the following day, the leading plane of the flight was christened "Miss Columbia, S.C by the wife of the Mayor of the City. At the same time the Bomber was christene the Army Northrup plane, piloted by Major Willis Hale, who landed with the Bombers, was also christened, in the presence of the Governor, "South Carolina." Many State and City dignitaries were present at the christening of the planes. Major Dargue and Captain Cronau made speeches, as did the Governor and the Mayor. Major Dargue explained in his speech that, with the advent of flying, cities whic used to enjoy immunity from coastal attack by being located inland, were no longer immune, and he described how the air forces located at Langley Field ex-

isted for the purpose of protecting all the cities of the Atlantic States against possible air attacks.

Following the christening ceremonies, the Squadron took off and headed for Langley Field. Bad weather was encountered nearly all the way, but the Bombers came through with no mishaps and landed on the home airdrome about three o'clock.

All the personnel who made the trip to Miami declared it was the most pleasant experience they had ever had. The people at Miami are more than air-minded, and extend every courtesy to visiting pilots - at least this is the opinion of the 20th Squadron and other members of the flight. It is thought by the Second Bombardment Group that while Miami is run in the pleasant way it is now, it is perhaps the best city for winter air meets in the country.

The personnel on the Miami flight were: Major H.A. Dargue, Captains Robert Olds, Phillip Melville, B.T. Cronau, Henry Pascale, Lieuts. McDonald, Dunlap, Ladd, McLelland, Wood, Vos, Hutchinson, Huglin, Murphy, Crawford, Pratt, Winch, Burnside, O'Keefe, Freeman, Biggerstaff (started) and McDarment.

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AN OBSERVER'S UNHAPPY PREDICAMENT

Considerable excitement was packed into a short space of time during a recent flight by 2nd Lieut. Edgar A. Sirmyer, Jr., and Vernet V. Poupitch, of the 15th Observation Squadron, Scott Field, Belleville, Ill., which included such incidents as a loosened safety belt, premature opening of a parachute, a dead motor, and a forced landing which ended almost on the edge of a deep ditch. Considerable damage was caused to the O-19 airplane, but luckily the occupants escaped without injury.

The two officers were on a mission checking the strip map between Scott Field and Kansas City. Lieut. Poupitch had just taken an oblique photograph of the landing field at Mexico, Mo., when the plane hit a bump which almost threw the camera out of his hands. In his strenuous effort to hold the camera, the mechanism caught in the rip cord and released his parachute. Quickly dumping the camera into the cockpit, Lieut. Poupitch grabbed the 'chute just as the top of it piled up on the tail surfaces. He retrieved the silk before any jamming of the controls.

Lieut. Sirmyer decided to proceed to Columbia, Mo., about 25 miles away, in an effort to borrow another parachute. When about half the distance had been covered, the motor began to miss badly. Action on the wobble pump helped some, and Lieut. Sirmyer headed for a field about two miles short of the Columbia airport. Just when it seemed the chances of reaching this field were good, the motor stopped entirely and Lieut. Sirmyer headed for a very small field, which was the only level spot in sight in that rough country. His judgment was excellent in the approach, for he went under some telephone wires and over a high fence and dropped the plane into a muddy field less than 50 yards square. The plane went through a fence, and then a ground loop stopped it right on the brink of a bank about 35 feet high.

During all this time, Lieut. Poupitch had been huddled in the rear cockpit with his arm full of parachute and his safety belt unfastened. He had removed the belt to take the photograph and had been unable to replace it after getting the parachute back into the ship. Had the plane gone over the bank or nosed over in the mud, he would undoubtedly have been tossed out of the cockpit.

The damage to the plane was considerable, the fuselage being broken apart near the tail. The wings and landing gear also suffered.

Lieut. Edgar T. Selzer, Engineer Officer of the Squadron, investigated the cause of the motor trouble and found a broken fuel pump. The plane and motor were shipped direct to Dayton for overhaul.

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The work of painting the Coat of Arms of the Air Corps Technical School, Chanute Field, Ill., on both sides of some forty planes now stationed at that field, has just been completed. The coat of arms consists of the shield, crest and motto. The shield is blue, carrying a gold torch of knowledge on which is a spray of three feathers, representing the three original departments of the Air Corps Technical School.

The crest is imposed on a wreath which consists of a mechanic's hand grasping the key of knowledge. The motto below the shield reads "Sustineo Alas," which means, "I sustain the Wings." This coat of arms as inscribed on the planes is a work of art and is beautiful.

MR. IDE LECTURES ON EUROPEAN DEVELOPMENT

Mr. John Jay Ide, Technical Assistant in Europe of the National Advisory Committee for Aeronautics, made his annual visit to Wright Field, Dayton, Ohio, on January 18th, addressing the officers and engineering personnel on European aviation developments of the past year.

In all countries, Mr. Ide said, the financial severity of the times had been shown in the decrease in research and experimental fields. In England, large single-seaters capable of long cruising ranges were under development. Stainless steel was experimented with. Large long-range seaplanes were part of the British program, and a light 3-bladed autogiro capable of 118 m.p.h. and powered with an inverted De Haviland engine had been bought.

In France, the supercharger, which had been invented there, was at last coming into recognition. Of the different types of military planes, the Pursuits were in a rather lamentable state of development. They were still using wood fuselages for these. A Pursuit competition, however, is scheduled which would undoubtedly bring forth new designs. The French had bought some Rolls Royce Kestrels to improve the Pursuit situation. The Observation planes were in better state. Attempts were being made to protect the rear gunner and several designs of windshields had been tried out. A new multi-fighter for the protection of day Bombers, but capable itself of bombing had been designed. Urgent need of large seaplanes had become apparent and were being developed along the Dornier lines, powered with four 650 h.p. Hispano engines. A Farman stratosphere monoplane was awaiting final test of engine and propeller, and Clerget was making progress with an air-cooled radial engine of the Diesel type.

In Italy, technical development had been greatly neglected during 1931. Special attention was being given to flying boats and 40 single-seater seaplanes had been bought. New laboratory equipment was under development.

In Germany, the Diesel engine was being studied in all laboratories. A second DO-X had been flown over the Alps and a third was awaiting delivery in the Spring.

Mr. Ide remained in Dayton two days, permitting time for consultation in the various engineering departments. As usual, his visit was one of vital interest to the Materiel Division.

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A MODEL SQUADRON MESS KITCHEN AT BROOKS

"It is to be expected that mess kitchens compare with those of any other establishment whose motive is one of utter cleanliness in every detail," says the Brooks Field Correspondent, and then adds: "The mess hall and kitchen of the 58th Service Squadron, however, more than merely compares, but also undoubtedly offers pointers in efficiency, economy and arrangement. In a large commodious interior, made attractive by applications of white paint by the men themselves, one is attracted to the large white porcelain ice box, the only one of its kind on the Field; the pine tables scrubbed until they present shining immaculateness, laid with clean china and stainless silver; the large coffee percolator, 36" tall, 2' in diameter, containing an interior receptacle that allows of drip coffee in the best accepted French style, and at least three bake pans, of pure aluminum, all fashioned from props of disabled ships; the cook's table, with the top surface a sheet of aluminum, constructed from tubing from these disabled ships, and other equipment such as racks and smaller pots and pans fashioned of the same material from disabled airplanes.

"But not only are the personnel fortunate in their equipment, but also in the fact that they have Mess Sergeant Harry Crist as the presiding genius; three cooks of exceptional ability in Privates, first class, Roy M. Young, Richard M. Gleason and Private Harry G. Douglas, and a pastry cook, Private, first class, Edward F. Bartlett, whose exploits with dough and sugar are widely heralded.

"Lieut. O.L. Rogers and 1st Sergeant Terry are the guiding factors who have assisted in inspiring this organization into becoming one of the best on the post.

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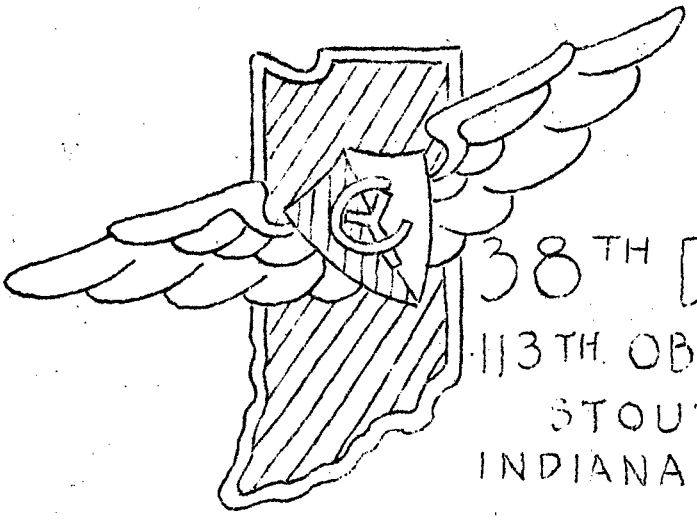
Lieut. Richard H. Magee, Air Corps Instructor, Penna. National Guard, states that facilities are now available for overnight guests at the 103rd Observation Squadron Armory, Municipal Airport, Philadelphia, Pa., and that all officers of the Air Corps and National Guard are invited to use same when in this vicinity.

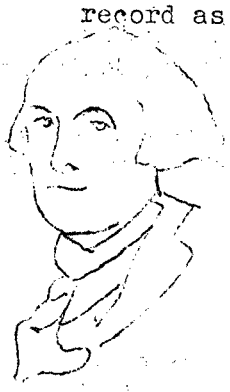


38TH DIV. AVIATION
113TH OBSERVATION SQD.
STOUT FIELD
INDIANAPOLIS, IND.

Though February is the shortest month of the year it holds Lincoln's Birthday, Washington's Birthday, Valentines Day and five National Guard drill nights for Indiana.

Such a month is an inspiration to the Observation Squadron to its ever increasing desire to greater achievements.

We wish to present out three new officers to the Air Corps: Lieut H. L. Ahl, W. C. Hiser, and H. J. Langsenkamp, who have just received their commissions by promotion after an excellent record as enlisted men.

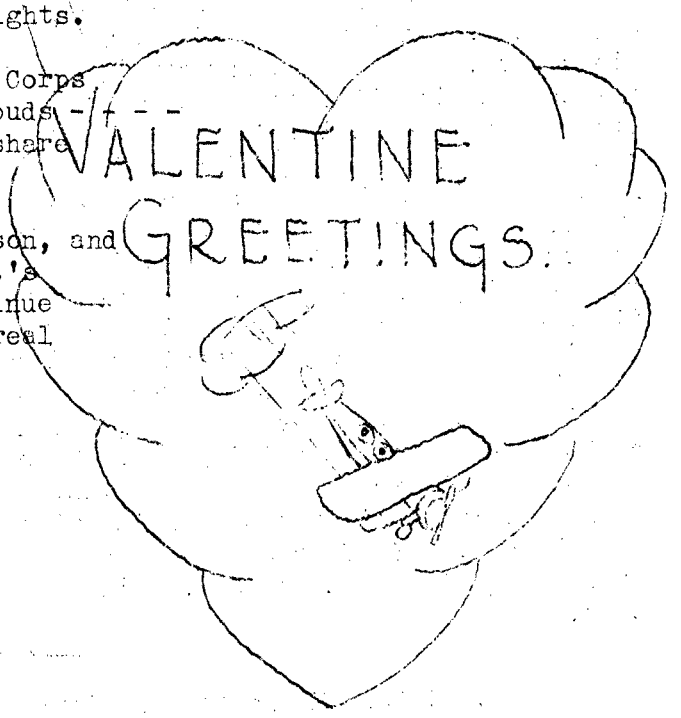


Captain Ray Whitehead, (flight surgeon), has just completed giving us the careful 'once-over' in the semi-annual 64, and we are happy to know that we are physically fit for another six months of romance in the air.

The Squadron now has a plane equipped for blind flying and the senior pilots are receiving instruction and practice in this new science.

Our observers are quite pleased to note that they are gradually overcoming the nauseating effect of the camera gun in dog fights.

Our Vanentine greeting to the Air Corps is for many happy hours in the clouds - - - and we shall look forward to our share of your stopOvers at Stout Field. Special greetings to our friends and past Instructors Lt D. D. Watson, and Captain Tom S. Voss. We hope D. D.'s brakes hold and Toms stogies continue to have authority. We hope for a real re-union some day.



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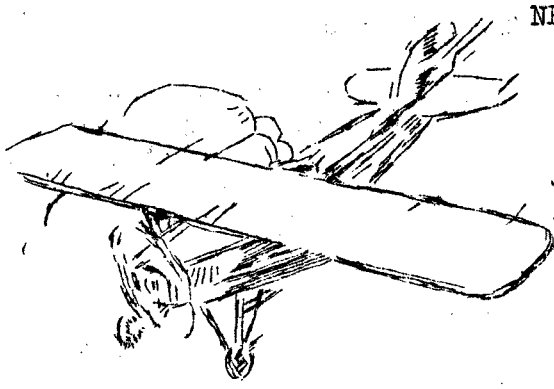
NEW YEAR STARTS AUSPICIOUSLY AT FRANCE FIELD



On the first real day of work in the New Year at France Field, Panama Canal Zone, there was a forced parachute jump and a fire which burned one of the two speed boats to the waters edge and injured two men of its crew.

In the morning at 9:30 o'clock, Lieut. Neal Ausman was forced to leave his spinning P-12 and join the Caterpillar Club. While attempting a roll on the top of a loop, Ausman's plane went into an inside spin which he tried to stop after a turn and a half. For some unexplained reason, the plane whipped into an outside spin and continued to spin in an inverted position until it hit the ground 6,000 feet below. The engine stopped after about six turns of the spin. The pilot fell 2,000 feet in a delayed drop until he was clear of the airplane, then pulled the rip cord and landed safely in the swampy jungle a mile east of the field. The airplane hit less than half a mile away and was completely demolished.

The crews which had been sent to search for Lieut. Ausman had just returned when an explosion was heard along the waterfront, followed by the whine of the fire sirens. Hampered by the fact that the speed boat was adrift, the fire department made little headway in stopping the blaze that followed the explosion, and the Cris-Craft rescue boat was damaged beyond repair. The crew had made the regular morning test run and had then serviced with gasoline and worked on the engine for two hours. The hatches were closed and the engine started. The craft had scarcely cleared the boathouse when gas in the engine compartment exploded, blowing two of the three men on board into the water.

Private, 1st Cl., Benjamin W. Sainer, 44th Obs. Sqdn., was treated at Colon Hospital and Private Joseph C. Burke, Headquarters Detachment, was given first aid treatment at the France Field Dispensary. The third member of the crew was forced to jump overboard, but was uninjured, and the boat drifted across the bay to the front of the Commanding Officer's quarters, where the fire department extinguished the blaze.

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NEW AIRPLANES FOR SELFRIDGE FIELD

Fourteen P-6E airplanes (Curtiss "Hawks") under the contract in which 44 are to be supplied to Selfridge Field, arrived recently. These planes are now being received at the rate of approximately eight a week.

Fifteen Selfridge Field pilots, under the command of Captain R.C.W.Blessley, left Seattle, Wash., January 31st, with 15 P-12E (Boeing) planes for ferrying to their home station. Under the allotment, Selfridge Field is to receive a total of 22 of this type.

Major Gerald E. Brower, Commander of the First Pursuit Group, recently visited Baltimore, Md., to obtain the first of the Berliner-Joyce two-seater Pursuit type airplane to be assigned this station. Hopes are expressed that these planes will be received in future at the rate of several a month.

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CRISSY FIELD RECEIVES MANY AERIAL VISITORS

During the year 1931, Crissy Field, Presidio of San Francisco, Calif., justified its unofficial title as "The Hub of West Coast Military Airways," with a record of no less than 812 visiting military airplanes for the period. None of these visits was in connection with the annual maneuvers. Ye eagle eyed statistician informs us that the above is not a record by any means. On the contrary, the traffic of visiting aircraft has diminished quite perceptibly during the past few months, probably due to the curtailment of flying time allotted for cross-country training.

In addition to the above mentioned military aircraft, Crissy Field played host to a total of 244 commercial aircraft during the year just ended.

Peculiar weather conditions existed around the Bay area recently. Normally the most fog-bound airdrome in the Bay area, Crissy was from time to time clear when, at the same time, Oakland Airport and Mills Field were fogged in. In consequence, several mail planes found Crissy Field a welcome refuge.

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AIR ACTIVITIES IN THE HAWAIIAN ISLANDS

Experiments were recently started at Luke Field with long distance photography. The first shots were taken 40 miles west of Oahu at 16,000 feet towards Hawaii, Mauna Loa and Mauna Kea, 260 and 250 miles away, respectively, as well as all the other islands of the Group in that direction. The next shots will be taken northwest of Kauai, and it is hoped to take all the islands of the Group in one picture.

The 23rd Bombardment Squadron performed altitude tests on the LB-6 Bombers with which the organization is equipped. All pilots went up in three-plane formations to about 11,000 feet and then continued individually to the ceiling. Each airplane carried six 100-pound sand loaded bombs. The absolute ceiling varied from 14,600 to 16,200 feet.

The 23rd Squadron is at present probably the most unique organization in the Air Corps. It is both a Bombardment squadron and a construction company. Every man in the squadron, with the exception of those men who are absolutely indispensable on other jobs, is aiding in the reconstruction of the Squadron barracks, the building formerly housing the organization having burned to the ground on June 15th last. The work is being done by men of the organization under the able direction of Lieut. John W. Warren, Squadron Commander; Lieut. Charles G. Williamson, "Director of Construction"; 1st Sergeant John W. Grimme, "Assistant Extraordinary"; Corporal Bernt Balchen, Boss Carpenter (not the Polar Flyer), and Corporal Leslie A. Hodges, Electrician. Morale, cooperation from all post activities and workmanship are excellent, and the building progressed to such an extent that the Squadron had their Christmas dinner in their own mess hall.

The 6th and 19th Pursuit Squadrons, Wheeler Field, conducted a number of experiments on methods of attacking a Bombardment formation. The 5th Composite Group cooperated by furnishing a formation of Bombers for each experiment. Camera guns were used and our pilots obtained some excellent training and experience.

Eight new Boeing P-12E Pursuit planes assembled at Wheeler Field embody a new type of life raft container which will greatly increase safety of flights over water. This is the first time this station assembled airplanes shipped direct from the manufacturer.

The new P-12E differs from the P-12B and P-12C, already in service here, in having an all-metal fuselage instead of part fabric and in being better streamlined. The engine is similar to that in the older job, but has greater compression and hence develops greater horsepower.

The new type life raft container is streamlined on top of the fuselage just behind the pilot's cockpit. In this it differs from the life raft container recently developed by Lieut. George P. Tourtellot, Post Engineer Officer of Wheeler Field, for use on the older planes, which was mounted on the upper wing.

The cockpit of the new plane is designed to give increased comfort to the pilot and makes controls most readily accessible. Lieut. Tourtellot was in charge of the assembling of the planes, assisted by Lieut. Budd J. Peaslee.

The latest additions to Luke Field are two eight-place Douglas Dolphin Amphibians, powered with two "Hornet" engines, which develop more than 600 h.p. These are two of three planes allotted the Hawaiian Department and their receipt is hailed with much joy.

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Two and one-half hours after Kelly Field received a request for an ambulance plane from Fort Clark, Brackettville, Texas, an air line distance of about 100 miles, Private Joseph J. Jordan, Troop B, 5th Cavalry, Fort Clark, was turned over to a station hospital ambulance at Dodd Field, Fort Sam Houston, Texas. Jordan suffered an attack of acute appendicitis. The call was received by the Operations Office at Kelly Field at 1:15 p.m. Half an hour later the ambulance plane, piloted by Lieut. Harvey L. Boyden and carrying a medical attendant, left Kelly Field, arrived at Fort Clark in an hour and 40 minutes and left there at three o'clock with the patient. The journey to Dodd Field was made in 45 minutes.

THE NEW BOLLING FIELD

With various trees and buildings which dotted the site of the new Bolling Field now out of the way, and with work progressing on the sub-surface drainage system, the realization of this long-needed improvement at the nation's Capital takes tangible form.

The new Bolling, which is located directly south of and adjacent to the present field, is 15 feet higher than the present field and will have a 6,000-foot north and south runway and a 3,000-foot east and west runway. Thus, pilots can bid a welcome good-bye to the jockeying often now necessary for a happy landing. A half mile long hangar line will also welcome visiting fliers.

That the port will have an appearance befitting the Air Corps flying field at the Capital City is assured by the information that the Fine Arts Commission of Washington are to pass on the architectural appearance of all buildings erected. In keeping with the spirit of the Potomac, a pure Colonial style will be adhered to. Completely equipped single quarters will be provided for married officers. These are to be placed on the hillside to the east side of the field, more than 60 feet above the river line, thus affording an unusual view of the Potomac and Washington.

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TACTICAL EXERCISE BY ATTACK PILOTS IN HAWAII

The 26th Attack Squadron, Wheeler Field, T.H., recently conducted a tactical exercise, involving aerial machine gun fire and bombing. The target represented an Infantry battalion of 280 men marching along a road. Suddenly warned of an aerial attack, the battalion dispersed. Four seconds were allowed for this; each man then marked his position with a stake. Silhouette targets were placed at each stake and a target, 3 by 5 feet, represented each machine gun position. A total of 270 of the former and the 8 machine gun targets were scattered over an area approximately 200 yards long and 33 yards wide.

Nine ships with 32 machine guns (two planes did not have wing guns) carried 9400 rounds of .30 caliber ammunition, interspersed every fifth round with white tracer bullets. In addition, each plane was armed with ten 17-pound fragmentation bombs.

At 9:00 a.m., the first attack was made. Only the machine guns were used. Owing to the size and nature of the target, a single ship column formation was necessary. Coming in down wind from 600 feet altitude, pilots opened fire at 1,000 yards, using short bursts. The second attack, at 10:00 a.m., was made slightly cross wind, the ships in close formation. Passing over the target at 500 feet altitude, in one attack, each pilot dropped ten bombs. The salvo release was not used, each bomb being dropped as a single.

All targets were marked and scored after the last attack by two Infantry and two Air Corps officers. The following results were certified:

A total of 202 silhouette targets were hit with machine gun fire; 230 silhouettes were struck by both bomb fragments and gun fire; 48 targets were untouched, while 15 were completely destroyed and only counted as 15 hits.

Total number of bullet hits	339
Total number of fragmentation hits	406
Total number of hits	745
Percentage of casualties	84%

It is noteworthy that much of the destructive force of the bombs at right angles to the line of flight could not be recorded because no target was presented at the side by the silhouettes.

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With the arrival of the 11th Bombardment Squadron at March Field, Calif., all the units of the 7th Bombardment Group are for the first time at the same station. The Group Staff is composed of the following-named officers: Group Commander, Major Joseph T. McNarney; Adjutant, Captain Devereaux M. Myers; School Officer, Capt. Benjamin B. Cassidy; Operations Officer, 1st Lieut. Westside T. Larson; Personnal Adjutant, 2nd Lieut. Frederick W. Ott; Supply Officer, 1st Lt. John M. Davies; Engineering Officer, 2nd Lieut. Wm. A. Matheny; Communications Officer, 2nd Lieut. Donald R. Lyon; Armament Officer, 2nd Lieut. John S. Mills; Information Officer, 2nd Lieut. Harold W. Bowman.

Commanding the Squadrons of the 7th Group are: Lieut. Charles H. Howard, 11th Bombardment; Lieut. Harold Beaton, 31st Bombardment; Capt. Younger A.Pitts, 9th Bombardment; Capt. Leo F. Post, 70th Service; Lieut. Donald G. Stitt, 23rd Photo Section; and Capt. D.M. Myers, Hqrs. 7th Bombardment Group.

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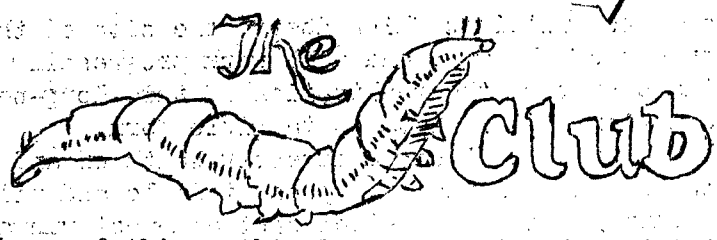

The end of the year 1931 saw a total of 426 names inscribed in the Caterpillar Club register, with an explanatory note to the effect that 441 emergency parachute jumps were made, meaning that 12 members of this mythical organization jumped twice and one member, none other than the best known flyer in the world today, Colonel Charles A. Lindbergh, jumped on four different occasions.

A total of 85 names were added to the roster of the Caterpillar Club during the Calendar Year 1931, as against 131 names added the preceding year, from which it will be noted that there was a decline in emergency parachute jumps last year to the extent of 46. So far as airplane accidents were concerned, 1931 was not such a bad year after all.

Entered below are the names of airmen who were initiated as Mystic Knights of Caterpillars, or what have you, during the year 1931. There may have been others initiated also but, if so, such cases were not brought to the attention of the Caterpillar Club Historian. Readers of the News Letter who have knowledge of jumps made during 1931, and which are not recorded below, will confer a favor upon the Air Corps Information Division by forwarding the details thereof.

No.	Date	Name	Rank	Place of Jump
341	Jan. 3	A.W. Dukes	Corporal, Air Corps	Winkleman, Arizona.
342	Jan. 8	Walter R. Podraza	Staff Sgt. Air Corps	Encinal, Texas.
343	Jan. 8	Warren H. Higgins	2nd Lt. Air Corps	Encinal, Texas.
344	Jan. 11	Albert H. Santa Maria	Civilian	Philadelphia, Pa.
345	Feb. 3	Harvey W. Regan	Flying Cadet, A.C.	Big Springs, Texas.
346	Feb. 5	Haywood Hansell, Jr.	2nd Lieut. Air Corps	Langley Field, Va.
347	Feb. 8	Charles D. Fator	2nd Lieut. Air Corps	Whitewater, Calif.
348	Feb. 9	Eddie J. Fries	Civilian	Near Findlay, Ohio.
349	Feb. 19	L.H. Jack Atkinson	Civilian	Van Nuys, Calif.
350	Feb. 27	Reginald F.C. Vance	2nd Lieut. Air Corps	Smithfield, N.C.
351	March 10	Harold M. Williams	Private, Air Corps	Chanute Field, Ill.
352	March 10	Stoyte O. Ross	2nd Lieut. Air Corps	Chanute Field, Ill.
224*	March 15	Verne E. Treat	Air Mail Pilot	Near Laurel, Md.
353	March 23	R.C.W. Blessley	Captain, Air Corps	Selfridge Field, Mich.
354	March 24	J.C. Torrien	Pharmacist Mate, USN	Condega, Nicaragua.
355	March 24	J.P. Grando	Private, Marine Corps	Condega, Nicaragua.
356	March 24	J.J. Vlack	Private, Marine Corps	Condega, Nicaragua.
357	April 5	Justin C. Ford	Private, Air Corps	Bakersfield, Calif.
358	April 5	James T. Cumberpatch	1st Lieut. Air Corps	Bakersfield, Calif.
359	April 6	Joseph A. Brier	Flying Cadet, A.C.	Kelly Field, Texas.
360	April 8	Edward L. Pugh	Lieut. Marine Corps	Managua, Nicaragua.
361	April 8	T. Conradi	Private, Marine Corps	Managua, Nicaragua.
362	April 13	Charles G. Breene	Captain, Air Corps	Langley Field, Va.
363	April 13	Charles A. French	Major, Coast Art'y	Langley Field, Va.
364	April 15	Paul Hovgard	Civilian	Washington, D.C.
365	April 25	Anthony Sieklecki	Civilian	Long Island, N.Y.
366	April 28	Peter T. Hubert	National Guard	Chicago, Ill.
367	April 28	James C. Richardson	Sergeant, Air Corps	Fort Benning, Ga.
368	April 29	Ernest K. Warburton	2nd Lieut. Air Corps	Selfridge Field, Mich.
369	May 12	J. K. Carris	Civilian	Los Angeles, Calif.
370	May 26	William G. Swan	Civilian	Atlantic City, N.J.
371	May 27	F. N. Kivette	Lieut. U.S. Navy	Ream Field, Calif.
372	May 27	F. S. Golding	A.M.M., U.S. Navy	Ream Field, Calif.
373	June 6	Harold R. Osborne	Private, Air Corps	Chanute Field, Ill.
332*	June 9	Arthur R. Kingham	2nd Lieut. A.C. Res.	Sacramento, Calif.
374	June 6	Karl H. White	Civilian	Robertson, Missouri.
375	June 19	Al Howe	Civilian	Near Leandro, Calif.
376	June 19	Irwin K. McWilliams	Civilian	Asheville, N.C.
166*	June 23	James H. Doolittle	Major, A.C. Reserve	East St. Louis, Ill.
377	July 20	Francis X. Kelly	2nd Lieut. A.C. Res.	Newington, Conn.
378	July 20	David L. Spicer	Sergeant, Air Corps	Newington, Conn.

* 2nd Degree Member

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No.	Date	Name	Rank	Place of Jump
379	July 27	Fred J. O'Neil	Civilian	Boston, Mass.
380	July 27	O. P. Pierson	2nd Lieut. A.C. Res.	Boston, Mass.
381	Aug. 2	Frederick Postal	Civilian	Imlay City, Mich.
382	Aug. 6	Harry A. Johnson	1st Lieut. Air Corps	Selfridge Field, Mich.
383	Aug. 7	Kenneth W. Mosher	2nd Lieut. A.C. Res.	Selfridge Field, Mich.
384	Aug. 7	Robert W. Burns	2nd Lieut. A.C. Res.	Selfridge Field, Mich.
385	Aug. 10	Weldon E. Rhoades	2nd Lieut. Air Corps	Waianae Mts., Hawaii.
386	Aug. 10	Roland E. Meade	2nd Lieut. A.C. Res.	Waianae Mts., Hawaii.
387	Aug. 10	James D. Koons	Private, Air Corps	Waianae Mts., Hawaii.
388	Aug. 14	William DaBall	Civilian	Cortland Airport, N.Y.
389	Aug. 14	Stanley Vossler	Civilian	Cortland Airport, N.Y.
390	Aug. 17	William F. Day	2nd Lieut. A.C. Res.	Selfridge Field, Mich.
391	Aug. 23	Joseph Walkos	Private, Air Corps	Wayne Co. Airport, Mich.
392	Aug. 27	Edward Winfield	Civilian	Exeter, Nebraska.
393	Aug. 31	L.H. Sanderson	Lieut. Marine Corps	Cleveland, Ohio.
394	Aug. 31	W.O. Brice	Lieut. Marine Corps	Cleveland, Ohio.
395	Sept. 1	Thayer S. Olds	2nd Lieut. Air Corps	Lake Erie, Ohio.
396	Sept. 6	Walter Hunter	Civilian	Cleveland, Ohio.
397	Sept. 9	S. S. Miller	Lieut. U.S. Navy	Hampton Roads, Va.
398	Sept. 12	William Kelly	Sgt. Penna Natl G'd	Philadelphia, Pa.
399	Sept. 12	Roscoe Brinton	Civilian	Springfield, Mass.
400	Sept. 18	A.D. Seick	Civilian	Flint, Mich.
401	Sept. 21	James G. Hall	Civilian	Staten Island, N.Y.
402	Sept. 23	Leon A. McKennon	Civilian	Dallas, Texas.
403	Sept. 25	Robert B. Richard	2nd Lieut. A.C. Res.	Near Mendota, Calif.
404	Sept. 25	Ralph W. Fairington	Private, Air Corps	Near Mendota, Calif.
405	Oct. 3	Donald Jenkins	Civilian	Cleveland, Ohio.
406	Oct. 5	Weston Adams	Civilian	Framingham, Mass.
407	Oct. 7	J. B. Moss	Lieut., U.S. Navy	Hampton Roads, Va.
408	Oct. 7	Whitman	C.A.P., U.S. Navy	San Diego, Calif.
409	Oct. 10	F.P. Tague	Lieut. U.S. Navy	Hampton Roads, Va.
410	Oct. 15	John V. Kipp	U.S. M.C.R. 2d Lt.	St. Paul, Minn.
411	Oct. 17	Jack Ayres	Civilian	Fairfax Airport, Mo.
412	Oct. 19	Harrison G. Crocker	1st Lieut. Air Corps	Wright Field, Ohio.
413	Oct. 21	S. J. Jaros	C.A.P., U.S. Navy	San Diego, Calif.
414	Oct. 30	Leonard Povey	Civilian	Chicopee Falls, Mass.
415	Oct. 30	Joseph Silverthorne	Civilian	Chicopee Falls, Mass.
416	Nov. 3	Earnest H. Briscoe	Flying Cadet, A.C.	Kelly Field, Texas.
417	Nov. 3	J. Eldridge	Lieut. U.S. Navy	
418	Nov. 3	Jack Ware	A.P., 1st Cl. USN	
419	Nov. 4	C. B. Harper	Lieut. U.S.N. (Ret.)	So.Manchester, Conn.
420	Nov. 28	Melvin Garlow	Air Mail Pilot	Pittsburgh, Pa.
421	Dec. 2	Denaro Rionda	Civilian	Bayonne, N.J.
422	Dec. 12	M. B. Gardner	Lieut., U.S.N.	San Diego, California.
423	Dec. 13	Richard Scanlon	Civilian	Greencastle, Ind.
424	Dec. 16	Donald N. Yates	2nd Lieut. Air Corps	Randolph Field, Texas.
425	Dec. 16	John H. Davies	2nd Lieut. Air Corps	Hawaiian Waters.
426	Dec. 24	James Johnson	Air Mail Pilot	Kylertown Airport, Pa.
	Since Jan. 1, 1932, the following Caterpillars were initiated:			
427	Jan. 4	Neal E. Ausman	2nd Lieut. Air Corps	Panama Canal Zone
428	Jan. 7	L. L. Hunt	Lieut. U.S. Navy	Hampton Roads, Va.
429	Jan. 7	Robert J. Potter	Flying Cadet, A.C.	Kelly Field, Texas.
430	Jan. 8	A.V.P. Anderson	2nd Lieut. Air Corps	Nichols Field, P.I.
431	Feb. 1	William A. Cocke, Jr.	2nd Lieut. A.C. Res.	Sequoia Natl Park, Calif
432	Jan. 15	Wilbur O. Riley	Flying Cadet, A.C.	Kelly Field, Texas.
433	Feb. 3	James M. Treweek	Flying Cadet, A.C.	Kelly Field, Texas.

And so, at this writing, the Caterpillar Club score is 433 lives saved and 448 emergency jumps made.

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Major Willis Hale, on duty in the Office Chief of the Air Corps, recently flew a new Boeing Bomber into Bolling Field, D.C. This ship is a radical departure from the popular conventional conception of what a Bomber should look like, being a low wing, two motored dual control type. There being no bomb bay, the bombs are suspended from under the wings. As yet no one at the field other than Major Hale has flown the Bomber. "All the young hopefuls on the field," says the News Letter Correspondent, "are especially anxious to 'give her the works.'

OLD INDIAN FIGHTER VISITS SCOTT FIELD

Scott Field, Belleville, Ill., played host recently to the most picturesque guest who has ever visited the post. This guest, a long haired, bewhiskered old man, leading a white burro, entered the gate of the field during the last week of the year and proceeded to headquarters where he reported to Lieut.-Col. John A. Paegelow, Commanding Officer.

The mysterious stranger was none other than Colonel Raymond Hatfield Gardner, more popularly known in frontier history of the west as "Arizona Bill." Colonel Paegelow made him his guest until the weather clears so that he may comfortably resume his journey on foot and burroback to his home in Tombstone, Arizona.

Colonel Gardner is the last of the scouts and Indian fighters. He is 86 years old, but his appearance and agile activity fail to betray his age. He wears his chestnut-brown hair uncut and, despite his age, there's not a gray hair on his head except for perhaps a few stragglers in his full beard. A veteran of three wars, Colonel Gardner is now indulging in a leisurely sort of a tour of the country with his burro, which answers to the name of "Tipperary." This trip is the tenth which he has taken in the last twenty years.

Colonel Gardner entered the service of the United States as a boy of 16 years when he joined the Union forces during the Civil War, and fought under General Phil Sheridan. After peace between the North and the South had been effected, Colonel Gardner went to the wide open spaces of the West where he became a scout and an Indian fighter. He fought in Major Reno's command in the Bighorn Massacre of June, 1876, and he often saw Custer.

In the expedition into the Black Hills country, "Arizona Bill" was Colonel Theodore Roosevelt's personal guide. During the Apache Indian outbreak in 1883-85, the Scott Field guest was stationed at Fort Grant in the Arizona Indian territory.

After more than 56 years of Army service, Colonel Gardner became a guide in Yellowstone National Park, and later was affiliated with the Pacific Northwest forestry division. During the World War he served in the Canadian Royal Northwest Mounted Police at Dawson, Yukon Territory, and since then he has been knocking about all over the continent.

Colonel Gardner is a Boy Scout enthusiast, being a great friend of Daniel Carter Beard, founder of the Boy Scouts of America. Since his arrival at the field he has arranged to give several talks to various Scout organizations in this vicinity.

During his stay at Scott Field, he was a guest of the various organizations and his story telling periods in the various "day" rooms have provided his audiences with many vivid and interesting tales connected with his many experiences.

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MECHANICAL BOMBING MAY RESULT FROM INVENTIONS.

Through the use of automatic pilots and stabilizers, aerial bombing may be reduced to mechanical precision, according to Major Herbert A. Dargue, Commanding Officer of the Second Bombardment Group. In a recent lecture by Major Dargue before the Bombardment pilots of Langley Field, a picture was drawn showing how a human pilot may set a plane on a direct course over a target, and with the gyro stabilizer and automatic release bomb sight a cargo of bombs could be delivered with utmost precision. The human pilot would turn the plane over to the gyro when the course was set properly.

It is well known by all bombing pilots that even in the smoothest air it is very difficult to steer a Bomber directly over a course after the target has disappeared beneath the nose and fuselage of the plane. No satisfactory way has been worked out for service use as yet on steering a plane over a target. With the exception of a tricky radio installation, pilots still have to use the methods in practice during the war. If such a mechanical bombing arrangement could be worked out, the pilot and bomber would be free to man machine guns while flying across the "hot spot" around the target.

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Commanding Officer (pointing to a cigarette butt on floor of headquarters building) - "Orderly, is that yours?"

Orderly: "Not at all, Colonel; you saw it first."

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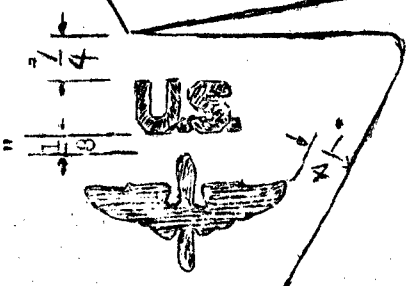
CORRECT POSITION OF INSIGNIA ON SERVICE COAT OF AIR CORPS OFFICERS.

A.R. 600-40 - Wearing of Insignia.

Courtesy of A.H. Dondero, Inc., Washington, D.C.



RECONSTRUCTION OF TE AIRSHIP

All parts for the reconstruction of the TE Airship at Langley Field, Va., arrived and the complete ship has no doubt been flight-tested at this writing. In appearance this is the most airworthy small ship the Army has known. The new power plant consists of a pair of Lambert 5-cylinder air-cooled engines developing 70 h.p. at 1900 R.P.M.

Among the departures from conventional design in this ship is a new experimental rudder. This rudder, instead of carrying the extended portion with counterbalance on the lower side, is lopped off even with the lower edge of the lower fixed surface and carries a counterpoise vane about the vertical center and overlapping the hinge section about ten inches.

The 19th Airship Company ix experimenting with a new type landing wheel for this ship. The standard type high pressure tire with large wheel has been removed for the period of test and replaced with an air wheel the size of the Keystone air wheel. Although certain changes in the wheel fork were necessary, the weight increase was under ten pounds. This installation should prove more satisfactory than the standard type in that the wheel will absorb most of the shock of landing and the car will be lowered about ten inches.

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EXPERIMENTS ON B-6A BOMBERS

After some difficulty, a Sperry Gyro Horizon and a Sperry Directional Gyro were installed on a B-6A Bombardment plane of the 96th Bombardment Squadron, Langley Field, Va. As the instrument Board of a B-6A leaves no space for additional instruments, the two Gyros were arranged on top of the cowling on the right side in front of the windshield. The windshield itself was cut and a covering placed around the opening and the Gyros so that there would be no difficulty in seeing these two instruments under all weather conditions. This installation is now undergoing test.

Three-bladed propellers are now installed on most of the Squadron planes. As they cut down both the vibration of the plane and the intense noise on the pilots' ears, the Squadron personnel are well satisfied with them.

The 96th Bombardment Squadron will represent the 2nd Bombardment Group in a demonstration of Bombardment tactics at the Air Corps Tactical School at Maxwell Field, Montgomery, Ala.

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AERIAL REVIEW FOR RETIRING N.C.O.

On the occasion of the retirement of 1st Sgt. John S. Martin, 27th Pursuit Squadron, the Commanding Officer of the 1st Pursuit Group held an aerial review at Selfridge Field on the morning of January 30th.

Three composite Squadrons were organized, the Group consisting of two squadrons of 12 P-12's each and one squadron of P-6A's and P-6E's. Major G.H. Brett, Post Commander, accompanied Sgt. Martin at the taking of the Review.

Sgt. Martin's service in the Group and in the service in general has been exemplary, and the Commanding Officer voiced the expression of the entire command in wishing him success and happiness inhis well earned retirement.

V-6241, A.C.

Engineering News

MATERIEL DIVISION ACTIVITIES

Retractible Chassis Warning Device: Design has been completed for a warning device, the purpose of which is to caution the pilot as to the position of the retractible chassis. When constructed, the device will be tested in flight.

Blind Flying Hoods: Fabrication was started of a blind flying cockpit hood in order that National Guard airplanes may be equipped for blind flying training.

Long Range Flight Study: A study has been started to determine the requirements necessary for long range flight and the adaptability of present American airplanes to these requirements. A study for loading engines in transport airplanes has also been started.

Slots and Flaps: A study is to be made of the recent developments in slots and flaps with a view to improving performance of airplanes.

Parachutes: A 3-second delayed drop test was made with the 80-foot triangle parachute, using a 1,000-pound weight, to determine the shock load produced and the strength of the parachute. A shock load of 12,000 pounds was produced without damage to the canopy. This load is far in excess of that ever produced on any parachute. Tests will be conducted on the parachute with heavier weights and longer delays until the ultimate bursting point is determined.

Cockpit Heater: Preliminary tests of a Prestone-filled cockpit heater have shown good results. A greater quantity of heat is given off by this method than by steam, hot water, or exhaust type heaters. This equipment will be flight-tested as soon as ground tests have been completed.

Kreusi Radio Compass: A flight was made to Columbus, Ohio, in the Douglas XBT-2B airplane for the purpose of testing the Kreusi radio compass, tuning in on Station WAIU, Columbus, Ohio. Upon arrival at Columbus, the airplane was flown for a distance of approximately 30 miles with the compass tuned on Station WLS, Chicago, Ill., after which a return flight to Wright Field was made, tuning in on the 50-watt transmitter at Patterson Field. The airplane was flown part of the time from the rear cockpit without the aid of gyro or magnetic compasses.

Outline Light Dimmer: Night flying tests were conducted to determine the effect of the outline light dimmer when operated at a rate of 30 times per minute. Previous tests were conducted, operating at a rate of 16 times per minute. The increased rate was found to be more satisfactory. Further tests will be made until the most desirable rate of flash is determined.

Improved TC Airship: An improved type of TC airship is a contemplated development by the Lighter-than-Air Unit of the Air Corps, in which design and specifications will be considered in three separate units - those for the car, those for the envelope and those for the control surfaces.

The car is to be the first development, and a mockup is in course of construction. Special attention is being given to the placing of personnel with relation to the instrument board and various controls, visibility from the pilot's compartment, streamlining, and landing arrangements. Arrangements also include provisions for carrying a sub-cloud observation balloon in the rear of the car. Considerable work has been done toward the establishment of the overall weight of the airship in order that a fairly exact maximum weight for the car may be specified. Some of the general characteristics estimated for the airship are as follows: Volume 359,000 cubic feet; length 244.75 feet; diameter, 53.8 feet; gross lift 22,260 at 100 percent inflation of 95 percent gas; fixed weight 12,490 pounds; useful load, 9,770 pounds; normal useful load 8,350 pounds with 2,300 feet altitude. Useful load includes a crew of seven men, 770 gallons of fuel, 60 gallons of oil, and 60 gallons of water ballast, 960 pounds of armament, and miscellaneous equipment consisting of 421 pounds including two-way radio and blower unit. High speed, 65 m.p.h.; endurance with normal fuel load,

12½ hours at high speed, and a cruising speed of 52 m.p.h. for 25 hours. Performance at maximum fuel load is estimated at 65 m.p.h. for 18.2 hours, and 52 m.p.h. for 40 hours. Static efficiency is .37½ percent under normal conditions. Maximum range, 2,080 miles.

Airship Envelope Construction: A study is being made for the various schemes for changing the conventional construction of the bow portion of airship envelopes in an endeavor to reduce the tendency of bow stiffener battens to break under the influence of side strain produced by the stretch of the envelope fabric. The most practical solution appears to be the scheme whereby the bias of the fabric will be alternated by longitudinal gores instead of by circumferential rings which is the present practice.

Spectrograph in Use in Materials Branch: The Materials Branch has recently acquired a quartz spectrograph to supplement usual chemical methods in the quantitative analysis of metals and alloys. In the usual routine of testing metal samples, a series of tests must be run to detect and determine the amount of each constituent element in each sample. By means of this equipment, all elements present may be detected in a single operation and the amounts present estimated rapidly. The method is best suited to the study of elements present in small amounts, especially those below one percent.

In testing with the spectrograph, the sample is placed in an electric arc, where the vapor of each metal present emits light of certain characteristic colors. In passing through the spectrograph, this light is resolved into these component colors by means of a quartz prism. Quartz is used for the optical system instead of glass, because of its transparency to radiation of the ultra violet region in which the most significant lines appear. The spectrum produced is recorded on a photographic plate within the instrument. On this plate each color is represented by a line in a definite position. Since each element has certain characteristic colors, its presence is denoted by the appearance of lines in definite positions. The relative intensity of these lines is in proportion to the quantity of the various elements present.

The investigation of these intensity relations is now being made at Wright Field. Preliminary comparisons with the results of the usual method of chemical analysis indicate that spectrographic analysis will make possible more rapid routine determination of certain constituents of alloys used in aircraft construction. The application of the spectrograph to the analysis of various other aircraft materials is now being studied. The spectrograph is not largely used in this country, although they have been installed in several industrial laboratories where they are employed in connection with the testing of particular alloy the constituents of which have been fully investigated.

Foreign Aircraft.

C-24 Autogiro: A two-seat cabin autogiro with the pylon streamlined in to the roof of the cabin. All external bracing of the rotor has been eliminated and the machine is very clean. A 120-horsepower Gypsy III engine is installed, and a speed of 120 m.p.h. is claimed.

Junkers JU. 52. A new single-engine transport airplane with a slotted wing effect, consisting of a movable trailing flap. It has a single B.M.W. 700 h.p. engine. It carries a payload of no less than 4,680 pounds with a range of 622 miles.

H.H. Tiger Moth: No kin to the small high-speed Tiger Moth of some years ago, this is a two-seat training airplane having the Gypsy III inverted engine. It differs largely from the standard Moth in its general design and detail, but presents no novelties.

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GRADUATIONS FROM AIR CORPS TECHNICAL SCHOOL

A class of eight in Aircraft Machinist, eight in Parachute Riggers, six in Aircraft Armorers, and eight in Photography, were graduated from the various schools of the Air Corps Technical School, Chanute Field, Ill., January 29th.

Those graduating as Aircraft Machinists were: Welton E. Avery, Edwin A. Creech, James A. Farrell, Herman C. Meyer, John C. Parker, Edward Wall and Elmer Kunnas; Parachute Riggers - Dewey Horton, Robert E. Barnes, Joe H. McGraw, Samuel Fazey, Joseph W. Peck, Walter F. Linzenmeyer, Ronald Mogford and James H. Wall; Aircraft Armorers - Albert Trueblood, Jr., Edgar A. Currie, Andrew Giastaferro, Dwight J. Pulliam, Kenneth P. Thrasher and John F. Viens; Photographers - Charles Zumber, John W. Anthony, John D. Lanier, Gene F. Badger, John H. Kelly, James F. Boostrom and Harold Muldoon. Marcus B. Armfield, Jr., will be graduated from the Photography Class, less mosaics.

WAR DEPARTMENT ORDERS AFFECTING AIR CORPS OFFICERS

CHANGES OF STATION: To Bolling Field, D.C.: 1st Lieut. Lawrence J. Carr from duty as Instructor, Randolph Field, Texas; Lieut.-Col. Barton K. Yount from Rockwell Field, Calif.

To Barksdale Field, La.: Major Millard F. Harmon, Jr., from duty as Instructor, Command and General Staff School, Fort Leavenworth, Kansas.

To Army War College, Washington, D.C.: Major Percy E. Van Nostrand, Capts. George C. Kenney, David S. Seaton, Lieut.-Col. Frank M. Andrews, for duty as students, 1932-1933 course, reporting August 15, 1932.

To Chanute Field, Rantoul, Ill.: 2nd Lieut. George R. Bienfang, from duty as student at Air Corps Technical School.

To Washington, D.C.: To Office Chief of the Air Corps - Major Arnold N. Krogstad from Hqrs, 2nd Corps Area, Governors Island, N.Y.; 1st Lieut. George C. McDonald from Langley Field, Va.; To War Department General Staff - Major Edwin B. Lyon, from Army War College; Major Davenport Johnson from Ft. Crockett, Tex.; To Office Asst. Secretary of War - Major Wm. H. Crom from A.C. Tactical School, Maxwell Field, Ala., effective Sept. 5, 1932.

To Langley Field, Va.: Major Byron Q. Jones from duty with War Department General Staff; 2nd Lieuts. John E. Bodle and John H. Ives from A.C. Technical School, Chanute Field, Ill.; Col. C.C. Culver, War Department Gen. Staff.

To Fort Crockett, Texas: Major Horace M. Hickam from War Department General Staff; 2nd Lieut. Frederick E. Calhoun from A.C. Technical School, Chanute.

To Fort McPherson, Ga.: Major Ira A. Rader from Fort Benning, Ga., for duty at Headquarters Fourth Corps Area.

To Fort Bragg, N.C.: 2nd Lieut. Dudley E. Whitten from A.C. Technical School, Chanute Field, Ill.

To Governors Island, N.Y. for duty at Hqrs. 2nd Corps Area: Lieut.-Col. Roy C. Kirtland from Langley Field, Va.

To Maxwell Field, Ala.: Major John C. McDonnell from Office Chief of the Air Corps, Washington; Capt. Myron R. Wood from O.C.A.C., Washington.

To Kelly Field, Texas: 2nd Lieut. George L. Murray from Mather Field, Calif.; Major Wm. E. Kepner from duty as student, Advanced Flying School.

To Rockwell Field, Calif.: Lieut. Guy Kirksey from O.C.A.C., Washington.

To Mitchel Field, N.Y.: 1st Lieut. John P. Doyle, Jr., 2nd Lieut. David H. Baker, from Advanced Flying School, Kelly Field, Texas; 2nd Lieut. John J. Keough from A.C. Technical School, Chanute Field.

To Middletown, Pa., Air Depot: Capt. Max F. Schneider, from Kelly Field, Tex.

To Hawaiian Department: 2nd Lieut. Wm. R. Morgan from Chanute Field, Ill.

To Mather Field, Calif.: 2nd Lieut. John L. Nedwed from A.C. Technical School, Chanute Field, Ill.

To Selfridge Field, Mich.: 2nd Lieut. Morley F. Slaght from A.C. Technical School, Chanute Field, Ill.

To Randolph Field, Texas: 2nd Lieut. Ivan M. Palmer from A.C. Technical School, Chanute Field, Ill.

To March Field, Calif.: 1st Lieut. Jesse A. Madarasz and 2nd Lieut. Wilbur Erickson from A.C. Technical School, Chanute Field, Ill.

RELIEVED FROM DETAIL TO THE AIR CORPS: 2nd Lieuts. Clarence D. McGowen, Theodor J. Beck, Charles I. Humber to Inf. 2nd Division, Ft. Sam Houston, Texas; Robert Q. Brown, Leo W. Cather, John P. Daley, Donald C. Little, Ashton M. Haynes to Field Artillery, Second Division, Fort Sam Houston, Texas; Elmo C. Mitchell, Philip B. Stiness to 6th Coast Artillery, Fort Winfield Scott, Calif.; 1st Lieut. Harry W. Johnson to 2nd Cavalry, Fort Riley, Kansas.

DETAILED TO THE AIR CORPS, and to Randolph Field, Texas, March 1, 1932, for Training: 1st Lieut. Fremont S. Tandy, Corps of Engineers.

TRANSFERRED TO THE AIR CORPS: 2nd Lieuts. Morris J. Lee, Cavalry; John C. Kilborn, Field Artillery, Sory Smith, Infantry, to rank from June 12, 1930.

RETIREMENTS, for disability incident to the service: Captain Harry C. Drayton, 1st Lieut. James Flannery, January 31, 1932.

PROMOTIONS: To Major: Captain Rosenham Beam, rank from Jan. 1, 1932; To Captain - 1st Lieuts. Thomas W. Blackburn, Harry A. Johnson, Bob E. Nowland, Barney M. Giles, Bernard J. Tooher, Claude E. Duncan, rank Jan. 1; Albert F. Hegenberger, rank Jan. 3rd; Wendell H. Brookley, rank Jan. 5th; Max F. Schneider, rank Jan. 13th. To 1st Lieut. 2nd Lieut. Henry R. Baxter, rank January 3rd.

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The Chief Signal Officer has commended Selfridge Field, Mich., for a standing of second in point of accuracy, neatness and adherence to standard practice in the submission of meteorological reports as compared with reports received from 33 other military meteorological stations, and stated the quality of the meteorological reports received from Selfridge Field during 1931 was excellent.

The Commanding Officer, Selfridge Field, feels that this excellent record is due largely to the efficiency and attention to duty of Staff Sgt. Solomon Wolfson, Detachment Sixth Signal Service Company, Signal Corps, who is in charge of the Selfridge Field Meteorological Station.

AERIAL MAPPING IN NORTHWEST PRESENTS DIFFICULTIES

The 15th Photo Section, Crissy Field, Presidio of San Francisco, Calif., just completed a 1,000-square mile photographic project for the Geological Survey in southwestern Montana, utilizing a Fairchild photographic plane and a K-3 camera. This project was commenced June 2nd by Lieut. Wallace and Tech. Sgt. Stockwell. Due to adverse weather conditions and forest fires, only a small portion of the work was completed by June 24th, at which time Lieut. Wallace's tour of active duty expired. He was replaced by Lieut. Poole, who worked on the project until August 16th, when he was recalled.

Forest fires and weather conditions were so bad that it was decided to postpone the work until later in the fall. On Sept. 21st, Lieut. Bobzien, who had been on leave of absence, left for Billings, Montana, and completed the project, returning home October 17th.

Aerial mapping in the northwest presents a much greater problem than in almost any other part of the United States. The contours vary, as on this Montana project, from 5,000 to 12,000 feet within 25 miles. This necessitates flying as high as possible and the use of oxygen. Then, too, forest fires make it almost impossible to do any work at any time other than right after the snow melts in the spring, and in the fall right after the first rains. This project was flown at an altitude of 20,000 feet, and oxygen was used on all trips.

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SUDDEN FOG MAKES PILOTS HUSTLE IN LANDING

During a tactical flight of six P-12 Pursuit planes of the 55th Squadron, Mather Field, Sacramento, Calif., a ground fog rolled in so suddenly that the flight was unable to beat it to Mather Field and the ground. The two elements of the flight separated. Lieut. G.F. Saville, leading the second flight, found himself in a hole. Signaling for a "Lufbery," he went down through the mist and landed - upside down in the mud. His wing men took a look - they say they couldn't see anything in the fog but heard Saville raving - and decided this could not be the answer to their problem. They scrambled back above the mess and finally landed safely at the Sacramento Municipal Airport, finding there the three ships of the other element which had preceded them.

Net result of the morning activities - a slightly damaged P-12 and a very much embarrassed element leader.

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DEATH OF LIEUT. ALBERT L. ALEXANDER

On Saturday, February 6th, at 8:25 p.m., 2nd Lieut. Albert L. Alexander, Jr., was killed in a crash near Chanute Field, Ill.

Lieut. Alexander was engaged in a routine local night flight, using a BT-2 airplane. His passenger, Lloyd W. Bender, son of Captain Walter Bender, Air Corps, and a member of the R.O.T.C., University of Illinois, was thrown from the airplane and painfully, though not seriously injured, suffering minor contusions, cuts and sprains. He is progressing nicely.

"Tentative reconstruction of the accident from ground scars is difficult, says the News Letter Correspondent, adding: "It is believed that Lieut. Alexander was flying at approximately 500 feet altitude when he found difficulty with the plane or engine, and was forced to find a landing. Apparently he released parachute flares at an altitude of about 250 feet, circled and attempted to land. Traces on the extremely soft ground show that he approached with high speed and an angle, striking and wiping off the landing gear. The airplane then had skidded on its belly for 250 feet, when it nosed over, throwing Bender out, and bursting into flames."

The airplane, with Lieut. Alexander pinned in, was completely burned, leaving only the engine and the metal fuselage constructions.

Lieut. Alexander was a student pursing the Maintenance Engineering course. He was born in Aberdeen, Miss., in 1905, the son of Major Albert L. Alexander, Dental Corps, U.S. Army. Upon his graduation from the Central High School, San Juan, Porto Rico, in 1924, he was appointed to the U.S. Military Academy, graduating from West Point in 1928, and commissioned in the Corps of Engineers. In Sept. 1928, he was detailed to the Air Corps and, after graduating from the Advanced Flying School, Kelly Field, Texas, received the ratings of Airplane Pilot and Airplane Observer.

Lieut. Alexander was Boxing Coach of Chanute Field, work which he voluntarily assumed beyond that ordinarily demanded of him. His excellent character with an outstanding personality endeared him to his associates, and his loss is deeply felt by his comrades.

NOTES FROM AIR CORPS FIELDS

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Wright Field, Dayton, Ohio:

During the past year, the Field lost two Flight Surgeons to whom it had become decidedly attached. Maj. E.G.Reinartz was transferred to Randolph Field, Maj. M.G.Healy following at a later date. Maj.W.E.Wilmerding, formerly stationed in the Philippines, replaced Maj. Reinartz in August and Maj. H.H.Fisher, formerly of Scott Field, is to replace Maj. Healy as assistant Flight Surgeon.

Lt. C.D.McAllister, pilot, and Capt. D.L. Bruner,Observer, recently flew to Schenectady, N.Y., and East Orange,N.J., for a conference with the contractors regarding boundary light flashers and external energisers.

Capt. A.J.Lyon ferried a new Thomas-Morse O-19 from Buffalo to Wright Field

Lieut.C.H.Caldwell flew to Montgomery,Ala.,Ft.Benning,Ga., and Atlanta, to confer with Commanding Officers regarding supplies and equipment at these stations.

Lieut. L.L.Beery and H.G.Crocker recently flew to San Antonio Air Depot to ferry down winter flying equipment.

John C. Lingling of the Lighter-than-Air Branch, left for Scott Field to inspect the envelope of a new T.C. airship.

Capt. J.G. Taylor ferried a new P-6E from the plant of the Curtiss Co., Buffalo, N.Y., to Wright Field.

Capt. Clements McMullen and Lieut. J.D.Corkille left Miami,Fla., on Jan. 5th, to participate in a night demonstration for the Miami Air Races.

Lieut. K.B.Wolfe flew to Chicago,Milwaukee,LaCrosse,Wisc.,and Elgin,Ill., for conference with manufacturers of those cities concerning Air Corps equipment

3d Pursuit Squadron,Clark Field,P.I.,July 1st to Dec.31,1931:

Personnel: Commanding Officer, Capt. A.Hornsby; Flight Surgeons, Maj. Ira F.Peak,MC.; Engineering Officer, Capt.L.R.Hewitt; Officer in Charge of Squadron and Squadron Activities, Capt. S.L.Ellis; Organization Supply Officer, Lieut. W.H.Hardy; Adjutant, Lieut.R.W.Harper; Station Supply Officer, Lieut. J.R. Hawkins; Operations Officer, Lieut. K.J.Gregg; Asst.Engineering Officer, Lieut.A.R. Springer; Transportation Officer, Lieut. W.Goss; Communications Officer, Lieut. E.A.Sanborn; Asst.Officer in Charge of Squadron, Lieut. T.J.Dubose.

Losses: Capt. W.C. Morris on the October transport.

Gains: Lieuts.J.B.Burwell and G.E.Henry arrived on the December transport.

Detached Service: At Baguio:-Lieuts. Hawkins, 10 days; Harper and Goss, one month. At Corregidor for contact training:-Lieuts.Goss and Sanborn. One week contact training at Fort Stotsenburg:-Artillery, Capt.Ellis, Lieuts. Hawkins, Harper, Hardy, Taylor and Fisher; Cavalry: Capt.Hewitt; Lieuts. Murphy, Springer, Sanborn, Dubose.

Upon arrival of the December transport, the strength of the command was: Officers, 17; Enlisted Men, 169.

Equipment: During this period the average number of planes on hand at this station were: 10 P-12B's, 1 O2-H, 1 O-19 and 1 Douglas Transport. P-12B's are armed with .30 cal. guns. Eight .50 cal. guns are available for immediate use. A recent shipment of Pursuit radios are being installed in all planes as they are sent for overhaul to the Philippine Air Depot. With the arrival of the U.S.A.T."Meigs" in January, this station will receive five P-12-E airplanes.

Construction: The following new construction took place during this period: Concrete apron running from Hangar #3 towards the east end of the field, size 40'x550'; Construction of a gas house and the remodeling of the garage; new range house at the north end of the officers' quarters; new office and laboratory for the Flight Surgeon, located next to the Bowling Alley; new office and machine shop for the Engineering Department; new office for the Station Supply; and a new basketball court in Hangar #1. The flying field was completely regraded with exceptionally fine results.

Flying Activities: During the first three months,an intensive school program was carried on and regular flying was continued. The last three months' training was devoted to combat work and problems in preparation for the maneuvers in January. Flying time for the past five months was as follows: July, 339:40; August 153:15; September 357:55; Oct.,303:50; Nov.,273:50.

One trip to the Southern Islands was made with a Sikorsky Amphibion by three officers from this Field, Capt. Hornsby, Lieuts. Hardy and Murphy. Numerous other extensive cross country flights were made throughout Northern and Southern Luzon. An exhaustive test was run by the Armament Department on .50 cal.machine guns in Pursuit planes with very satisfactory results. Several aerial reviews were participated in by the Squadron, both with and without the Group.

V-6241,A.C.

Fifth Composite Group, Luke Field, T.H., Jan. 12th:

On Dec. 10th, 11th, 15th, 17th and 22d, the 23d and 72d Bombardment Squadrons participated in combat exercises in cooperation with the 18th Pursuit Group at Wheeler Field, T.H. Landings were made both before and after these missions for conferences which were held in the Group Operations Office at Wheeler Field. While these exercises were in progress, the squadrons participating experimented with the comparative defensive merits of various formations and other tactical principles.

On Dec. 11th, the Sikorsky airplane, with 2d Lieut. Robert E.L.Choate,Pilot; Staff Sgt.Troy Letchworth, Crew Chief,and Morley S.Roberts, Radio operator,were dispatched on an Inter-Island Flight to Port Allen, Kauai, to transport military supplies and personnel.

Due to restrictions on flying time, our training schedule was curtailed during December. Aerial gunnery on towed targets, radio communications, aerial reconnaissance, photography and instrument flying were the main factors of the training. Aerial gunnery is progressing very rapidly and we hope to close the gunnery season with very good results.

The dark room of the 11th Photo Section building was gutted by fire of unknown origin on Jan. 5th,the flames destroying photographic equipment,chemicals and valuable negatives before they were extinguished. Heroic action of Staff Sgt. Bertsch and Pvt. Loomer,who were in the dark room at the time, saved a valuable roll of aircraft film which was in the developing tank at the time. The two men remained at their posts, continuing to develop the film. They finished treating the film and removed it from danger without mishap. The film represented hundreds of dollars worth of flying time and contained air views to be used in the Fleet Maneuvers during February. Quick action on the part of the post fire department prevented the flames from spreading and saved valuable aerial cameras.

The 50th Observation Squadron began gunnery practice and flexible machine gun firing on towed targets,and the good scores turned in show that all observers are looking forward to "EXPERT" ratings.

Each week, planes were sent to work simulated Artillery adjustment missions with the 11th Field Artillery Brigade in preparation for their actual firing later on.

The Group area has been undergoing changes during the past month. Huts which were along the water front were removed and the four-man huts are being converted into eight-man huts. This,and the fact that the old school building was taken down, will add to the beauty of the area.

Eight officers were recently assigned to this station - Lieuts. John V. Hart, Courtland M. Brown, Fred C.Fishback, Fred A. Ingalls, Benjamin T.Starkey, Paul H. Johnston, Murray C. Woodbury and Charles H. Earnest.

Eighteenth Pursuit Group,Wheeler Field, T.H.: The Transport,"St.Mihiel" brought the following officers for this station:-1st Lieuts.Donald G.Stitt, Luther S.Smith and William O. Eareckson; 2nd Lieuts. Walter S. Lee, John M. Sterling, Emmett F. Yost and Lauris Norstadt.

Three Air-Reserve officers sailed Jan. 9th to the mainland to finish their tour of active duty, viz. 2nd Lieuts. William A.Cocke, John C.Crain and Edward H.Hoffman. These fine young officers were with the Group almost two years, and we were reluctant to see them return to civil life.

December found the 6th Pursuit Squadron busy in preparation for the joint Army-Navy Maneuvers. A streak of bad weather interferred with matters considerably. "Fair Hawaii"has been giving us a very good imitation of San Francisco weather; a combination of rain,fog and cold winds. However, the Squadron managed to learn a little more about formation flying. Several days were spent in trying out different methods of attack on Bombing formations,and with the help of the Bombers from Luke Field, we feel that a great deal of progress is being made in determining how we may best employ our formations and armament in breaking up on shooting down a Bombing mission. Camera guns are being used and, while they have so far proved of little actual help, we hope to learn more from their printed records when close range pictures can be taken.

Lieuts. Bassett, Rhoades, Graham and Rotherham recently returned from 10 days spent on Detached Service at Kilauea Military Camp on the Island of Hawaii. Most of the time was spent in hiking, riding and hunting goats. The trip is highly recommended to their brother officers as time well spent.

Mitchel Field, L.I., N.Y., Jan. 14th:

The most important event at Mitchel Field last month was the New Year's Eve Dance held at the Salisbury Country Club. The entertainment committee originally planned two dances during the Holidays, one some time after Christmas and the other, a tea-dance on New Year's Day. However, at a meeting of the officers' Club in December a motion to put all the eggs in one basket and have a big New Year's Eve Party was unanimously carried. The dance was quite a success even pleasing our critical guests from Langley and Selfridge Fields. (Lieuts.

Robert Dunn of Langley and William Day of Selfridge were present and seemed to enjoy themselves.)

The high light of the evening was the arrival of the New Year as portrayed by Lieut. Cecil Folmar in a pair of diapers. He made an excellent, rosy-cheeked cherub in his rather abbreviated costume, and got quite a hand from his audience. The fun started though when one or two of the safety pins gave way and he had to beat rather a hasty retreat.

Lieut.-Col. John H. Howard, the Commanding Officer and Major W.O.Ryan, the Executive Officer, were not present being away on leave over the holidays. Col. Howard visited San Antonio, much to the envy of the junior officers who came from there so recently. Maj. Ryan visited relatives in Jacksonville,Fla. We envied his trip almost as much, although we still have hopes of getting to Florida this winter. During the absence of the higher officers, Captain Charles Pursley was in command of Mitchel Field.

Officers of the Air Corps, who are fond of the works of James Fenimore Cooper, may be quite surprised to know that here at Mitchel Field we have one of his original characters, taken as it were from the very leaves of his "Leather Stocking Tales". This startling discovery was made during the holidays while Lieuts. Travis, Burns, Baxter and Haynes were on a hunting trip near Savannah, Ga. Baxter appeared for the chase bright and early the first morning garbed in one of the costumes from which "Leather Stocking Tales" derive their name - a real Daniel Boone outfit with fringed buckskin shirt and slacks. Somehow or other he seemed to have overlooked the coonskin cap.

His remarkable knowledge of forest lore immediately won for him the sobriquet of "Pathfinder". A little later, when it developed that he was the one and only member of the party to bag a deer, his official title was changed to "Deerslayer". (He actually got the deer, because some one saw it). Reports of the trip itself, though, would probably make the Last of the Mohicans turn over in his grave. What, with about half a dozen or a dozen colored servants to do all the coaching and chasing the deer out into the open for them.

Mitchel Field seems to have a few good lecturers and public speakers, judging by reports we've heard lately. Capt. Pursley gave a talk to the graduating class at the Hempstead Junior High last week on the Air Corps and the possibilities it offers to young college men. He was requested to come back at some future date and give a talk to the whole school on his travels in China and Japan. Maj. Moulton, Capt. Taylor, and Lieut. Murtha attended a meeting of the Lincoln Fraternity in Queens Village during the same week. Capt. Taylor gave a talk on aerial photography and Lieut. Murtha talked about the Air Corps. They were also asked for an encore.

Lieuts. R.O. Cork and Zay Smith both returned from their honeymoons and are setting up housekeeping in the vicinity.

Mr. and Mrs. O'Brien, of Chicago, announced the engagement of their daughter Helen to Lieut. John K. Gerhart of Mitchel Field. Looks like these new Bachelor Officers' quarters won't have many occupants when they are finished.

Scott Field, Belleville, Ill., Jan. 13th:

Army homing pigeons scored a real triumph at the 13th Annual National Pigeon Show at Louisville, Ky., from Jan. 7th to 11th. Army birds entered in this show, sent from the Signal Corps lofts at Scott Field, carried off a big majority of the prizes.

The total of 26 birds were shipped to the show by Lieut.-Col. John A. Paegelow accounted for 25 firsts, three seconds and two thirds in the regular and special classes. The two star birds of the Scott Field loft, "General Frank Parker", a 1931 cock, and "Col. John A. Paegelow", champion of the 1930 National Show, gathered in the big honors. "Gen. Parker" took the premier honors as the best record bird of the show. In addition, this blue-checker cock took first awards as the best 1931 record bird the best cock and the best 1931 blue cock of the show. "Col. Paegelow" was the biggest prize winner with five firsts to his credit. His awards were: Best blue old cock, best blue or black check bird best adult cock, best 200-mile record bird and best adult record bird of the show. The other big prize, that of the best homer display, also came to the Scott Field entries.

This was the final show of the season for the local birds and, as a result, Col. Paegelow's trophy case filled to overflowing with new cups and ribbons.

Capt. John P. Temple who reported for duty at Scott Field on Jan. 9th from

Hawaii, received new orders two days later to proceed at once to Barksdale Field Shreveport, La. It is understood Capt. Temple will be Supply Officer at the newest of the Air Corps stations.

At a recent meeting of the Scott Field Officers' Club, the following officers were elected for the first six months of 1932: President, Lt.-Col. John A. Paegelow; Vice-president, Capt. Elmer J. Bowling; Sec.-Treasurer, Capt. Ira R. Koening; Board of Directors, the foregoing officers, Maj. Norman W. Peek and 1st Lieut. Frederick A. Johnson.

France Field, Panama Canal Zone, Jan. 18th:

The following is a brief resume of activities at the Panama Air Depot during December: Aero Repair: 3 O-19C and 1 P-12B planes overhauled; minor overhauls on one each B-3A, O-19D and P-12B.

Engine Repair: Engines overhauled: 4 SR-1340-D, 2 R-1340-C, 2 R-1690-B, 2 R-1340-D engines rechecked and tested.

Parachute Department: 108 parachutes folded, 130 inspected, 28 repaired.

With the beginning of the dry season, drop testing of all parachutes in service at this station was started.

An old fashioned minstrel and vaudeville show was presented at the Post Theatre, Dec. 22nd, and won hearty applause from a capacity audience.

An improvised stage, wings and curtains were installed by the Quartermaster, and special lighting for stage and orchestra gave the proper setting for the show. Local talent, under the direction of Sgt. "Jack" Wade, interlocutor, assisted by the entertainers from Coco Solo and Colon, and Miss Eileen Hill with her dancing Colleens, rendered an interesting program of clever jokes and gags, clog dance and jogs, instrumental selections and fancy dance rhythms - a most pleasing variety for eye and ear.

From the overture by the France Field Orchestra, and the opening chorus by the entire cast "Roll on Mississippi", came one gay selection after another, and hearty applause and encores testified to the enjoyment of every one present. This entertainment was repeated on Jan. 8th, at the Colon Theatre with further success and applause.

A well-merited word of appreciation is due the whole cast for their good work, not omitting the director and interlocutor, Sgt. Jack Wade.

During December the following changes in personnel took place at this station: Maj. Thomas F. Weldon, Flight Surgeon, left for Langley Field, being replaced by Maj. Edward C. Greene, from Brooks Field; Capt. H.H. George departed for Langley Field; Lieuts. Neal E. Ausman and Kurt M. Landon, from Kelly Field, were assigned to the 24th Pursuit and 25th Bombardment Squadron; Lieut. Charles R. Overacker, Chanute Field, was assigned to the 25th Bombardment Squadron and detailed as Post Signal Officer, Post and Group Communications Officer, Post Signal Supply officer and Post Signal Property Officer; Lieuts. C.E. Henry and Edwin M. Day from Selfridge Field arrived on the "Chateau Thierry" Jan. 16th. Lieut. Henry took command of the 78th Pursuit and Lieut. Day was assigned to the 25th Bombardment Squadron.

When the "Chateau Thierry" returns to New York, on the 20th, Lieuts. D.J. Ellinger and R.D.Biggs, will depart for new stations at San Antonio.

Fort Sill, Okla., Jan. 26th:

The members of this command, having weathered the Xmas and New Year's festivities, are settling down to their work with the F.A. School which will continue until June 13th.

1st Lieut. Wm.L.Ritchie who took advantage of the holidays to spend 10 days in relentless pursuit of the quail population around SanAntonio and Corpus Christi, Texas, reports no serious depletion during his stay.

The following cross-country trips were made by members of this command:

Dec. 23rd, 2nd Lieut. Douglas T.Mitchell, pilot, Lt.-Col. George M. Peek, Executive Officer the F.A. School, passenger, to Memphis, Tenn. Returned solo. 2nd Lieut. Claire Stroh returned Col. Peek to this station, Dec. 28th.

Jan. 6th, Capt. Frank H. Pritchard with Mr.Sgt. Dawkins, ferried O-19C to SAAD,Duncan Field, Texas, returning Jan. 8th. in a newly overhauled O-19B.

Jan.18th, 1st Lieut. Wm.L. Ritchie with St.Sgt. Lynch, to Helena, Ark. Returned Jan. 20th.

Lieut. G.G. Johnson, 1st Balloon Co., is under orders to sail on the May 25th Transport for the Philippine Department. Lieut. Rowland Kieburtz, from Hawaii, was assigned to the 1st Balloon Company as replacement.

The 1st Balloon Company Pistol Team is getting a good start in competitive shooting, having tucked three scalps under its belt to date. Among the victims are the 38th Infantry (both rifle and pistol), the M.P. Detachment, Fort Sill, Okla., and the Lawton, Okla., Police Force. Members of the team are: Mr. Sgt. Mansfield, 1st Sgt. Johnson, St. Sgt. Dundore, Sgts. Ingmundson and Baker.

Rockwell Air Depot, California, January 21st:

The Engineering Dept. of the Rockwell Air Depot completed major overhaul on 17 airplanes and 27 engines during December. Thirty-five airplanes and 25 engines were in process of overhaul at the end of month.

Man hours expended in the Engineering Shops of the Depot for the manufacture and repair of Air Corps equipment other than airplanes and engines -4,609¼.

During December, six P-12E airplanes from March Field were ferried to the Depot for installation of radio equipment.

Capt. C.M. Savage, post adjutant since June, 1930, departed on 15 days' leave prior to sailing on transport from San Francisco, Jan. 27, for duty in the Office of the Chief of the Air Corps.

Capt. Harold M. McClelland, now on duty at Rockwell Field, was appointed Post Adjutant. He was on temporary duty from Nov. 20th, date of his arrival at Rockwell Field, to Dec. 31st at March Field, in connection with the service test of experimental Pursuit Radio sets. Capt. McClelland reported the tests were highly successful, the new equipment being far superior to anything heretofore used in the Air Corps.

Lieut. Raymond E. McQuillan, 11th Cav., accompanied by Capt. Robinett, Cav., 9th Corps Area, with Capt. John E. Upston and 2nd Lt. George E. Northrup, A.C., arrived Jan. 6th from Crissy Field on temporary duty to witness tactical exercises in connection with Joint Grand Army-Navy Exercises No. 4.

Lt.-Col. S.T. Mackall, I.G.D., 9th Corps Area, made his annual post inspection January 20th and 21st.

Brooks Field, San Antonio, Texas, Jan. 15th.

Several flying days were lost on account of inclement weather. It seems the "winter" weather for Texas resolved itself into a prolonged rainy season. A well known civilian of San Antonio, who is a flyer himself, says Brooks Field possesses some of the best flyers in the service. Among Reserve officers at present on duty at the field are - 2nd Lieuts. H.L. Baird, A.J. Boot, F.A. Creech, J.E. Darby, Carl A. Gerlicher, K.H. Greeson, B.G. Holloway, H.S. Houghton, H.S. Houghton, R.S. Johnson, G.P. Keene, D.M. Kesler, J.N. McCormick, R.O. Ralston, W.M. Wood and J.R. Novake. Lt. Norfleet G. Bone is another Reserve officer who made for himself an extensive reputation when he so successfully executed the landscaping of Randolph Field. Lts. Gerlicher and Boot are assisting Lt. A.L. Bump in coaching the post basketball teams. Lieut. Novake is Assistant Personnel Adjutant.

Lieut. A.L. Bump, Jr., was relieved as Police and Prison Officer to assume the duties of Personnel Adjutant, relieving Lieut. F.H. Rice, assigned as E. & R. Officer and the Mess Officer of the 62nd Service Squadron.

Capt. Raphael R. Baez, Jr., Commanding Officer, 62nd Service Squadron and Post Engineering Officer, sailed for duty in Hawaii. He was much liked at Brooks Field and takes with him the best wishes of officer and enlisted personnel.

Cpl. John R. Brighton, 12th Obs. Squadron, and Pvt. 1st Cl. S. Lazarian, 22d Observation Squadron, are now attending the course of instruction in parachute rigging and armoring, respectively, at Chanute Field, Ill.

Capt. Louis R. Knight, C.O. of 58th Service Squadron, was relieved to assume duties of C.O. of 62d Service Sqdn. and Post Engineering Officer. This is only a temporary appointment, since he accompanies the 58th to Barksdale Field, Shreveport, La., for station sometime in the Spring.

San Antonio Air Depot, Duncan Field, Texas, Jan. 30th.

Capt. and Mrs. Benj. F. Giles of the Inspection Division, Office Chief of the Air Corps, who reported at San Antonio Jan. 15th for duty under the Inspection Division, as Technical Supervisor for the supply area served by this Depot, established his office and was assigned quarters on this post. He and Mrs. Giles are a welcome addition to the social life of the station.

Orders were received for the assignment to duty at this Depot of Lieut. David J. Ellinger, from the Panama Canal Department.

On January 19th Col. W.B.Tuttle, Chairman of the Hoover Unemployment Relief activity in San Antonio, gave a talk to the employees of the Depot, urging relief for the unemployed and needy of the community. Col. Tuttle was introduced by Lt.Col.A.G.Fisher, the Depot Commander. As a result of this talk, 426 civilian employees of this Depot signed pledge cards, for a voluntary contribution each month, such pledge to be in effect as long as the acute situation exists among the needy in San Antonio. The total amount pledged was $557.96.

1st Lieuts. Thomas W. Blackburn, Instructor with the Texas National Guard, Houston, and Earle T.Showalter, 36th Div. Aviation, Texas National Guard, visited here, Jan. 21st, bringing in a number of O-38 propellers for exchange.

Capt. A.M.Guidera, Instructor with the Indiana National Guard, Indianapolis, recently paid an informal visit to this station.

Lt.-Col. A.G.Fisher, Capts. Warner B. Gates, B.F.Giles and E.V.Harbeck, Jr., and Lieut. C.E. Thomas, Jr., made a cross-country trip to Eagle Pass.

Capt. H.L.Clark and Lieut. Allen (Air-Res.) from the new Barksdale Field, Shreveport, La., were callers at the Depot recently.

Kelly Field, San Antonio, Texas, Jan. 25th:

Students at the Air Corps Advanced Flying School started their cross-country training flights. Following are the itineraries for the four sections:

Attack Section, Jan.18th to 22d: Kelly Field to Galveston, Texas, Galveston to Dallas, Texas; Dallas to El Paso, Texas, and return to Kelly Field. 12 students, 1 flight surgeon, 3 instructors, 2 mechanics, 15 airplanes.

Bombardment Section, Feb.2d to 5th: Kelly Field to Dallas, Texas; Dallas to El Paso, Texas, via Midland; El Paso to Kelly Field via Marfa, Dryden, and Ft. Clark, Texas. 18 students, 1 flight surgeon, 3 instructors, 8 mechanics, 12 airplanes.

Observation Section: 1st Flight - January 22d to 26th; 2d Flight, Jan.26th to 30th. Kelly Field to Galveston, Texas; Galveston to Ft.Sill, Okla.; Ft. Sill to El Paso, Texas; El Paso to Kelly Field via Marfa, Dryden and Ft. Clark, Texas. 15 students, 1 flight surgeon, 3 instructors, 2 mechanics, 18 airplanes.

Pursuit Section: 1st Flight - Jan. 30th to Feb. 3d; 2nd Flight - Feb. 5th to 8th; 3rd Flight - Feb. 8th to 11th. Kelly Field to Ft. Sill, Okla., via Dallas and Muskogee; Ft. Sill to El Paso, via Midland or Amarillo; El Paso to Kelly Field via Marfa, Dryden and Ft. Clark. 15 students, 1 flight surgeon, 3 instructors, 2 mechanics, 18 airplanes.

Capt. Thomas M. Jervey, Ord. Dept., was designated Ordnance Officer for the entire Air Corps Training Center, for the inspection, maintenance, repair and alteration of all Ordnance material.

There is now a general epidemic of sore backs, legs and arms among the officers. Supervised athletics were ordered for them twice a week.

The second member of the present class of students to join the Caterpillar Club was Cadet Wilbur O. Riley, Bombardment Section. He jumped from a P-1 when the wing of his plane collapsed while he was flying pursuit transition.

The 22d Photo Section had a busy two weeks turning out photos of students for identification cards, and 1500 invitations to the graduation exercises, Feb. 26th, in addition to their regular work.

The following-named officers have orders to report to Kelly Field for duty within the next few months: 1st Lieuts. Wilfred H. Hardy, Walter C. White, 2nd Lieut. Fred S. Stocks and George L. Murray.

Patterson Field, Fairfield, Ohio

Capt. H.W.Flickinger ferried to Bolling Field an O-38B, overhauled at this Depot for the private use of the Chief of the Air Corps.

Certain officers of this Station departed during the past two weeks on inspection trips throughout the Fairfield Air Depot Control Area and National Guard activities regarding the maintenance of Air Corps supplies and equipment. Following are the itineraries covered:

Capt. Burton F. Lewis to Norton Field, thence to Cleveland Airport; Detroit Mich.; Selfridge Field; Chicago, Ill.; St. Paul, Minn.; Fairfield, Ohio.

Lieut. George V. McPike to Pope Field, thence to Candler Field, Lawson Field; Maxwell Field, Birmingham, Ala.; Little Rock, Ark.; Sky Harbor, Nashville Tenn.; Bowman Field, Ky.; Lunken Airport; Fairfield, Ohio.

Lieut. Clarence S. Irvine to Ft.Benj. Harrison, Ind.; thence to Stout Field, Ind.; Chanute Field, Ill.; Omaha, Nebr.; Marshall Field, Kans.; Lambert Field, Mo.; Scott Field, Ill.; Fairfield, Ohio.

During the month of December, 1931, the Engineering Department performed

the following overhauls on airplanes and engines: Airplanes - Major, 17; Minor, 17; total overhauls, 34. Engines - Major, 30; Minor, 25, total overhauls 55.

Tonnage of incoming freight (December) 245.1 tons; express, 1.5 tons. Tonnage of outgoing freight, 106.6 tons; express, 2.2 tons. Incoming parcel post, 589 lbs., outgoing, 2,311 lbs. Material received by other means 140,865 lbs., shipped, 170,200 lbs. Shipments received, 685; made, 1,310.

Among those visiting here during the past two weeks, the following were noted: Lieut. Fitzmaurice, Kelly Field, Jan. 2d, on cross country mission; Lts. Beverly, Higgins and Moore, Sgts. Galbraith and Russell, Kelly Field, Jan. 3rd, en route to Aberdeen, Md., on cross-country mission; Lieut. Maxwell and Sgt. Robinson, Detroit, Jan. 4th, for major overhaul of plane; Capt. Guidera, Lieut. Carpenter, Stout Field; Lieut. Newhall, Chicago; and Capt. Hamilton, Chanute Field, Jan. 4th, on cross-country missions; Lieuts. O'Donnell and Parlette, Selfridge Field, Jan. 5th, to ferry there P-12C planes given major overhauls here; Lieuts. McConnell and LeMay, Norton Field, Jan. 6th; Capt. Bivins, Bolling Field; Lieuts. Fitzmaurice, Beverly, Higgins and Moore, Kelly Field, Major Muhlenberg, Norton Field, and Lieut. Burgess and Private Payton, Chanute Field, Jan. 7th, en route on cross-country missions; Lieut. Schoenlein, pilot, Capt. Branshaw, passenger, and Lieut. Scott, pilot, Sgt. Logdson, passenger, Chanute Field, Jan. 8th, for major overhauls; Capt. Gill and Sgt. Kennedy, Cleveland, Jan. 8th, on cross-country mission; Mr. Ball, ferrying a Waco plane from Troy, Ohio, to Muncie, Ind., Jan. 9th; Lieut. Smith, pilot, Capt. Whitehead, passenger, from Schoen Field, Ind., on 11th; Capt. Connell Chicago, Jan. 12th, for major overhaul of plane; Major J.H. Doolittle, Air Reserve, St. Louis, from New York in a Lockheed, January 14th.

Boston Airport, Mass., February 1st.

With the large number of Reserve Officers appearing at the Airport to keep theirhand in at flying, it looks as if a mathematical genius would be needed to adjust the amount of time to be apportioned each man. One hour a month appears to be the maximum under the present curtailment of flying hours.

The general feeling in the local press is that the small flying time per man is dangerous to personnel and equipment. The Reserve Officers feel the cut in time, as we are using service type equipment; and all our inactive status flying consists of intense training in military flying tactics.

At a recent meeting of the Reserve Association at the Old France Restaurant, motion pictures were shown of the first airplane the Army placed in service - yes, the old Wright. Movies taken from the plane caused considerable comment on the old front elevator, and on the "low and slow" flying.

Capt. Joseph A. Wilson, C.O., Boston Airport Detachment, recently arranged a schedule of night flying. With Capt. Chas. Clark, Res., Capt. Wilson dropped landing flares from various altitudes and landed by aid of their light. Later, each Reserve present was taken for a training flight by Capt. Wilson and Lieut. Glenn Salisbury. After a discussion of night flying problems, each officer took off, flew around Boston, and then back to the airport for a landing.

Reserves participating in this night flying were Maj. Bartlett Beaman, Capts. Chas. Clark, George Lusk, Byron Switzer and Lieuts. Horace White, Windsor Harlow and Bond. Another Group will participate in the next scheduled night training. Several of the Reserves have not had much opportunity to fly at night since the war, and this training was received with great enthusiasm by all concerned.

Capt. J.A. Wilson is to leave shortly on a Mediterranean cruise. In fact, by the time this is published, "Smoky Joe" will be well along the route.

Chanute Field, Rantoul, Ill., Jan. 22d:

Basketball: The Basketball Team defeated two strong teams from Champaign, the University City,- the Hanley team, 17 to 12, and the Prohn Collegians, 28 to 19. Last season Chanute won the coveted Corps Area Championship. This team is practically intact this year. It is well coached by Lieuts. C.B.Stone and A.W.Kissner.

The Flying Line: Despite a long spell of inclement weather, Chanute Field airplanes are being well exercised by the large list of pilots at this station. Recent cross-country flights include: Capt. A.G. Hamilton and Lieut. H.J.Flatequal to Columbus, Ohio; To Chicago, Lieuts. W.K. Burgess, A.L.Harvey, T.S. Power, S.O. Redetzke, M.W. Reed, L.N. Tindal, and H.W. Anderson. To Wright Field: Capt. W.B. Souza, Lieuts. H.W. Anderson, Russell Scott, Tech. Sgt. D.M. Swisher. To Scott Field: Col. James A. Mars, Capts F.S.Borum, W.A.Hayward, Lieuts. W.C.Farnum and RC Wriston. To Indianapolis, Ind., and return: Lieuts. C. R. Storrie, C.B. Stone and

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H.W.Anderson. To South Bend,Ind.: Lieut. H.H.Tellman. To Terre Haute,Ind.: Lieut. J.L.Lacey. To Patterson Field: Capt. C.E.Branshaw and Lieut.R.L.Schoenlein. To Buffalo,N.Y.: Capt.S.M.Connell. To Great Lakes,Ill.: Lieuts. D.C. Doubleday, A.W.Shepherd and Wilbur Erickson.

Equipment: The ground equipment for the Air Corps at this station was augmented and tremendously improved by the receipt of two Marmon-Harrington Gas Trucks. There were also received three Caterpillar Tractors without hoist,and one Caterpillar Tractor with hoist. This will fill a long-felt need for the line, the school and for general post Air Corps use.

Personals: Lt.-Col. James A. Mars and officers of his staff were guests of the Urbana Rotary Club at its weekly luncheon at the Urbana-Lincoln Hotel, viz. Major Ballantyne, Surgeon; Capt. Skemp, Asst. Commandant; Lieut. Farnum, Adjutant; Capts. Connell, Engineering officer; Jacobson, Quartermaster; Borum, Supply officer; and Souza, Signal Officer. Lieut. Walter K. Brugess, Parachute Dept., recounted in an interesting manner his recent high altitude live jump.

Maj. Arthur E. Brown recently reported as the new post Dental Surgeon.

Lieut. and Mrs. Malcolm N. Stewart are parents of a new son, born recently at Burnham Hospital, Champaign,Ill.

The Officers' Mess: An innovation in occasional "Dancing Dinners" was instituted at which dance music is played during the dinner hours. The "Dancing Dinners", of which two have been held, bid fair to become a most popular post activity, sixty to seventy officers and ladies attending, taking advantage of a special menu, the dance music and the excellent opportunity to enjoy informal early evening entertainment offered in a most congenial form.

The Officers' Club at its semi-annual meeting, elected the following Officers: President, Maj. L.W.Ballantyne,M.C.; Board of Governors: Capts. W.A. Hayward,A.C., A.G.Hamilton,A.C.,and S.Jacobson,Q.M.C.; Secretary-Treasurer, Lieut. H.W. Anderson,A.C.

Monthly scheduled activities of the Officers' Club consist of a dance on the last Saturday and Evening Bridge Parties on the first and third Tuesdays.

Chanute Field, Rantoul, Ill., Feb. 2nd:

Basketball: The Chanute Field Flyers at the Post Gymnasium defeated the Bellflower Ford Motor Co. Independent, 47-15. The Flyers led at the half 30-3, and the Chanute second team, playing the second half, held the visitors well in check.

The Chanute Flyers won from the Jefferson Barracks team at that place, Saturday evening, Jan. 22d, score 35-24. This was the first Sixth Corps Area team to be met this season and came as a welcome victory to the Flyers, who are defending the championship of the Sixth Corps Area.

Fencing: A Fencing Class thus far consists of 29 officers, ladies and soldiers. Lieut. Carl R. Storrie was appointed Fencing Coach. Last year, the Chanute Field Fencing Team, starting from scratch under the initiative and leadership of Lieut. Robert W. Stewart, participated in the Illinois State Fencing Tournament at the University of Illinois and acquitted themselves in style which would have been commendable for even experienced foilsmen. All of last year's fencers were transferred to other stations, but it is expected Chanute Field will again this year have its hat well toward the center of the fencing ring in this vicinity.

Ladies' Volley Ball: A team made up of the Officers' Wives of Chanute Field defeated the Rantoul Volley Ball Team in tournament, winning four straight games, Members of the winning team are: Mesdames W.C. Farnum, James Spry, R.E.Holmes, C.B. Stone, J.J. Keough, J.L. Nedwed, C.K. Moore, R.H. Lynn and D.E. Whitten.

The Flying Line: Flying operations last week included the following cross-country flights: To Dayton, Ohio: Maj. L.W.Ballantyne,MC., Capts. A.W.Marriner, W.A.Hayward and Fred S. Borum, and Lieuts. G.W.Goddard, Malcolm N.Stewart and Herbert W. Anderson. To Scott Field: Lieuts. C.B. Stone, L.H. Douthit and Lieut. L.D.Fator with Maj. C.F. Snell, M.C., as passenger. To Great Lakes, Ill.: Lieut. H.F. Gregory.

During the week ending Jan. 29th, the post received three transport loads of new students from Brooks, Selfridge and Randolph Fields.

Personals: Lieut. and Mrs. Casper P. West are recovering from painful cuts and bruises caused when their car skidded early Saturday morning into another parked car on Route 25, near Thomasboro. Lieut. West started to pull around the parked car but saw another car approaching from the south, and applied his brakes which caused his car to skid into the parked car.

Their injuries were found not serious though extremely painful. Lieut.West returned to duty on Feb.1st while Mrs. West will be confined to the Post Hospital for a short time longer.

The kindergarten class, being conducted at the Post Chapel at Chanute Field under the direction of Mr. Roughia, is progressing nicely. This class was start-

ed last September and has enrolled children from the post and from families in Rantoul. The Classes are held daily each morning excepting Saturday and Sunday, from 9 to 11 o'clock.

Lt.-Col. James A. Mars, Commandant of Chanute Field, was a special guest and speaker at the American Legion Auxiliary meeting one evening of last week. Using as his subject, "National Defense and Americanism", he stressed adequate national defense, and praised the Legion and Auxiliary members for their Americanism. This meeting is reported as having been the most interesting as well as the most successful held during the current season by the Rantoul chapter.

On Monday, Jan. 25th, Capt. Arthur G. Hamilton, Director of Armament, Air Corps Technical School, addressed the Chamber of Commerce of Hoopston, Ill., on the subject of Gas Warfare.

Staff Sgt. William DesMarias was promoted to Tech.Sergeant and will soon leave for Hawaii. He will be replaced as 1st Sergeant of Section "A", A.C.T.S. Detachment, by Staff Sgt. Bishop, formerly Post Personnel Sergeant Major.

The Officers' Club: On Saturday evening, Jan. 30th, the Officers' Club held its monthly dance. The Club ballroom was decorated following a Japanese motif. About 150 guests attended. The dance committee consisted of Maj.L.W. Ballantyne, Capts. W.A.Hayward, S.Jacobson, A.G.Hamilton, and Lieut. Herbert W. Anderson.

Prior to the January dance, one of the most delightful dinners of the season was given by Lieut. and Mrs. Roscoe C. Wriston, Lieut. and Mrs. Walter T. Meyer, and Lieut. and Mrs. Russell Scott. Tables were laid for fifty-two guests. Decorations consisted of beautiful bowls of summer flowers with terra cotta candles. Music was furnished by a five-piece orchestra.

Crissy Field, San Francisco, Calif., Jan. 6th:

The casual visitor at Crissy Field at certain periods during the past two months had occasion to gaze in stark amazement at the peculiar flying field spectacle greeting his eyes. Up out of the deep and broad Pacific come submersible amphibians, making 4-point landings on Crissy Field. So far so good, but these amphibians care nothing about wind and traffic direction. When they reach the ground they always stay there, but are likely to make a cheval-de-boie in any direction, and "all the king's horses and all the king's men" can not do anything about it. Though they go in all directions, they never collide with themselves, but give us heart failure lest some unsuspecting orthodox airplane should get in their way.

The Operations officer gave up all efforts at control and reluctantly and of necessity curtailed his flying training whenever our new type amphibians take over the field - and take it over they do.

We forgot to begin at the beginning. Several months ago, we noted some blue hat-cord mechanics constructing a one-way ramp on the edge of the field. A few days later, they returned with their motorless amphibs and pushed them down the ramp. Then, after a minimum of water taxiing, our Crissy Field Amphibs ran up Nature's ramp easier than the best amphib on the best ramp. What maneuverability! The wing men are helpless. Our little field must look like the wide open spaces compared with her corral - and away she goes like U.S.C. gridmen through Georgia. Not even Will Rogers could catch her. A good man knows when he is licked and knowing no airplane can stop an Army mule, we are not going to give her a chance to show that she is the better man. Therefore, we are giving no competition. Every few days, Capt. Upston takes his red ink and puts down a deficit of several hours' flying-training lost, and all who know him realize it is not done willingly. He is now planning to have us catch up, and we suspect we are going to have to turn in our beds and draw lanterns.

Well, we only know what we read in the papers and they tell us that the armies of California are soon to launch an attack on far away Hawaii, and your scribe - with astounding sagacity - has deducted that the strange antics above described are only the Presidio Doughboys rehearsing their act! We wish them success and hope that, having captured and occupied that famous land of steel guitars, ukes, etc., everything will be "oke".

"Unusual Weather" (The term made famous by California boosters), prevailed sure-nuff in the San Francisco Bay area the past month, and flying operations suffered accordingly. The post meteorologist's chart shows only 12 days, including Sundays and Holidays, suitable for flying. Even then the airdrome was a veritable morass of mud and water. To add to our problems, a wooden sewer pipe, installed during the Pan-Pacific Exposition in 1915, under what is now

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the airdrome, rotted and weakened with age, gave way under the strain of the flood of water the heavy rainfall imposed upon it, and a large gaping chasm suddenly and without warning, appeared in an important part of the flying field. What happened to the earth which formerly occupied that space is a mystery. Presumably, it has gone to its former home on the bottom of the Bay.

On Dec. 22d, Lieut.-Col. L.W. McIntosh relinquished command of Crissy Field and the 91st Observation Squadron to take over as a full-time job the duties of Air Officer, Ninth Corps Area, which office he ably administered, in addition to his other duties, since the departure of Col. Lahm several months ago. Col. McIntosh's administration has been extremely popular, and we are loath to lose him from Crissy Field. However, we are happy in the knowledge that he will remain close by, and that we have Maj. M.F. Davis, who is no stranger to most of us, to succeed him.

On New Year's day the bachelor officers of the Post entertained the married officers and their families at a breakfast served at the officers' mess. There were 48 persons present and, from all available reports, a good time was had by all. This was the first function of its kind held on the Post in some time and, in view of the fact that the party was a success, it is hoped we will have similar functions in the near future.

Tech.Sgt. Raymond Stockwell left Crissy Field recently for Randolph Field, for flying instruction, training in grade. From all reports, he is making the best of his opportunity. We all wish him success and hope he returns soon with his "wings".

Crissy Field, Presidio of San Francisco, Calif., Jan. 21st:

Fog and rain during the past two weeks materially hampered our flying. In addition to transforming our flying field into a small lake, the rain caused two big washouts, which make the field dangerous for operations. We now have men working on the field and expect to have it back in shape before long.

The commissioned strength of Crissy Field is temporarily augmented by the arrival of Lieuts. Cocke, Crain and Hoffman from Hawaii. These officers are attached to Crissy Field awaiting the completion of their tours of extended active duty.

On Jan. 15th, the Crissy Field Basketball team swooped down on Mather Field and defeated its basket shooters in a hotly contested game, 20 to 19. Lieut. Paul Wilkins, able coach of the Crissy Field team, picked Pvt. Way of the 91st Squadron as outstanding star of this contest. The Mather Field athletes comprise a fighting aggregation, confident of securing revenge in a return game scheduled for the near future.

March Field, Riverside, Calif., Jan. 18th:

The March Field Athletic Association is in full swing now and pepping up the athletic activities of the Post. A Golf Practice Course was installed and the increased patronage made the area surrounding it a regular "No Mans Land". Not casting any reflections, for anyone is liable to slice a ball or find out that their "brute strength" is far above their expectations. And, of course, in conformity with Army traditions, there are "trenches" and "shell holes" popping into view daily.

Capt. Post, Post Athletic Officer, devoted a great deal of his time developing a baseball diamond with grand stand, grass, n' everything. It is predicted that, with the abundance of material available, this station should have one of the strongest teams on the West Coast. Spring training will start in the very near future.

Sunny California suffered a severe set-back when old man Weather started playing his funny tricks. For two successive mornings snow drifted down and landed on the terrain so noted for its orange blossoms and balmy atmosphere. Natives say that that kind of weather is as bad as a Bridge partner trumping your Ace.

17th Pursuit Group: Eighteen new P-12E's arrived at March Field during December, 14 of which were assigned to the 73d Pursuit Squadron. This brings the number of Pursuit planes in the 17th Pursuit Group to fifty, 36 of which are the new E's.

Officers of the Field who made the trip during December to the Boeing plant at Seattle to ferry back the new planes are: Lieut.-Col. H.H.Arnold, Commanding Officer of March Field; Maj. Carl Spatz, Commanding Officer of the 1st

Bombardment Wing; Capt. F.O'D. Hunter, Commanding Officer of the 17th Pursuit Group; Capt. W.C.Morris, 17th Pursuit Group Operations Officer; 1st Lieuts. Claude E. Duncan, Stewart W. Towle,Jr.; J.L.Loutzenheiser, Ralph E. Fisher, 2d Lieuts. James E. Briggs, J.E. Mallory, A.F. Solter, S.K. Robinson, W.P. Sloan J.N. Stone, J.H. Bundy, W.C. Morse, C.H. Murray, L.W. Sharman.

Second Lieut. Forrest L. Neville, 28 years of age, died Dec. 10, 1931, at the March Field Hospital, six days after an operation for appendicitis. He is survived by his wife, who has the heartfelt sympathy of the personnel of this Group.

Lieut. Neville reported to March Field Oct. 21, 1931, and was assigned to the 34th Pursuit Squadron. On Nov. 5th he was transferred to the 70th Service Squadron, for duty as Mess and Supply Officer. At the time of his death he was assigned for duty to the 17th Pursuit Group Headquarters.

Graduating from the Air Corps Advanced Flying School in March, 1927, Lieut. Neville began his Army career as a member of the 12th Observation Squadron at Dodd Field, Texas. From October, 1928, to November, 1929, he served as an instructor at Brooks Field. At that time he was sent to Fitzsimons General Hospital, Denver, Colo., and from there to March Field.

The Basketball team of the 64th Service Squadron, 17th Pursuit Group, captured first place in the March Field inter-squadron tournament. Members of the 64th team were St.Sgt. L.R. Wimberley, Cpls. C.D. Graw, and M.A. Watts, Pvts. W.J. Arnold, Morris Goldberg, L.A. Ozenbaugh, L.J. Chapman, E.V. Edman, D.J. Miles, G.W. Mouser and A.F. Story.

Second place among the squadrons was won by the 31st Bombardment Squadron team, while third and fourth places went to the 34th and 73d Pursuit Squadrons, respectively.

7th Bombardment Group: The Group loses several of its most efficient officers due to foreign service orders. Capt. Benjamin B. Cassiday, Group School Officer, E. & R. Officer and Agent Finance Officer; 1st Lieut. Donald G. Stitt, Commanding Officer of the 23d Photo Section, since the transfer of that organization from Post Field to March Field in 1927; and 2nd Lieut. Charles D. Fator, 9th Bombardment Squadron will soon leave for the land of the swaying palms and Ukeleles.

Orders for foreign service caused considerable changes in the enlisted personnel of the Group. Tech. Sgt. Glenn Freshwater of the 70th left for the Hawaiian Department. His replacement, Tech.Sgt. Charles G. Helsel, already reported for duty with the 70th. Staff Sgt. Horace Ackerly, 31st Bombardment Squadron, left for the Philippines on the February 4th Transport as replacement for Staff Sgt. Tyrus Holmes.

Mather Field, Mills, Calif., Feb. 1st:

Mather Field is obliged to report a faint scratch or two on a record hitherto almost perfect. Two recent crashes resulted in major damage to one BT and less serious damage to a P-12. The BT lost its undercarriage and wings when the motor quit cold over the marshes near Rio Vista, Calif., and the pilot, in a 35-mile-an-hour wind, was forced to sit the ship down cross-wing in the only field available. Neither the pilot, Lieut. Kelly, nor Lieut. Jacobson, his passenger was injured.

For a month following the destruction of the Officers' Club by fire, the officers of the Post ate at the Squadron messes; and, probably because they felt that there was nothing to be done about it, appeared very satisfied. Now, however, the Officers' Mess is re-established and Lieut. Kroeger, in charge, advises that the griping has started already - also that the officers are all gaining weight.

The 55th Squadron regrets the absence of its Commanding Officer, Lieut. C.E. Crumrine, who is undergoing major overhaul at Letterman General Hospital. Examination revealed that very few parts require replacement, and, with one exception, the Squadron hopes to see Lieut. Crumrine back on the line soon. The exception is a bright young officer who was so unfortunate as to nose over when forced into a soft field by heavy fog. The ship involved was the particular pride and joy of the squadron commander and its pilot is not at all anxious to see his C.O. before the airplane is reconditioned.

The 77th Squadron has been devoting the few hours allotted to it largely in experimentation with the various theories which concern the attacking of Pursuit units by Pursuit. These flights, while not offering definite proof of the superiority of any single theory, do foster those arguments and debates which are

both essential and conductive to an intelligent application of military principles, and the peace and contentment of a command.

On Jan. 23d, the 80th Service Squadron received another trophy to add to its collection, won by defeating the other squadrons of the 20th Pursuit Group in the Annual Field Meet, on Nov. 28th, 1931. Maj. Tinker, Commanding Officer of Mather Field, presented the cup.

San Antonio Air Depot, Duncan Field, Texas, Jan. 14th:

Air Corps officers visiting this Depot Jan. 5th, to attend the regular monthly conference for coordination of Air Corps supply and engineering matters in the Depot's Control Area were Capts. S.J. Idzorek, E.M.Morris, Alfred Lindeburg, and 1st Lieut. J.J. O'Connell from Ft. Crockett; Capts. C.E. Giffin, Raphael Baez,Jr., and 2nd Lieut. L.W. Ott from Brooks Field; Capt. George W. Polk, Jr. and 1st Lieut. H.A. Bartron from Randolph Field; and 1st Lieut. R.G. Harris from Kelly Field.

On Jan. 6th-7th the Depot enjoyed a brief visit from Maj. Carl Cover, Air-Res., of the Douglas Aircraft Co., Santa Monica, Calif., who stopped overnight en route ferrying a Douglas Amphibian to the East Coast.

Lieut. L.S. Webster left Jan. 7th for 15 days' leave, visiting in the East.

The annual inspection of this Depot was begun Jan. 11th by Lieut.-Col. Guy Kent, I.G.D., of Hqs.,Eighth Corps Area, Ft. Sam Houston.

Maj. C.L. Tinker, Commanding Officer of Mather Field, Calif., called at the Depot for a pleasant informal visit on Jan. 11th.

Capt. F.H. Murchison, Air-Res., and 1st Lieut. R.H. Cooper, A.C., were visitors here Jan. 13th and 14th, from Hensley Field, Dallas, Texas, on cross-country in an O-19.

Lieut.-Col. Fisher, our Commanding Officer, and Capt. E.V. Harbeck,Jr., of this Depot, taking advantage of the plentiful supply of quail in this section during the present hunting season, had very successful shooting over the week-end of January 9th.

During December, the Engineering Department of this Depot overhauled and repaired the following airplanes and engines: - Airplanes Overhauled: 1 A-3A, 3 A-3B, 1 LB-7, 2 O-2H, 1 O-17, 3 O-19B, 1 P-1C, 1 P-1D, 3 P-1F, 5 BT-1, 3 PT-3, 2 PT-3A, 1 C-9, Total 27. Airplanes Repaired:- 1 A-3B, 1 O-2J, 6 O-19B, 1 P-1C, 1 C-4A, 1 Y1C-14, Total, 11. Engines Overhauled:- 20 V-1150, 11 R-790, 11 R-975, 10 R-1340, 7 R-1690, 4 R-1750, Total, 63. Engines Repaired: -3 V-1150, 2 R-790, 2 R-1340, 12 V-1650; Total, 19.

Selfridge Field, Mt. Clemens, Mich., Feb. 1st:

General Henry C. Pratt and Col. Augustine W. Robbins, accompanied by ten other officers from Wright Field, paid a visit here Jan. 8th. The General and his party made the visit an occasion for a series of consultations regarding engineering and supply matters and of inspecting the new construction on the field. The trip was made in a C-4A Ford tri-motor Transport, piloted by Lieut. H.G. Crocker of Wright Field.

Maj. G.E. Brower returned with his family from a month's leave of absence spent at the home of his parents in Brooklyn, N.Y.

The past week saw much excitement on the post with respect to basketball, and several changes in the standings of the teams to date. The 27th Pursuit Squadron defeated the 17th, 33 to 14, and the 94th, 19 to 18, but lost to the 36th Squadron, 14 to 25. The 57th Squadron defeated Headquarters Detachment, 23 to 15, and the 36th was victorious over the 17th, score 31 to 16. The 36th Pursuit Squadron leads the Post League with six victories; the 94th won three and lost three; Headquarters Detachment and 57th Service Squadron won two and lost two; 27th Pursuit won two and lost four, and 17th Pursuit won one and lost five. At the completion of the Squadron schedule, it is planned to organize a Post team and arrange several games with good civilian and Army teams.

Under the direction of Maj. George H. Brett, Post Commander, organized athletics and exercise are now being participated in by all the officers of the Post. Four handball courts were built in one of the old hangars, and intense interest is being displayed in handball and squash.

The bowling alleys in the basement of the 36th Squadron barracks were completely renovated and re-equipped, and a number of officers are becoming adept at knocking down a lot of pins all at once. High scores noted and authenticated to date were made by 2nd Lieuts. James O. Guthrie, Res., 236; Norris B. Harbold, V-6241,A.C.

A.C., 235; Capt. J. Van Ness Ingram, Q.M.C., 230; Lieut. Harry G. Armstrong, M.C., 220, and Capt. H.S. Farish, Finance Dept., 205.

A number of officers are also participating in basketball. Squadron teams for officers were organized, and it is reported that an unusual amount of exercise can be obtained in one of these games. Standings to date are as follows: 94th Pursuit, won three; 27th and 36th Pursuit, won one, lost one; 17th Pursuit, lost three.

Orders were received promoting Lieut. Harry A. Johnson to the grade of Captain. He has been on duty at Selfridge for nearly four years, and during most of his tour was in command of the 94th Pursuit Squadron.

Capt. Hugh A. Bivins and Lieut. Lyman P. Whitten, accompanied by Mr. Richards and Tech.Sgt. Xura L. Horn, all from the Office, Chief of the Air Corps reported to the Field, Jan. 23d to conduct the regular technical inspection due at that time. Lieut. Whitten and Sgt. Horn were ordered to return to Washington soon after arrival, but Capt. Bivins and Mr. Richards remained to conduct the inspection of records and airplanes.

CASTLE

17th Pursuit Squadron: The New Year opened quietly, but it wasn't many days (nine to be exact) before events of major importance occurred. In the first place, Capt. Ross G. Hoyt, our Commanding Officer, returned from his long sick leave and took firm hold on the tiller. Two days later, Lieut. J.S. Griffith returned from leave and took over his job as second in command and Operations Officer. It wasn't very long before the boys of the 17th were opening their sleepy eyes and taking new note of their surroundings - and the time of the day. The Squadron rolled up its collective sleeves and prepared for a 1932 of accomplishment.

But already a member of the 17th stole a march on the New Year. At the very end of 1931, our own Tex (PT) Coolidge deserted our bachelor ranks and took unto himself a wife. In honor of that noteworthy event and in order to welcome the charming new Mrs. Coolidge, and also to speed the departing Bobby Burns and Van (Van) Auken on their way to Hawaii, Capt. and Mrs. Hoyt entertained members of the Squadron at their quarters shortly after the New Year. We were sorry to see Bobby and Van go away.

On Jan. 13th, the first of the new P-6E's arrived from Buffalo, addressed to the 17th. The ship hadn't been on the field five minutes before the entire 17th was out to see its new flying contraption, and many and varied were the comments to be heard. "It looks nice", was the cautious approval to be heard from pilots, while the mechanics looked dubiously at the pants on the wheels (they look like eggs) and wondered if they would clog with mud easily. However, Jack Jacobs, our new Engineering Officer from the 57th, soon reassured them on that point and many others. Shortly thereafter, Putt, Strung and Mason went to Buffalo to get some more of the P-6E's, and we had enough so that everybody could try one out and see if they really would go 200 miles per. In several more weeks we should have enough of the new ships so as to start on squadron formation work - we hope.

Two members of the 17th, Ryan and Jacobs, were lucky enough to be sent to Seattle to ferry some of the new P-12E's. They carry our regards to all our friends they will see on their stops at March Field and San Antonio.

Two personnel changes occurred recently. Blanchard was transferred to the 94th, and Sillin came to the Squadron from the 27th. This was in line with the policy of having the right balance of junior and senior officers in every squadron on the field. The 17th was slightly overburdened with "members of the younger set", and needed a little more rank in its midst.

27th Pursuit Squadron: With the recent allotment of additional flying time to Selfridge Field, the 27th Pursuit Squadron dusted off its doughty P-12's that were pawing at the curb the last several weeks, ended the month in a burst of tactical flying that seemed like the proverbial "good old days" and materially improved squadron morale.

Moderately good weather proved the rule; each pilot put in several hours on rendezvous, attack or radio missions. The month ended with several officers being sent on individual cross-country missions, the first in many weeks.

Capt. R.C.W. Blessley, Squadron Commander, 2nd Lieuts. George F. Smith and Francis H. Griswold left late in the month with a party of about a dozen officers from Selfridge Field proceeding by rail to the Boeing plant at Seattle, Wash., to ferry to Selfridge the first consignment of P-12E's. A total of 22 of the new Boeings are due here by the last of February, all of them slated for the 27th, to replace the P-12C's with which the squadron now is equipped.

Lieuts. Ray Allemang and Jack Swain returned from the Curtiss plant,

Buffalo, from which they ferried two of the new P-6's.

2nd Lieut. Edwin R. French was recently transferred to the 17th Pursuit Squadron from the 27th.

Officers of the 27th continue to play a fair brand of dub basketball in the post exercise plan and so far have won three games and lost only one. The players have worked themselves up into that fine state of physical perfection wherein each can play nearly an entire quarter without relief in the form of time out or substitution.

36th Pursuit Squadron: On January 26th Capt. E.C.Whitehead, Commanding Officer of the 36th Pursuit Squadron, accompanied Lieuts. Egan. Wilson, Vaupre and Hegy, this squadron, departed for Seattle, Wash., to ferry back the first of the new Boeing P-12E's allotted this station.

94th Pursuit Squadron: All the members of the 94th Pursuit Squadron were sorry to hear of Lieut. Flint Garrison's transfer to the 57th Service Squadron here. None of us hold a thing against the 57th Squadron, but we just hate to lose Flint. Lieut. Garrison recently graduated from the Air Corps Technical School and this transfer gives him a chance to use his training as an Engineering Officer to good advantage.

Needless to say, we are all glad to see the Captain's bars resting so proudly on the shoulders of "Skipper" Harry A. Johnson, our C.O. We began to think that the promotion list was a thing of the past, but it did come through in a pinch and slide forward a bit. All the officers and men in the squadron congratulate him and wish him a happy married life, (I beg your pardon, we are congratulating him on his captaincy instead of on a marriage). Well, even at that, we wish him a happy married life.

Just a day or two after Lieut. Garrison transferred from the squadron, Lieut. P.W. Blanchard, regular officer in the last class from Kelly, transferred from the 17th Pursuit Squadron to 94th.

Recently some very attractive enlargements of Air Corps formations and activities were received by 94th Pursuit Squadron and these were framed, and hung on the walls of the "Rec" room. They make interesting decorations for the room, and also in conjunction with war-time pictures hanging there, add considerably to the records of the squadron history.

"Just a bit of bragging, perhaps, but just try us and see", say the officers on the 94th Pursuit Squadron basketball team. At present the laurels for victorious and glorious combat are irresistably drawn toward that squad of doughty warriors who so fearlessly carry the colors of old 94th in battle. The team is composed of Lieuts. Auton, Baker, Coleman, White, McCoy and Schlanser. Their challenge is as follows: "Come one, come all, throughout the Air Corps." (Why not take 'em up on that and see what happens?)

57th Service Squadron: Several new P-6E's were ferried to this station and, after preliminary testing by this squadron, were turned over to the various squadrons. The new Berliner -Joyce P-16 is about ready for issue to the service and we expect to have one or two very shortly.

Lieut. Flint Garrison was assigned to this squadron and will act as Engineering Officer. Lieut. Paul M. Jacobs was transferred to the 17th after long and valuable service in this squadron.

The new N.C.O. Quarters were completed, so the married N.C.O.'s are having a time moving their furniture and arranging their new houses.

PARACHUTES IN TRANSPORTS

The attention of members of the Air Corps is invited to a bill introduced on February 3d by Representative Celler (Dem.) of New Yrok,requiring commercial airplane operators to equip their aircraft with a parachute for each passenger and member of the crew.

Mr. Celler called attention to the fact that all pilots and passengers in Army and Navy airplanes are required to wear parachutes and that this practice should be carried on in commercial aviation.

"From 1919 until the end of 1931 more than 700* persons saved their lives by parachute jumps from Army planes" states Mr. Celler. He mentions the military Air forces of foreign powers requiring the use of parachutes and states that Knute Rockne and his companions could have been saved had parachutes been provided.

No mention was made of the cabin 'chute developed by the Air Corps. Those interested in the matter might read "Would You Jump?" - Popular Aviation, September, 1931: "Death by Air Transport" - Forum, February, 1932.

*Roster "Caterpillar Club" gives 433 members from the services and civil aviation.

INSPECTION DIVISION NOTES

OPERATION OF AIRPLANES:

During a recent technical inspection conducted by a representative of the Inspection Division, Office Chief of the Air Corps, a visual chart similar to the one on page 77, was observed in the Operations Office of the New Jersey National Guard Air Unit, for the purpose of recording compliance with Circular Letter, OCAC, dated January 6, 1932, subject, "Operation of Airplanes." This chart was maintained on a mounting board similar to that now required by par.3, Technical Order 00-15, for mounting of Technical Order Compliance Charts, Air Corps Forms 60A and 60B. This chart serves the purpose excellently and furnishes at a glance an up-to-date record of the degree of compliance with the above mentioned Circular Letter and, in addition, combines the chart recommended in these notes in the Dec. 4, 1931, issue of the News Letter for recording compliance with Circular 60-6, OCAC.

Charts similar to the one shown on page 77are urgently recommended for all Station Operations offices, and in addition are also recommended for Squadron Operations offices, since the headings on the chart may be changed or amended to suit any such type of record which may be desired to be maintained. The following explanation will be of assistance in the preparation and maintenance of these charts:

Charts may be prepared in any length or width to suit the requirements of the station or organization and to provide for necessary additions and changes.

For ready reference, names of pilots should be entered in alphabetical order regardless of rank, with sufficient space between each letter to permit the addition of new names as required.

Under the heading "Compliance with Circular 60-6, OCAC," it is recommended that the date the pilot actually demonstrated an operating knowledge of the starting, ignition and fuel systems be entered under the particular aircraft heading.

In the heading of the remaining columns on the chart enter such technical instructions as come within the provisions and requirements of Circular Letter, OCAC, dated Jan. 6, 1932, subject, "Operation of Airplanes." These column headings have been divided by a dotted line on the attached chart, which permits entering above each technical instruction listed a notation as to the particular type of equipment affected by the instruction. This permits personnel concerned to know at a glance whether or not the technical instruction pertains to equipment at the station or to equipment which, under normal circumstances, they may not be required to operate. It further facilitates reference by supervising personnel by indicating additional and special instructions pertaining to aircraft starting, ignition and fuel systems and their control with which pilots must be familiar in order to assure compliance with Circular 60-6, OCAC.

It is recommended that whenever a pilot has complied with the provisions of Circular Letter, OCAC, dated January 6, 1932, subject, "Operation of Airplanes," in regard to any of the technical instructions listed on the chart, that such pilot be required, under the supervision of the Station or Squadron Operations Officer, to enter personally his initial in ink or indelible pencil after his name and under the proper column heading.

METEOROLOGICAL DATA:

Recent technical inspections have disclosed the fact that all Air Corps activities equipped with teletype are not receiving full advantage of the weather data available on teletype machines.

The weather data furnished by those machines is very valuable and furnishes up to the minute information on flying conditions. It should be posted as received for information of all concerned and to facilitate such posting and to assist C.O.'s of Air Corps activities in complying with the provisions of Circular 105-3, the following system, devised by the Commanding Officer, Air Corps Detachment, Boston Airport, Boston, Mass., is recommended as an excellent method of consolidating this information for ready reference.

This, or a similar method modified to meet local conditions, should be installed at all Air Corps stations equipped with teletype.

Individual forms similar to the one on page 79, ruled according to the number of reports normally received covering the route or territory to which they pertain. are first made up for each recognized air route, territory, adjacent states habitually flown over and for each State and route forecast and each route summary.

As weather reports are received the tape is pasted to the proper form, in the space provided, and the form placed under its proper heading on the Meteorological Bulletin Board, and changes or additions entered thereafter as received.

By looking under the clearly identified headings on the Meteorological Bulletin Board and then by reading the special information contained on each attached form, it is possible for flying personnel to obtain immediate weather information over a considerable radius from any Air Corps station.

By also posting a daily weather map at the bottom of the Meteorological Bulletin Board, it is further possible for interested personnel to obtain daily weather forecasts.

CHART TO RECORD COMPLIANCE WITH CIRCULAR LETTER OCAC, 1/6/32, SUBJECT: OPERATION OF AIRPLANES

Name of Pilots	Record of Compliance with Cir. 60-6, OCAC.							General	General	Air Cooled Engines	P-12&P-6	C-6A	General
	BT-2-A	BT-2-B	PT-3-A	O-2 H	B-6	B-6 A	YIC 14	Par.1 AC Cir. 60-4	T.Order 01-1-45	T.Order 02-1-42	T.Letter 31-27	T.Letter 31-279	T.Letter 31-289
James Green, Major, A.C.	11/12/31	11/30/31	5/10/31	6/7/30	11/20/31	11/21/31	2/10/32	JG	JG	JG	JG	JG	JG
Thomas Howe Capt., A.C.					10/12/31	12/5/31	2/2/32	TB	TB	TB			TB
John King 2nd Lieut., A.C.	1/10/32	1/10/32				2/5/32		JD	JD	JD			JD
William Smith Capt., A.C.	1/15/31	6/10/31			9/5/31		2/6/32	WS	WS	WS			WS

METEOROLOGICAL BULLETIN BOARD

Boston-New York	New York-Wash.	New York-Cleve.	New York-Pitt.	Albany-Clev.	Albany-Montreal
This space for Daily Weather Report Form (See Form Above)					

Wash.-Atlanta	New England	New York State	State Forecasts	Route Forecasts	Route Summaries

DAILY WEATHER MAPS

WASHINGTON - ATLANTA

Time_____ Date_____

Insist on the latest report

This report is available every three hours day and night beginning at 7:30 A.M. Details in order are: General conditions; Ceiling, Visibility, Wind Direction and Velocity. Thermometer and Barometer.

QUANTICO VA.	
CREWE VA.	
GREENSBORO VA.	
SPARTANBURG S.C.	

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The following Air Corps Circulars and Air Corps Circular Letters were published and distributed since the last issue of the News Letter on January 25, '32:

AIR CORPS CIRCULARS

Number	Subject	Date
Cir. 15-24	BLANK FORMS AND REPORTS - War Department, Air Corps Form No. 84, Bin Card. (This Cir. supersedes Cir. 15-24, dated 11/10/30	1-16-32
Cir. 15-34F	BLANK FORMS AND REPORTS - Air Corps Form No. 41, Airplane Maintenance Inspection Record. (This Circular replaces Circular 15-34E, dated 8/3/31, and changes Cir. 15-34, dated 8/15/28).	1-5-32
Cir. 65-36	SUPPLY - Part Numbers and Nomenclature	1-16-32
Cir. 100-1	COMMUNICATIONS - Army Aircraft Movement Messages on Department of Commerce Teletype Circuits	1-26-32
Cir. 100-2	COMMUNICATIONS - Government Facilities Available for Official Use. (This Cir. supersedes Cir. 100-2, dated 4/18/24, which has been entirely revised.)	1-9-32
Cir. 105-1	METEOROLOGY - Station Meteorological Officers. (This Cir. supersedes Section II, Cir. 105-1, dated 4/18/24.	1-9-32
Cir. 105-2	METEOROLOGY - Station Meteorological Section. (This Cir. supersedes Section III, Cir. 105-1, dated 4/18/24.)	1-9-32
Cir. 105-3	METEOROLOGY - Posting of Meteorological Information. (This Cir. supersedes Section IV, Cir. 105-1, dated 4/18/24).	1-15-32

The following Technical Orders and Letters have been distributed since the last issue of the Air Corps News Letter on January 25, 1932:

Date and No.	Subject	Distribution
TO-00-0-10 1-2-32	Monthly Index of Technical Instructions	General
TO-02-1-33 1-15-32	Engine and parts, General - Overhaul and Flying Time Record. (This Technical Order replaces Technical Orders 02-1-33, dated 9-14-27, and 02-1-36, dated 2-15-28.)	General
TL-31-20 1-13-32	Installation of Bushings, Wing Struts, Tail Skid Post and Landing Gear Attachment Lugs - Boeing P-12, P-12B, P-12C, P-12D and P-12E airplanes. (This T.L. replaces T.L. 31-20, Nov. 22, 1930)	Chanute, Hawaiian A.D., Panama AD, Philippine AD, MAD, FAD, SAAD, RAD.
TL-31-95 1-13-32	Replacement of impeller shaft bearing part No. 105, during overhaul of all Pratt and Whitney Engines. (This T.L. replaces T.L. 31-95, Nov. 23, 1931).	All Depots and Chanute.
TL-31-258 2-1-32	Change of Stabilizer adjustment Operating Mechanism on O-19B, O-19C and O-19D airplanes. (This Technical Letter replaces Technical Letter No. 31-258, dated 9-26-31).	Chanute, Brooks, France, Hawaiian AD, Kelly, Luke, Panama AD, Philippine AD, Pope, Post, Rockwell, Scott, Wright, FAD, MAD, RAD, Hatbox, Hensley, Langley, Selfridge and Nichols.
TL-31-278 1-18-32	Checking electrode clearance with template No. 4-140 and No. 4-141 in scintilla type V-AG 9-D Magnetos and V-AG-12D Magnetos. (This T.L. replaces T.L. 31-278, Nov. 10, 1931)	Chanute and all Depots.
TL-31-305 1-18-32	Eclipse Starter Motor Pole Piece Screws No. 20507-5.	Chanute, Wright and all depots.
TL-32-4 1-18-32	Installation of Hose Connections, Fuel Line, Carburetor to Fuel Pump - Douglas BT-2A, BT-2B, O-38 and O-38B Airplanes.	General.
TL-32-5 1-14-32	Change on Guide, Tail Wheel Control Spring Thomas Morse O-19B, O-19C, O-19D and O-19E.	All Depots and Wright.
TL-32-6 1-14-32	Installation of Scuff Plates Fokker Y1C-14 and Y1C-15 airplanes.	FAD, RAD, MAD, SAAD and Wright.
TL-32-7 1-21-32	Safetying Fillister Head Machine Screws used to assemble the Throttle Body of Stromberg Aircraft Carburetors.	Chanute, Wright and all Depots.
TL-32-8 1-21-32	Replacement of Hand Type Starters with Electric Type on Fokker C-7A and Ford C-9 airplanes.	MAD, FAD, SAAD, RAD, Panama AD, Chanute and Wright.
TL-32-9 1-19-32	Replacement of Aileron Hinges - Curtiss B-2 and B-2A Airplanes.	Chanute, FAD, RAD, MAD, SAAD and Wright.
TL-32-11 1-15-32	Reworking of Propeller Shaft Thrust Bearing End Oil Deflector, Part No. C-9719 to Deflector, Part No. 77060 on GV and GIV-1570. Engines.	FAD, MAD, SAAD and RAD
TL-32-12 1-25-32	Installation of Engine Mount Brace Strut Keystone B-3A, B-5A, Y1B-4 and Y1B-6 Planes.	Chanute and Wright, and all depots.
TL-32-13 1-26-32	Use of Static Chains as a Ground for Airplanes.	General
TL-28-32 1-28-32	Piston Ring Gap, Cyclone and Whirlwind Engines.	Chanute and all depots.
TL-32-16 1-29-32	Installation of Gun Synchronizer Parts for R-1340-D Engines.	Chanute and all depots.
TL-32-17 2-1-32	Reinforcement of Stabilizer Attachment Structure, Rear - Keystone B-3A, B-5A, Y1B-4 Y1B-6, B-4A and B-6A Airplanes.	Aberdeen, Chanute, France, Kelly, Langley, Luke, March, Leavenworth, Wright and all depots.
TL-32-18 2-1-32	Change on Edgewater Ring Spring, Landing Gear Oleo Unit - Douglas BT-2B, BT-2C, O-38 O-38A and O-38B Airplanes.	Chanute, MAD, FAD, SAAD, RAD, and Wright Field.
TL-32-19 1-30-32	Airways Flare Installation for Sikorsky Model C-6A Airplanes.	France, Hawaiian AD, Luke, MAD, Nichols, Panama AD, Philippine AD, and RAD.
TL-32-20 2-1-32	Installation of Hand Type Fire Extinguishers on Aircraft.	General
TL-32-21 1-23-32	Camshaft Drive Shaft Bearing Failure V-1570 Series Engines Starting with No. 31-1036.	Bolling, Crissy, Mitchel, Selfridge, Wright, FAD, RAD, and MAD.

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Date and No.	Subject	Distribution
TL-32-22 2-1-32	Change on No. 6 Cylinder Exhaust Stack - Boeing P-12B, P-12C and P-12D Airplanes.	Bolling, Chanute, Kelly, Langley, March, Mather, Maxwell, Selfridge, Luke, Wright, France and all Depots.

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AIR CORPS CIRCULAR LETTERS

Stencil No.	Subject	Date
W-2035, A.C.	Maintenance Notes published in the Air Corps News Letter.	1-21-32
W-2036, A.C.	Training and Operations, Air Corps Form No. 4, and Monthly Aircraft Report, A.C. Form No. 95.	1-21-32
W-2037, A.C.	Technical Orders	1-29-32
W-38, A.C.	Flight Surgeons Accompanying Air Corps Air Corps Units.	2-1-32

SERIAL NO. 314 LIST OF NEW MATERIAL ADDED TO INFORMATION DIVISION FILES
Jan. 24th to Feb. 13th Incl.

Available for loan to Air Corps Organizations only upon request to the Air Corps Library, Munitions Building, Washington, D. C.

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AIR CORPS

NEWS LETTER

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WAR DEPARTMENT
WASHINGTON, D. C.

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VOL. XVI. AIR CORPS NEWS NO. 3

Information Division
Air Corps

March 15, 1932

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

Publishers are authorized to reprint material appearing in this publication.

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GENERAL WASHINGTON ENCOURAGED AERONAUTICS

The Bicentennial Celebration of the birth of General George Washington has tended to create an incentive among professional writers and others to unearth all possible incidents connected with the life and career of the Father of his Country. Along with this new flock of historians, who have sprung up almost overnight, the News Letter editor also caught the fever and started delving into various books and documents in an endeavor to discover if the subject of aeronautics had ever been brought to the attention of the great American, whose 200th birthday anniversary has been made a continuous celebration in the Nation's Capital, starting February 22nd and continuing until next Thanksgiving Day.

It is recorded that the first balloon ascension in the United States took place at Philadelphia on January 9, 1793, when Jean Pierre Blanchard, intrepid French aeronaut, made a successful ascent from the Prison Court in that city.

Blanchard arrived in America under auspices which resulted in his being presented to President Washington. On the morning of his ascension, which was advertised as his 45th aerial flight, Blanchard was presented by the President with a "Passport" recommending him to whomever he might meet during his ascent, descent or afterward. In the advertisement covering this flight it was stated that it was fixed positively for Wednesday, January 9th, weather permitting; that those who have subscribed on the blank subscription cards distributed thro' the city, are requested to send them to Oeller's Hotel, and those who wish to subscribe, may apply at the same place, until the 3rd of January, inclusively. Price of subscription, Five Dollars.

The "Passport" given Mr. Blanchard read as follows:

"GEORGE WASHINGTON, President of the United States of America,

To all to whom these presents shall come.

The bearer hereof, Mr. Blanchard a citizen of France, proposing to ascend in a balloon from the city of Philadelphia, at 10 o'clock, A.M. this day, to pass in such direction and to descend in such place as circumstances may render most convenient - These are therefore to recommend to all citizens of the United States, and others, that in his passage, descent, return or journeying elsewhere, they oppose no hindrance or molestation to the said Mr. Blanchard; And, that on the contrary, they receive and aid him with that humanity and good will, which may render honor to their country, and justice to an individual so distinguished by his efforts to establish and advance an art, in order to make it useful to mankind in general.

Given under my hand and seal at the city of Philadelphia, this ninth day of January, one thousand seven hundred and ninety three, and of the independence of America the seventeenth.

Signed GEORGE WASHINGTON."

The President, many of his Cabinet, a large number of members of both Houses of Congress, and a vast assemblage witnessed this epochal event in Philadelphia

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(then the Nation's Capital). The whole town turned out - people came from miles around.

Blanchard's balloon was in process of inflation with hydrogen gas for an hour or more. Cannon fire had echoed at intervals from dawn of day - the final discharge coming just as the aeronaut left the earth. A band of music enlivened the occasion. At ten o'clock all was in readiness. Blanchard bade Washington farewell.

Then "the Bold Adventurer" sprang into the boat-shaped balloon car, with its gilt spangles glistening in the sun against a brilliant blue. His balloon was of a bright yellow varnished silk, and Blanchard wore a plain blue suit and a cocked hat with a white feather. The band played slow music. As the balloon began to ascend, the throng was absorbed and still. Then the throng burst into a great cheer. Blanchard doffed his hat and waved the Stars and Stripes and the colors of the French Republic.

The squares and streets of Philadelphia and the nearby roads were packed with people; housetops, and even steeples, were black with humanity. Blanchard, rising in his balloon, looked down upon an immense sea of faces of men, women and children alight with intense and enthusiastic interest.

Blanchard's aerial voyage lasted about three-quarters of an hour. The balloon rose rapidly and immediately began drifting toward the southeast, soon crossing the river into New Jersey - at 20 miles an hour.

Picking up the story at this point from the columns of "The Federal Gazette and Philadelphia Daily Advertiser," of January 10, 1793, it is stated:

"Anxiety for the safety of the Aeronaut was painted on every face from the time the citizens lost sight of him, and various were the conjectures as to the place where he would descend.

About half after 6 o'clock last evening we were happy to meet Mr. Blanchard again in this city going to pay his respects to the President of the United States. He informed us, that his aerial voyage lasted forty-six minutes, in which time he ran over a space of more than 15 miles and then descended a little to the eastward of Woodbury in the state of New Jersey - where he took a carriage and returned to Cooper's ferry - and was at the President's, as we have already mentioned at half past 6 o'clock last evening."

In Blanchard's book, reciting his experiences in America, he alludes to the receipt of the "Passport" from President Washington, as follows:

"I then received from the President the most flattering mark of his good will in the passport which he was pleased to deliver to me with his own hand. I never felt the value of glory so much as I did in that moment, in the presence of a Hero, whom she had constantly attended at the head of armies, and with whom she still presided over the councils of his country."

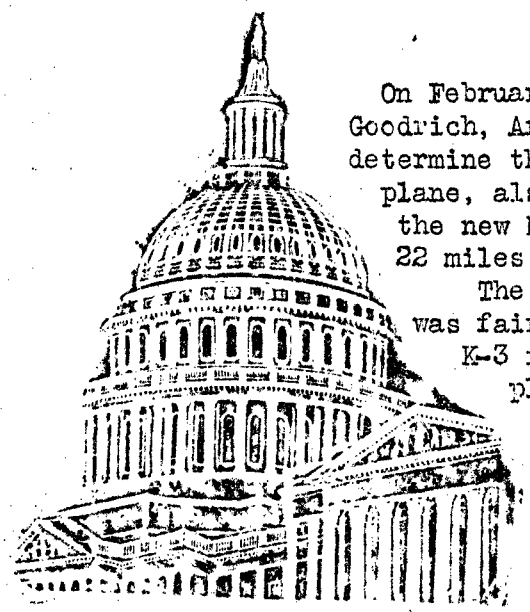
Describing his balloon flight and what transpired after he landed, Blanchard said that, meeting a citizen and relating the circumstances connected with his presence at that place, he showed him his passport. That individual beckoned to several persons, saying: "He has a certificate from our Washington, he has shewn it to me; but as I cannot read, come here and read it." Blanchard then goes on to say: "While these picturesque scenes were acting, I saw two women and several men on horseback arrive, who expressed as much pleasure as surprise, to see me thus in the midst of my colossal apparatus, which I was busy to arrange and put in order, for the purpose of facilitating its carriage. I could not, nor did I know how to answer all the friendly questions which they asked me; my passport served me instead of an interpreter. In the midst of a profound silence was it read with a loud and audible voice. How dear the name of Washington is to this people! with what eagerness they gave me all possible assistance, in consequence of his recommendation!"

Delving further into early aeronautical history in America, it is learned that the first balloon to be seen in this country was exhibited by Dr. Foulke, who lectured on the subject at the University of Pennsylvania, May 17, 1784, when he invited General Washington to attend. The first attempted ascent of an aeronaut is that of Joseph Deeker, from England, when his balloon was burned during inflation in New York, August 14, 1789.

Blanchard came to America after his celebrated crossing of the English Channel with Dr. Jeffries, the American. Intense interest was shown in these events by Washington, Adams, Jefferson, Madison, Monroe. It created wide discussion among Alexander Hamilton, Aaron Burr, Patrick Henry, John Hancock, Henry Clay, John Randolph, John Marshall and Paul Revere - and men who were building the new Republic.

MY EXPERIENCE IN HIGH ALTITUDE PHOTOGRAPHY

By Master Sergeant Andrew E. Matos,
Bolling Field, D. C.



On February 16th, I accompanied 1st Lieut. David W. Goodrich, Army Air Corps, on an experimental flight to determine the ceiling of a Fairchild Photographic airplane, also to obtain photographs showing the Capital, the new Mt. Vernon Boulevard and Mt. Vernon itself, 22 miles away.

The visibility from the photographic standpoint was fair. A service type K-3 camera was used with K-3 filter and super-sencitized speed film. The plane was serviced with 84 gallons of gas, and two tanks of oxygen with pressure of 1750 pounds in each. A centigrade thermometer with large figures was fastened on the strut. At 11:30 a.m., when we left the ground, the temperature was 38 degrees, and it fell to about 15 degrees below zero when we reached an altitude of 23,200 feet, at about 2:30 p.m.

The first 10,000 feet was made in 15 minutes, but it took 45 minutes of hard struggling to make the last 500 feet. Breathing ozygen from an ice-cold tank was like eating ice. The camera was frozen and very hard to operate.

The exposures were made about 2:30 p.m. As this was late for the time of year and there was considerable haze, the negatives were rather flat, somewhat under contrast. The results obtained, however, were very satisfactory. Six vertical photographs were made at three-minute intervals and, according to the overlap on photographs, the ship was making very little headway. There was a 90% overlap. We estimated that a 70 to 80-mile head wind was blowing.

Although there were solid blankets of haze restricted to certain areas, we could, from the height attained over the city, look beyond Baltimore and as far as Leesburg in the mountains to the northwest, and down the Potomac about sixty miles away, the Chesapeake Bay.

One of the greatest difficulties encountered in taking the photographs was the handicap imposed by the short length of tubing connected to my oxygen tank. It was less than a yard long, and it was almost impossible to move from the back of the plane to the front in taking obliques and verticals. It was also difficult to keep the mouthpiece from slipping out due to the excessive chattering of my teeth from the intense cold.

When making the last strip of photographs over the main part of the city, the left gasoline tank went dry and the motor stopped roaring, idling very slowly. For the moment I forgot my camera and turned my eyes toward the front of the plane. Usually in such cases Lieut. Goodrich's movements are very quick, but to my surprise he seemed to be moving very slowly, much the same as an actor on a screen in a slow-motion picture. Apparently his vitality was lowered by the rarefied atmosphere. Finally, he succeeded in pulling the throttle back, but it took both of his hands to turn the switch to the center tank. Immediately the motor started roaring again, and another photograph was made which, when compared with the others in scale, showed we had lost 2,000 feet altitude in these few seconds - quite in contract to the hard struggle we had undergone to gain the last 500 feet.

After being in the air three hours, my supply of oxygen was nearly exhausted, so when Lieut. Goodrich motioned to me to take more photographs I had to point to the dial which registered only about 300 pounds left in the oxygen tank. About twenty minutes later, when we reached the ground, we found to our surprise that, on comparing the oxygen tanks, Lieut. Goodrich had used about a third of his supply of oxygen, while mine was nearly gone. This was no doubt due to the fact that I consumed mine at a faster rate because of my moving about, lifting the heavy camera, opening windows, etc.

While in the air I felt a burning sensation in my stomach, due probably to a very light breakfast and no lunch, and I had a severe headache for some hours after landing. But we suffered no serious ill effects from the experience, cold as it was, and are well pleased with the results of our first experiment in high altitude photography.

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GOAT INITIATED IN THE ORDER OF ARMY AIR CORPS INSIGNIA

Insignia designs thus far adopted by Air Corps organizations of the Regular Army, and approved by the War Department, depict such animals as a kicking mule, a leaping tiger, sea horse, buffalo, puma, wolf, beaver and monkey. This collection of four-footed creatures was recently augmented by another one which figures rather prominently in several slang expressions - a goat. The design reproduced to the left was submitted by the 62nd Service Squadron, Brooks Field, Texas. It was selected after both the commissioned and enlisted personnel of this organization had submitted designs, and was recently approved by the War Department.

The News Letter Correspondent goes on to say that the goat head design is considered especially applicable, since a Service Squadron bears the brunt of much of the utility work at an Air Corps station; also because the goat is noted for its ruggedness, its ability to exist in almost barren areas, its stamina in undergoing hardship, its agility and, under provocation, its ability to fight and fight well.

The 62nd Service Squadron is a war-time organization, although it experienced no service overseas. First organized at Mitchel Field, N.Y., as Air Park No. 7, it was transferred to Carlstrom Field, Arcadia, Fla., and, upon the removal of the Air Corps Primary Flying School to Brooks Field, Texas, it accompanied the School. In July, 1923, the name "Air Park No. 7," was changed to 62nd Service Squadron. The insignia just approved becomes the permanent identifying mark of the Squadron. Captain Louis R. Knight commands the organization, and other commissioned members thereof are 2nd Lieuts. Louie P. Turner, Assistant Transportation Officer of the Post; I.W. Ott, Assistant Post Engineering Officer; and E.H. Rice, E. & R. Officer and Adjutant of the Squadron.

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PURSUITERS START OUT ON SKIING EXPEDITION

Six pilots of the First Pursuit Group, Selfridge Field, Mich., (Captains Blessley, Ballard, Lieuts. Hodgson, Olds, Ramey, MacDonald) and two members of the Materiel Division, Wright Field (Lieut. A.R. Crawford and Mr. Bosler) took off recently on a mission with the purpose in view of finding snow and testing recent landing skii developments. The principal object of the trip was to make a general comparison between wheel skiis and skiis without wheels, and having done this to determine the best skii of the several types submitted.

Arriving at Madison, Wisconsin, on the afternoon of Feb. 18th, the airmen spent the night there and took off the following morning for St. Paul, Minn., to begin the tests. In several respects the snow conditions around St. Paul were ideal for such a test. All normal snow conditions, except very deep snow, were encountered, and some snow as deep as 18 inches was found on sheltered frozen lakes. All types of skiis were found to be successful in varying degrees. In spite of their small bearing surface, the wheel skiis proved to be entirely adequate for landings and take-offs in all conditions of snow. Their drag on the surface is somewhat greater than flat skiis, but, of course, their value is felt when any bare ground is encountered.

The expedition remained in the vicinity of St. Paul and Minneapolis for about five days and returned to Selfridge Field via Chicago. The trip was made with no serious mishap and was successful in its mission.

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"Page Captains A.F. Hegenberger, Wendell Brookley and H.R. Wells," says the Materiel Division News Letter Correspondent, and then adds: "On second thought, better page them as Lieutenants, as they may not recognize their new titles."

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NAVAJOS GRATEFUL TO THE AIR CORPS

"At a time when many pointed references are being made to the Army as 'a costly and useless implement of destruction,'" writes the March Field Correspondent, "it was recently the privilege of the 11th Bombardment Squadron to add to the already lengthy list of 'Things The Army Does Besides Fight.' On January 16th, six Curtiss Condor Bombers under command of 1st Lieut. C.H. Howard, of the 11th Bombardment Squadron, left March Field for Winslow, Arizona, under orders to report to the Supervisor of Indian Agencies for the Navajo Reservations in that section. The work they accomplished is by now well known to even a casual newspaper reader. In a period of five days, close to 40,000 pounds of bulk food was distributed to an estimated 20,000 Navajo Indians, who were facing starvation because of the fact that unprecedented heavy snows had blocked all roads for many weeks. During the period Jan. 17th to 22nd, the planes covered sections of four States: Arizona, New Mexico, Utah and Colorado, as they penetrated the farthermost recesses of the reservations under the direction of guides from the Indian Headquarters at Winslow and Holbrook.

Indians of the Black Mountain and Navajo Mountain regions had their first opportunity to see an airplane at close range, when the huge Condors with 100-lb. sacks of rations hung on the bomb racks and packed in the nacelles, swung low over their villages and 'hogans,' circled over the 'target' and dropped their ration bombs. 'Chity Nah Tiagie,' they must have shouted to each other, the Navajo words for airplane-chug, chug, overhead. It is possible the Signal Corps could get some pointers from our 'primitive brethren,' inasmuch as it was pointed out that even in the most snowbound and remote villages, where all means of communication was apparently cut off, word that the 'Father in Washington' had sent food with his 'automobiles in the air' had spread over the Indian Grapevine Telegraph.

The moment the planes appeared near most villages, crowds of Indians poured in the open to wait for the Army's 'flying bread line.' The six ships engaged in the mission flew approximately 15,000 miles during the mission and covered an area of approximately 20,000 square miles in their search for the stricken Navajo villages. The temperature during the entire period was close to the zero mark, which necessitated night crews to keep the motors turning over hourly."

"The Navajos never tire of telling of their emotions when they saw the big Army planes flying over their country, and particularly when they became aware that food was being dropped," writes Mr. John G. Hunter, Superintendent of the Southern Navajo Agency, Fort Defiance, Ariz., to Lt.-Col. Henry H. Arnold, Commanding Officer of March Field, Riverside, Calif., in expressing his gratitude to the Army Air Corps for its cooperation in a grave emergency.

Mr. Hunter states the prompt and efficient service rendered by the 11th Bomb. Sqdn. relieved much distress, the Navajos stating they were not only greatly helped by the food dropped from the planes, but also felt assurance that the Government was doing, and would do, anything possible to help them.

The remaining portions of Mr. Hunter's letter are quoted below, as follows:

"The Navajo Indians and the friends of the Navajos are very grateful for the services rendered by the 11th Bombardment Squadron in delivering food supplies to the needy people of their snow-blocked country, and it is the purpose of this letter to state conditions which led up to the request for these services, and to express appreciation in behalf of the Southern Navajo jurisdiction for the assistance given.

The weather experienced in this country during the past sixty days has been unprecedented in severity. One snowstorm followed another, with the result that roads to a great many sections were kept completely blocked for such a long period of time that the supplies of the Indians, and also the supplies of the traders, were practically exhausted. During this entire time this Agency had three Caterpillar tractors, each equipped with a snow plow, operating almost continuously, but almost as fast as the roads were opened they were blocked by drifting snow or by additional snowfall. Owing to the extreme isolation of many Navajo communities, together with distances ranging from 10 to 150 miles from base of supplies, the conditions described culminated in the crisis which prompted the request of the Commissioner of Indian Affairs for aid from the War Department.

Lieut. Howard, the officers and enlisted men of his command, are deserving of highest praise for the conscientious and tireless effort put forth by them, and for the outstanding success which they achieved in attending the business of their expedition. I never witnessed greater efficiency than was demonstrated by the 11th Bombardment Squadron. My association with the members of this Squadron shall remain as one of the high points of my life, and shall cause me to more fully appreciate the Air Corps of the United States Army and the principles and standards of conduct and efficiency which this organization maintains, and I may safely state that this sentiment is shared by every one with whom they came in contact while in this section of the country.

The activities of the 11th Bombardment Squadron will ever be an important part of the history of the Navajo Indians, which tribe now numbers more than fifty thousand souls. They will always cherish in their memories the timely assistance given, and will much more thoroughly appreciate the United States Army and the Government for which it stands."

Asserting that he never worked with a finer or more systematic and agreeable bunch of men than those of the 11th Bomb. Sqdn., Mr. C.L. Walker, Superintendent of the Western Navajo Indian Agency, Tuba City, Ariz., in a letter to the Com-

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manding Officer of March Field, adds that from Commanding Officer to Private they showed that they had the interest of their work at heart, and were capable in every respect. They were on the job constantly, and the organization worked perfectly."

The official report of Lieut. Charles H. Howard, commanding the flight of planes from the 11th Bomb. Squadron, which participated in relief operations over the Navajo and Hopi Indian Reservations, was recently received by the Chief of the Air Corps. Although the last issue of the News Letter touched upon the splendid work performed by this relief expedition, Lieut. Howard's report is of such unusual interest as to justify full quotation thereof, viz:

"a. Reference to a map of Northern Arizona will show the areas covered by the Western and Southern Navajo Reservations. It will be noted that this area completely encompasses the Hopi Reservation.

b. The snow line extended from a point about thirty miles north of Winslow where the elevations are some 500 feet above that point. Eastward the snow line began about Holbrook and the ground was completely covered in the entire eastern area. The snow became deeper as the altitude increased, there being in all areas a marked difference in depth on the wind-swept mesa and the valleys and canyons. Long parallel drifts on the open areas gave testimony to the violence of the blizzards. It was noted that the unsheltered hogans had a definite open pathway entirely surrounding the structure. At first glance it was thought to be a path cleared by the Indians, but investigation proved it to be an aerodynamic phenomena due to the extremely high wind velocities. Hogans in the valleys were entirely snow covered.

c. The number of snow-bound Indians in the Western Reservation was estimated at some five thousand, while in the Southern area there were some sixteen thousand. It will be seen that the Western area is very sparsely settled. On this account, two ships were assigned to this area and four to the Southern.

d. The problem was not only one of food dropping, but of locating the proper place. This information was known only to the Indian agents and their associates who acted as guides. Mr. C.L. Walker of the Western Area, and Mr. J.G. Hunter of the Southern Area, rode every mission and much credit is due them for keeping going under extremely uncomfortable flying conditions. The proper distribution of food was possible only through their intimate knowledge of the country. Altho many places bore names on the map, they actually consisted in many cases of only a single hogan or house.

e. This condition is characteristic of the Navajo Indian. He, it was understood, is essentially a nomad, living and moving with his flock. He is independent and in many cases the nearest neighbor was from one quarter to a mile away. The hogan is a semi-spherical dwelling of mud and sticks, with a smoke hole in the top and a door opening to the east. Each hogan had its sheep corral of vertically placed posts, and in many cases the only trail visible was between hogan and corral. This mode of life is in distinct contrast to the Hopi Indian, who is a village dweller and an agriculturist.

f. In searching such areas for needy Indians, it was the Indian Agent's familiarity with his district that enabled the planes to drop food at the proper hogan. It being impossible to drop a sack at each hogan, the community center or hogan of the local head man was chosen as a distributing point to which the Indians could break trails. In several instances, localities which usually have a number of families were found deserted, so search was necessary to find where they had moved to escape the severe storms.

g. In anticipation of dropping rations in burlap sacks, half of each bomb bay had been floored with the idea of having a man heave the loads out on signal from the pilot. Bulk and inconveniences immediately showed this to be a poor arrangement. In anticipation of the possibility of using the bomb racks as carriers, Lieut. John S. Mills, Squadron Armament Officer, had carried a full complement of bomb shackles, and these solved the problem.

h. The ration as made up by the Indian authorities consisted of the following articles and amounts: 48 lbs. Flour, 10 lbs. Sugar, 4 lbs. Salt Pork, 10 lbs. Coffee, 2 lbs. Baking Powder, 10 lbs. Beans, 10 lbs. Dried Fruit.

A sample bag of these articles was made up in a burlap bag and dropped at low speed and altitude on the airdrome and instantly disintegrated. On the next attempt, each article was placed in a burlap bag, tied, and the whole placed in a larger sack. This was bound much as a blanket roll is roped, with two bands around the diameter. The bomb shackle was hooked to these latter ropes and the bag hung on the rack. It was found possible to place ten such sacks in each bomb bay, leaving very little free space, however. The total weight of each bag averaged 98 pounds, making a bomb load of roughly 1,000 pounds. Of all the lots dropped, not to exceed four burst open, and in these the inside sack saved the contents. The depth of the snow aided materially in preventing destruction.

i. Due to the fact that no landings were made on these missions, little direct contact or information was received from the Indians. Their reactions could be judged only fleetingly by the pilots. In one instance, a drop was made in an extremely isolated spot about 30 miles west of Cameron on a high plateau. On the approach of the plane, an Indian woman came out of the hogan to observe. As the ship came in and dropped several sacks, she was back into her house in one dive and no more was seen of her. This was the only instance where fear was shown. On a later drop in the Painted Desert Region, near the junction of the Little Colorado and the main stream, an Indian seemed to sense the coming of

of food and waved his arms vigorously as if to attract attention, finally getting out a blanket and waving that. After the first bag was dropped, the whole family came out making several desperate but futile attempts to retrieve the sacks before the next round of the plane, but running to safety without their food. This hogan was the only one for several miles in a desolate and isolated spot, so near the edge of the canyon of the Little Colorado, that at each pass the pilot found himself out over a canyon with 3,000-foot vertical sides. This whole region lay under a solid blanket of snow, ravines and gullies so filled that it looked like a flat plain. Another drop was made at a point called Copper Mine, about 30 miles east of Lees Ferry. This was made on the last day of the expedition, and a notable increase of foot trails could be seen. The drop here was made at a hogan to which all trails seemed to lead. The Indians here were very shy and hid behind walls and corral until satisfied that the last bag was dropped before venturing out to get the food. In nearly every instance after the first bag dropped, the Indians all understood what was being done, and waved their arms in apparent appreciation.

The closest contact with a real Indian came with the arrival of Mr. Clyde Lizner, one of Mr. Hunter's guides. He is a well educated Navajo and of some wealth. He watched closely the processes of loading and other incidents. That evening, he saw his name on a bulletin board and listened intently to all instructions. The next morning, he donned his flying equipment, parachute and all, without a word of instruction, climbed into the proper seat and unerringly directed the pilot to his destination.

j. As noted before, the Hopi is a village dweller and here are located the local store, and in many instances a government agency. These, in contrast to the Navajo mode of life on the plains, form a storehouse upon which the Hopi can draw in emergencies such as this. For this reason it was necessary to drop food in only two places in the Hopi country. One at Pinon, about 20 miles north of Kearns Canyon, and another at Coal Mine, a source of that fuel in the Indian country. In the Southern Navajo country, relief extended south of Gallup, New Mexico, into the Zuni country. Snowfall was heavy in this section, but constant effort had opened several of the main roads. It was in this section that last November some 2,000 Navajos, on their annual pinon or pine nut harvest, were trapped. At this time they were fed by hospitable Zunis for a long period. Strenuous work by road crews under direction of the Indian Agents made it possible to get all these Indians out without loss of life. This annual pinon harvest is not made with an idea of storage for winter food, but the crop is marketed, principally through the Fred Harvey system.

As stated before, this trip developed very little of first hand reactions of the Navajos. Reports to the government agents by telephone indicated that at such places as gatherings were possible, that deep gratitude was felt toward the 'chiti-no-tah,' or automobile that flies."

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CATASTROPHE FOLLOWS STARTING OF BT2A

"What with fried mice in the radio transmitter and this and that," says the News Letter Correspondent, "Mather Field is making a rare collection of natural history stories. The latest is vouched for by the officers and men of the 80th Service Squadron, but your correspondent takes no responsibility.

"Seems that in making a routine inspection of the line one day, Major Tinker singled out a BT2A of the 80th Squadron and ordered it started. Off it went, and immediately, with a cough and a sputter, died again, to the accompaniment of such a series of wails and screams as has never been heard since the Spanish Inquisition. This, at a Saturday morning inspection, was decidedly irregular; so, as soon as the mechanics could be coaxed from the hangar tops to which they had retired, an investigation was in order.

"Guided by various scratchings and small yells, some brave soldier removed the cowling over the motor and found in the carburetor air scoop a very much agitated yellow tom cat, all claws and tail, that had evidently taken refuge there from the cold night air."

The Correspondent concludes his story with the statement that the motor of the plane was not damaged but that no one has seen Mr. Thomas Cat since he faded over the horizon.

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Send in your news contributions to the News Letter on the first and 15th of the month.

RANDOLPH FIELD GRADUATES ITS FIRST CLASS

The first class to graduate from Randolph Field, the new Air Corps Training Center, numbers 101 students, comprising two officers of the Regular Army, a German Army officer and 98 Flying Cadets. These Primary Flying School graduates were transferred March 1st to Kelly Field, Texas, for advanced flying training. Their names are listed below:

2nd Lieut. William T. Hefley, Jr. C.E.
2nd Lieut. Russell A. Wilson, S.C.
Captain Eberhard F. Baier, German Army.

Flying Cadets

Wilbur W. Aring
Carl F. Baker
Stephen A. Beck
Lloyd I. Belden
Jasper N. Bell
A.J. Bird, Jr.
William I. Bogardus
William F. Bonnell
Adrian Borchers
Henry O. Bordelon
Aldor W. Borgers
Robert W. Brady
William F. Brannon
Cedric J. Brockliss
James L. Bruce
Martin B. Cahill
George S. Cassady
Frank W. Cazier
John W. Christner
Randolph E. Churchill
Glenn C. Clark
William L. Clark
William L. Combest
Robert E. Cooper, Jr.
Emmett J. Corrigan
Harry Coursey
Dudley S. Cox
Homer M. Cox
Harry H. Culler
William E. Davis
Marvin C. Demler
William G. Ditzen
John C. Doherty
Hubert B. Duckworth
Carl H. Eaker
Lloyd W. Earle
Scott Flower, Jr.
John S. Fouche, Jr.
Frederick R. Freyer
Thomas L. Gates
Clifton V. George
Marvin C. Glasgow
George L. Govoni
Donald W. Haarman
Olin K. Haley
Edward N. Hamilton
Paul J. Hanspeter
Clyde C. Harris, Jr.
Richard W. Henderson
Cecil R. Hoffman
Lewis Horvath, Jr.
Louis R. Hughes
Jack S. Hunt
Wilburn R. Hunt
Don L. Hurst
Edmund L. Jackson
Robert E. Jarmon
Theron S. Jobson
William W. Johnson, Jr.
John R. Kane
Gregory F. Keenan
Lester E. Krug
David B. Lancaster, Jr.
William T. Lovelace
Howard W. Mackelcan
Francis W. Matthews
Howard A. Moody
Ralph J. Moore
Ormond J. Mosman
George M. Murchison
Jesse Neal
David R. Nelson
William P. Nuckols
Walter A. Oglesby
Byron G. O'Hara
Noel F. Parrish
Samuel V. Payne
Donald E. Philip
Brittain H. Purser
Joseph R. Qualm
Jack L. Randolph
Roger M. Reynolds
Harold G. Richardson
Nathan F. Searles
Moir L. Shockley
Elton Smith
John P. Spake
Noble O. Sprunger
Fred D. Stevers
Henry H. Swift
William L. Trimble
Marion D. Unruh
Roy P. Ward
Ralph L. Wassell
Richard C. Weller
Paul S. Woolley
James T. Workman
Steve L. Zelazo

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SERGEANT COLLINS COMMENDED FOR BRAVERY

In a General Order issued at Raldolph Field, Texas, Staff Sergeant William M. Collins, 67th Service Squadron, was commended for bravery. On January 25th, a gas torch broke and scattered flames far and wide in the Engineering Shop on the post, and Sergeant Collins with disregard for his personal safety, promptly put it out. The torch was being used for welding parts of an airplane and when the hose broke the tank would have blown up had it not been for Sergeant Collins' prompt action and disregard for his personal safety.

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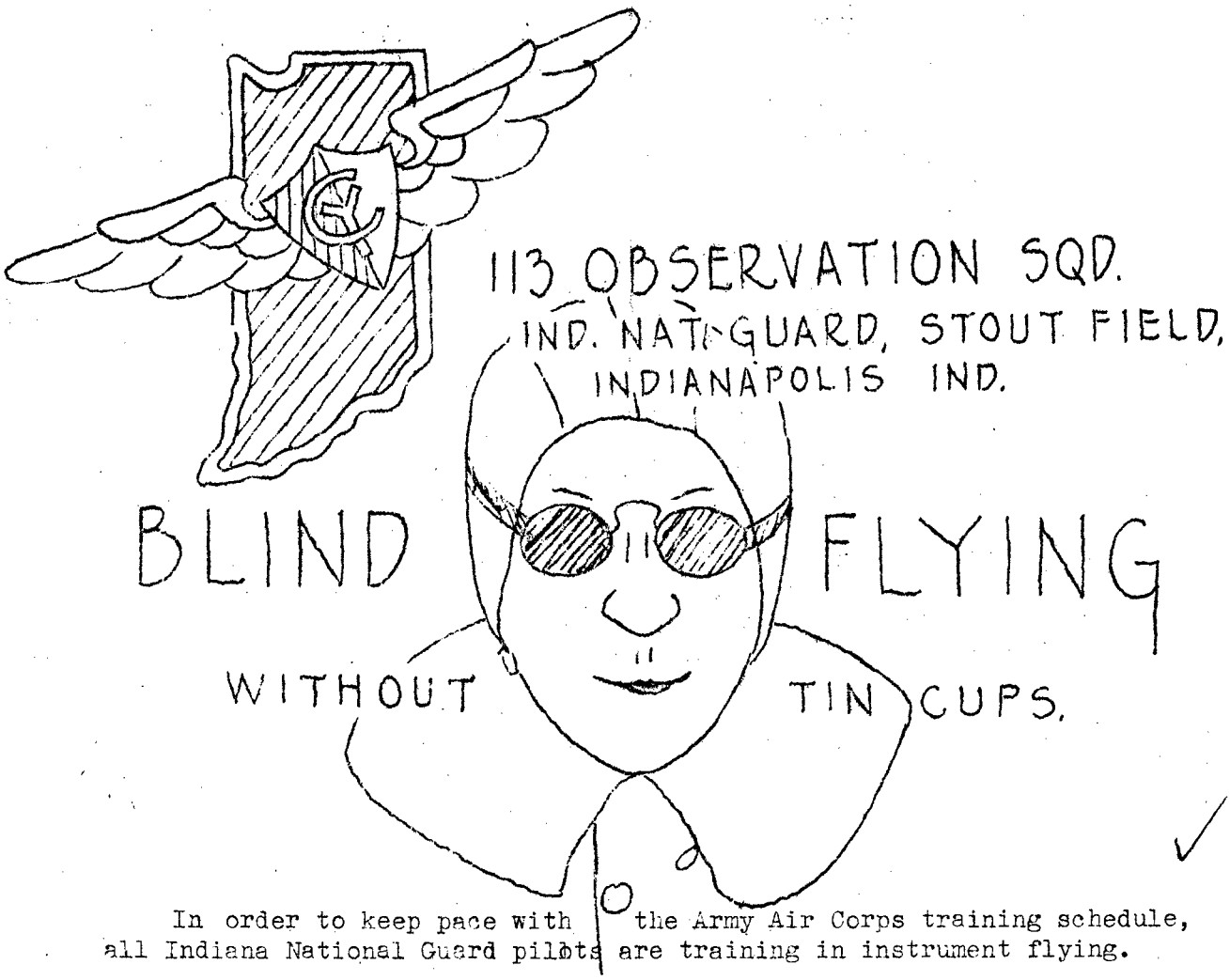
Bolling Field is testing a new method of boundary lighting. A small one-sixth h.p. motor operates the mechanism, allowing the intensity of the lights to vary. All the boundary lights operate from field intensity downward to a low order of intensity. From a distance the lights appear as blinkers. The incoming pilot sees a field defined by blinking lights which instantly catch his eyes.

Pilots stationed at Bolling Field and those on duty in the Office of the Chief of the Air Corps flew a night mission recently, and each one reported favorably on this system of lighting the field.

V-6247, A.C.



In order to keep pace with the Army Air Corps training schedule, all Indiana National Guard pilots are training in instrument flying.

To make possible instrument flying, the 113th Observation Squadron, Indiana National Guard, have a sliding cover for the front cockpit on O-38B ship, adjustable in flight by the pilot.

Construction of this device consists of two 3/8" tool-steel rods running lengthwise on each side of cockpit and clamped at each end to the longerons. This acts as a track on which slides a N shaped bow made of 3/16" x 1" strap iron which has #2 length steel tubing attached to each end, which slides on the steel rods. This end bow has two handles on inside, in order to move the bow forward to rear edge of windshield. Another bow is fastened to rods at rear and made secure to cowling in front of rear windshield. A canvas cover is laced around rear and front bows and to rings along the sides, which slides on steel rods.

After taking off, the pilot slides the front bow forward to rear edge of front windshield and makes secure by flaps which are part of the canvas cover, to lift-a-dot fasteners on inside of cowling in front of windshield. This completely covers the cockpit except for a small opening in back, which permits any gas fumes which might be in the cockpit to escape, and also permits the check pilot to see the pilot at all times.

The blind flying is done at a minimum altitude of 2000 feet, and there is always an assistant pilot in the rear cockpit to take charge if the blind man goes hay wire.

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With all flying equipment, uniforms, buildings and what have we, polished to the utmost, the Squadron stood the annual federal inspection under Lieut Colonel H. C. Kress Muhlenberg, Air Officer, Hq.5th Corps Area, on Sunday and Monday February 14 7 15th.

We hope we looked as good to the Colonel, as we felt about ourselves. As for the planes the mechanics reached the height of gloss in polishing the planes, and if they look better next year we'll have to wrap them in cell-O-phane.

V-6247, A.C.

BOMBARDMENT TACTICS DEMONSTRATED TO TACTICAL SCHOOL STUDENTS

STUDENTS of the Air Corps Tactical School, Maxwell Field, Montgomery, Ala., were given a practical demonstration of salient phases of bombardment tactics and technique by the 96th Bombardment Squadron of Langley Field, Va., during the period January 25th to February 3rd, inclusive.

On the first day, the 96th Squadron, carrying the Tactical School students as observers and gunners, demonstrated the various means of taking off, assembling and landing a bombardment formation. On succeeding days, the Squadron assumed its various machine gun defense formations and were "attacked" by Pursuit with camera guns. Two formations, the "javelin," a step-down column of elements, each slightly offset, and the "staggered cloverleaf," a new formation different from the normal cloverleaf in that the number two element is staggered below and the number three element staggered above their normal cloverleaf position, proved to be the most successful. At a critique later by the School students, the concensus of opinion as to which of these formations present Pursuit the most unfavorable target appeared divided. A basis for comparative estimates of these formations, however, was provided by the exercises.

On February 1st, the Squadron simulated a night bombing of Montgomery while under harrassment by anti-aircraft and searchlight. The purpose of this demonstration was two-fold. First, it was desired to show the method of night attacks conducted by a Bombardment squadron attacking "by threes" at three-minute intervals; second, it was desired to demonstrate from both the anti-aircraft and bombardment standpoint the method of illuminating Bombardment airplanes and how they appeared when caught in the searchlight beam, both when viewed from the ground and when in the airplane.

A similar mission was scheduled for February 2nd, but was rendered impossible by weather, as was the take-off for home scheduled for the following morning. Despite the relatively slow speed of the B-6 Bomber, a 50-mile an hour tail wind enabled the Squadron to make record time home.

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DEMONSTRATION OF VERY PISTOLS AND SIGNALS AT BOLLING

Captains Coupland and Stribling, Ordnance Department, recently witnessed the demonstration of 25-mm. Very Pistols and Signals conducted at Bolling Field by Messrs. Fisher and Biddle, representatives of the Erie Chemical Company, Cleveland, Ohio. Two representatives from the Department of Commerce and two from the Coast Guard also witnessed the tests.

Several red, white and green Single Star Signals, without parachute, were fired in front of the Operations Office at the field. The recoil of the pistol was not excessive. After this firing, several signals were fired from the other side of the flying field at a distance of approximately one-half mile, the observers remaining at the Operations Office. All of the red, white and green signals were very distinctive, and it is estimated would have been visible under ideal weather conditions at a distance of from three to five miles. It is estimated that the height of projection was approximately 100 feet. There were three or four misfires during the firing of the 12 or 15 signals. Several of the White Star Signals failed to ignite.

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NEW BOEINGS ARRIVE FROM SEATTLE

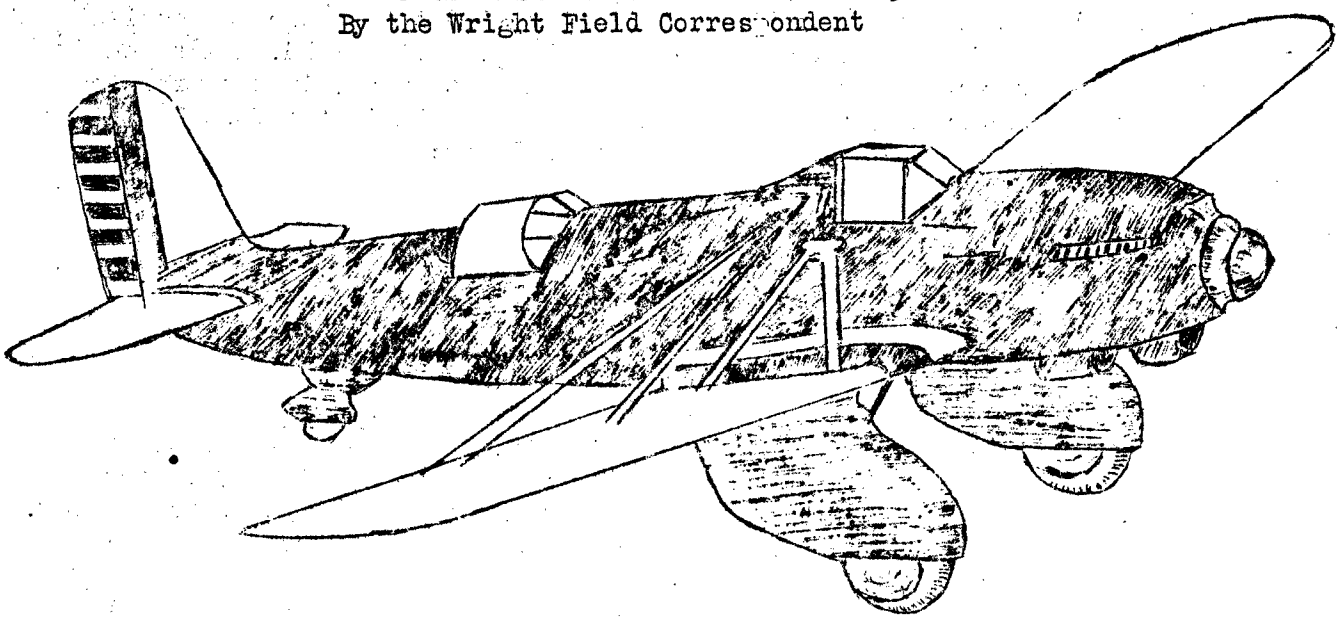
Fifteen of the new Boeing P-12E Pursuit planes arrived at Selfridge Field on February 11th, having been ferried from Seattle, Wash., to Detroit, by way of Rockwell Field, Coronado, Calif.

Up until February 10th, the trip had been pleasurable and uneventful. On that morning, taking off from Scott Field in 3-plane elements, bound for Selfridge Field, dense fog and dangerous flying conditions were encountered in Indiana, which were apparent around Selfridge Field around 12:30 and were indirectly the cause of Lieut. Webber's unfortunate crash. Nine of the planes retraced their route and landed at Chanute Field. Three others were forced down at Rochester, Ind., and late in the afternoon proceeded to Fort Wayne for an overnight stop. Three other planes sought the safety of the Transcontinental Airport at Toledo, but while flying near Toledo in the direction of the airport, one of the formation disappeared. This was Lieut. Feldmann of the 94th Pursuit Squadron who, finding himself alone and with fog closing in on him, landed in a hurry in the best available field. His safe landing under very adverse conditions was deserving of the congratulations which his fellow officers bestowed upon him.* All fifteen planes arrived at Selfridge Field intact by 1:00 o'clock the following day.

*Note: An officer of the Information Division, on business at Toledo that day, also saw the back yard surrounded by high tension lines and trees where Feldmann landed, and also congratulates him on his skill.

A NEW ATTACK TYPE AIRPLANE

By the Wright Field Correspondent



The Curtiss XA-8, the Army's latest model of an Attack airplane, has elicited great interest throughout the Air Corps. From the points of view of design and performance it appears most promising. The earlier Attack airplanes were virtually modified Observation airplanes of biplane type. For some years it was realized that the internally braced metal monoplane, with fuselage of metal monocoque construction offered reduced drag and parasite resistance in comparison with the biplane types, but an objectionable wing "flutter" when dived at high velocity made it impossible for military use. A vast amount of work devoted to this problem led to the elimination of this difficulty and the development of the present attack type, soon to be released for service testing to Air Corps stations.

Fuselage, wing, and landing gear of this airplane quite successfully fulfill the modern demand for aerodynamic cleanness. This airplane is a low-wing monoplane of cantilever two-spar construction. The exceedingly thin wing is wire-braced, with dural spars and built up box sections. It is equipped with slots and flaps. The covering is fabricated from smooth suralumin sheet. Provision is made for the mounting of guns for attacking ground troops beneath the wing to either side of the fuselage.

The landing gear is of the split-axle type with oleo shock absorbing system. Cockpits are hooded for the protection of pilot and observer, and streamlined into the fuselage. Streamline fairings are also incorporated in the design features of landing gear and tail wheel.

The power plant of this airplane consists of a liquid-cooled Curtiss V-1570-C engine, known commercially as the "Conqueror." It is rated at 600 h.p. at 2400 r.p.m. A three-bladed metal propeller gives improved performance and justifies the increase in weight over the two-bladed type. Speed is the predominating performance characteristic, and tests have proved this airplane to be faster than any foreign types that could be used against it.

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ATTACKERS PARTICIPATE IN PARADE

Members of the 8th, 90th, 13th and 60th Squadrons of the Third Attack Group took part in the Mardi Gras parade at Galveston, Texas, on February 8th. Marines and sailors from the U.S.S. WYOMING also took part in this annual affair.

King Frivolous XV arrived by plane and rode in the parade in a Supercharged De Lux Model Monoplane whose Ford tractor engine permitted the high speed of 10 miles per hour.

Ambitious airplane designers and builders of the 60th Service Squadron were quite proud of their creation. This year's crate was an improvement over the one which was used last season, in that it did not fall apart before the parade came to an end. So sturdily was it constructed that it has been taken down and stored away for future use.

GRADUATION OF STUDENTS FROM ADVANCED FLYING SCHOOL

Ninety-eight students (4 officers, 93 Flying Cadets and one noncommissioned officer) graduated from the Advanced Flying School, Kelly Field, Texas, on February 26th. An aerial review was flown in the afternoon, in the presence of nearly 5,000 persons, and graduation exercises were held in the Post Theatre at 3:00 p.m. The graduates are listed below, as follows:

Observation

Major Wm. E. Kepner, A.C.
2nd Lieut. David H.Baker,CAC.
2nd Lieut. John P.Doyle,Jr.,Cav.
2nd Lieut. David R. Gibbs, Cav.
Staff Sergeant Jerome Brooks McCauley, (2nd Lieut. QMC Res.)

Flying Cadets

Observation

Burton W. Armstrong, Jr.
Joseph A. Barnes
Hiram Droiles
Carl Frank Bruce
Lewis John Connors
Timothy James Creedon
Benjamin H. Dally, Jr.
Thomas Smith Davis,Jr.
Harry Wagner Fanning
James Lowell Fletcher
Pearre DuB. Jacques
Henry C. Kristofferson
James A. Maxwell, Jr.
Jack D. Milstead
Erickson S. Nichols
Dudley H. Pierce, Jr.
William Pierce, Jr.
Reuben LeR.Spickelmier
Howard C. Stelling
Foster Craig Townsend
Mack Olin Travis, Jr.
William R. Walner, Jr.
Doyle Cassius Warren
Lawrence K. Welch
Maurice Wight Wiley

Attack

Loren Cornell
Herbert F. DeBuys
Eugene Fletcher, Jr.
Wayne C. Gardiner
Walter E. Lawrence
Archie J. Old, Jr.

Attack

Archie J. Old, Jr.
Peter J. Prossen
George B. Schoonmaker
Don Wesley Smith
Joseph C. Taylor
Randolph L. Wood

Bombardment

Walter McLain Bass
Robert B. Collins
Merrill E. DeLonge
Richard F. Fender
Joseph D. Hutchinson
James Matthews
Joseph A. McAnulty
Eugene H. Mitchell
Joel B. Moore
James H. Patrick,Jr.
Wilbur Odell Riley
James H. Rothrock,Jr.
Charles Deming Shaw
Calvin B. Simmons
Roger W. Smith
Frank J. Waddell
Russell L. Waldron
Fred Nathaniel Ward

Pursuit

Wyatt H. Alexander,Jr.
George Edward Batty
William Grover Benn
Eugene Brecht, Jr.
Earnest H. Briscoe
George E.M.Campbell

Pursuit

Kenneth Robert Case
Carl M. Christenson
George W. Conners,Jr.
Harry Lewis Dulin
Fred O. Easley, Jr.
Robert S. Fisher
Willard J. Foley,Jr.
Elbert B. Gentry
Fred'k L. Gunter
Albert F. Hastings
James C. Jensen
Harold L. Kreider
Robert J. McLean
Silas M. Miller
Thomas B. Mixon
Sterling R. Newman
John H. Patterson
Robert Jesse Potter
George Howard Prince
Charles W. Reineke
George I. Rhoades
Charles McC.Robertson
Joshua Wilson Rowe
Charles L. Sharp
Frank Dias Sinclair
Fred W. Smith
Ira David Snyder
James M. Treweek
Gilbert Von Tribbett
Terry Marvin Turner
Harry Warren Wells
Francis W.Williams
James R. Williams

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COLORING UP A STORY FOR PUBLIC CONSUMPTION

A story in a New York newspaper of recent date conveyed the information that Private P.P. Butcher, of the 61st Service Squadron, Mitchel Field, N.Y., narrowly escaped being dragged into the air by one leg from an airplane moving at 115 miles an hour; that about 700 feet of one-half inch steel cable trailing behind the plane, which was 500 feet up, snaked across the field, gashed Butcher's leg, missed six other privates and cut into a steel hangar door.

The remainder of this newspaper story is quoted, as follows:

"Lieutenant Jonathan Haynes and Corporal William Burtnette had taken aloft a Falcon army biplane to test a new type of towed target for ground gun crews to shoot at. The target is a sleeve of fabric with metal rings at each end, so attached to 1,000 feet of cable that when a renewal sleeve is run down the wire, the first one falls to the ground for examination.

Flying low across the field, Corporal Burtnette released a second target, but both sleeves fell off and about 700 feet of the cable trailed on the field,

when the wind tension against the targets was removed. As the cable swished along the ground, Butcher and six other privates scattered for cover and Burtnette began to reel in the wire as fast as he could. The cable cut into the hangar door, swirled about and a length of it wrapped around Butcher's right leg. He got free, however, almost at once and went to the post hospital with a deep cut, but otherwise unhurt.

Pilots at the field said that if the cable had held to Butcher's leg, the leg might have been torn off or Butcher dragged into the air or the plane been wrecked."

In commenting on this story, the News Letter Correspondent from Mitchel Field states that it gives a general idea of what happened. "Of course," he adds, "we have not as yet attempted using 1000 or 1500 feet reels of half inch cable for our tow target work.

The flight in question had for its object the service testing of the new B-11 tow targets. While flying over the field at an altitude of 500 feet with approximately 700 feet of cable out carrying the standard A-4 target, the B-11 was sent along the cable. It tripped the release on the A-4, allowing it to drop to the ground. Following this, the ring on the B-11 broke, allowing it to drop also. The tension being relieved from the cable, its trailing end fell to the ground near some enlisted men. All but Pvt. Butscher managed to get out of the way. The cable struck his leg barely breaking the skin. It then hit the door of the Engineering hangar. By this time the operator was reeling in his cable. No damage was done to the hangar door."

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SWIMMING PARTY FOR MULES

"Crissy Field has been taking to sea since the recent heavy rains," says the News Letter Correspondent, and he then goes on to say: "We lost tons of valuable field terrain when some of the old drain pipes caved in and started out to sea.

The local Doughboys have been doing a lot of mule wrangling of late. Curious as to whether a mule would sink or swim, if participating in a landing party, the soldiers have been trying them out by boosting said mules off the dock. In a recent excursion after local color, ye scribe journeyed to the Crissy Field dock and learned a lot. The foot soldiers from up on the hill have evidently been watching the Air Corps mechanics swinging props. In every instance the mule was reluctant to take part in the experiment, so one of the attending chaperones would grasp the old jug-head's tail firmly and swing it clockwise. If there was no evidence of starting, the said manipulator would then swing the tail vigorously counter-clockwise. By this time the victim was fed up with the whole performance and took the path of least resistance - a nose dive. There were instances where a little priming would doubtless have been extremely useful, but apparently no priming equipment had been developed.

After making his bored progress to shore, the next move of the mule was to explore Crissy Field for grass. There wasn't much grass - but, Oh, how he rambled! Mules are like a lot of people - they are always wanting to be where they ain't. After lingering longingly in the vain hope that a couple of mules would start an interesting diversion by going to sea, this amanuensis returned to the inner sanctum to ruminate on why is a mule anyway.

When those mules surfboard over the breakers at Waikiki, won't they miss the little waves on Crissy's coral strand! Hush-Hush! It's not at Waikiki - but that's the only beach we know in Hawaii."

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WORLD FLIGHT NAVIGATOR LECTURES ON AERIAL NAVIGATION

Mr. Harold Gatty, senior aerial navigation research engineer of the Air Corps, is at the present time conducting a course in aerial navigation at Bolling Field, D.C., and at the Offite of the Chief of the Air Corps. The course covers a period of 36 classroom hours and embraces all phases of pilotage, dead reckoning, celestial navigation and radio navigation.

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The First Balloon Company, Fort Sill, Okla., boasts a crack pistol team (4 or 5 men) and desires either telegraphic or radio matches with any Air Corps unit on any standard small bore ranges stipulated by the challenging team or teams.

PURSUITERS FERRY PLANES FROM SEATTLE TO SELFRIDGE

Seven pilots left Selfridge Field February 5th for Seattle, Wash., via rail, to secure and ferry to their home station P-12E Pursuit planes. The party was made up of Major George H. Brett, Commanding Officer of Selfridge Field, Lieuts. Culbertson, French, Garrison, Putt, Sillin and Wright. The flight was organized early on the trip out, and appropriate officers appointed to handle the routine ground work incident to the return trip by air.

The time on the train was passed in various activities of one sort or another, the most outstanding being the initiation of the junior officers into the well known Air Corps Organization of R.H.I.P., when it became necessary to elect one member of the flight to represent the group on a ride in one of the new type electric locomotives. The representative being duly elected and installed in the cab of the locomotive, the junior members of the flight repaired to the club car and formed a counter organization, the name of which may not be mentioned here, but membership in which was equally enjoyable. The remainder of the train trip was uneventful, and the flight arrived in Seattle at eight O'clock on the morning of the 8th.

At Seattle the pilots were met by the Air Corps representative stationed with the Boeing Company. After preliminary greetings, they were taken to the Washington Athletic Club for a quick shower and change of clothing. This accomplished, bags were hurriedly repacked, and pilots were rushed to throbbing cars below in which they were speedily whisked to the field.

At the field the pilots found acceptance papers prepared for signature, tool kits and equipment handily arranged for speedy check, and all ships on the line with engines warmed and idling in readiness for the take-off. After a short test hop, the flight was allowed a hurried tour of inspection of the Boeing Plant, followed by a luncheon with the Boeing executives. Upon return to the field, the ships were found fully serviced and everything in readiness for departure. Baggage was quickly packed, final weather reports and clearances were obtained, and the flight cleared the airport early in the afternoon. The whole thing was handled with the utmost Teutonic efficiency, and the time spent in Seattle was cut to a minimum.

After an uneventful flight, the pilots arrived at Vancouver, Wash., where the night was spent. The Commanding Officer, having flown the course several times before, rotated the lead so that each officer would have a chance to navigate over strange territory. The flight cleared Vancouver Barracks around nine the next morning and stopped for gas at Medford, Oregon. A slight difficulty arose here when the pilot who was leading at the time, after locating Medford, failed to locate the airport. The Flight Commander who, with usual diligence, was carefully checking the course, flew alongside to see what the leader would do. The leader, with the able assistance of his wing men, fimally spotted the field, and a safe landing was made by all. The pilots had lunch while the ships were being serviced, and the flight then cleared for San Francisco. After an hour or more flying over the Siskyiou Mountains and by the snow-capped peak of Shasta, the flight entered the fertile Sacramento Valley and landed at Crissy Field.

Quarters not being available at Crissy Field, the major portion of the flight decided to stay in San Francisco, where excellent accommodations were obtained at the Bellview Hotel at reasonable rates. Bad weather caused a two-day delay, which was thoroughly enjoyed. The next "hop" was made towards March Field, wherein the leader, lacking his Missouri Valley section lines and becoming slightly bewildered, wandered amiably between the Rocky Mountains and the Pacific Ocean. After a given period of time, and to the utter amazement of all, a permanent check point was spotted and Bakersfield ultimately located. Clouds were forming on the mountains south and east of Bakersfield and, after trying to fly through Tehachapi Pass, the flight commander returned the flight to Bakersfield for a landing. An hour was lost gassing and waiting for favorable weather reports. The flight from Bakersfield across the ridge down into the Mojave Desert and through Cajon Pass to March Field took less than two hours.

One night at March Field, where old acquaintances were renewed and new ones made, and the flight proceeded to Rockwell Field. Here the ships were thoroughly inspected and plans made to leave the following morning. That evening, off duty procedure was the same as at March Field. A short tour of inspection was arranged to the nearest foreign country by officers stationed at Rockwell, and all pilots were on the line the next morning with baggage packed and ships warmed. Weather was doubtful, but being a day behind time it was de-

cided to take off and try to get through to the next stop. After a 20-minute flight, it was apparent that there was no chance to cross the mountains, so a return to Rockwell was necessary. The usual wrestling with P-12E baggage compartments was once more in order, and pilots, by this time being fairly proficient at baggage smashing, soon were back at the previous evening's abode. Another tour of inspection was instigated to investigate the prosperity of lower California. The source of prosperity soon became apparent and it was decided to return to Coronado. February 14th dawned cloudy and rainy, and clearance was impossible. Shopping and Contract occupied most of the day. The following morning was clear and the flight proceeded to Tucson, Arizona.

The hop from Rockwell to Tucson was made without incident. It was necessary to climb above the clouds to cross the San Jacinto mountains and pass Chimney Peak. A nice bit of navigating featured this leg, as a good half hour of flying in a strong variable cross wind was done without check points. Servicing at Tucson took a little over an hour, and the flight was on its way to El Paso. Arriving at Fort Bliss, pilots were furnished transportation to El Paso, where rooms were arranged at the Hussman Hotel. All members of the flight were interested in an old fashioned Mexican dinner, so Juarez was visited, the meal eaten and several souvenirs purchased.

Left Fort Bliss the following morning and reached Midland, Texas, after the leader had negotiated every turn in a nearby pipe line. After servicing, the flight was on its way to Dallas, where an excellent fried chicken dinner was enjoyed at the home of one of the members of the flight. After a good night's sleep, all proceeded to Muskogee, Okla., where it was decided to make Kansas City the next stop, the weather to Scott being questionable. A night in Kansas City, and the flight started on the last leg of the trip to Selfridge. A good tail wind was encountered from Kansas City to Selfridge, and record time was made home, the only delay being a short stop at Chanute Field for gas, oil and lunch.

The whole trip proved very successful and all ships landed at Selfridge Field in good condition. It was the concensus of opinion among members of the flight that the new Boeing ship was thoroughly dependable. All junior members of the flight expressed their appreciation to the Commanding Officer for the valuable experience gained during the flight.

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CAPTAIN STEVENS RETURNS FROM MAPPING PROJECT

By the Wright Field Correspondent

A final practical test of the experimental model 5-lens camera has just been completed. Captain Albert W. Stevens, photographer, and Lieut. J.F. Phillips, pilot, returned to the Materiel Division from California on February 17th, having been engaged on a mapping project of the Sacramento and San Joaquin river valleys. The flying base was Crissy Field, San Francisco, with occasional flights from Mather Field when weather conditions at Crissy were unfavorable. The area covered was 1,000 square miles. This work was on an unusually large scale, and the photographs were obtained from low elevations, with great side and end overlap. Nine thousand negatives were made for the U.S. Coast and Geodetic Survey, which is preparing new large-scale maps of this region.

The camera used was a T-3A or 5-lens type developed by the Materiel Division, following the original 3-lens camera designed by Major J.W. Bagley. The negative material was a new aerial supersensitive panchromatic film on a special non-shrink base. With this film excellent photographs were obtained in winter weather, early mornings and late afternoons through ray filters which excluded all blue light. Haze and water vapor reflect much blue, and it is desirable to prevent light of this color from reaching the negative in order to obtain clear, snappy photographs.

Two missions, resulting in 1700 negatives a day, were flown on several occasions. All negatives were developed by the 15th Photographic Section at Crissy Field, several of the last missions also being flown by that section.

The printing of the negatives was done under the direction of Captain Bruce Hill at the Materiel Division Photographic Laboratory, and 11,482 prints were made and forwarded to the U.S. Coast and Geodetic Survey in Washington. This organization is reimbursing the Air Corps for the cost of the project, including materials and flying. The airplane used was the F-1A Army monoplane built especially for photographic work, with maximum ceiling of 23,000 feet.

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WAR DEPARTMENT ORDERS AFFECTING AIR CORPS OFFICERS

CHANGES OF STATION: To Wright Field, Ohio: Major Wm. E. Kepner from Advanced Flying School, Kelly Field.

To Fort Leavenworth, Kansas, for duty as Instructor: Major George E. Stratemeyer (upon completion course at this School), and Major Thomas J. Hanley, Randolph Field, Tex. (To Command and General Staff School).

To Kelly Field, Texas: 1st Lieut. Edgar T. Selzer, from Scott Field, Ill.;

To Army Industrial College, Washington, D.C. (1932-33 course): Major W.R. Weaver and 1st Lt. Julian B. Haddon, O.C.A.C., Washington; Majors Lawrence S. Churchill, Langley Field; R.M. Jones and 1st Lt. A.W. Martenstein, Wright Field, Ohio; Major S.W. FitzGerald, Army War College, Washington.

To Maxwell Field, Ala.: Capt. Sam L. Ellis from Philippines. To duty with Staff and Faculty, Tactical School, upon completion course at Command and Gen. Staff School, Ft. Leavenworth - Capts. Frederick I. Eglin, A.K. Ladd, J.I. Moore.

To Philippines: Majors G.E. Brower, Selfridge Field; Douglas B. Netherwood, Tactical School, Maxwell Field; 1st Lts. James W. Hammond, Langley Field, Va., and Walter E. Richards, Mather Field.

To Randolph Field, Texas: Major Henry W. Harms from Philippines; Captain Karl S. Axtater, 1st Lt. Randolph P. Williams, Wright Field, for training.

To Brooks Field, Texas: Major Benj. G. Weir, from C. & G.S. S., Fort Leavenworth; 1st Lt. Milton J. Smith from Middletown, Pa., Air Depot.

To Mitchel Field, N.Y.: Major Henry J.F. Miller, from C. & G.S. School.

To Langley Field, Va.: Captain Edward C. Black, from Philippines.

To Fort Crockett, Texas: Capt. Lloyd L. Harvey from C. & G.S.S. L'worth.

To Ft. Leavenworth, Kans., for duty with Air Corps Detachment: Major V.B. Dixon, upon completion instruction at Command and General Staff School.

To March Field, Calif.: 2nd Lt. D.W. Buckman, from Panama. Previous orders in his case revoked.

To Rockwell Field, Calif.: 1st Lt. Cecil E. Archer, O.C.A.C., Washington.

To Fort Bragg, N.C.: 2nd Lt. John C. Covington from Mitchel Field, N.Y.

RELIEVED FROM DETAIL TO AIR CORPS: 1st Lieut. Harold J. Conway, Ord. Dept., to Fort Crockett, Texas; 2nd Lieuts. Wm. D. Davis, James T. McClellan, Merson L. Skinner, Maynard N. Levenick, Richard K. Boyd and Harry G. Roller to Infantry, 2nd Div., Fort Sam Houston, Texas; Edwin A. Walker, Terrence R.J. Hickey, Irving W. Jackson, to Field Artillery, 2nd Div., same post; Cornelius Licherie and James C. Blanning to 1st Cavalry Div., Fort Clark, Texas; Marvin L. Thomas to 1st Engineers, Fort DuPont, Del.; Wm. R. Woodward to 22nd Inf., Ft. McPherson, Ga.

PROMOTIONS: To Colonel: Lt.-Col. Roy C. Kirtland, rank from Feb. 1, 1932; To Lieut.-Colonel: Major H.C. Kress Muhlenberg, rank Jan. 28, 1932; Majors John F. Curry and James E. Chaney, rank Feb. 1, 1932; To Major: Captains Harry H. Young and Donald Wilson, rank Feb. 1st; To Captain: 1st Lieuts. Donald G. Stitt, rank Jan. 22, 1932; Glenn C. Salisbury and Harold R. Wells, rank Feb. 5th and 8th, respectively; To 1st Lieut.: 2nd Lieuts. Morris R. Nelson, Feb. 1st, Kenneth P. McNaughton, Feb. 5th.

RETIREMENT: 1st Lieut. Richard H. Dean, Crissy Field, to proceed to his home.

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AERIAL PHOTOGRAPHY IN LOUISIANA

Personnel of the 5th Photo Section, Scott Field, Ill., will perform the first photographic mission for the U.S. Geological Survey to be assigned to that Field for the 1932 season. The project, designated as L-32, comprises 17 fifteen-minute quadrangles in Louisiana, and the total area which will be photographed will be about 5,000 square miles.

Second Lieut. Herman F. Woolard, commanding the 5th Photo Section, pilot on the mission, with Master Sgt. Wilbur F. Rhodes as photographer and Corp. Paul Langlands as mechanic, left Scott Field in an F-1A cabin plane to make its first base at New Orleans. A T2-A four-lens camera will be used for the vertical shots and a K3-B, with an 8¼-inch focal length, will be used in making oblique photographs to assist the team in their work. All vertical photographs will be delivered with a scale of one over twenty thousand.

Due to the danger of flood conditions near New Orleans, the Geological Survey Department requested that photographs of the eight quadrangles near that city be taken first. These eight quadrangles are located in a block four long and two wide with New Orleans in the Northwest corner and contain about 2080 square miles. Lt. Woolard figures to complete this section of the project with five good photographic days.

Five more quadrangles to be covered are along the Gulf coast in Vermilion and Cameron Parishes. If it is possible to change the base of operations to Lake Charles, this work will be considerably expedited, as otherwise the plane will have to make flights averaging about 150 miles going to and from the area. It is expected to complete this area with three full flying days.

With the completion of this tract of about 1300 square miles, the base will

be shifted to Shreveport. Two quadrangles situated just northwest of Alexandria will require two photographic days for completion and then the final two quadrangles just northeast of Shreveport will receive attention.

Exposed rolls of film, containing about 175 exposures each, will be shipped to Scott Field immediately, and the production of the prints will be rushed day and night in order to deliver them at the earliest moment. With the use of the four-lens camera and any sort of a break in weather, Lieut. Woolard hopes to complete another mission at low cost per square mile even though it will be necessary to land and reload the camera after photographing about 1½ quadrangles.

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PRAISE FOR CHANUTE FIELD METEOROLOGICAL STATION

The Chief Signal Officer of the Army, Major-General Irving J. Carr, in a letter, dated Jan. 20, 1932, to the Signal Officer of the Sixth Corps Area, gives high praise to Chanute Field, Rantoul, Ill., for the excellence attained by the meteorological personnel at that station. The letter goes on to say:

"1. A careful examination of the meteorological reports sent regularly to the Office of the Chief Signal Officer from the thirty-four meteorological stations operated by the Signal Corps during the year 1932 has been made. These reports have been checked for accuracy, neatness and adherence to instructions in their preparation.

2. This check brings out the fact that of all reports received from meteorological stations, those received from the meteorological station at Chanute Field are consistently the most complete, accurate and satisfactory. These reports show that much care has been exercises at Chanute Field throughout the year to make the meteorological work of the Army accurate and dependable.

3. Technical Sergeant Frederick A. Matchinski, Private First Class John H. Butler, Private First Class Melvin R. Loring and Private Ralph W. Anderson are commended for close attention to duty and for the care exercised in the preparation of these reports and performance of meteorological work."

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OLD BOMBS PROVE ANYTHING BUT DUDS

Under the caption "Do Old Bombs Explode," an item in the News Letter of January 25th last, submitted by the Correspondent of the 18th Composite Wing, Hawaiian Department, stated that in an Ordnance demonstration test recently conducted at the Maili Range in the Waianae Mountains to determine whether bombs held in storage ten years would explode, a total of twelve bombs of various sizes were dropped, including two 2,000-pound bombs; that all bombs exploded except the first 2,000-pound bomb, which was a dud, and that the second bomb of this weight, dropped from 6,000 feet, resulted in a low order of explosion. The item concluded with the statement that the cause of the malfunctioning of these bombs had not been determined by the Ordnance experts.

A letter recently received by Capt. S.R.Stribling, Ordnance Dept., from an Ordnance officer at Honolulu, T.H., furnishes adequare proof through an enclosed photograph that the bombs were anything but "duds." This letter goes on to say:

"When we went out to dig for it we found a crater, 45 feet across, which was just about the size of the second bomb's crater. I could hardly believe my eyes. The terrific force of the detonation was evidenced by huge boulders up to three feet in diameter, located 75 feet from the crater center, being moved out of their "sockets" several inches, some being rolled on down the hill. A small grass fire had started in some grass which fell on one side of the crater. Boulders four feet in diameter had been blown out intact or split in two. Not a sign of any explosive around."

It appears that observers at the bombing demonstration reached the conclusion that the two big bombs failed to "do their stuff" because of no appreciable uprising of a shower of loosened earth and rocks following their explosion. This is explained in the above mentioned letter, as follows:

"In later tests with 155 mm. Howitzer shell, we have encountered several of these noiseless "duds," which turned out later to be high orders, so far below the ground as to be entirely quiet. I found in this later work four actual mounds instead of craters, and on digging in the mounds we found a great many fragments from high order detonators. "Duds" in this soft damp earth just cut a hole thru and lie at the bottom. Low orders out here make small craters, leave big fragments around and scatter junks of explosive on the ground and thru the dirt in the crater."

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A 12-ship formation from the 95th Pursuit Sqdn., flew from March Field to Phoenix, Ariz., by way of Tucson recently, and returned the following day. First Lieut. Leo H. Dawson, Squadron Commander, led the formation. Relatives of the late Lieut. Frank Luke were at the Phoenix Airport to meet Lieut. Dawson, who was the overseas flight leader of the famous "Arizona Balloon Buster." The pilots were overnight guests of Dr. A.J. Chandler, at Chandler, Arizona. Members of the formation were Lieuts. J.C. Crosthwaite, Alfred R. Maxwell, David D. Graves, Edward W. Anderson, Floyd H. Davidson, Aubrey S. Hurren, Joseph A. Brier, Arthur E. Livingston, Tim Roberson, John O. Zahn and Henry G. Reynolds.

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MIDDLETOWN AIR DEPOT INAUGURATES AIR TRANSPORT SYSTEM

Shortly after the first of the year, the Middletown, Pa. Air Depot inaugurated a "Delivery by Air Service," to serve the three major stations in the Middletown area, viz: Langley, Bolling and Mitchel Fields, with the purposes in view of facilitating the delivery of supplies such as can be handled in a transport plane; creating savings in transportation funds and in time of deliveries; eliminating labor involved in packing and crating of supplies and the materials needed therefor; training personnel in the handling of supplies by transport; increasing the efficiency of pilots in flying fully loaded transports and affording them more cross-country experience and, in general, promoting greater efficiency in the operation of Depot and Station Supply organizations.

A YlC-14 is used as the transport plane. The dispatching of the transport and the assignment of pilots is under the direction of the Operations Officer. The Depot Supply Officer regulates the quantity and nature of the articles transported and loads and unloads the transport at the Depot.

Each station has detailed a crew to load and unload the transport. They have already become familiar with the proper methods in handling supplies and engines. While 1200 pounds is the maximum load to be carried on a trip, 1400 pounds may be carried if conditions warrant. In cases where no return load is available at the station a cargo of supplies is carried, a repairable engine is taken aboard. Station Supply Officers have been instructed so to arrange their shipments as to always have a load of supplies or a repairable engine available for the return trip of the transport.

All the stations are very enthusiastic over the success of this transport service and desire its continuance and enlargement. Parcel post and express shipments to the three stations served have been practically ended. An assured weekly delivery almost entirely eliminated emergency requisitions and should obviate the necessity of voluminous quarterly requisitions.

Figures compiled covering the operation of the Middletown Air Transport Service during the period January 8th to 29th, show that in a total of ten trips, 276 items, weighing 11,881 pounds, were delivered to the three Air Corps fields named above, involving an estimated saving of $640.89, of which $207.00 covered saving in labor for packing, $300.00 for packing materials and $123.89 which it would have cost to send these supplies by rail. Of these shipments, Langley Field received 64 items, aggregating 4,714 pounds; Bolling Field 143 items, aggregating 3,415 pounds, and Mitchel Field 69 items, aggregating 3,752 pounds.

Incoming shipments by air to the Depot from these fields, during the period January 11th to February 1st, totalled 188 items, aggregating 9,593 pounds. The estimated saving, covering labor for packing, packing materials and freight and express charges amounted to $460.57. Thus, the first month's operation of this air transport system saved an estimated outlay in funds of $1,101.46.

Out of ten scheduled trips during January, four were postponed, three because of weather and one because of an engine change in the YlC-14. All but one trip was completed the same day, the exception being a trip to Mitchel Field which was delayed because of severe gales and rain at Mitchel Field.

Five engines were transported. Articles of practically every classification were included in the shipments, including steel stock, barreled goods, baled clothing and rags, and lumber.

During February, in a total of 15 round trips, 576 items, totalling 18,122 pounds, were delivered, and 77 items, weighing 10,374 pounds, received. Bolling Field received 6,321 pounds and sent 4,320 pounds; Mitchel Field received 5,115 and sent 4,451 pounds, and Langley Field received 5,151 and sent 4,199 pounds. The total estimated savings on labor for packing, packing materials and charges estimated for rail transportation on both outgoing and incoming shipments was $1,543.25. Aside from the trips to Bolling, Mitchel and Langley Fields, three extra ones were made, one to Burgess Field with an engine replacement for a ship down, one to Waynesboro, Va., with an engine for a ship down, and the third to Burgess Field to return the removed engine and crew. Fourteen engines of all types were delivered to the Depot by air for overhaul.

Major J.H. Houghton, Commanding Officer of the Middletown Air Depot, commenting on the operation of the air transport system, states it is entirely practicable for a depot to serve its area by air, providing the proper type

transports are available. He prefers a bigger load-carrying airplane, such as a B-2 or a B-3 Bomber to the Y1C Transport, because the latter's carrying capacity is limited and, further, because considerable damage is constantly being done to the interior of the cabin, chiefly in the handling of engines.

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NEW FLYING FIELD AT FORT SHAFTER

Considerable headway has been made in connection with the establishment of the new flying field at Fort Shafter, Honolulu, T.H. Under the direction of Air Corps personnel, a portion of the golf course is being leveled for use by the airplanes. Certain high spots are being graded down and some of the low places filled.

The plan is to make the field suitable for the landing of ambulance planes from distant points with patients for Tripler General Hospital and for courier planes carrying messages to Department Headquarters. Coincident with the announcement of this plan, stretchers for use in Bombing planes have been developed. The stretchers, which are of the light wire mesh type, can be attached to hooks in the bomb bay of a plane in about two minutes, tests have revealed. These will insure a convenient method of caring for any person being rushed to the hospital after an injury. Since the new airplane stretchers have been well devised, all Bombing planes have become ambulance planes as well. Landing of patients will be possible for any post on the Island within two hours, should an injury occur. The landing field lies just north of the Department Headquarters building and will be only 200 or 300 yards from the hospital.

It has long been planned to develop a field near Department Headquarters which would make it possible to supplement other forms of communication with the airplane. The field is due to be tested very shortly.

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AIR CORPS OFFICERS ASSIGNED TO FORT LEAVENWORTH

The following-named Air Corps officers have been designated by the War Department as students at the Command and General Staff School for the 1932-1934 course, and are under orders to proceed to Fort Leavenworth, Kansas, and report to the Commandant of that school not later than August 29, 1932, for duty accordingly:

Majors Harvey S. Burwell, Oliver P. Echols, Delos C. Emmons, Captains Elmer E. Adler and Lawrence P. Hickey, students at the Air Corps Tactical School, Maxwell Field, Ala.; Major Willis H. Hale, Office of the Chief of the Air Corps, Washington; Captains Christopher W. Ford, Kelly Field, Texas; Lester T. Miller, Langley Field, Va.; St. Clair Street, Wright Field, Dayton, Ohio.

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SEVENTH BOMBARDMENT GROUP TO HAVE INSIGNIA

After some months of reviewing histories, alteration and revision of designs, a suitable insignia has been worked out and forwarded for approval at Washington. The predominating colors of the insignia are blue and gold. The most impressive feature to the casual observer is the crest which is adorned by a winged skull and a bony arm and hand holding an upraised aerial bomb. Directly underneath the crest is a scroll bearing the Latin phrase "Mors Ab Alto," which, literally translated, means "Death From Above." The shield is divided into four sections, representing the 70th Service Squadron and the 9th, 11th and 31st Bombardment Squadrons. The sections representing the Bombardment Squadrons are properly charged with their respective war honors. The four maltese crosses in the 11th's section represent the four major engagements officially credited to the 11th. Three maltese crosses represent the 9th Squadron's official battle credits, and a Fleur De Lis represents the 31st Squadron's service in France as base school squadron at Issoudon.

The design is a combination taken from those submitted by 2nd Lieut. E.F. Kiessig, formerly of the 95th Pursuit Squadron; 2nd Lieut. Harold W. Bowman of the 11th Squadron, and Private Joseph M. Koleson, also of the 11th Squadron. The original was worked out and painted by Corporal Fritz Seaburg, of the 11th Squadron.

ENGINEERING NEWS

Development of direct military interest for the past month, as reported in the periodicals of the world, are meager.

New High-Power Searchlight:

One development, however, that seems to have excited the interest of editors in general is the new Savage searchlight in Great Britain. This light is unique both in power and arrangement. It is rated at three billion candlepower which is quite large for a single unit and, in addition, is capable of throwing a cross-sectioned beam. The value of this light used in conjunction with modern sound detecting equipment which, it is said, can locate raiding aircraft within a seven-degree cone is readily apparent, since the cross-sectioned beam is in the shape of a quadrilateral pyramid with an apex of twenty degrees. The dead light may therefore be trained on the aircraft with a positive degree of accuracy. After the searchlight is turned on, the aircraft can be made to pass through three or more of the cross-lines, from which its speed, altitude and direction may be determined. After these data have been recorded the whole beam can be concentrated instantly and used in the ordinary way for gunnery purposes. If the aircraft spins or dives out of the concentrated beam, the light can be immediately reconverted to the cross-sectioned beam and the aircraft located as it crosses one or more of the lines. The searchlight unit is entirely self-contained on a Tilling-Stevens petrol-electric chassis. The controls of the light are electric and remote. The light originates from an automatic arc in front of a parabolic mirror which projects the rays onto an image plate made of a large number of optical flats. The image extrudes the light at an angle of ninety degrees. By a rather ingenious mechanism the individual strips on which the flats are mounted are capable of being rotated through 180 degrees; in this way it is possible to change instantly from one cross section of beam to another. The whole barrel of the light may be rotated about its major axis and about a vertical line perpendicular to this major axis making the mounting nearly universal. The power required to maneuver the light about these axes is less than one h.p. Complete constructional details are, unfortunately, difficult to obtain.

New Navy Plane:

Another startling departure from ordinary engineering practice was the delivery to the Navy of a Berliner-Joyce XOJ-1 more than a hundred pounds under contract weight and fourteen miles per hour faster than contract speed.

Japanese Pursuit Plane:

On the matter of speed, it is reported with no official backing, that the Japanese have an all-metal monoplane fighter capable of 250 m.p.h. It is said to be powered with a 600 hp water-cooled engine. The consensus of opinion is that this performance estimate is optimistic.

Hermann Kohl Flying Wing:

A great deal of interest seems to be centering around the so-called flying wing and the Hermann Kohl design is the subject of most of it. Extremely low power requirements are claimed. The design is said to attain a top speed of 98 mph with a Bristol Cherub engine of 30 hp; the gross weight reported with this speed is about 1100 pounds. Observers of the test flight were said to be surprised at the maneuverability of the craft, probably because previous designs have been markedly lacking in that characteristic. In any event, a speed of such magnitude with a power loading of more than 36 lb/hp is worth more than passing notice.

Fuel Injection Systems:

Some attention has been given in the United States to fuel injection in spark ignition engines for aircraft. The Pratt & Whitney Co. have such an engine on service test on one of the western division airplanes where it is said that it is giving satisfactory performance. The advantage of such a fuel system over the conventional carburetor system from the standpoint of cold weather operation and distribution of fuel to the cylinders are apparent and it should be possible to effect a considerable saving in specific fuel consumption. It is possible that the power output per cubic inch of displacement can be increased with such a fuel system by means of valve overlap and pressure differential scavenging. In any event, the development indicates a distinct step forward in airplane power plant design.

Noise Reduction:

Noise reduction has claimed increasing attention both from the standpoint of comfort to passengers on transport lines and from the standpoint of concealing aircraft in flight from the enemy. Some interesting mufflers have been introduced on the Eastern Air Transport lines that are said to reduce the exhaust noise some seventy percent and induce a back pressure of only twelve inches of water. In addition, Mr. Maxim, of firearm silencer fame, has been quoted as having designs going through the patent office that will aid materially in the reduction of noises due to the propeller flutter.

Strength Requirements for Aircraft:

Numerous personages in the aircraft structures world have felt it their duty to say that something should be done about strength requirements now that

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performances have been so materially increased and a few have written papers on the subject. The actual change in requirements will undoubtedly take place - sometime.

Stainless Steel:

All-metal structures are claiming increasing attention since the introduction of spot-welded stainless steel. Even Russia has an aircraft built entirely of this material. The data on the very thin sections used in this type of construction are very meager and will probably retard development, that is to say, sound development.

Mono-Spar Construction:

Mono-spar construction has been the aim of most airplane designers for a long period because of the possibility of weight reduction. The British have built and flown such a wing on a Fokker airplane and the weight per square foot approaches biplane construction weight, being 1.25 pounds per square foot. It may be that after charging off all the disadvantages of the biplane structure as weight the two structures may be comparable and may even give the monoplane mono-spar a slight edge.

Stearman Beta at Wright Field: Mr. E.T. Allen, of the Stearman Airplane Co., landed at Wright Field recently from Wichita, flying a new Stearman Beta which, he said, had averaged better than 200 m.p.h. for the flight with the aid of a stiff tail wind. The Beta is a modification of the Northrup Alpha, being a low wing, all-metal monoplane, with tapered stress-skin wing. The landing gear is of the full cantilever type, all shock loads being taken by an oleo strut in the wing. Wheels are streamlined into a trouser fairing. The power plant is a Wasp Junior engine, developing 300 h.p. Top speed is 204 m.p.h. at the ground. This little single-seater remained for a day for the inspection of Air Corps Engineers with a view to its possible usefulness for military work. It was later flown to New York for delivery to a private owner.

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FATAL ACCIDENT AT SELFRIDGE FIELD

The personnel of Selfridge Field is saddened by the loss of one of their members, Lt. Lee C. Weber, Air Reserve, who was instantly killed in an aircraft accident near the Field on Feb. 10th. On that date Lieut. Weber was a member of a 3-plane flight bringing three new Curtiss P-6E planes from Buffalo, N.Y.

Taking off, with good weather reports along the route, the formation experienced good flying conditions until within five miles of Selfridge Field, where they encountered a wall of fog which had suddenly settled over the field. The leader immediately turned about to search for a suitable field in which to land. On one of the turns Lt. Weber left the formation and disappeared. The other two planes landed in a farmer's field near New Baltimore, Mich. A few moments later, Lt. Weber, after flying in the vicinity of Selfridge Field, crashed near the South River Road, about ½ mile southwest of the Field. His parachute was open and it was evident from the relative positions of the plane and body that he attempted to use his parachute at too low an altitude for it to function. No reason can be given for Lt. Weber's entering the foggy area after leaving the formation.

A simple but effective tribute was paid Lieut. Weber by the garrison of Selfridge Field at a ceremony held the afternoon of Feb.12th. The entire command was paraded in a hollow square as Rev. Schellhase, Chaplain, Reserve Corps, conducted the ceremony and the 36th Squadron, of which Lieut. Weber was a member, flew a funeral formation overhead. The entire personnel of the field attended the ceremony, after which the body was shipped to Davenport, Iowa, where funeral services were held by the members of his immediate family.

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BOMBARDMENT PILOTS PURSUE TRAINING PROGRAM

The 2nd Bombardment Group, Langley Field, Va., rather doggedly carried out the rigid training program drawn up at the beginning of the training season. Generally fair weather aided the progress, especially in night flying. Many interesting flights were performed the past month with only a minimum number of accidents. Considerable flying was performed over long stretches of open water, namely, Chesapeake Bay and certain areas of the deep blue sea, with the attendant risks of such ventures relegated to the background of the Flyers' minds. Rapid development of aircraft and engines to a point where mere speculation upon performance has ended has done much to promote confidence and heighten the morale of the pilots.

In a recent night bombing raid over Washington, 27 planes made the flight to the Capital, following the commercial route and using the light beacons. Two planes were forced down with, fortunately, no casualties or damage to the planes. Low oil pressure and an overheated engine forced Lt. J.F. Biggerstaff down at Urbanna, Va., while Lt. W.C. Jamison, who got on the Richmond-Washington beacons by mistake in an area of low visibility, landed at West Point, Va. A 50-mile gale made it difficult for the pilots to keep on the course, even though they could see the beacons. Night flights are regularly made by the Group between Richmond and Langley Field and points in between. Everyone gets a turn at following the Radio Beacon from Langley to Richmond and return. It is interesting to note that on all training maneuvers the Group is controlled in the air by radio command.

NOTES FROM AIR CORPS FIELDS

Scott Field, Belleville, Ill., Feb. 10th.

Fifteen pilots, led by Capt. R.C.W. Blessley, ferrying new P-12's from Seattle to Selfridge Field, made an overnight stop here. Arriving Feb. 9th from Dallas, they made at early getaway the next morning. In these days of non-cross-country flying, the arrival of this large number of visiting planes at the "Crossroads of the United States," created considerable stir.

The one-year active duty tour of 2d Lt. Kennedy Dodds, Air Reserve, with the 15th Obs. Sqdn., was extended 4 months to June 30th. He and Mrs. Dodds recently visited relatives in San Antonio while on leave.

Capt. Wolcott P.Hayes, C.O., 15th Obs. Sqdn., spent ten days' leave visiting relatives in Washington, D.C., being accompanied by Mrs. Hays and daughter.

Scott Field basketball team opened its season Feb. 6th by defeating the Methodist Church team of Belleville, 32 to 29. Thirteen players were used in the Scott Field lineup to get a good line on the various candidates.

Pvt. George W. Hancock,age 36,a member of the 24th Airship Service Co.,was instantly killed on the night of Jan.17th by a freight train near Scott Field. He was evidently returning along the railroad tracks from Mascoutah when overtaken by the train. A soldier discovered his mangled body and immediately notified the guard house. Major Lyle C. White, M.C., was sent to the scene. Pvt. Hancock completed over 7 years of service, most of which was at Jefferson Bks. He reenlisted for Scott Field last November, and was company clerk for his organization. His mother, Mrs. Irene Hancock, lives at Henderson, Ky.

Lawson Field, Ft. Benning, Ga., February 8th.

"Flight "B", 16th Obs.Sqdn., flew training missions as follows in December and January: Aerial Camera Gunnery, Flexible Gunnery, Low Altitude Bombing, Radio (plane-ground), navigation and reconnaissance, cross-country.

The following missions were flown in cooperation with the Infantry School and the 83d Field Art'y: 12/1 - Communications, Lts. Barnett and Skow; 12/15 - Attack Mission, Lts. Brownfield and Holland; 12/16 - Infantry Liaison, Lieuts. Barnett,Skow,Brownfield,Holland; 12/18 - Tow Target, Lt. Holland; 1/20-Infantry Liaison, Lts. Brownfield and Skow; 1/27 - Artillery Adjustment, Lts. Holland and Skow, also on 1/28; 1/30 - Formation-Review,Lts.Barnett,Skow,Brownfield,Holland.

Following Air Corps officers arrived by air on various missions,inspection trips,cross-country flights,etc.: Majors Curry, Candee, Capts. Blackburn, Paul, Robinson, Hoag, Walton, McMullen, Brock; Lieuts. Barker, McKinnon, Watson, Rich, Corkille, McPike, Yeager, Hillery, Caldwell, Saunders and Persons.

Third Attack Group, Ft. Crockett, Texas, Feb. 17th.

The 13th and 60th Squadrons will meet soon in the deciding contest of the Inter-Squadron Basketball League. This game was postponed several times due to other activities. The 13th held the League Cup for the past two years and received little competition. This season the 60th is making them work hard. The 13th dropped their first game to the 60th at a time when they were weakened by injuries. In the second match the Ghost men had a full squad and triumphed. Both teams are recognized as among the top-notchers of the city. The 13th is representing the Post in the County League and having fair success.

On the evening of Feb.16th, the enlisted personnel of the 3rd Attack Group honored the petty officers and men of the visiting German naval vessel, the Cruiser "Karlsruhe," at a dance at the Post Gym. The affair was a huge success from start to finish and the German lads seemed to enjoy every bit of it.

Col. Guy Kent, I.G. Dept., recently inspected the Post and the Group. An aerial review was flown for him and he appeared pleased with the smooth manner in which the squadrons took off and landed.

Chanute Field, Rantoul, Ill., Feb. 9th.

The Chanute Field Flyers, Post Basketball team, divided in two games over the week end of Feb. 6-6th, defeating the independent team from Farmer City at the Post Gym, 28-13 and losing to Camargo at Camargo, 32-31. Chanute's stalling defense worked to perfection against Farmer City, that team making only four field goals. In a preliminary game, Chanute B team won from the Farmer City B team, 15-14.

At Camargo, members of the Chanute team report they had to play in a gymnasium so short that the foul circles overlapped the center circle. The ceiling was high and shots for the basket could be attempted and made from any part of the court. In one corner of the playing floor was a large stove and, playing under these conditions, the first team of Chanute Field deserted the floor before the game was over and the second team finished the contest.

The Chanute Field Fencing Class is well under way, under the coaching of Lieut. Carl R. Storrie and supervision of Mr. H.W. Craig, Fencing Coash of the University of Illinois, who had for the last two years put out one of the three outstanding Fencing teams of the United States. The class at present consists of the following officers:

Lieuts. F.H. Moehlmann, Chaplain; James K. DeArmond; 2nd Lieuts. Donald J. Keirn, Roy H. Lynn, Lawrence H. Douthit, Lawrence C. Westley and Samuel O. Redetzke, Air Corps.

The following named enlisted men are out for the team: G.E. Badger, L. Bergere, E.H.Callan, C.J. Clark, Z.M. Clements, J.P. Craig, N.D. Cunningham, E. Evans, J.A. Farrell, R.J. Foster, A.E. Haney, J.B. Henderson, G.A. Henry, F.L. Kern, P.W. Killian, J.P. Levine, W. Montgomery, E. McLaughlin, C.C.Perry, Jr., M. Reis, M. Summers.

At a meeting of the Rantoul Post 287, American Legion, Feb. 9th, Lieut. F. Herbert Moehlmann, of Chanute Field, was the speaker of the evening, addressing the Legionnaires and their guests on the subject of "The Fallacy of Pacificism". Chaplain Moehlmann, who entered the military service a little over a year ago, is recognized as one of the most able speakers in this part of Illinois, and spares no effort in spreading the gospel to the effect that the Lord favors a well equipped Air Corps.

Recent cross country flights of Chanute Field pilots include: To Scott Field and return: Capt. S.C. Skemp, and Lieuts. Harold Rivers and F.A. Bacher,Jr. To Patterson and Wright Fields and return: Lieuts. Walter Burgess, N.R. Laughinghouse, L.D. Fator, R.C. Wriston, M.N.Stewart and H.W. Anderson.

Visiting officers at Chanute Field, recently, include: Maj. J.H. Houghton, Middletown Air Depot; Lieuts. A.R. Williamson and C.A. Ross of Wright Field and Lieut. C.S. Irvine, of Patterson Field.

Mitchel Field, L.I., New York, Feb. 12th:

Our doughty champions of pillbox tennis are looking for more fields to conquer. The racketeers of the squash courts proceeded to Armonk, N.Y., Jan. 21st for a match at the Greenwich,Conn., Country Club. Lieuts. Laubach, Dwyer, Travis, Anderson and Gerhart represented Mitchel Field and were ably assisted by Lieut. Pynchon of the Reserves who filled in as the sixth member. Our team won five of its six matches. They are now looking for new fields to conquer and would like to arrange matches with other Air Corps Posts. They were royally entertained by their hosts at a big luncheon and are looking forward to the time when they can arrange a return match.

The basketball team, while it has not done quite as well as we had hoped, is certainly upholding the Mitchel Field traditions in the face of stiff opposition. The outstanding stars of the team are Pvts. F. Spore, 29th Engrs., N. Snow, 5th Squadron, and G. Tindle, 99th Squadron. The fact that our team won six of its stiff schedule of nine matches speaks very well for the players' spirit. They won from Forts Hamilton, Wadsworth, Navy Hospital, Marine Barracks, and twice from the Royal Five, champions of Long Island. They lost one game to Forts Totten and Jay, and a return game with Fort Hamilton.

It is always interesting suddenly to learn that we have a celebrity who is so modest that his remarkable deeds have been kept secret from his associates until a cub reporter broadcasts the news to the world. An article in a local paper stated that, "Capt. Taylor, en route to Lake Placid, N.Y., kept in touch with our operator at Mitchel Field for the astounding distance of 261 miles", or exactly eleven miles farther than the record established in 1888 by Oscar McGillicuddy. The report raised a fund of praise for the Captain until someone happened to notice that the particular ship in which he made the trip was not and never had been equipped with a radio.

Lieut. Hez. McClellan recently departed with a Keystone Bomber for March Field. Several people tried to get the detail but it seems Hez is our most experienced Bomber pilot. He will pick up a new Douglas and ferry it back to us. It should be a rather nice trip, especially at this time of the year with the weather what it is on Long Island.

Lieuts. Harmon and Mathewson just returned from a round trip to Chanute in the Fokker, ferrying enlisted men out to the school and bringing some back.

Among the Social activities the Old Guard Ball at the Commodore Hotel, New York City, the latter part of January was a very colorful event and Mitchel Field was extremely well represented. The dances in the past few months have been unusually well managed by the Club secretary, Lieut. L.W. Johnson and it is with regret that we see him leaving us for his new station in the Philippines. Lieut. S.E. Anderson is taking over his duties and we are looking for Sammy to put on some good affairs.

Langley Field, Hampton, Va., March 1st.

The old order changeth, and those heavy, cumbersome winter flying suits were relegated to the ash heap, figuratively speaking. The new suits were pronounced a big improvement, being much lighter and more flexible than the old type. It is suggested, however, that complete and detailed instructions be furnished with each suit, as it takes considerable ingenuity and maneuvering to wriggle into this patented gallus-and-zipper arrangement. Extreme concentration and care must be exercised, or one finds oneself in the general shape of a pretzel, as one unhappy pilot did upon trying on the new type for the first time.

Ten bombers of the 96th Bomb. Sqdn. went to Maxwell Field, Ala., early in February and took part in the Tactical School Maneuvers. Bad weather at Maxwell delayed the flight several days on their maneuvers, but during the few good days the planes worked with the Tactical School, the students were shown just how Bombardment aviation fits in with other phases of aviation. The Langley pilots enjoyed their visit as they rejoined old friends of the School. The Tactical School left Langley only about six months ago and the personnel has not as yet had time to change much. Maxwell Field seems like a part of Langley Field on detached service.

Organization commanders are looking anxiously toward the new barracks which they hope to enter with their "outfits" within a few weeks. The Group units patched up, painted over and tried to make the old buildings, especially the kitchens, hold together until real buildings were put up. Now that realization of new barracks seems at hand, the organization commanders are getting restless to enter them.

Speculation is rife among pilots of the 2nd Bombardment Group on prospects of maneuvers on the west coast this year. Rumors, both pro and con, fly thick and fast. Pilots and mechanics of the Group are all primed for the flight, for this is a choice morsel in the line of flights, especially after the planes reach California. It may be the famous California climate, or the California brand of hospitality, but those who made flights to the west coast are so enthusiastic that everyone wants to go.

During February, three of Langley's young Reserve officers reverted to inactive status. They had been with us for a year or more, and it is regretted they could not have continued on the active list. They are 2nd Lieuts. Hamish McLelland, Ellis D. Shannon and Stanley G. Winch.

Active duty tours of 2nd Lieuts. Hugh C. Worthington, Sterling S. Tatum, William J.B. Murphy and Harvey W. Regan, Reserve, which terminated Feb. 28th, were extended to June 30, 1932. It is hoped by that time some legislation will have been enacted to continue them on the active list.

1st Lieut. George C. McDonald, Adjutant of the Group, departed for duty in the Office of the Chief of the Air Corps. He leaves a host of friends. Fortunately, his new station is at a neighboring city, and we shall still hope to see a lot of the McDonalds.

Lieut. Mark R. Woodward reported for duty from the Aberdeen Proving Ground, Md. He is again back with his old organization, the 49th Bomb. Sqdn.

We are happy to announce that our Commanding Officer and friend was just promoted. The promotion of Colonel Kirtland is one over which officers and enlisted men are enthusiastic in their congratulations.

19th Airship Company: The TC made a cross-country flight to Washington, D.C., on February 16th. Part of the mission was a landing on the Washington Monument grounds. In so doing, a downward bump of air caused it to squash into a tree. The lower two-thirds of the rudder was washed out but, after closing the opening and smoothing up the job, the ship took off and returned home under her own power. Staff Sgt. Quinn and Sgt. Taylor made the repairs to the ship, while Lieut. Gillespie and Master Sgt. Short were pilots.

The Basketball team wound up its schedule, finished in first place with a percentage of .917, having won eleven games and lost one. Evidently the team wins the Post Cup, as their closest rival has a percentage of less than .800.

The Bowling team still seems to be running the wrong way around the track.

Work is progressing on the rebuilding of the outside machine shop and the new hangar heating plant. Under the new plan the radiators in the hangar shops will be placed along the wall instead of in the ceiling. This is going to fill a positive need for heat in these shops.

Volley Ball is a popular game, a coirt having been laid out inside the rear end of the hangar and another one on the concrete apron in front. The Rigging Department produced an extra net, and games are in progress during all daylight off duty hours.

The new barracks for the Company are fast nearing completion. Duty details cleared the front of the building, levelled the area and spread top soil preparatory to planting grass. While hangars, heating plants, and shops are in process of construction on the Heavier-than-Air side of the field, a contractor is working on a new heating plant for the Airship hangar.

Lieut. W.J. Paul was made the recipient of a decidedly useful gift by the officers of the Company and the enlisted hangar department heads. For some months past he complained of side glare and oblique light reflection in the car of the TC-11. Since this is an experimental car, it was not considered advisable to alter the windows to correct the condition complained of. After consulting the Flight Surgeon, the above mentioned parties went into a huddle and

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decided to remedy matters. Not long ago, after a brief but touching summary by Capt. Miller, Lieut. Paul was presented with a pair of fine, service weight, brass trimmed Hoss-Blinders which, it is hoped, he will wear with pleasure to himself and honor to the organization.

59th Service Squadron: The Squadron is joyously anticipating an early evacuation of its present abode, and cogitates merrily on the picture of loyal sons of "Beaver" ensconced as one big happy family, in their palatial new quarters. Of course, we had expected to be located in time for the Christmas holidays and, after that optimistic thought had washed out, for Washington's birthday, but now we are certain that moving day will fall not later than March 15th, or Easter, or Fourth of July. Well, anyway, we hope to move before next Xmas.

Second Lieut. Charles W. O'Connor, our Engineering Officer, made another of his frequent cross-country flights to Wright Field on February 18th.

Our Basketball team went down fighting, their heads bloody but unbowed, in the recent Intersquadron series. We only managed 4th place, but we'll take the Trophy next time.

The results of the Intersquadron Bowling League tilts are bringing the Cup closer and closer to the 59th with each game. We're holding second place now, with victory just around the corner.

Private, 1st Cl. DeForrest Rumage was ordered to the Training Center at Randolph Field. We hope to see him return this time next year with a full fledged Enlisted Pilot's rating tucked in his cross-country bag.

96th Bombardment Squadron: The 96th regrets losing two of its most promising officers, to wit: "Our" Garfield Cuno and Wycliffe E. Steele. This loss to the squadron is alleviated by the recent arrival of Lieut. Roy D. Butler from France Field, Panama.

Capt. Milo McCune, flying a "B-6," had a fortunate or otherwise forced landing on the boggy northeast section of the field on Feb. 20th. Both motors, through some undetermined cause, cut out simultaneously on the take-off. With but a scant 100 feet, Capt. McCune was forced to set her down near the balloon hangar. The ship nosed over on the soft ground while still rolling fast and was almost completely washed out. Lieut. J.M. Gillespie, who was to have ferried this ship to Panama, evidenced considerable displeasure with a fate that not only once but several times washed out his prospective flights to Panama. However, he was assigned another ship, and perhaps will make it this time.

Fort Sill, Okla., February 27th.

Cooperative work with the Field Artillery School the past month was limited, due to inclement weather which curtailed the field exercises and outside activities of the classes. The "Flight" has been far from inactive, however.

The three O-19C's assigned here were all delivered to the S.A.A.D. during this period and were temporarily replaced with O-19B's. These B's have been equipped and tested and are ready for work.

The following maintenance training flights from Kelly Field were also added to the activity of the "Flight":

January 27-28, 1st Lieut. H.A. Moore with three instructors and 13 students in 3 O-19 and 14 O-2H planes of the Observation Section were serviced and remained overnight - Jan. 30-31, 1st Lieut. F.I. Patrick with 3 instructors and 15 students in 3 A-3 and 15 P-1 airplanes of the Pursuit Section remained overnight - February 5-6, 1st Lieut. Dale V. Gaffney with 3 instructors and 15 students in 3 A-3 and 15 P-1 airplanes of the Pursuit Section remainder overnight - Feb. 10-11, 1st Lieut. F.G. Irvin with 3 instructors and 12 students in 3 A-3, 2 O-2H and 10 P-1 planes of the Pursuit and Observation Sections remained overnight.

On February 11th, Capt. Benj. F. Giles and Tech. Sgt. Scott arrived from Hensley Field for a technical inspection. After a thorough inspection, they departed Feb. 13th for Hat Box Field, Muskogee, Okla.

The following ferry pilots stopped here enroute to March Field, Riverside, Calif.: February 17th, Lieut. D.R. Lyon in a B-4A from factory at Bristol, Pa.; Capt. A.C. Foulk in a B-4A from Wright Field - Feb. 22nd, Major Keesling in a Y-10-24.

In taxying out for take-off, Capt. Foulk's Keystone, with a full load of gas, broke through the surface crust of the field and became thoroughly mired up. A full afternoon's work with sixty men and two 5-ton tractors were required to get it back to the flying line. After five days of bad weather, Captain Foulk finally got off, feeling like a member of the permanent garrison.

The following cross-country flights were made by the pilots of Flight "E":

January 31-Feb. 3, 2nd Lieut. D.T. Mitchell and Staff Sgt. Salter to Kansas City, Mo. - February 2, 1st Lieut. Wm. L. Ritchie and 1st Sgt. Johnson of the 1st Balloon Company to Oklahoma City, ferrying personnel - February 4-6, 2nd Lieut. C. Stroh and Capt. R.E. O'Neill ferrying aircraft to Duncan Field, Texas - February 6-9, 1st Lieut. Wm. L. Ritchie and Tech. Sgt. Herb to Fort Riley and Topeka, Kansas - Feb. 10-12, Capt. F.H. Pritchard and Pvt. Coleman to Kansas City, Mo. - Feb. 17-22, 2nd Lieut. C. Stroh and Capt. J.H. Carriker, F.A., to Duncan Field, ferrying aircraft.

The First Balloon Company successfully completed two field assignments with the Department of Gunnery of the Field Artillery School.

The Air Corps quintet fought and shot its way to the 1932 basketball championship of Fort Sill by conquering the 18th Field Artillery, 31 to 24. The main feature of the game was not in the outstanding play of any of the Air Corps five, but the speed and accuracy with which the entire team functioned. The team work which was developed by the coach, Staff Sergeant Joseph A. Murray, was remarkable and regarded as the best ever seen in Fort Sill. The Air Corps players were chosen from the First Balloon Company, and the winning of the Trophy is all the more remarkable because the other teams represented battalions.

The Air Corps team started poorly, with no experienced players, and gradually worked itself into as fast and scrappy a machine as ever graced a Fort Sill court. Most of their games were won with a terrific last minute drive that could not be stopped. The Air Corps team, with the addition of a few picked post players, will form the Fort Sill team which faces the Corps Area champions from San Antonio in a three-game series. The Post Team will be coached by 1st Lieuts. Wm. L. Ritchie, A.C.; J.F. Baird, F.A. and Staff Sgt. Murray, 1st Balloon Company. The regular personnel of the Championship Air Corps team are - Forwards, I.A. Noakes, R.C. Motley, J.R. Varnell; Centers, J.B. Hagan, O. Kohl; Guards, W.I. Duke, F.H. Clark.

112th Obs. Sqdn., 37th Div. Aviation, Cleveland Airport, O., March 1st.

Hello, Air Corps of America. This is the first broadcast of the good old 112th Observation Squadron of racing fame from Cleveland, Ohio. In other words, "The Cream of the Crop."

We recently received the first of our series of two new O-38's from the Douglas factory at Santa Monica, Calif. Lieut. Hez McClellan, from Mitchel Field, ferried it through for us. Yes, Sir, we sure needed it.

A proposed extension to our present hangar has been submitted to the Adjutant General of the State for his ratification and approval, which we believe will be forthcoming. This extension will take care of our Motor Shop, Air Corps Stock Room, Parachute Packing Table and Armament Room. This will give us room for four more ships in the main hangar, as the units just mentioned were set up in one end of the hangar. Following this, if the Militia Bureau should see their way clear to assigning this unit more ships, we can with this extension very amply take care and house them.

Our new Instructor, 1st Lieut. Charles Backes, who came here from the Philippine Islands, arrived in Cleveland Dec. 3, 1931. The entire unit seems to like "Charley" very much; he knows his Army, and how! Yesterday, Lieut. Backes received orders to depart for Santa Monica, Calif., to ferry back our second new O-38B from the Douglas factory.

March 4th, 5th and 6th, Lieut.-Colonel Muhlenberg, Air Officer, 5th Corps Area, will give our unit its annual armory inspection. We are always glad to see him and particularly to learn of his recent promotion to the rank of Lieutenant-Colonel.

All the officers of the Squadron seem to have become imbued with the Radio bug. Every flight in our service ships is a detailed radio mission, and some very good results have been accomplished as result of the interest shown. Another thing very worthy of mention is the installation in the Liberty BT-1 of a Sperry Artificial Horizon and a Sperry Directional Gyroscope. These instruments are very expensive but, oh, how useful when you learn how to use them! Every rated pilot is put in the front seat of the BT-1 and a hood fastened over the entire cockpit, with a second pilot in the rear cockpit. Instruction is then given in blind and instrument flying, such as - 1. Straight and level flying; 2. 90, 180 and 360 deg. turns until same can be made correctly; 3. Stalls, dives and spins. Believe you me, this kind of instruction is very helpful and necessary to every pilot, whether in military or commercial flying. The Squadron plans on installing a radio receiver in the BT as well, so that all of our pilots can fly the radio beacon blind and learn to stay right on the course.

The time is beginning to draw fairly close again to another year of the National Air Races, to be held - where? Why, of course, at the Cleveland Airport, Cleveland, Ohio. To those Army, Navy, Marine Corps and National Guard officers who have been our guests before, it is unnecessary to explain about all the added attractions to be had during these events. You know all about it, so make it a point to come again this year, if possible. We will be glad to see you. To those officers who have never been down to the Cleveland Races, may we suggest that you arrange to join us this year. We assure you that a good time will be had by all, and we welcome you as our guests.

Our former Commanding Officer of the Squadron, and now Division Air Officer, Lieut.-Colonel Thomas J. Herbert, has filed application to run for the office of United States Congressman at large from the State of Ohio. We are all pulling for "Tommy," and want to see him elected.

One of our officers, 2nd Lieut. Charles Haas, is now out in Los Angeles, Calif., on 90-days leave of absence. Pretty tough life, eh, enjoying all of that nice warm California sunshine.

During the past month, the Squadron had quite a number of Air Corps officer visitors who stopped in to get gas and a bite to eat, enroute to their final destination. Come again, boys!

And now, that our ten minutes of broadcasting is drawing to a close, we will stop "That Magic Carpet," and say "Selah" until next month.

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March Field, Riverside, Calif., Feb. 12th.

17th Pursuit Group: Two and one-half inches of snow greeted us the morning of Jan. 15th. Native sons of "Sunny California" were kept busy explaining the "unusual weather" to critical outsiders. However, by noon the snow was gone and flying resumed.

Acrobatics, individual combat, squadron formation, strange field landings and blind flying formed the major part of the training schedule in the air in January. Night flying was conducted by the 95th Pursuit Squadron.

Ground school classes in mess management for Group officers continued under the instruction of 1st Lt. J.H. Dulligan. A 2-hour course in oxygen equipment was conducted by Lt. W.C. Morse, Group School Officer. Troop schools for enlisted men were conducted in Armament, Engineering and Maintenance.

Six new P-12E's were ferried here in January from the Boeing factory in Seattle by Capt. Chas. Douglas, Lts. Castor, Dawson, Minter, Dulligan, Crosthwaite.

Second Lt. N.H. Ives, at Fitzsimmons Gen. Hospital for past two years, reported for duty Jan. 4th, and was assigned to Pursuit Group Headquarters.

The 95th Sqdn. conducted a service test on night flying equipment for Pursuit planes Jan. 19,20,21. Five landings were made by each pilot to test the landing lights installed on the wing tips of two P-12E's.

2nd Lt. L.W. Sharman, Res., 34th Pursuit Sqdn. departed on month's leave.

2nd Lt. Robert B. Richard, Res. was brought back here Jan. 13th from Mather Field in a Fort Transport. Riding in an automobile at night as passenger, the car struck a road grader. Master Sgt. B.R. Ertwine flew an enlisted man from Rockwell to Letterman Hospital in a transport and returned with Lieut. Richard.

2nd Lt. Stuart D. Baird, Res., was married Dec. 30th to Miss Jeanette Gordon of Pasadena, Calif. They are now living at 5248 Magnolia Ave, Riverside, Calif.

7th Bombardment Group: Pvt. Frank J. Garjola, 31st Bomb. Sqdn., for the past several years on duty in the Parachute Dept., succumbed Jan. 14th to internal injuries received in an automobile accident at Riverside, Calif., Jan. 10th. The end came at Letterman Gen. Hospital, where he was taken in the big Ford Transport plane. His remains were sent to the home of his mother at Atlantic City, NJ.

The keeper of the "roster of pilots for ferry trips" is by far one of the most popular (or unpopular) individuals in the Group Operations Office these days. A number of Keystone B4-A's are ready for delivery by the Keystone Plant at Bristol, Pa., and it seems nearly every officer wants to make the trip. On Feb. 1st, 2nd Lieuts. H.W. Bowman, J.A. Ronin and L.R. Parker, with staff Sgt. McPheter, Sgt. E.F. Waid and Corp. R.C. Hayes as mechanics, departed for Bristol by rail to secure three of these ships. Capt. Leo Post with Staff Sgt. J.H. Arthur left Feb. 8th on the same mission, as did 2nd Lieut. D.R. Lyon and Staff Sgt. M.B. Kieado. Major Lloyd N. Keesling, Post Operations Officer, departed Feb. 5th for the plant of the American Airplane and Engine Corp., Farmingdale, N.Y., to take over a Y1C-24 for ferrying to March Field. First Lieut. C.W. Pyle, 2nd Lieuts. E.H. Beebe, W.A. Matheny, with Staff Sgts. Thomas Toohey, Matthew Grier and Lewis Coty, are under orders to depart Feb. 12th in three O-38's for delivery to Bolling Field, then to proceed to Langley to procure two Y1B-4's and one Y1B-6 for ferrying to March Field.

The 7th Bomb. Group notes considerable coming and going among the noncommissioned officers of the first three grades. Master Sgt. Edward McAleer, 31st Bomb. Sqdn., goes to Hawaii as replacement for Master Sgt. Henry A. Doirant and Tech. Sgt. Peter Ceccato, 11th Bomb. Sqdn. as replacement for Tech. Sgt. Ballard B. Small. Master Sgt. Thomas F. Randle, just returned from Philippines, was attached to the 31st Bomb. Sqdn. Staff Sgt. Horace Ackerly left for the Philippine Islands as replacement for Staff Sgt. Tyrus Holmes.

The training schedules of the Group advanced to the point of simulated squadron tactical movements and, as a result, considerable havoc was wrought (theoretically) upon railroad yards, docks and industrial centers in southern California. For example, one day last week, Capt. Y.A. Pitts took his 9th Bomb. Sqdn. and their doughty B-3's to Yuma, Ariz., where he landed, surveyed the situation and then went aloft over the So. Pacific R.R. Yards and erased them entirely. The Group Operations Officer has been noted casting a stern and meaning eye at the harbors of San Pedro and San Diego. Yea, even at our Navy ships, while mapping out practical applications of this simulated squadron tactical training program.

Wright Field, Dayton, Ohio, March 1st.

Brig. General H.C. Pratt, Chief of the Materiel Division, addressed the students of the U.S. Military Academy at West Point early in February on the work of the Materiel Division, going on from there to Washington for a conference with the Chief of the Air Corps.

Master Sgt. David Samiran returned to the Field after a 3-months' absence in the Fitzsimmons General Hospital, Denver, Colo., much improved in health. Sgt. Samiran, it will be remembered, was largely responsible for the fuel segregator which has been approved for Air Corps use.

Major Frank C. Mahin, Inspector General's Dept., arrived Feb. 9th for an inspection of Wright Field. While here he was the guest of General Pratt.

Lieut. George S. Schulgen, formerly of the Power Plant Branch, was welcomed by his old friends when he arrived here from Langley Field on February 12th.

Bolling Field, D.C., February 10th:

During the first part of February, Lieut. James A. Willis, Jr. soloed by automobile to the United States Military Academy at West Point. Capt. McDaniel and Lieut. White, from the Office, Chief of the Air Corps, preceded him by rail.

Capt. McDaniel gave the First Corps of cadets two lectures on the new Training Center at Randolph Field, after which the three of them, with the assistance of the different Air Corps officers on duty at West Point, talked to the cadets informally, answering any and all questions. From all reports, the three apparently enjoyed their stay at the Academy very much. After much debating on the part of Capt. McDaniel and Lieut. White, they decided to accompany Lieut. Willis on the return trip to Bolling Field.

The director of the Traffic Bureau of Bolling Field has required all the officers, enlisted men and civilians to pass a rigid inspection of their cars. Lieut. Ronald A. Hicks, in addition to his regular duties as Air Corps Detachment Commander, was appointed to fill this responsible position. In the future, it is hoped that the motto of Bolling Field will be "Bigger and Better Cars". Incidentally, the tags now used are quite good looking, the plate being blue and the number and words "Bolling Field" yellow.

Kelly Field, San Antonio, Texas, Feb. 25th:

Flying Cadet William M. Miller, who was on furlough awaiting training with the next class, was found in his automobile, on the Kelly Field reservation on the night of Feb. 21st with a bullet wound in his head. He died from the wound the next day. The circumstances of his death have not been cleared up. Funeral services for Cadet Miller were held at Kelly Field Feb. 24th, and his body shipped to Lexington, Ky., accompanied by Charles Hart Miller, brother of the deceased.

Maj. William E. Kepner, who graduated from the Advanced Flying School Feb. 26th, received orders for duty at Wright Field, Dayton, Ohio.

Lieut. Edgar T. Selzer reported to Kelly Field and was assigned to the 40th School Squadron for duty as Engineering Officer.

Capt. Perry Wainer was assigned Director of Ground School at the Air Corps Advanced Flying School, effective March 1st.

Capt. Max. F. Schneider departed for his new station, Middletown Air Depot Pa.

Pvt. Jesse C. Brown, 41st School Squadron, was transferred to the 67th Service Squadron at Randolph Field.

Pvt. Jesse L. Madden, 40th School Squadron, departed for Chanute Field, Ill. to take a course in Radio.

Cpls. Elliott and Pruett, 40th School Squadron, purchased their discharge.

Mather Field, Mills, Calif., Feb. 10th:

All available airplanes from the post joined for three days in the search made by Mather, Crissy and March Fields for Lieut. Hoffman, who was lost on Feb. 2d in the Sierras east of Bakersfield.

55th Pursuit Squadron: Lieut. C.E. Crumrine, Commanding Officer of the 55th, returned to duty after several weeks at Letterman General Hospital. In his absence the squadron carried on its work under command of Lieut. M.D.S. Steensen.

Due to the shortage of flying time, training for the past month consisted of tactical problems calculated to use to the best advantage the few hours available. Pilots are chafing somewhat under the strain of inactivity and are considering hopefully the prospect of more time in the near future.

The 55th's team did not lose a single game in the inter-squadron basketball tournament just completed, and at the last game of the series received from the hands of Maj. Tinker, Commanding Officer of the Post, the silver cup donated for the purpose by a local sports dealer.

The squadron is looking forward eagerly to the arrival of the new P-12E's with which it is to be equipped.

77th Pursuit Squadron: This organization spent the last two weeks of the month in Aerial Gunnery and Bombing. The veterans of the squadron proved again their skill by repeating the scores which made them experts last year. New gunnery and bombing ranges were installed in preparation for the season record practice which began the 1st of February.

Feb. 26th.

Cross-country missions were flown by Capt. H.A.Bivins, Technical Inspector for the Fairfield Depot Control Area, Feb. 23d, to Bolling Field, and by Lieut. D.R. Goodrich with Capt. H.W.Flickinger to Selfridge Field, Feb. 24th.

A number of war-time temporary buildings were recently salvaged by a wrecking company, and since they were torn down and cleared away the appearance of the grounds were greatly enhanced.

Maj.-Gen. John F. Preston, The Inspector General of the Army, and Maj.Frank C. Mahin, I.G.D., arrived Feb. 19th to make the annual inspection.

Among visitors to this station the past two weeks, the following were noted: Capt. Palmer, Chicago, Ill., Feb. 17, in a O-17 for major overhaul - Capt. Herold, Lambert Field; Col. Mars and Capt. Hamilton, Chanute Field, and Lieut. Fernander, Scott Field, Feb. 18th, ferrying planes for major overhaul - Capt. Day, Ft.Leavenworth, Kans., Feb. 24th, ferrying a P1B for major overhaul - Lieut. Pratt, pilot, Sgt. Taylor, passenger, and Lieut. Bisson with eight passengers, en route to Langley Field via Bolling Field - Lieut. Downey with nine passengers Mitchel Field, to Bolling Field on cross-country mission.

A flight of Illinois National Guard O-38 planes, with Capt. Mann leading, arrived here Feb. 19th. This was a night cross-country training flight for five National Guard officers. They returned to Chicago the next day.

San Antonio Air Depot, Duncan Field, Texas, Feb. 13th:

This Depot had the pleasure of a brief visit from Col. C.C.Culver, of the Office of the Chief of Staff, Washington, who stopped here over night for servicing of the O-38 he was piloting from the West Coast to Bolling Field.

1st Lieut. Edmund C. Langmead, Wright Field, visited this Depot Feb. 6th and 8th. This visit was in connection with an extended cross-country tour being made by him of various Air Corps activities in the West, Southwest, and South, for the purpose of conferring on the manintenance of supplies and equipment and coordinating matters pertaining to the Materiel Division.

Lieut. Donald F. Fritch, of this Depot, returned from an extended cross-country trip, in which he ferried an A-3B plane from the Depot to Edgewood Arsenal, Edgewood,Md., and from there ferried an A-3, by way of the Middletown, Pa., Air Depot, to Kelly Field.

Airplanes and engines were overhauled and repaired by the Engineering Department of the San Antonio Air Depot in January, as follows:- Airplanes overhauled: 2 A-3, 3 A-3B, 3 O-2H, 4 O-19B, 1 P-1C, 1 P-1D, 4 P-1F, 3 BT-1, 5 BT-2B, 1 PT-2, 2 PT-3, 5 PT-3A; total, 34. Airplanes repaired:- 3 A-3B, 1 O-2J, 8 O-19B, 1 O-38, 1 PT-3, 1 PT-3A, 1 C-7A, 1 23/AE, 1 24/NV; total,18. Engines overhauled:- 12 R-790, 6 R-1750, 3 V-1150, 10 R-1340, 3 R-1690, 3 R-975; total, 37. Engines repaired:- 1 R-790, 7 V-1150, 5 R-1340, 7 V-1650, 2 R-1750; total, 22.

36th Div. Aviation, Texas Nat'l Guard, Houston, Feb. 10th:

Flying activities of the 111th Observation Squadron lagged the last two weeks of January, due to flying time allotment being nearly consumed during the first two weeks of the month. However, one consolation is that the pilots who consumed their flying time get plenty of practice with the radio.

Our training program is being adhered to and progress is rapidly being made in puff target work. We are still waiting for the sun to do its part in order to carry on the photographic work. Approximately five hours training was given in blind flying.

Maj. Blackburn returned from Santa Monica, Calif. with a new O-38B. It is hoped that he gets a few more opportunities for such trips.

The social activities of the Officers perked up with the appointment of a social committee which immediately began to function. A dinner-dance in honor of Maj. and Mrs. Blackburn, held in the Spanish dining room of the Lamar Hotel, was a success. It is our intention to have an Officers' Club social function once a month from now on. Any officer who happens to be in Houston when one of these affairs is about to take place is cordially invited to attend.

The Squadron Basketball team got off to a bad start by losing two games but then won three out of the next four, and things look good for a successful season after all.

Selfridge Field, Mt.Clemens, Mich., Feb. 26th:

Six of the ten members of the Roumanian Olympic Bod-sled team who visited Selfridge Field on Feb. 19th are members of the Roumanian Air Corps. Maj.Brett made a special effort to show these officers the new construction about the post, as well as the new airplanes recently received. They were greatly impressed by the appearance and performance of the new P-12's.

2nd Lieut. Walter N. Pharr, Air Res., returning from Middletown Air Depot on a navigation training flight, Feb. 1st, was injured when his P-6A crashed near Carlton, Mich. He received a broken jaw and cuts about the face. He spent the night at the Monroe, Mich., hospital and returned to the Field the next day. An accident investigating committee will seek to ascertain the cause of the crash.

The first game of the recently organized Post Basketball team was against the Port Huron Junior College team which took the short end of a 16-9 score. The strong defense displayed by the visiting Selfridge team had their opponents baffled at all times, Port Huron scoring only one basket from the field, the other points resulting from free throws due to fouls. In the second game of the basketball season, Feb. 25th, in the Selfridge gym, the Post team defeated Ft.Wayne, 44 to 11. After the first few minutes of play there wasn't the slightest doubt as to which was the better team. The stellar playing of Freelund at forward and Everett at center featured the contest. The guards,Schmitt and Bates, were especially formidable.

Harry Wilson, already famous as the inventor of the "Wilsonbury Circle", further distinguished himself recently by creating a new type of landing. This novel maneuver is to be performed entirely at night and in the absence of any spectators. As yet, he has issued no statement, nor has he given any rules concerning the crack-up.

Harry was testing some landing lights on a P-12C, when he received the creative urge to make a new type of night landing. Turning out the landing lights, he descended to the ground, perpendicularly, from the height of twenty feet. The landing gear, totally unprepared for the shock, gave away and left the inventor stranded out in the middle of the field. Quizzed concerning the event the next morning, Wilson was noncommittal and would only say that he had taken off the night before and then landed.

CASTLE

17th Pursuit Squadron: The month opened in mournful fashion for the fighting 17th; even pay day couldn't cheer us up. We knew our old and faithful P-12's would be taken from us, but we clung to the faint hope that the powers-that-be would change heart at the last moment and maintain the status quo for the 17th by means of a moratorium-or something. Feb. 3d, a whole gang from the 36th came down the line to the 17th hangars, took the ships out and as they were rolled away, Capt. Hoyt removed his hat and muttered sadly into his beard,while we all followed suit, down to the lowest ranking new recruit, and the rankest beard.

The only light in the gloom was the addition of two new names to our pilot's roster - Lieuts. Sillin and French, both good lads with experience behind them. "Frenchy", especially, is an old-timer around here, having been at Selfridge longer than anyone else on the field among the commissioned personnel. Sillin is a good addition, because of the inside scoops he can give us on the Sino-Japanese situation. He hasn't been with us two days before he had obtained and disseminated "Confidentially" of course - the info that a secret radio arrived telling of the sinking of two American destroyers in Shanghai harbor. Every morning he brings new and better rumors, each one a masterpiece of gaudy and lurid imagination. He ought to be a headline writer for some questionable journals.

Four squadron members are due for congratulation, Lieuts. Putt, French, Ryan and Sillin being among those sent to Seattle to ferry new P-12E's back here.

During several days in the middle of the month, the 17th managed to muster enough planes for a fifteen-ship formation. Composed of P-6A's, P-6E's and a couple of P-12D's, left us by mistake, it was a weird looking formation, but worked surprisingly well, until we tried a dive. Then the P-12's trailed far behind like tired pigeons. Some day we hope to receive our full allotment of P-6E's, and have them in commission. So far the ones we have were on the ground most of the time with broken tail posts and what not. But the Curtiss people are making changes which we expect will cure the troubles.

V-6247, A.C.

94th Pursuit Squadron: As the writer sits and ponders on what news to hand out, Lieut. Carl R. Feldmann comes through in a "pinch". He not only offers a suggestion, but goes right out onto the old flying field and gives us a demonstration of just how it should be done. Here's the dope:

Carl jumps into the P-5 for a test flight, taxies out and "gives her the gun". Off comes a wheel and up goes Carl on his nose, or rather on the ship's nose, - he didn't hurt his own nose at all (tough luck). Carl is still out there on the field, and I can see him throwing out his chest with pride every now and then. We will have to wait until next month for Carl's own story of the affair.

The 94th does most of its flying on the ground these days, so we have time to do lots of painting on the new ships. All of them are out of commission, pending a change in the tail skid assembly.

57th Service Squadron, A.C.: With all four of the new hangars at Selfridge Field over - flowing with sleek Pursuit ships, the 57th Service Squadron's flying section was forced to move its brood of orphan planes, a Ford C-4, a Fokker YIC-14, an O-19 and two PT-3's, to the new, but unheated Air Corps Assembly building. The move necessitated the building of a temporary road of old hangar doors from the flying line across the main road to the new home. Every trip across the road is an adventure. It sags badly, nails work through continually, and its sole support is the ragged, frozen ground. Men on the line are awaiting the spring thaw with interest.

Heat was promised for the Air Corps Assembly building and the Aero Repair and Machine Shop building by March 1st. Plans are completed to install new machinery and equipment and start operation without delay. Both the machine shop and the carpenter shop will be completely equipped and prepared to do any sort of work.

With all of the work involved in such mass moving, other Service Squadron activities have not slackened. There are still forced landings to be visited and crashes to be retrieved. The only noteworthy change was in Lieut. H.T. McCormick's method of approaching a forced landing or a wreck. Heretofore he jumped into his shiny Hudson Eight with a bursting sense of duty, and proceeded with all haste to the scene. A series of unfortunate incidents, including an expensive trip to Monroe, andboggings in the fields around Mt.Clemens changed all of that. Now he walks to his wrecks.

27th Pursuit Squadron: February's outlook was of the customary depression dreariness: No flying time, no cross-countries, no luck. Then the depression lifted and for once the panic failed to follow. The Squadron turned in its quota of cross-country requests and had same approved. Formation flying again became the accustomed thing.

The 27th Squadron, long noted for its accurate diagnosis of trouble, again proved its accuracy. Lieut. Day, one of our stellar Reserves, was forced down while on cross-country. Not content with wiring that his motor had frozen, Lieut. Day, with uncanny ability, ferreted out the trouble and wired: "Forced down near"Podunk" stop Ship needs Revs." The Engineering Department immediately shipped the necessary revs and everyone is happy.

Capt. Blessley, Lieuts. Culbertson, Griswold, Wright, and Smith made a trip to Seattle for new Boeings.

Capt. Blessley and Lieut. Ramey made a trip to St.Paul to test skiis for airplanes.

Lieut. Todd returned from leave spent in San Antonio.

Lieut. Allemang was relieved from active duty, having faithfully served his eighteen months.

36th Pursuit Squadron: The 36th won the undisputed basketball championship of Selfridge Field when it "clinched" its string of victories by decisively defeating the Headquarters Detachment team, 35 to 11. This being the final game of the season, the Squadron was left with the enviable record of ten victories, no ties and no defeats.

The unusual showing of the 36th's basketball outfit is all the more worthy of mention because this is the second season this organization participated in basketball. The Squadron itself was made active at Selfridge Field less than two years ago.

As a tribute to the team for such a splendid record, the Squadron tendered the players a banquet in the organization mess hall on Feb. 24th. Maj. Brett, the Post Commander, with his staff, all Squadron Commanders and the officers of the 36th attended.

The regular members of the team were: 2nd Lieut. Weber, Staff Sgt.Howard, Cpl. Everett, Pvts. Algren, Harvey and Brown.

Nichols Field, P.I., Jan. 13th:

6th Photo Section: The Section is at present busily engaged in preparing a Mosaic of Ft. Stotsenburg, Pampanga, P.I., for the Maneuvers of the Philippine Division, slated to begin on Jan. 7th.

2d Observation Squadron: Considerable time was run up this month, most of it in cooperation with other branches of this Department.

"Believe it or not" - Some of the officers wish that they had winter flying suits to use these days.

This squadron is now well supplied with airplanes, having fourteen observation planes and three Sikorski's.

66th Service Squadron: During the past year, this squadron was winner in the following inter-squadron events: Baseball, basketball, volleyball, bowling (2d place).

At the present time the squadron is leading in the inter-squadron baseball league, winning all five games played, four of them by the shut-out route.

During the recent Department Athletic Meet at Ft. William McKinley, P.I., on Dec. 18 - 19, the 66th Squadron was well represented in the aquatic events. Pvt. 1st Cl. Urben took first place in the 220 yd. Breast-stroke, and Pvt. McDermott, took second place in the one mile swim and another second place in the 440 yd. swim, and was a member of the relay team that took third place in the 1600 meter swim.

Altogether, this squadron had a very prosperous year, and no little credit is due to our Squadron Commander, Capt. Vernon L. Burge, our Squadron Adjutant, 1st Lieut. John H. McCormick, our Supply & Athletic Officer, 1st Lieut. James S. Stowell, A.C., and 1st Sgt. James S. Grisham.

103d Observation Squadron, Penna. National Guard:

The new Armory of the 103d Observation Squadron at the Philadelphia Airport, Philadelphia, Pa., accepted by the State and turned over to the outfit is truly modern and answers the long felt need of the Squadron for a proper home. For the past eight years, the Air Corps drilled in a Cavalry Armory and while the Air Corps may be OK in a back seat they are not much good on a horse. The following officers are members of the Squadron: Maj. John S. Owens, Commanding Officer; Capts. George R. Dickens, Operations Officer; John V. Dallin, William C. Gallagher, George Logan; 1st Lieuts. Ralph J. Bradford, Adjutant; Raymond L. Jablonski, George E. DeCoursey, Edward G. Pennock, Samuel Brenner, Arthur S. Cox, Robert Glendinning,Jr., John Vickers, Howard G. Kurtz,Jr., Alberto H.Santa Maria, John A. Hawkins, Edgar M. Scattergood,Jr., Edgar G. Carlisle,Jr., Lawrence S. Semens.

The Squadron is truly a League of Nations in itself, having among others: 2 British, 2 Canadians, 1 German, 1 Syrian, 1 Polander, 1 Cuban, 1 Jewish and last, but not least, 2 Irishers. Of course Lieut. Jablonski has been trying to change his name to SHARKEY, but Logan and Gallagher can't see it.

Our most distinguished Legioneer, Capt. Nasief, who during the great war was a First Lieutenant in the Syrian Camel Corps, still has a hard time keeping away from his old friends at the Zoo.

In closing, the Squadron desires to invite all members of the Air Corps and National Guard to visit at any time. Hope to see many visitors within the next few months.

Brooks Field, San Antonio, Texas, March 1st:

Probably no Air Corps tactical organization ever faced a situation,so far as flying is concerned, that now confronts the 12th Observation Group.

The condition referred to goes back to the concentration of this Group. At the beginning of the fiscal year, 1932, the Tactical Squadrons which later made up this Group were allotted individually certain flying time, based on their strength at that time, and roughly at the rate of 180 hours per year per pilot (the allowance as set down by the Office, Chief of the Air Corps, as the allotment for an Observation pilot). In a similar manner, an allotment of time was made the Air Corps Training Center, from which time there was allotted the School at Brooks Field a certain number of hours. In the latter part of October and the first of November, the 12th Observation Group was concentrated at Brooks Field, the Primary Flying School at that time having moved to Randolph Field,

leaving at Brooks Field 21 officers and 2 Service Squadrons, but taking with them their entire allotment of flying time.

The 88th Observation Squadron from Ft. Sill had taken from its limited allotment, 720 hours which was left with Flight E, 16th Squadron, which had been organized at Ft. Sill. There being no additional flying time available, this Field was required to take the remaining hours originally assigned the three tactical squadrons, the 12th, 22d and 88th Observation and "spread" this time over its entire personnel. Unfortunately, the War Department Training Directive did not reach the 12th Observation Sqdn., then stationed at Dodd Field until approximately 600 hours of their time had been used up for missions of the 8th Corps Area which were not part of the Training Directive.

By Feb. 1st, a total of only 4,585 hours remained for the organizations of the 12th Observation Group for the period Feb. 1st to June 30th, or a total of 8 hours and 20 minutes per officer per month for this period. From this total must be deducted, in accordance with instructions from the Corps Area, 70 hours allotted the 2d Division for May 10-31 Maneuvers, and 100 hours allotted the 1st Cavalry Division, March 4-12 Maneuvers. This time was held to an absolute minimum and is below that which it should have properly to carry out its normal missions with other troops. The time to and from these Maneuvers are included in this total of 170 hours.

For gunnery and field training for the three tactical organizations and the entire commissioned personnel, 2160 hours must be reserved which, added to the 170 hours, makes a grand total of 2330 hours for maneuvers, gunnery and field exercises. Deducting this total from the 4,585 hours remaining on Feb. 1st, leaves 2,255 hours, or 4 hours, 20 minutes per officer pilot per month for the period February 1st to June 30th for all flying training.

That this allotment of time per pilot will not remain fixed is obvious, as this organization will very probably receive a number of officers from the recently graduated class at Kelly Field. The War Department Air Corps Training Directive can be only partly carried out. Cross-country training, which is recognized throughout the Air Corps as the most valuable, except where it can be covered in a training mission, has become a dead issue at this Field. The situation in general is not disheartening to the flying personnel. When they see their brother officers of the surrounding fields ordered on cross-countries, and getting around 20 hours per month, it is hard to understand. Flying efficiency in this Group, as a result of the above, must suffer.

Brooks Field is represented in the March 2d Class, Air Corps Primary Flying School, Randolph Field, by Cpl. Fred. O. Tyler, 12th Obs. Sqdn., who will train in grade, Pvts. William A. Gay, 58th Service Sqdn. and Theodore F. Kellen, Jr., 62d Service Sqdn., appointed flying cadets.

1st Lieut. Armor Heffley, who reported at Brooks Field from Mitchel Field for duty, and will relieve Major Harry H. Young as Commanding Officer of the 22d Obs. Sqdn., was formerly stationed here in 1926, as Flying Instructor at the Air Corps Primary Flying School.

2nd Lieut. E.H. Rice, E.& R. Officer, and Adjutant of the 62d Service Sqdn, will depart shortly for Porto Rico to spend two months visiting the family of his father-in-law, Lieut.-Col. Lopez.

In the first boxing tournament to be held at the Post, Brooks Field staged a series of elimination matches on the evening of Feb. 26th before a capacity crowd, composed of both civilians and army personnel, which filled one of the big hangars of the Field. As a result, seven men were selected to form the team to represent Brooks Field in bouts to be staged between the various army contingents, 8th Corps Area at the War Department Theatre.

Maj. Frank D. Lackland, Commanding Officer of Brooks Field, took the occasion to award the championship Post Basketball Trophy to 1st Lieut. O.L. Rogers, Commanding Officer of the 58th Service Sqdn., whose team was declared winner of the 1932 Brooks Field Basketball Tourney.

Much credit for the success in promoting boxing as a major sport at Brooks Field is due 2d Lieut. Carl A. Brandt, who introduced boxing at the Field and coached the aspirants for ring honors.

Brooks Field added another Major to its rank of officialdom in the promotion on Feb. 26th of Capt. Harry Herman Young. Major Young on March 1st relinquished command of the 22d Obs.Sqdn. to 1st Lieut. Armor Heffley, and assumed the office of Executive of Brooks Field.

Major Young was born and educated in Germany. Prior to the World War he spent eight years with the New Jersey National Guard and entered the War with

that organization. He was transferred to the Air Corps in October, 1917, and as Aerial Observer with the 8th Observation Squadron, and later as Operations Officer with the 354th Observation Squadron, he saw World War service overseas at Amanty, Ourches, Toul and Saizaires.

Returning from overseas service, he organized the 4th Observation Squadron, and took it to Hawaii. Returning from Hawaii, he was stationed at Kelly Field. He was subsequently transferred to Brooks Field to receive training as a pilot; graduated in September, 1924, from the Air Corps Advanced Flying School, and was then appointed a member of the Air Corps Board, with station at Langley Field, Va.

In 1926, Maj. Young was placed on the Detached Officers' list and assigned to duty as instructor for the Air Corps Unit of the Missouri National Guard. From there, he was ordered to the Air Corps Tactical School, and was graduated in 1931. He came to Brooks Field on Aug. 13, 1931, and assumed command of the 22d Observation Squadron.

Maj. Young, by his widely varied experience in the different branches of the Air Corps, comes to his new position as Executive of Brooks Field well fitted to undertake the many detailed duties incumbent upon the trying job of first assistant to the Commanding Officer.

Friends of Chaplain Claude S. Harkey, stationed at Brooks Field will be glad to know of his recent promotion to Major. Since the Chaplains Corps comprises but 125 Officers, to attain one's majority is something of an accomplishment and an honor. Chaplain Harkey is a graduate of Vanderbilt University, and a post-graduate of Chicago University. Entering the Chaplains Corps Jan. 7, 1918, he served at Ft. Brown; Ft. Sam Houston; Corozal, Canal Zone; Ft. Crook, Nebr., and received assignment to Brooks Field, Feb. 1929, making a mutual transfer with Chaplain Harkins.

To foster a greater sympathy of purpose and cooperation between line officers and those of the Air Corps, in compliance with War Department Air Corps Training Directive, a number of officers of Ft. Sam Houston served two-week details of duty at Brooks Field, viz. Maj. Edmund B. Edwards and 2nd Lieut. George W. Gibbs, both of the 15th Field Artillery and 2nd Lieuts. Louis V. Hightower and Camden W. McConnell, 12th Field Artillery. Capt. Robert W. Patterson and 2nd Lieut. William L. Fagg, 23d Infantry, and 2nd Lieut. Frank Kowalski, Jr., 9th Infantry; began their temporary duty of two weeks with the 12th Observation Group on Feb. 15th.

When an Air Corps Reserve officer enters active service, upon graduation from the Air Corps Advanced Flying School at Kelly Field, it is always with the hope that "the breaks" will be in his favor to the extent that he may be granted permanent active status. However, the Five-Year Expansion Program is about to be terminated, and this dream of the young officers cannot be realized. But in some instances, extension of the Air Reserve duty mitigates in a measure the disappointment.

In War Department Special Orders of Feb. 4th, 2nd Lieuts. Charles T. McKinnie, George F. Keene, Jr., Fielden A. Creech and Donald M. Kesler, Air Reserve, are granted three months' extension of active service, effective March 2, 1932. Through a peculiar quirk in circumstances, in each case active duty is terminated Feb. 28, 1932, necessitating that the four officers revert to civilian status for a period of two days, after which they again don the gold bars and Sam Browne and become officers of the United States Air Corps.

Lieut. Edmund Langmead, instructor in flying at the Primary Flying School when it was at Brooks Field, arrived from Wright Field, Dayton, Ohio, to conduct an inspection for the Materiel Division. Another former instructor in flying at Brooks Field, who recently spent a few days here was 2nd Lieut. Claire Stroh of Post Field, Ft. Sill, Okla.

2nd Lieut. C.S. Tidwell, Air-Res., who has been on active service status for 16 months following his graduation from the Advanced Flying School and who, since the arrival of the 88th Observation Squadron, served as Operations Officer for the Squadron at Brooks Field, left for his home in Atlanta, Ga., Feb. 11th, having reverted to civilian status.

With the approach of the "gladsome Spring", Brooks Field officers are casting fondly speculative eyes toward Matagorda Island. Throughout the mild winter experienced by people in this vicinity, a number of cross-countries were made to the Island, but now that fairer weather and a more even trend in temperature are prevailing, applications for cross-countries to the fishermen's paradise are outnumbering all other applications.

Sgt. Clarence E. Hammerly, 22d Obs. Sqdn, was detailed as Sgt.-Instructor to the 35th Division Aviation, Missouri National Guard, at Robertson, Mo.

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INSPECTION DIVISION NOTES

The following Inspection Division notes are listed below in the order of their publication for the information of interested personnel in case such articles had not been noted at the time of their original publication.

The issue of November 9, 1931, contained the first notes published which referred to distribution of technical regulations by post and subordinate activities and contained a chart for a post storage battery record at Air Corps stations so as to show visually an accurate check of the maintenance performed on these batteries.

The issue of December 4, 1931, contained a recommendation for the sealing of cross-country envelopes to facilitate their maintenance and issue; a chart for the purpose of recording compliance with Circular 60-6, OCAC., and an article on unsatisfactory reports calling attention to the necessity for their immediate preparation and rendition in all cases of unsatisfactory performances and a recommendation that all reports be numbered serially by each station engineering officer commencing with number 1 and continuing consecutively throughout each calendar year.

m The issue of December 28, 1931, contained a recommendation for the ready identification of parachutes and recommended a form for the use of all activities in maintaining a record of expended gasoline certificates as required by paragraph 4, WD Circular No. 39, dated July 31, 1930.

The issue of January 25, 1932, contained a list of the most common aircraft maintenance deficiencies which technical inspections have disclosed as existing at practically all stations; an article on the maintenance of the permanent file of strip maps based on the system employed at Bolling Field and an article on the availability of meteorological data now broadcast by Department of Commerce stations on a frequency between 237 and 350 kilocycles on an average of three times during each hour.

The issue of February 18, 1932, contained a chart to record compliance with circular letter, OCAC.,dated January 6, 1932, subject, "Operation of Airplanes", which chart combined the chart for recording compliance with Circular 60-6, OCAC.,published in the issue of December 12,1931, and contained charts and information on the maintenance and distribution to flying personnel of meteorological data received on teletype machines. This chart and information is based on the system employed by Commanding Officer, Air Corps Detachment, Boston Airport, Massachusetts, to comply with the provision of Circular 105-3,OCAC.

The following Technical Letters and Orders have been distributed since the last issue of the Air Corps News Letter on February 18, 1932:

Date and No.	Subject	Distribution
TL-32-4 2/9/32	Installation of Hose Connections, Fuel Line, Carburetor to Fuel Pump-Douglas BT-2A,BT-2B, O-38 & O-38B airplanes. (This Technical Letter replaces Technical Letter 32-4 dated 1/13/32.)	General
TL-32-10 1/19/32	Installation of Tail Wheel, Anti-Shimmy Shock Absorber - Keystone B-3A,B-5A,YIB-4 airplanes.	Chanute,Kelly,Langley March,Phillips,Wright Luke and all Depots.
TL-32/11 2/10/32	Reworking of Propeller Shaft Thrust Bearing End Oil Deflector, Part #C-9719 to Deflector, Part #77060,on GV & GIV-1570 engines. (This TL replaces TL-32-11 dated 1/15/32.)	FAD, MAD, SAAD, RAD, & Chanute.
TL-32-14 2/18/32	Operation of B-13 Mixture on Pursuit Type Airplanes	4th Composite Group, France,Langley,Mather, March,Wheeler,Selfridge Maxwell,Kelly,18th Comp. Wing,Wright,Chanute & all Depots,also Bolling.
TL-32-23 2/5/32	Replacement on Straps of Gunner's Belt Assembly No. OQ-205.	General
TL-32-24 2/9/32	Replacement of Bearings,Landing Gear, Oleo Leg - Boeing P-12, P-12C and P-12D airplanes.	Chanute,Wright & All Depots.
TL-32-26 2/11/32	Installation of Parking Brake Controls on Douglas O-25A and O-25B airplanes	Boeing,Chanute,Chicago, Langley,Lawson,Leavenworth Marshall,Maxwell,Wright, MAD, FAD, SAAD & RAD.
TL-32-28 2/15/32	Replacement of Rudder Bus Cable Brackets and Pulleys - Boeing P-12B, P-12C and P-12D airplanes.	Bolling,Chanute,March,Mather,Maxwell,Selfridge, Wright,Luke,18th Comp.Wing France & All Depots,& 4th Composite Group.
TL-32-29 2/29/32	Clearance Chart Revision, Pratt and Whitney Engines.	Chanute & All Depots.
TL-32-30 2/16/32	Change on Plate Assembly, Magneto Switch - Boeing P-12B, P-12C and P-12D airplanes.	Bolling,Chanute,March,Mather,Luke,Maxwell,Selfridge, Wright,18th Comp.Wing,France, 4th Composite Group and All Depots.

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Date and No.	Subject	Distribution
TL-32-31 2/19/32	Replacement of Tube, Booster Coil Support - Douglas BT-2A, BT-2B, BT-2C, O-38, O-38A and O-38B airplanes.	Chanute, Wright, MAD, FAD, SAAD & RAD.
TL-32-32 2/29/32	Wright R-975-E Engines, Air Corps Nos. 32-611 to 32-642 Inclusive.	Bolling, Kelly, Panama Dept. Hawaiian AD, SAAD, MAD, FAD & RAD.
	(This TL replaces Technical Radio 32-32 dated 2/12/32.)	
TL-32-33 2/23/32	Testing Safety Belts	National Guard Units and A.C. Activities garrisoned by less than a Squadron.
TL-32-34 2/24/32	Reinforcement of Cabin Chairs - Fokker Y1C-14 and Y1C-15 airplanes	Chanute, Crissy, Kelly, March Mather, Selfridge, Wright, MAD, FAD, SAAD, & RAD.
TL-32-35 2/24/32	Valve Timing, Pratt & Whitney Engines	All depots and Chanute.
TL-32-36 2/24/32	Elimination of Fuel Tank Rip Panels- Fokker C-7A Airplanes	Brooks, Chanute, March, Mitchel, Randolph, Wright, MAD, FAD, SAAD & RAD.
TL-32-39 2/26/32	Stromberg Type NA-Y60 Carburetors Army Settings 63 and 69, for Installation on V-1570 Series Engines.	MAD, FAD, RAD, SAAD, Chanute and Wright.
TO-00-0-1 2/1/32	Monthly Index of Technical Instructions	

The following Air Corps Circulars and Circular Letters were published and distributed since the last issue of the News Letter on February 18, 1932.

AIR CORPS CIRCULARS:

Number	Subject	Date
Cir 5-7	PUBLICATIONS - PRINTING AND BINDING. Air Corps Catalogs and Stock Lists. (This Cir. replaces A.C. Cir. 5-7 dated 1/10/31.)	2/15/32
Cir 65-22	SUPPLY Depot Overhaul of Airplanes and Engines. (This Cir. supersedes Cir. Letter OCAC dated 6/13/31, Subject: "Depot Overhaul of Airplanes and Engines.")	2/15/32
Cir 120-1	INSPECTION Inspection Division, Office of the Chief of the Air Corps. (This Cir. supersedes Cir 120-1, dated 5/6/27, which is entirely revised.)	2/29/32

AIR CORPS CIRCULAR LETTERS:

Stencil No.	Subject	Date
W-2043, A.C.	Flying Time for Unusual Missions	2/13/32

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TRANSPORT FREIGHT SERVICE

The Fairfield Air Depot began delivering freight by air on January 25th, using the Y1C-14 airplane assigned to this station. Eight trips were made to Feb. 11th. A total of 11,323 pounds of freight was carried out to stations and 2,525 lbs. carried in to the Depot.

These shipments were made at a total cost to the Air Corps for fuel, oil, and pilots' expenses of $308.10. The total cost of making these shipments including freight charges and packing costs would have been $544.21.

"Some difficulty was encountered in getting stations to use this service to make return shipments to the Depot," says the News Letter Correspondent. "As soon as this difficulty disappears, and the weather improves so that we can make more frequent trips, we hope to show a large profit with our little air line. We will also be able to give much better service to our customers, allowing them to reduce their inventories and also show a profit.

SERIAL NO. 315 LIST OF NEW MATERIAL ADDED TO INFORMATION DIVISION FILES
Feb. 13th to March 15th Incl.

Available for loan to Air Corps Organizations only upon request to the Air Corps Library, Munitions Building, Washington, D. C.

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C 53/England 3 College of Aeronautical Engineering, London, Prospectus, 1932-33.

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Air Corps News Letter

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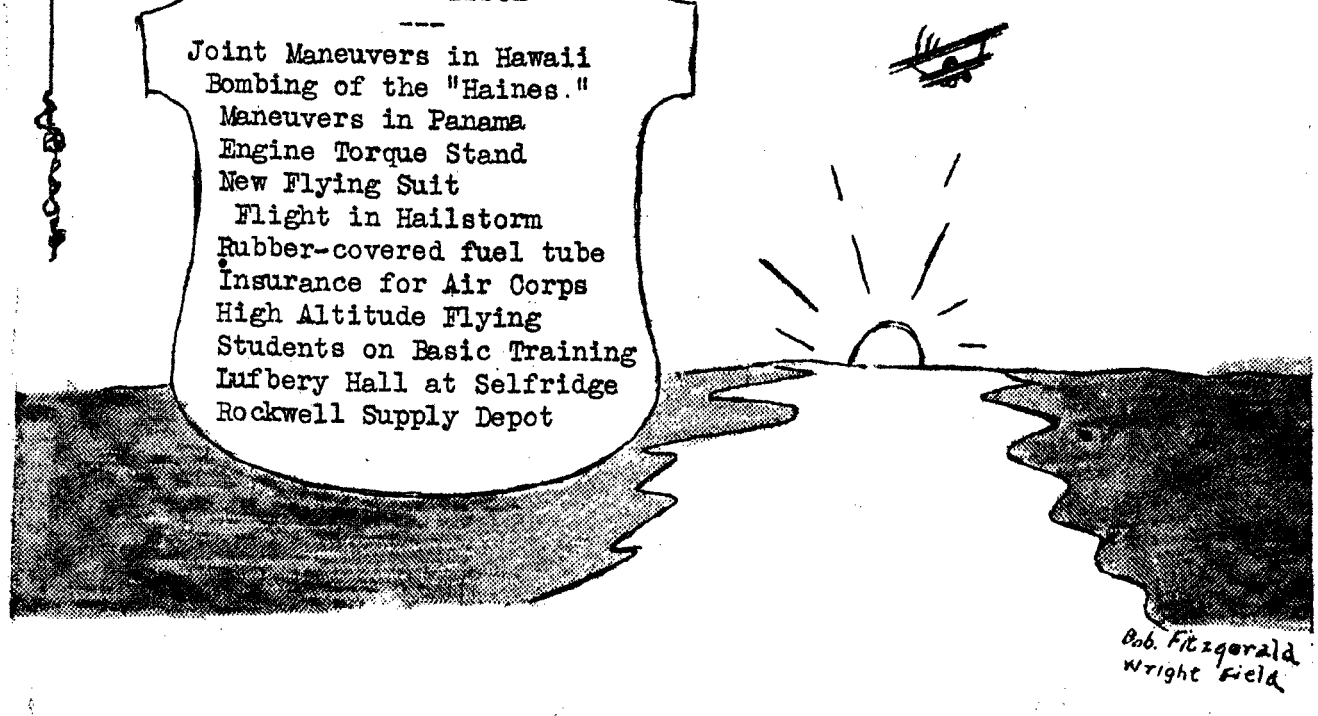

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VOL. XVI AIR CORPS NEWS NO. 4

Information Division
Air Corps

April 8, 1932

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard and others connected with aviation.

Publishers are authorized to reprint material appearing in this publication.

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THE JOINT MANEUVERS IN HAWAII

GRAND Joint Exercise No. 4, which presumed an attack on the Hawaiian Islands by a Blue Expeditionary Force to effect their recapture, was just brought to a successful conclusion, especially from an Air Corps point of view. As a matter of fact, the entire exercise, which lasted for eight days, effectively demonstrated to all observers the fact that the initial steps, at least, of the next great war will be fought and won in the air.

Following this introductory paragraph, the News Letter Correspondent goes on to say that for seven days all activities, on both Blue and Black sides, were confined to operations of planes, submarines and carriers. Commencing February 7th with an overwhelming air attack of 172 airplanes launched from the "Lexington" and "Saratoga" before daybreak, each succeeding day saw some new phase of air operations.

The dawn attack of the combined carrier planes from the Fleet on the opening day was directed against Luke and Wheeler Fields and was an impressive demonstration of the technical skill and flying ability of the Naval aviation. Squadron upon squadron, without the slightest hitch or deviation, went directly to their objective, and had the Black defending planes been present on their airdromes or in their hangars, the umpires would have undoubtedly ruled them all destroyed or damaged. As it turned out, however, all Black planes, except for some undergoing overhaul in the Depot, were snugly hid away on outlying fields, where every possible use was made of natural cover and camouflage to conceal them from view. Only two Attack planes of the active Black Air Force were ruled out as a result of the first day's maneuvers. However, 15 dummy planes, consisting of obsolete wings and tail surfaces, had been assembled by the Hawaiian Air Depot and placed in echelon formation on the Luke Field airdrome at dusk the preceding day. These dummy planes were ferociously attacked by the Navy Squadrons, and one could well imagine the damage that would have been inflicted in real war and had there been real planes there.

No attempt was made by Black to effect an air counter attack against the overwhelming (about 2 to 1) numbers of Navy planes, and as no damage had been done to the Black Air Force, it remained, with exception of reconnaissance missions, in concealment during the day.

At daybreak the next morning, when the Blue Air Force returned to attack with machine guns and bombs all outlying airdromes, they again found no targets, as the entire Black 18th Wing had concentrated in the air at high altitude over Kahuku Point a half hour before the Navy attack materialized. It was intended to follow the Navy attacking force back to their carriers, if possible, but this was prevented by rain and low visibility.

During the morning, reports from the Black Observation planes and Military Intelligence confirmed the presence of 31 Blue seaplanes of the "PK" and "PD" type at anchor in Hilo Harbor. Intensive air reconnaissance of the sea areas showed no enemy carriers in the vicinity of the islands to the South or within 75 miles of Oahu - the weather was bad, with intermittent rain squalls and low visibility favoring a surprise attack. At 1:15 P.M., the 26th Attack Squadron was ordered to attack the Blue Base at Hilo to destroy the seaplanes at anchor. The attack arrived over Hilo at 4:20 P.M., after a flight of 250 miles and without encountering any enemy opposition, except for anti-aircraft fire from a cruiser about 10,000 yards away. After attacking the seaplanes, whose crews were ashore, the Squadron proceeded to bomb Hilo Airport, and then headed for Oahu, where they landed at 6:20 p.m., after a non-stop flight of over 500 miles.

The successful completion of this attack, over sea and in bad weather, against a distant enemy, indicates the offensive power of a well trained Air Force. As a matter of fact, the weather conditions were so bad that no commercial planes ventured out that day and Blue frankly admitted that no attack from land planes was expected under the conditions. In time of war, there is

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little doubt but that all the anchored seaplanes would have been sunk or put out of commission by the rain of bullets and bombs. Those observers who have seen the 26th Squadron at target practice have no illusions about the efficacy of their aerial gunnery and bombing.

An hour before dawn on the 9th, the Wing again was in the air over Pearl Harbor. At 6:50 a.m., a message from one of the Luke Field patrol planes, giving the location of the Blue carriers about 55 miles off Barbers Point, was relayed by radio to the Bombardment Squadrons in the air, and they immediately proceeded to the attack. On the way out to the carriers, the two Bombardment Squadrons were intercepted by 24 Blue planes, but as the Bombers had the advantage of altitude, the Naval planes were unable to intercept the attack until after the Black Bombers had dropped (theoretically) eight 2,000-pound bombs on one carrier and seven on another. In the meantime, the two Pursuit Squadrons and the Attack Squadron from Wheeler Field had a real dog fight with about an equal number of Navy fighters off Barbers Point, each side claiming the victory.

As the destruction of both carriers would have ended the maneuvers, the umpires decided that only one - the "Saratoga" - had been damaged to the extent that she could no longer be used as a carrier. Admiral Yarnell and his Staff then transferred in small boats to the "Lexington," which was ruled to have been uninjured by the rain of 2,000-pound bombs.

There were no further air activities of importance that day, although both sides carried on an intensive reconnaissance, and many Observation planes were brought down on each side. Fifty Marines landed on the Island of Maui and captured the Maalaea Airport (Territorial Airport), but as it was not in use by the Black Air Force, no results were obtained. About the same time (11:00 a.m.) three torpedo planes attacked the Black Air Observation base on Molokai, but as the Black planes were in the air, no damage was done except the loss of one of the Blue planes through a counter attack by four Black O-19's which had hidden behind the clouds while the attack on the airdrome was under way.

At about 3:30 a.m. the following morning, enemy transports were reported off the North shore of Oahu and a warning order was issued the Wing to be ready to attack the fleet. At 3:46 a.m., an Observation plane from Luke Field, using Parachute flares, definitely located the "St. Mihiel" at sea due North of Kahuku Point, and at 4:35 a.m., about two hours before dawn, the Bombardment Squadrons took off and were joined over Schofield Barracks by the Attack Squadrons. At 5:15, the Bombardment and Attack, using airways flares to illuminate their targets, effectively attacked the transports. Umpires decided the three transports had been struck with bombs. As the Bombers were each carrying 1100-lb. bombs, the results should have been satisfactory. Returning from this attack, a squadron of Blue torpedo planes were attacked and five of them ruled out by the umpires.

It might be stated here that all the air umpires, with the exception of Major Carl Spatz, A.C., were Navy fliers from the Battleship PENNSYLVANIA. One was assigned to each Black Bombardment, Attack and Pursuit Squadron and accompanied that unit in all air operations. Their impersonal and impartial rulings were most favorably commented upon by all the Senior Umpires and by the Black Air Forces themselves. Were it not for the courtesy of the Captain of the PENNSYLVANIA in loaning his fliers for this purpose, it would have been difficult for an unbiased report to have reached the Chief Umpires. It was obviously impossible for Major Spatz to be everywhere and see everything taking place.

At 4:35 p.m., Feb. 11th, one of the dusk Pursuit patrols led by Capt. Auby Strickland, located a carrier with about 60 planes on deck, approximately 75 miles North of Oahu. As the radio sets supplied the Pursuit planes over here are inefficient, this information had to be transmitted to Wing Headquarters by telephone after landing. The 6th and 19th Pursuit Squadrons were immediately ordered to attack, using 100-lb. explosive and incendiary bombs to supplement their machine guns. The units cleared at 5:45 p.m., and led by Capt. Strickland, reached the carrier just at dusk (6:21 p.m.) when they delivered a surprise attack, diving from 9,000 ft. to 1,000 ft. before releasing their bombs. The carrier turned out to be the "Saratoga." The Pursuit returned to Wheeler Field about 7:00 p.m. in high glee over having located their target nearly 80 miles at sea and having conducted, what would have been in war, a devastating attack.

At 1:50 a.m. the following morning, a special patrol O-19 from Luke Field confirmed the presence of enemy vessels off the West Coast of Oahu. These vessels were kept under surveillance from that time on, using airplane flares and coast defense searchlights. At 5:25 a.m., the 18th Wing proceeded to attack the enemy transports and air forces. Small boats unloading soldiers and Marines from the "St. Mihiel" and the "Henderson" were attacked by 15 planes of the 26th Attack Squadron, while the Bombardment units dropped bombs on the transports. Soon after daybreak, the Pursuit units had their hands full with attacking Blue planes, as many as three Squadrons having been engaged in the course of as many minutes. Luke Field being under fire from the fleet, all surviving planes of the Bombardment and Pursuit landed at Wheeler Field at 7:00 a.m., for rearming and refueling. The refueling was promptly attended to by the efficient Wheeler Field personnel and a second attack on the enemy fleet was launched as soon as the prescribed 30 minutes on the ground had elapsed.

At 9:30 a.m., after conference of the Wing Commander with the Chief Air Umpire, it was decided that nothing further was to be learned from continuing the simulated attacks, and at 10:00 a.m., all planes were turned over to maintenance, and the tired but jubiland pilots went off to get some well earned rest.

Despite the fact that nearly all flying was off emergency fields, lacking the usual maintenance facilities - despite the fact that nearly all operations started in the dark and often in the rain, and that all operations were over a

choppy sea with bad weather and poor visibility, only one real casualty to the Black Forces occurred. Following the bombing attack on the carriers, about 60 miles at sea, on the morning of the 10th, one LB-6, piloted by Lieut. Lloyd H. Tull, from Luke Field, had a forced landing in the sea, due probably to a clogged gas lead to the starboard engines. Lieut. Tull made a perfect landing into the wind and, despite the rough sea, the Bomber remained afloat until the crew was picked up by the enemy destroyer "John Long," which rendered prompt and efficient rescue service. This lucky crew were furnished dry clothing and royally entertained by the LEXINGTON until the completion of the Maneuvers. It is rumored that Lt. Tull intends to transfer to the sea forces, stating he would rather occupy an Admiral's cabin any time than fly an old Bomber in nasty weather.

The Maneuvers were followed by a critique held at Pearl Harbor and attended by about 1,000 Army and Navy officers. This critique, which was presided over by Admiral Schofield, Chief Umpire, was most interesting and instructive, as all the movements and plans of both Blue and Black forces were gone into and the reasons therefor discussed. One thing was clearly brought out, and that was the fact that Oahu is a hard nut for an enemy to crack. "It is believed that the taking of the Dardanelles or of the fortress at Verdun would be child's play in comparison," says the News Letter Correspondent, and adds that "the 18th Wing bore the brunt of the enemy's attack and carried out all their operations so efficiently as to win the praise of all, including the enemy. This is a just cause of congratulation. The lowest Air Corps private will scarcely deign to speak to any commoner now, unless he has a rank at least equal to a Governor or a General or an Admiral."

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MATERIEL DIVISION OFFICERS LECTURE AT HARVARD

Four officers of the Materiel Division, Wright Field, Dayton, Ohio, Capts. Albert W. Stevens, D.M. Reeves, Bruce Hill and Lieut. J.F. Phillips were chosen to present at the Institute of Geographical Exploration of Harvard University four different phases of a subject to which they have devoted years of special study and of which they have become leading exponents. All lectures were delivered in March. On the 1st, 2nd and 3rd, Capt. Stevens discussed "Aerial Photography"; on the 8th, 9th and 10th, Captain Reeves, the "Uses of Aerial Photographs"; on the 15th, 16th and 17th, Captain Hill, "Photographic Mapping"; and on the 22nd, 23rd and 24th, Lieut. Phillips, "Aerial Photographic Flying."

The Institute, which was founded by Dr. Hamilton Rice, is concentrating on a study of the "development of the best technique in topographical survey and astronomical field work and the use of photography from the air in reconnaissance work, mapping, and topographical surveying." It is especially interested in the aspects of the subjects which pertain to Exploration. Captain Stevens, it will be remembered, accompanied Dr. Rice as aerial photographer on one of these expeditions into South America when the headwaters of the Amazon were explored.

The Institute is housed in a new building of Georgian architecture, and laboratories and equipment are the most complete and modern that could be devised. In a basement room is a remarkable clock vault. As one enters the door, the clock itself looms up as a 3-foot copper cylinder with a glass bell jar over the top but without dial or hands. It is one of seven of the kind in the United States. The foundation on which it stands is not part of the building, so that vibrations from passing trucks and the like which cause the building to quiver do not affect its two-foot square foundation pillar. The yearly deviation of this clock from the exact time is but four or five seconds. Many clocks are now regulated from this master clock, and it is expected that within a few years all the clocks at Harvard will be controlled by it.

The lecturers were keenly interested in the Institute, its activities, aims, and home, but no more so than the Institute was interested in what the lecturers had to offer.

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ANOTHER DOUGLAS AMPHIBIAN FOR THE HAWAIIAN DEPARTMENT

The second of three new Douglas amphibians, the latest type to be approved for use in the Hawaiian Department, was assembled and tested recently. The Douglas plane was the first to fly around the world, and this type represents years of progress and development from its globe-circling predecessor.

A most unusual feature of this plane is its absolutely water-tight cabin. Even were it to be absolutely submerged, not a drop of water could reach its occupants. Duralumin bulkheads and shatterproof glass in clever design allow this construction, which should prove invaluable in the event the plane should at any time be forced down on rough water.

Although it will carry nine persons at a top speed of 146 miles per hour, the twin 300 h.p. engines are highly economical in fuel consumption. When used as a commercial transport, this plane is fitted to carry 10 or 12 passengers, depending on the cabin equipment, but when it is converted for military use, part of the available space is used for radio equipment, thus limiting its capacity to nine. It is designed for a pay-load of 1845 pounds, and large fuel capacity, combined with its economical motors, give it a wide cruising range.

These Douglas Amphibians have been assigned to Wheeler Field, Honolulu, T.H.

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"BOMBING OF THE HAINES"

RECENTLY the 49th Bombardment Squadron, Langley Field, Va., was afforded an opportunity to indulge in bombing practice upon a rather difficult target. It appears that an old vessel, named "Haines," which had outlived its usefulness and was being towed out to a deep watery grave by a Coast Guard cutter, was unable to withstand the strain and went down about 200 yards off Plum Tree Island in the fishing boat channel. The authorities quite rightly decided that such an obstruction in this channel was a menace to navigation. And so the 49th Squadron started to practice first with dummy bombs.

Being submerged, it was difficult to see the target from the air and, to facilitate aiming operation, a float, ten feet square, was constructed of light wood and anchored to the wreck, which was itself only 15 by 45 feet. In this first practice, the Squadron dropped five bombs per ship, and even on this first practice the wreck would have been no more had the bombs been loaded with TNT instead of sand.

On the following day, Wednesday, flying operations were confined to engineering tests and, therefore, hostilities against the"Haines" were suspended. The next morning another and final practice round of bombs was dropped, with an improvement in accuracy throughout the Squadron.

Friday morning was the crucial test. Either the derelict would be blown to bits or - well - there is no use mentioning an alternative, "because," says the News Letter Correspondent, "each one of us knew that stave wood and ten penny nails would look like redwood logs and building girders compared to what would be left of that wreck. Each of the six planes took off, loaded with two sand bombs, the three leading ships carrying four 100-pound and one 300-pound TNT loaded missles of destruction, while the other three planes carried five 100-pounders each.

The Squadron took off at 9:00 a.m., dropped their bombs and landed at Langley Field an hour and five minutes later. As soon as the planes landed, an inspection party left the dock in a sea sled and went out to the scene of operations. They found a few splinters of wood, none of which were over six feet long. Thus endeth the "Haines."

The fact that the wreck was blown up is very pleasing, but the data on errors is, to say the least, astounding. In the Bombing Matches held at Langley Field in 1929, the average radial error, the distance from the point of fall of the bomb to the pin point center of the target, was about 200 feet. An improvement was shown in the 1930 Matches, the radial error being 194.07. A still greater improvement was shown for 1931, a cut of 45 feet for an average error of 149.6 feet being the result of the observers. This shows a steady,though slow, improvement among the recognized expert bombers of the Army, the contestants in the Matches being the team having the highest score in each squadron.

During the record bombing of the "Haines," the average radial error was approximately 25 feet, an achievement by an entire squadron which we believe to be worthy of note."

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LOST FLYER FOUND AFTER LAPSE OF TWO MONTHS

An Associated Press dispatch of April 3rd states that the body of Lieut. Edward D. Hoffman, Air Corps Reserve, missing since February 1st, when his plane was dashed to pieces against a Sierra peak, was found that day where he had perished in deep snow. It appears that he had fought through a blizzard for four and a half miles to within a half mile of the main highway of the region and was within three-quarters of a mile of two well supplied cabins. The body was discovered in four feet of snow by Fred Ogilivie, mountaineer, one of a group of searchers who had started at daybreak. The wrecked plane was discovered the previous day. The press dispatch goes on to say:

"Lieut. Hoffman was flying from Los Angeles to San Francisco with Lieut. William A. Cocke, Jr., when he disappeared. Over the Sequoia National Park they encountered a blizzard and, after fighting it for several hours, Lieut. Cocke jumped with a parachute, intending to lighten the plane so that Lieut. Hoffman could bring the plane down safely. Lieut. Cocke was found on the highway after passing a night in a cabin within two miles of the place where Hoffman's body was discovered.

"Lawrence Cook, chief ranger of the Park, said that Hoffman apparently had found it impossible to land his ice-laden plane and, after turning off the ignition, had followed Cocke's example and jumped. A large piece of silk, presumably from his parachute, was found in a treetop not far from the plane.

Cook said the aviator then attempted to reach shelter and struggled through the deep snow drifts and against the raging storm until he fell exhausted. Three-quarters of a mile up the mountain side was a park ranger cabin stocked with food and wood. Down the mountain side was the cabin of Sol Sweet, an aviator, who took part in the search for Hoffman last February."

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Tests are being conducted at Wright Field on a two-wheel type bomb trailer and a tractor equipped with hoisting crane to determine the usefulness of this type of equipment in connection with moving bombs about the airdrome and loading same into airplanes.

THE MANEUVERS IN PANAMA

THE 6th Composite Group, France Field, participated in the annual Panama Canal Department Maneuvers this year, being designated the Panama Canal Department Air Force on January 20th. It was ordered at once to hold itself in readiness for missions as ordered by the Division Commander. A flight of five Observation planes was immediately ordered to an advanced airdrome at Fort Clayton, C.Z., and functioned as Divisional Observation. From January 20th to the 28th, Headquarters Panama Canal Department Air Force remained at France Field. On the latter date the enemy, hitherto reported off the southwest coast of Panama, effected a landing at Chepo, about 40 miles northeast of Panama City, and the war was on in earnest. The Panama Canal Department Air Force was immediately moved to Fort Clayton Advance Airdrome, the entire command being moved in about three hours. The 24th Pursuit Squadron (simulating attack), two Observation planes and three Bombers represented the hostile air force. From January 28th to February 5th, battles were waged fast and furiously with the Air Corps being employed at all hours for Observation, Bombardment and Attack missions.

Emergency landing fields in the interior were utilized by command and observation missions. These fields, mostly small clearings in the jungle, were an extreme test of piloting ability, a particularly good example being a place called "Dead Horse Field." In this field it was necessary to set the wheels of the plane down about five feet from a dead horse and by ground looping gently to the left and applying all brakes possible, a steep hill on the left and a swamp and trees on the right and in front could be avoided. The fact that only one plane was damaged during the maneuvers speaks well for the pilots of France Field. Each officer was detailed with the Infantry for periods varying from two to five days. It was one real simulated war, and concealment was taken advantage of at every possible opportunity to avoid the enemy's very active observation. However, the Observation soon discovered that by following the gaudy yellow Post Exchange truck on its runs to deliver ice cream to the hiding doughboys, they could save their valuable eyesight for future sixty-fours. Another handy assistance which helped to make an easier war was a little white dog that always followed the point of the advance guard.

On February 8th, all troops on the Isthmus were reviewed by the Department Commander and the President of Panama at Albrook Field. The ground review was followed by an aerial review of the Sixth Composite Group. At each critique during the annual maneuvers the Air Corps was highly complimented on its work. The officers and men were on the alert at all times, and the missions were carried out efficiently and successfully. The thoroughness, attention to detail and accuracy of Observation aviation made many enthusiasts of ground officers who formerly were skeptical of air-ground cooperation under extreme field service conditions.

Following the maneuvers the entire Group moved by air to La Venta, Rio Hato, where two more days were spent under canvas before returning to France Field.

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THE NEXT CLASS AT THE TACTICAL SCHOOL

According to Special Orders of the War Department, recently issued, a total of 30 Air Corps officers will attend the next class at the Air Corps Tactical School, Maxwell Field, Ala. These officers are under orders to report to the Commandant of the Tactical School not later than Sept. 5, 1932, for duty as students in the 1932-1933 course, viz: Major Howard C. Davidson and 1st Lieut. Louis M. Merrick, Bolling Field, D.C.; Major Wm. O. Ryan, 1st Lieut. Hez McClellan, Mitchel Field, N.Y.; Major Hubert R. Harmon, U.S. Military Academy, West Point, N.Y.; Major John C. McDonnell, Captains Sam L. Ellis, Floyd E. Galloway, Aubrey Hornsby, Frank M. Paul, Myron R. Wood, 1st Lieuts. John A. Kase, Wendell B. McCoy, Harry H. Mills, Maxwell Field, Ala.; Captain Wolcott P. Hayes, Scott Field, Ill.; Captain Virgil Hine, Fort Crockett, Texas; Captain Harry A. Johnson, Selfridge Field, Mich.; Captain Lowell H. Smith, Keystone Aircraft Corp., Bristol, Pa.; Captain Walter F. Kraus, 1st Lieut. Edwin B. Bobzien, Crissy Field, Calif.; Captain Younger A. Pitts, March Field, Calif.; Captain Charles P. Prime, 1st Lieut. Charles W. Sullivan, Office Chief of the Air Corps, Wash. D.C.; Captain Samuel G. Frierson, M.I.T., Boston, Mass.; 1st Lieuts. George H. Beverley and Frederick I. Patrick, Kelly Field, Texas; 1st Lieuts. Warren R. Carter and John R. Morgan, Randolph Field, Texas; 1st Lieut. John D. Corkille, Wright Field, Dayton, Ohio; 1st Lieut. Samuel P. Mills, New York University, New York City.

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NEW ENGINE TORQUE STAND AT MATERIEL DIVISION

By the News Letter Correspondent

THE engine torque stands at Wright Field, Dayton, Ohio, were destroyed in January, 1931, by fire, since which time the endurance testing of engines for the Air Corps has had to be carried on with a small emergency stand at the field or at a distance at the plants of engine manufacturers. The latter procedure has proved especially inconvenient in obtaining standard test results and, in addition, has involved the stationing of an engineer, whose services were much needed at home, in the manufacturer's plant to direct procedure, with the loss of efficiency always entailed when persons employing different methods attempt to work together under conditions not equally familiar to all concerned. For this reason in a year when special emphasis has been placed on power plant development, the work of the Power Plant Branch of the Materiel Division has been decidedly handicapped in not having at its disposal its full facilities for testing.

No sooner, however, had the torque stands been put out of commission, than plans for a new torque stand laboratory were worked out and put in execution. In the new plans, the Air Corps had the benefit of the experience of several engineers who had directed engine testing from the early days at McCook Field. Many hundreds of hours had made them familiar with what was necessary, what unnecessary; what advantageous, what disadvantageous in the construction and operation of a torque stand. Ideas were thrashed out and presented to the Construction Quartermaster who, with intelligence and insight incorporated them in a building which with its equipment gives to Wright Field one of the most efficient and modern torque stand laboratories in existence today.

Reduction of Noise, Vibration and Fire Hazard. In planning the new Laboratory, special effort was expended toward as great a reduction of noise, vibration, and fire hazard as possible. In appearance the building resembles a series of square concrete stacks, 40 feet high, joined by enclosed passages. The materials employed are reinforced concrete and steel. Except for a few doors and some bomb proofing, which will be described later, no wood is used even in the interior. Centered between the stacks are seven torque stands, six for the use of the Power Plant Branch for the endurance testing of engines, and one for the use of the Aircraft Branch for the testing of propellers under installation-on-engine conditions. Each engine support pier is a huge block of concrete sunk twenty feet into the ground, completely encased in cork to prevent transmission of vibration to any part of the building, the jointure at the floor being filled in with tar used because of its resiliency. Thus, these blocks are completely independent of the rest of construction. The old torque stand supports were not independent and transmitted serious vibrations to the walls of the engine room and to the operators.

Engine Room. Each torque stand is placed in its own engine room where a clearance for swinging an 18-foot diameter propeller or test club prevails. To protect the walls around the engine, so that in case of engine failure, parts of the engine or propeller will not crash into the concrete, 2 x 6's of red oak laid edge to edge for 16 feet, form a bomb proof. These are covered, for appearance sake, with aluminum. In one of the rooms an especial insulating material is experimentally installed, consisting of 20 x 20-inch pads of rock wool filler held in place with aluminum wire set in aluminum panels which are fastened to angles bolted in the wall.

The great stacks are for the reduction of noise outside the building and are so constructed, one about each engine room, that the sound waves striking the 40-foot high walls can find an outlet only through the top of the stack which is open to the sky. Pilots have commented on hearing this roar five hundred feet up against the noise of their own motors and propellers, so the plan would seem to possess efficacy.

Operator's Room. Between each two engine rooms is an operator's room, used for observing the engine during test, with very thick walls of reinforced concrete and a vibration-deadening insulation of heavy cork. These rooms are especially light and well ventilated to prevent harm to operators from strong gas fumes. Doors, front and back, provide easy egress. Glass observation windows on either side look into the two engine torque rooms. Twin installations of instruments and controls for conducting tests and recording observations are placed on the wall near these windows. There are instruments for measuring engine pressures, temperatures, fuel flow, oil flow, fuel consumption, engine speeds, etc., and any number of controls.

Fuel Rooms. Small rooms within the operating rooms contain gasoline and oil supply tanks for supplying and weighing the oil and gasoline used by the engine or engines under test. These also are well ventilated and are provided with fireproof drop doors separating them from the operator's rooms in emergency. Two independent fuel systems are provided in order that engines may be run simultaneously on different fuels without any intermixing or change of fuel characteristics. These tanks are in no sense for storage purposes, holding only amounts necessary for the uses of the occasion and being filled by pumps from tanks without the building. The oil storage building is located just in front of the torque stand laboratory.

The engine stands are of the "fixed" type, that is, no provision is made for determining torque reaction. Power determinations are accomplished on the

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dynamometers. These test stands are for the purpose of endurance testing of engines under conditions simulating those of airplane installation as nearly as possible.

The Laboratory cannot be said to be wholly complete; pavements to the doors are lacking, the ground about is still upturned and in uncouth state, furnishings are not all installed, nor equipment in all the operators' rooms, but engine tests were being run on one of the stands this week and a look of satisfaction rests on the faces of the engineers who have been busy there.

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GERMAN BANDMASTER JOAZ LEARNS AMERICAN JAZZ

Members of the band from the German Cruiser KARLSRUHE, in port at Galveston, Texas, were the guests of the Third Attack Group band recently. At dinner they were the guests of the 8th Attack Squadron. During the morning, the visitors listened to the Group instrumentalists go through their paces. After dinner, the Germans were given a chance to try their skill at American Jazz.

Though their language was different, the two bands found an international language in sheet music. The Americans gave suggestions from time to time and at the close of each piece applauded vigorously. When the German sailors concluded their visit, Bandmaster Joaz addressed those present in German, and then led his men in cheers for the Fort Crockett Band. Warrant Officer Karl Mueller, leader of the Group Band, acted as interpreter and informed those present that the German bandmaster, in expressing his appreciation for the favors extended, had stated that, although his organization had met many other bands, they had never before been accorded the courtesies and kindness accorded them by the Third Attack Group Band.

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NEW STANDARD TWO-PIECE FLYING SUIT FOR THE AIR CORPS

The well known one-piece "Monkey" winter flying suit, long familiar to the Air Corps, is due for the shelf. Complaints from the service concerning its various faults led to the design and development at the Materiel Division of a new two-piece suit which was tested and accepted as standard. A production order went into effect which will provide gradual replacements for old equipment.

The old one-piece winter suits, according to these complaints, were too bulky and heavy - the weight was from 14 to 16 pounds, varying with size - they were too difficult to get in and out of unaided, the wind went down the collar and through the interlocking fasteners, and they kept a body warm enough only if the temperature did not fall below zero. The new two-piece suit was tested out to -40 degrees Centigrade and found adequate.

Horsehide is used for the outer covering instead of calfskin. This material has a non-scuffing feature and is less heavy and bulky and more flexible than the calfskin. The lining and collar is of lamb shearling, fur-tanned and electrified - a process by which curly wool is submerged in acid and made straight. The straight wool is smoother and softer in appearance and less irritating to the skin. Interlocking fasteners used the entire length of arms, trouser legs, and jacket front facilitate getting into and out of the suit. Also different size of trousers and jacket can be issued if a better fitting ensemble is thus obtained. Leakage of air through the interlocking fasteners is prevented by an overlapping arrangement of the fur. By test in the cold chamber this arrangement served to increase the warmth of the suit 10 degrees. A specially designed collar, fitted close to the back of the neck and held in place by an elastic band attached to each side and extending over the head, provides smugness for the back of the neck. Heavy elastic suspenders allow the shoulders to carry the trouser weight.

The two-piece feature has decided advantages also. Separate jackets and trousers can be made to fit much better than can any one-piece garment. The trousers are especially unique. When the interlocking leg fasteners are open, they lie flat and blanket-like upon a table. They are donned by putting the arms through suspender straps and zipping up the legs. There is no drawing up of the under trouser legs, as with the flying suit that must be stepped into. When fastened they present a remarkably neat fit about the waist. If a pilot were flying in different climates, as from Maine to Florida, the trousers and coat could be worn with interlocking fasteners zipped up at the beginning of the journey and unzipped as the temperature grew too warm for comfort. The aviator may wear the jacket with lighter weight trousers, or pair the trousers with other coats. Double protection is provided by the overlapping of trousers and jacket to a part of the body easily affected by cold. Together the two pieces weigh 4 pounds less than the superseded one-piece type.

The two-piece flying suit is produced in a lighter weight garment also, suitable for fall and spring wear, or for weather too cold for the summer gaberdine but not cold enough for the full winter weight. This suit is made of silk pile fabric after the same model. Pilots trying out the new suits attested to their superiority in terms of no faint praise, and the fact that commercially the type is being adopted seems to give a seconded motion of approval.

HAZARDOUS FLIGHT THROUGH HAIL STORM

ONE of the most hazardous airplane flights ever taken near Scott Field, Belleville, Ill., took place on March 21st, when a new B4-A Bomber was caught in a violent line squall and hail storm. That the plane was not wrecked with possible loss of life was entirely due to the excellent judgment and flying displayed by the pilot, Lieut. Richard K. LeBrou, Rockwell Field, who was ferrying the plane from the Keystone factory to his home station.

Lieut. LeBrou, with Major N.S. Talbott, Field Artillery Reserve, Dayton, and Sergeant Gilreath, Rockwell Field, as passengers, took off from Scott Field about 2:30 p.m., for Springfield, Mo. Weather reports indicated good flying conditions to that point, but soon after passing St. Louis, the clouds began to get lower and thicker. Lieut. LeBrou swung his plane to the north, intending to land at Lambert Field, but with very poor visibility and not knowing the exact location of the field, he failed to locate it. He then headed east across the Mississippi River with the storm following closely, and located the emergency landing field at Lebanon, Ill. Just as he was preparing to land there, he saw the big airship hangar at Scott Field about six miles to the south and headed in that direction. The storm, pushed along by a 55-mile an hour wind on the ground and at least twenty miles an hour stronger at a thousand feet, reached Scott Field first and completely blotted out all view of the ground.

Flying at 300 feet, Lieut. LeBrou finally located the big balloon hangar, but was still unable to see the landing field. The hail was cutting and bruising the faces of both the pilot and Major Talbott, and after two vain attempts to reach an altitude low enough to land, Lieut. LeBrou swung away from the field and climbed up out of the hail storm. The wind was so strong that he was blown well east of Scott Field, and after the storm passed it took him about half an hour of hard wind-bucking to reach the landing field again.

Both Lieut. LeBrou and Major Talbott sustained badly bruised and cut faces from the hail, and the latter's hand was also badly pounded as he attempted to shield Lieut. LeBrou's eyes during the attempted landings at Scott Field.

Considerable surprise was expressed by the Scott Field officers that the fabric of the plane had not been damaged, for the hail had been large and some windows were broken or cracked. There was considerable tenseness at the field while the plane was battling the gale in its attempted landings, and this tenseness continued after the plane disappeared in the storm. There were many sighs of relief when the roar of the motors brought the message that the plane had been successful in riding out the storm.

Lieut.-Col. John A. Paegelow, commanding Scott Field, was greatly pleased and relieved when the plane landed safely, and sent a letter to the Chief of the Air Corps commending Lieut. LeBrou for his excellent judgment and piloting during this dangerous flight.

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WOMAN WINS PISTOL CHAMPIONSHIP IN PANAMA

According to the France Field Correspondent, a Mrs. Thompson (initials not given), the only woman to enter the Panama Canal Department Pistol Championship Matches, took the high score and, since she has defeated all civilians on the Isthmus, can be called the champion.

The Matches were held at Fort Clayton from February 13th to 20th, and teams from most of the military posts in the Canal Zone competed. All firing was done on the Standard American Target, which has a three-inch "ten" ring. Ranges were fifty yards slow fire, twenty-five yards quick fire and twenty-five yards rapid fire, the course being repeated on the second day of firing, which made the total possible score 600 points.

Corporal Andrew Bodner, 7th Observation Squadron, received the second place silver medal; Staff Sergeant George F. Brinkman took third place silver medal, and Private Steve L. Sefcovic, 25th Bombardment Squadron, received the last bronze medal. This is Sergeant Brinkman's second placing in Canal Zone Competition, and if he places next year he will be given the Distinguished Pistol Shot Medal. Private Sefcovic also has two legs on a medal, having placed last year in the competitions in Hawaii. France Field only placed third in team competition, but came home with half the medals.

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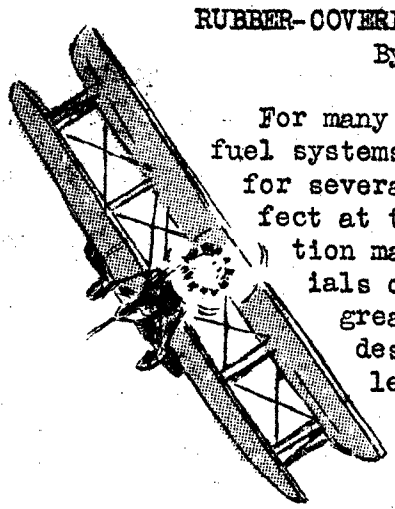
RUBBER-COVERED METAL FUEL TUBES DEVELOPED FOR AIRCRAFT

By the Wright Field Correspondent



For many years copper tubing of .035 wall thickness for aircraft fuel systems has been the recognized standard of the Air Corps, but for several years past a program of research has been kept in effect at the Materiel Division, Wright Field, in which the vibration machine has been kept going day after day testing materials other than copper, in an effort to obtain a tubing of greater desirability and offering greater resistance to the destructive action of vibration. As in all aircraft problems, the weight factor was a foremost consideration.

Various metals were placed under experiment, those of aluminum alloys seeming to prove equal to copper, but aluminum having advantage of lighter weight. No promise of signal success was achieved until the expedient of covering the metal with rubber was tried out. This led to an intensive course of development, the result of which promises a more efficient and durable fuel tubing than any ever obtained in the past.

In this type of tubing a rubber especially compounded to withstand gasoline and oils is vulcanized on aluminum alloy. On the vibration machine this tubing developed endurance limits considerably beyond the standard copper tubing or that of other metals uncovered and the weight per foot covered proved no greater.

In the development of this equipment which has been carried on with the cooperation of the industry, three distinct types of tubing have appeared. The first was a soft rubber tube slipped over the metal and wrapped with friction tape. This tubing was attached to the fittings in the conventional manner and under vibration failed at the fittings. In the second type, the rubber was vulcanized directly to the metal tube and fittings. While this construction was more successful under test, it necessitated the making up of tubing and fittings to predetermined lengths which added greatly to the complications of installation as well as to the supply problems throughout the service.

The third type of construction offered vast improvement over the previous types under experiment. A rubber tubing was indirectly vulcanized to the metal tube. In the fittings the tube was flared and so designed that the shock-absorbing and sealing effect of rubber was carried inside the fitting, allowing decided flexibility at the jointure. With this design the tube may be cut to any desired length and the fittings attached as needed. This aluminum flared tube construction stands up in the vibration machine approximately 250 hours as compared to a 25 hours' duration for the standard copper tubing or the aluminum or nickel tubing uncovered.

Besides the greater durability factor, the rubber-covered tubing brings an added safety factor to the fuel or oil system, for in instances where the metal tube has broken under vibration the rubber tube has served as a protection coating, preventing the fuels from leaking through. The latest report from the Power Plant Branch announces the completion of 325 hours of testing on the vibration machine without failure, which would seem to indicate extremely durable equipment. A quantity has been purchased for service testing and reports will be awaited with interest.

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THEORETICAL DESTRUCTION OF INDUSTRIAL PLANTS IN SOUTHERN CALIFORNIA

According to the News Letter Correspondent from March Field, Riverside, Calif., 1st Lieut. Westside T. Larson is one of the busiest individuals in the Air Corps these days. He says: "Your Correspondent does not know just what grudge he has against Southern California, but believe us when we say that this hard working Operations Officer seems to take a fiendish delight in laying low the yards, docks, harbors, industrial centers, shipping and rail commerce of this section. Tactical application of Squadron and Group training problems have taken the planes of the Group to many parts of the southern section of the State in the course of their simulated bombing missions. Theoretically, the Southern Pacific Railroad yards at Yuma, Arizona, are destroyed; the great docks and oil storage at San Pedro and Long Beach are only a barren waste; the reservoirs, docks, railroad yards and industries at San Diego are only a memory. Last week the Hoover Dam at Boulder City was destroyed by the 11th and 31st Squadrons before the unsuspecting contractors had even gotten the project well under way. To cap it all, the Operations Officer says the end is not yet in sight and many more maneuvers and problems remain to be carried out before the end of the training season in May.

INSURANCE FOR THE AIR CORPS

INSURANCE is a subject of vital importance and interest to all Air Corps personnel. In a racent interview with Captain Ray A. Dunn, Air Corps, the writer discovered the following interesting facts:

Air Corps officers will buy any kind of insurance if the salesman has a good selling talk.

Approximately eight out of every ten officers do not know what their basic premium rate is.

Five out of ten cannot tell offhand under what provisions they are insured and what benefits they are to derive from their contracts.

Nine out of every ten never have read their insurance contracts.

Ninety-five out of a hundred have never instructed their beneficiaries in the proper method to collect their insurance should it unfortunately become a claim.

Many officers are now holding insurance contracts which are not collectable in case of death due to aviation, but they do not know it. Others have entered into contracts on the promise of an agent to some provision or other which is not entered on the contract over a company officer's signature; therefore the agreement is not valid.

Several officers have secured insurance at a very high extra premium rate on the assurance of the agent that after paying in a number of years, the insured could stop payments and accept extended insurance for a stated period of years, making the cost for the total number of years insured less than the cost of a policy in some other company selling insurance at a lower extra premium. This is not possible, because at the beginning of the extended insurance period, the insured would have to keep on paying the extra premium or carry the extended insurance without protection for the aviation hazard.

Sounds like very severe criticism, but check up on yourselves and see how much of it pertains to you. That is Captain Dunn's advice, and also that all officers should get out their insurance policies while the subject is in mind. Check them over carefully; see why you are insured, what you are insured for; what the cost is. See if it can be collected, and how it can be collected. Instruct your beneficiaries in the proper method of collecting, and it might be a good idea to give a little instruction in how to make the best use of it when it is collected. Read all attachments and riders pasted on the contract, the application, the medical certificate and any others attached. All these attachments form part of the contract and are very important. It will be an education, and in addition you might find out you are not insured at all and that you are paying highly for this "Privilege."

No officer would buy a thousand dollar automobile without first finding out what the works look like and what makes it run. Before entering into a $10,000 contract for insurance, why not find out what the works of that contract look like and how it operates?

Captain Dunn is keeping constantly in touch with the Insurance problem in aviation, and will be pleased at any time to assist any officer of the Air Corps in the solution of insurance problems. He can be addressed at the Air Depot, Middletown, Penna.

While connected with the Daniel Guggenheim Fund for the Promotion of Aviation, he compiled a report for the Fund which was published and given a large circulation. It contains the only complete set of aviation mortality experience tables for all flying in the Unites States from its inception. This report is believed to have brought about the stabilization and standardization of the underwriting of the aviation risk within the life insurance industry. It brought about a drastic reduction in the extra premium rates being charged for the aviation hazard, especially for the Air Corps.

At the present time Captain Dunn is preparing for publication on May 1st, a book which he expects will still further assist in the underwriting of the aviation hazard and, in addition, bring about still further reductions in the extra premium rates.

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Readers of the News Letter may have noticed the different cover page designs featuring recent issues. These designs are sketched on mimeograph stencil sheets, and it is proposed to continue this practice until final selection is made of a cover design for regular use. Those skilled in work of this kind are invited to send in cover designs, drawn on paper or sketched on a mimeograph wax sheet (Cellotype or Mimeotype). They will be used in due course of time and full credit given the artist.

V-6254, A.C.

SOME "DOPE" ON HIGH ALTITUDE FLYING

SOME very interesting figures on high altitude flying, aided by the wind, are disclosed in the official report covering the record flight of Captain Reuben C. Moffat, Air Corps in XP-6D airplane, A.C. No. 29-260, on January 18th, between Wright Field, Ohio, and Bolling Field, D.C.

The distance of 382 miles was flown in an elapsed time of 85.6 minutes, the average ground speed being 268 miles per hour. The time consumed in circling for landing was .8 minutes, so that the average speed, omitting time for landing, was 270 miles per hour. The height flown, corrected to standard altitude, was 25,000 feet, the true airspeed at this altitude being 209 miles per hour. The time flown at high altitude was 50.3 minutes, during which 175 miles were covered, at an average speed of 209 miles per hour. During the climb, 38 miles were covered in 16.2 minutes, at an average speed of 140 miles per hour. In the descent, which consumed 19.1 minutes, 73 miles were covered, at an average speed of 230 miles per hour.

The air miles flown totalled 286. To the uninitiated this figure would appear to be erroneous, since it is stated above that the distance flown was 382 miles. It should be explained here that by air miles flown is meant the distance which would have been covered by the plane had it not had the benefit of a helping wind. The report gives 96 miles as the benefit derived from the wind in 84.8 minutes, Adding these 96 miles to the 286 miles, gives the total distance of 382 miles. The average velocity of the helping wind is given as 67.8 miles per hour.

Figures on fuel consumption show that of the total of 100 gallons of gas carried at the start of the flight, 94 gallons were consumed, the average rate fuel consumption being 65.9 gallons per hour, and the probable rate of consumption at 25,000 feet, 70 gallons per hour. The time on the auxiliary tank (50 gallons) was 47 minutes, and on the main tank (44 gallons) 38.6 minutes. The rate of fuel consumption on auxiliary tank was 63.8 miles an hour and on the main tank, 68.4 gallons per hour.

Captain Moffat states that during level flight at 25,000 feet, it was necessary to throttle back slightly to hold RPM down to 2400. Also, the engine "supercharger altitude" while on automatic control gradually dropped from 1500 ft. in climb to 400 in level flight at first, and then after about five minutes in level flight it fell below zero, and the manual control was used to hold zero. When allowed to function on "automatic" it fell back to 1000 feet.

Two bottles of "gas" oxygen were carried with manually-operated regulator. There was sufficient oxygen left to last about 15 or 20 minutes longer. The cockpit of this airplane is comfortably warm and sheltered. The compass seemed to be accurate. The automatic supercharger control functioned satisfactorily, as it was purposely set to give -1000 ft. "supercharger altitude" in order to permit fine adjustment by manual control.

In concluding his report, Captain Moffat states: "While wind aloft data obtained in Washington after the flight indicated wind velocities of 110 mph from the SW at 10,000 feet, such data was not available before the flight and it was not possible to choose the altitude of maximum wind velocity. During the flight a decided cross wind effect was noticed, so that it was necessary to head some 20° to 30° to the right of the true course. It is therefore likely that the absolute wind velocity was close to 100 mph, but not directly in line with the course flown. It is believed that the P-6E flown the same day at a height of 10,000 feet might have likewise reached Bolling Field in less than 90 minutes."

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LANDING A BLAZING PLANE IN A JIFFY

"What might have resulted in a tragedy was averted by the quick action of 2nd Lieut. Ivan L. Farman and Staff Sergeant Paul S. Patterson," reports the March Field Correspondent in referring to a recent flight of Curtiss-Condor #1, the "Command Plane" of the 11th Squadron. This plane was flown on a motor test, two new motors having just been installed. Some undetermined factor resulted in the left motor throwing a connecting rod and tearing two large holes in the crank case. A blaze broke out at once. At that particular time the plane was directly over the field at an altitude of 3,000 feet. Eye witnesses state that Lieut. Farman broke all known records in placing the big plane on terra firma, but that his speed was equaled by the agility demonstrated by Staff Sergeant Patterson, crew chief, in using the fire extinguisher to quench the fire.

STUDENTS TRANSFERRED TO BASIC TRAINING STAGE

The following-named students at the Air Corps Training Center, Randolph Field, Texas, were transferred to the Basic Stage on March 2nd last, after four months of intensive training on the primary stage:

SECOND LIEUTENANTS

Charles T. Arnett, Inf.
Milton W. Arnold, Cav.
Royden E. Beebe, Jr. Cav.
William J. Bell, FA.
Gordon A. Blake, CAC.
Wendell W. Bowman, FA.
Daniel F. Callahan, Jr., FA
Carl W. Carlmark, FA.
Gunnard W. Carlson, CE.
Joseph F. Carroll, CAC.
James B. Corbett, Cav.
Carl F. Damberg, Inf.
Charles F. Densford, FA.
Charles B. Dougher, Inf.
Marcellus Duffy, CAC.
Robt. E.L. Eaton, Inf.
Robert F. Fulton, CAC
John C. Gordon, Inf.
Russell H. Griffith, Inf.
Louis A. Guenther, Cav.
William A. Hampton, CAC
George F. Hartman, Inf.
John T. Helms, Inf.
E.W. Hockenberry, Cav.
David W. Hutchison, Inf.
Arthur R. Kerwin, Jr., Inf.
Lester L. Kunish, Inf.
Robert M. Lee, Cav.
Raymond T. Lester, Inf.
A.J. McVea, FA.
Paul G. Miller, CAC.
Henry K. Mooney, Cav.
Ernest Moore, CAC
David N. Motherwell, CAC
Hilbert F. Muenter, Inf.
Donald R. Patterson, Inf.
John R. Skeldon, Inf.
Jacob E. Smart, Inf.
Dean C. Strother, Inf.
Robert A. Stunkard, CAC.
E.J. Timberlake, Jr. Inf.
Peter O. Ward, Inf.
Gerald E. Williams, Inf.
Hoyt D. Williams, FA.
Richard H. Wise, Inf.
Donald N. Yates, Cav.
Millard C. Young, CAC.
John A. Feagin, Inf.

FLYING CADETS

William W. Amorous
William T. Bogen
Joseph D. Caldara
Clayton B. Claasen
Claire B. Collier
Marcus F. Cooper
Quinn M. Corley
Charles A. Cowing
Harry Crutcher, Jr.
Harold E. Dahl
Cecil Darnell
Charles M. Dittrich, Jr.
George A. Doole, Jr.
James R. Ducrest
Samuel B. Eisenmann, Jr.
Ephta W. Fator
Vincent Ford
James W. Furlow
Edward M. Gavin
John Gebelin, Jr.
Laurel J. Gephart
Lars J. Halversen
Harold D. Harmon
Lester S. Harris
Donal R. Hutchison
Earl D. Johnson
Edwin A. Joyce
Joseph J. Kelley
Leonard P. Kleinoeder
Charles H. Lesesne, Jr.
Horace H. Manchester, Jr.
Clark L. Miller
Dolf E. Muehleisen
Russell I. Oppenheim
Bruce C. Pettigrew
Everett C. Plummer
Harry N. Renshaw
Craven C. Rogers
Stuart E. Rutherford
Morris H. Shedd
William J. Sindo
Arthur H. Skaer, Jr.
John H. Smith
Richard B. Stophlet
Charles W. Stouff
Luther W. Sweetser, Jr.
John B. Thomas
Orgille E. Tibbs
Richard F. Vavrina
Donald N. Wackwitz
Lynn H. Webb
Clyde H. Wood, Jr.
Raymond C. Woodward
Leonard E. Zongker

NONCOMMISSIONED OFFICERS TRAINING IN GRADE

Mr. Sgt. Julius A. Kolb
St. Sgt. Ancel L. Lovvorn
Tech. Sgt. Raymond Stockwell
Sgt. Charles E. Cunningham
St. Sgt. Arthur Hanson

FOREIGN STUDENT

1st Lt. Nicolas H. de Leon, Guatemala

(Kane)

The following is a brief resume of the class which started training at the Air Corps Primary Flying School, Randolph Field, on November 2, 1931:

218 students reported for training (this figure includes 7 students who were held over from the previous class).

Of these 218 students, 9 were found physically disqualified for flying training prior to the start of training.

Making a total of 209 students starting flying training with the class of November 2, 1921.

Of these 209 students, 92 have been eliminated for flying, and 6 have been turned back to the class starting March 2, 1932.

1 was transferred to Basic Stage

1 was eliminated due to physical reasons after start of training.

1 student is in the hospital

1 student officer was killed in an aircraft accident, 2d Lt. W.L. Parham.

107 are still active and were transferred to the Basic Stage.

Of these 218 students, 100 were officers of the Regular Army (1 Captain, 3 1st Lieuts., 4 2nd Lieuts., who had seen service with the Army, and 92 2nd Lieuts. who had graduated from the Military Academy in June, 1931). There were four foreign students taking training, 1 officer of the German Army, 1 1st Lt. from Guatemala and 2 Chinese civilians. A total of 104 Flying Cadets reported for training. There were also 10 enlisted men, who reported for training in grade.

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The Premier Pictures Company of San Antonio, Texas, are considering the production of a picture to be made at Randolph Field depicting cadet life and training. The scenario for this picture was written by Mrs. P.D. Glassford, wife of a retired Army officer. The plans for this picture are now undergoing some changes and will be submitted to the Commanding Officer of Randolph Field and the War Department for approval within the near future.

V-6254, A.C.

LUFBERY HALL NAMED AT SELFRIDGE FIELD

THE name of the Bachelor Officers' Building at Selfridge Field, Mt. Clemens, Mich., has been designated as "Lufbery Hall," in honor of Major Raoul Lifbery. In chosing a name for the bachelor quarters, careful consideration was given to all distinguished personnel who served with the First Pursuit Group during the War. The record of service of Major Lufbery, together with his characteristics and personality made the choice of his name for the new building very appropriate and fitting.

Major Lufbery was born in France of French parents on March 14, 1885. His first visit to the United States was in 1906. About three years later he enlisted in the United States Army and was sent to the Philippines, where he remained for more than two years. When his period of enlistment expired, he left the service. He first became interested in aviation in 1912 while at Calcutta, India, where he became a mechanic for Marc Pourpe, a French aviator.

At the outbreak of the War, Lufbery enlisted in France in the Foreign Legion as an Infantryman, and transferred a few days later to the aviation service. His first service at the front was as a pilot in the Voisin Bombardment Squadron 106. He completed his aviation training at Nieuport and was sent to the Escadrille Lafayette on May 24, 1916. He shot down his first enemy plane on July 30, 1916, in a battle to the east of Etain in the Verdun sector. During the next few months he had chalked up four more enemy airplanes to his credit. On December 27, 1916, he had a thrilling single-handed battle with an enemy aviator and finally shot him down in the French lines. In this battle he narrowly escaped death, four bullets of his adversary having passed through the cockpit of his airplane very close to his body. This was his sixth victory.

In all, Lufbery received official confirmation for seventeen victories, although at a conservative estimate this is no more than half the number of planes which he actually destroyed. In January, 1918, he was commissioned a Major of the United States Air Service, and was sent to Issoudon. Shortly afterwards he was sent with the 94th and 95th Pursuit Squadrons to Villeneuve in the Champagne Sector. On May 19, 1918, while assigned to the 94th Pursuit Squadron, Major Lufbery went in pursuit of an enemy photographic plane which had crossed the French lines and which flew directly over the American aviation field. While attacking this airplane, his own machine burst into flames and started to crash to the ground. Major Lufbery jumped clear of his plane and was instantly killed.

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DIGRESSIONS OF A FERRY PILOT

Army custom dictates that an officer shall not carry an umbrella, but a certain Lieutenant at Selfridge Field thinks that he knows a worse breach of Army tradition - that of absconding with a Colonel's baggage, and his personal baggage at that!

It fell to the lot of one of the pilots of the 36th Pursuit Squadron the other day to ferry, in one of the new two-seater Pursuit ships, a Colonel and wartime pilot, from Selfridge Field to Scott Field, Ill. Fully aware of his passenger's rank and importance, the pilot diligently kept to his course and in excellent time deposited his superior officer at his destination. But alas, completely satisfied when his passenger had descended from the plane and certain that his mission was therefore completed, he blithely "gave her the gun" and departed.

Imagine his embarrassment when he reached his home station and was handed a telegram which his commanding officer had just received:

"Dear Brett:

Your very excellent pilot got me to Scott but took off with my baggage. Thanks for the courtesy."

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Ripley had something in one of his cartoons the other day about an airplane which took off from a certain point, flew in a constant direction for half an hour and then landed in the same place it had taken off from. A couple of new aviators fresh from the Air Corps Training Center almost duplicated the feat of Ripley's plane a few weeks ago at Selfridge Field. Ripley's explanation was that the speed of the plane was just equal to the velocity of the wind. "We hesitate to offer an explanation concerning these two Pursuit pilots," says the News Letter Correspondent, "but here's the story:

"The pair, on one of their first cross-countries since arriving at the field, departed in P-13's one sunshiny morning for Indianapolis, which lies about 250 miles southwest of Selfridge. They flew their "course" for two hours and a half, and not having arrived at their destination and fearing that their gas might be running low, they landed at an airport at a likely little town to ascertain their bearings. The town was Lansing, Michigan, and they were every bit of 75 miles from the point of departure. Nothing daunted them, for back they flew to Selfridge, refueled and again took off. It is reliably reported that they made it.

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MISCELLANEOUS NOTES FROM HERE AND THERE

AFTER a month's duty mapping the flooded areas of the Yazoo, Ouchita and Red Rivers for the Corps of Engineers, Captain Lloyd C. Blackburn, Photographic Officer, Maxwell Field, Ala., returned to his home station. Bad weather greatly handicapped his mission, but he apparently rendered valuable assistance, judging from the letter of commendation which he received.

Six ships of the 40th Division Aviation, California National Guard, were recently sent in formation to fly over Mount Whitney, highest point above sea level in the United States, and on the same flight to cover Death Valley, the lowest point. Excellent pictures were secured of the formation over snow-covered Mt. Whitney. The very low temperatures encountered washed out the motion pictures taken, because of the brittleness of the film.

Lieut. Lindsay Bawsel received the commendations of the Commanding Officer of Mitchel Field and high authorities in Washington for his work in evolving a standard method of radio procedure and usable code for air-ground liaison and artillery adjustment. Many misunderstandings between ground and ship had arisen in the past because of the complicated training regulations and code sheets then in effect. Lieut. Bawsel, with the help of Lieuts. Covington, Cork, Wilson and Johnson, worked out a procedure which, when tried, won the praise of of both ground stations and observers.

Three officers and one noncommissioned officer from March Field, Riverside, Calif., recently became members of the Caterpillar Club. Late in the afternoon of February 21st, 2nd Lieut. James A. Ronin and Sergeant Everest F. Waid, of the 11th Bombardment Squadron, were enroute from Dallas to El Paso, Texas, with a new Keystone B4-A for the 7th Bombardment Group. Caught in the fury of a fierce blizzard about 100 miles east of El Paso, it became impossible to maneuver the big plane with any degree of certainty, and it was evident that a crash with Guadalupe Peak was imminent. Sgt. Waid suffered a broken leg when the parachute dragged him over a rocky hillside. Both men were taken to William Beaumont General Hospital at El Paso. Lieut. Ronin was found to have suffered only superficial bruises and was released in a day or two to return to March Field. At this writing, Sgt. Waid is still at Beaumont General Hospital, but convalescing rapidly.

Following a collision in the air about 25 miles west of March Field, 2nd Lieuts. Phineas K. Morrill and Richard W. French "bailed out" when the wings of their P-12's began to break up. This accident, on Feb'y 23rd, occurred during a diving attack on "enemy" planes at an altitude of 5,000 feet. The two officers received minor scratches about the face in getting free from their damaged planes. Both made their way through some wooded country to a farm house where they reported the accident to the Post Operations Officer. Lieut. Marvin F. Stalder was the other pilot in the three-plane element.

A great marine disaster overtook Flight "A" of the 16th Observation Squadron, Langley Field, Va., on the morning of March 14th, when it was learned that the good ship DIXIE (a small cabin cruiser recently purchased by the Flight) had sunk at her berth at the boat house with no hands on board. It is reported that the boat was anchored at low tide underneath the pier and when the tide rose the cruiser soon filled with water and went to the bottom. Distress signals (consisting of much and varied shouting and running up and down on the pier) were sent out by Lieut. Brownfield, ship's Captain, and Sergeant Miller, Chief Engineer, but remained unanswered, due no doubt in part to the failure to use the International Signals of Distress. A tow boat was secured and the sunken boat pulled upon the beach, where an inspection showed the only damage to be the loss of the propeller. The boat has been completely refinished, the fishermen are getting out their tackles, the fish stories are starting, and all is peace again upon Back River.

The 24th and 78th Pursuit Squadrons, France Field, Panama Canal Zone, successfully tested liquid oxygen for use in the tropics. This is the first time on record that oxygen has been used successfully in this climate. Surprising as it may seem, temperatures of ten degrees below zero were encountered at altitudes above 30,000 feet. The greatest difficulty was encountered after the descent - trying to become acclimated to the dry season heat after wearing much winter flying clothing, or as much as could be located on the field. Winter equipment is not a normal item of issue in the Canal Zone.

Snowbound and cut off from all communication with the world, a man in a cabin near Big Bear Lake in the San Bernardino Mountains was contacted by two March Field pilots recently. Flying over the lake, which is nearly 7,000 feet high and only 35 miles from March Field, Captain Charles Douglas and 2nd Lieut. Burton Hall, 34th Pursuit Squadron, dropped messages conveying the news to the snowbound resident of his wife's death in Redlands and directions for meeting a relief party to get him out.

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Throughout the winter, pilots of thr Third Attack Group at Fort Crockett, Galveston, Texas, have led and participated in the search for several hunting and fishing parties which had become lost. Recently, enlisted men of the Group helped to save a disabled shrimp boat which was rapidly drifting out to sea, and helpless in the face of a stiff wind. The craft was first sighted in front of one of the Coast Artillery batteries. When it became apparent that the ship and its occupants were in need of aid, soldier watchers phoned the Coast Guard station. Three ships were sent to the aid of the imperiled fishermen. It was dark before they found the boat and, consequently, they had to use parachute flares before locating the craft, which was lying in the trough of waves estimated to be 12 feet high. Third Attack Group soldiers, under the direction of Major Davenport Johnson, tried to launch a rescue boat on the beach, but were unable to do so on account of the high waves.

On the morning of February 8th, the entire personnel of March Field turned aside from normal activities to participate in the ceremonies incident to the presentation of the "Soldier's Medal" to Private Mauchline, of the 70th Service Squadron, one of the units of the 7th Bombardment Group. After the presentation, a parade and review of the troops was held in honor of Private Mauchline. The Medal was awarded on November 2, 1931, the citation stating that the award was in recognition of the heroism displayed by Private Mauchline on the night of June 13, 1931, in the Bario os San Roque, Philippine Islands, at which time he dived headfirst into a well thirty feet deep and containing eighteen feet of water, for the purpose of effecting the rescue of a comrade. At the time of this act, Private Mauchline was a member of the 66th Service Squadron, Camp Nichols, having come to March Field on the November Transport.

Test landings have been made on the flying field which is being developed on the golf course at Fort Shafter, Hawaii. The field will not be ready for use for several weeks on account of recent rains. Lieut. Edwin W. Rawlings, of Luke Field, made several landings and take-offs without difficulty, using an O-19 Observation plane. He said the surface of the field was rough, but will be in good condition as soon as the grass grows. The field is in the middle of the golf course, and is intended for the use of courier planes from Department Headquarters and for hospital planes bringing patients to Tripler Hospital.

Authorities of the 8th Corps Area, Fort Sam Houston, Texas, recently expressed appreciation to the American Airways, Inc., El Paso, Texas, for the transportation over their lines without expense to the government of Corporal Clarence Ranck, Air Corps, from Tucson, Arizona, to El Paso, Texas, for emergency hospital treatment.

Mrs. Iona Coppedge of the Legal Branch, Materiel Division, Wright Field, Dayton, Ohio, on February 23rd, successfully passed all Department of Commerce tests and received private pilot's license No. 24,295 for piloting "all types of licensed aircraft."

This is the first instance of a woman of the Wright Field staff of employees seriously taking up the study of flying and establishing a definite flying rating for herself. Mrs. Coppedge has about 18 hours of solo work to her credit.

The entire 18th Composite Wing, Honolulu, T.H., consisting of 12 Bombers, 12 Observation, 12 Attack and 12 Pursuit airplanes, assisted in the Bicentennial celebration of Washington's birthday on February 22nd. At 2,000 feet altitude, the Wing flew over the City of Honolulu, remaining over the city until the head of the ground troops reached the Capitol. The Bombing planes then left the formation, forming a single column at 1,500 feet altitude, and dropped flowers simultaneously over the troops. The Naval Air Force from Pearl Harbor, together with the visiting fleet, also assisted in this exercise, the planes flying at an altitude above 3,000 feet.

The new mess hall of the 23rd Bombardment Squadron, Luke Field, T.H., is probably most unique among Army buildings. It was designed and built solely by Squadron personnel, in consequence of which things are arranged, particularly in the kitchen, the way a Mess Sergeant sometimes dreams a Mess Hall should be. Modern kitchen equipment was purchased by the Squadron Commander, such as a potato peeler, meat grinder, ice-cream freezer, buffing, polishing and whipping outfit (all of the foregoing electric), butter cutter, bread and meat slicer, steak tendering machine, and many other tools and pieces of equipment which make for more satisfied cooks, better and cheaper meals and last, but not least, a happy and well fed squadron.

The 34th Pursuit Squadron, March Field, Calif., has selected a squadron insignia and forwarded the design to The Adjutant General for approval. The emblem, a Thunder-bird in black upon a circular red background, was selected from a number submitted by the Otis Art Institute of Los Angeles, Calif.

INSPECTION DIVISION PERSONNEL INJURED IN AIRCRAFT ACCIDENT

PILOTING a new airplane on a ferry flight from the Douglas aircraft factory, Santa Monica, Calif., to Newark, N.J., for the use of the New Jersey National Guard, on February 16th, 1st Lieut. Delmar H. Dunton, Air Corps, accompanied by Master Sergeant C.E. Peterson, was forced to land about six miles south of San Simeon, Calif., and about 70 miles from the nearest railroad, due to engine trouble. Due to the faulty engine, the landing was made in the only accessible place on the rocky coast. In landing, the plane hit a rock, nosing over and throwing Sergeant Peterson the full length of his belt from the cockpit, causing a compressed type fracture of the fourth dorsal vertebra. Except for the shock, Lieut. Dunton was uninjured.

The following extracts are from a letter received from Sergeant Petersen which was written two days after the accident:

"We started from Santa Monica about 2:00 p.m., and had a real good weather report. After flying for a while, we encountered a few rain squalls, nothing to speak about though. We kept on flying and after about one and a half hours our motor started missing. We were flying along the coast and outside of the ocean which was not very inviting, landing fields were very scarce. We saw a place which looked fair on the coast, made for it and flew over it once and, while not of the best, we came around again and when starting into land, our engine decided to quit and did. We were sure thankful that it did not do it two minutes earlier, as that would have set us down in the breakers of the Pacific which might have made us wet for which we had no appetite. Well, landing we rolled along for about 200 ft. and then we hit rock and a soft spot and the first thing we knew our ship was on its nose and then on its back, and yours truly decided on a nose dive out of the cockpit - involuntary of course. My head met the immovable ground and buried itself therein. My first sensation, at least it seemed that way to me, was of shock, however, the second thought quickly developed that I must release my belt and clear the airplane in case fire broke out. I then saw that my brief case and hand bag had followed me and found my bones were in need of re-rigging and that the only thing I could do was to remain where I was. By this time two men, life-time convicts I found out later, came racing over to help us. Lieut. Dunton was standing up clear of the airplane but I could not move.

A car drove in to get me and was promptly mired, and as the million bones in body only wanted to stay stretched out, they decided to carry me for a mile to the only house in the neighborhood. By this time there were quite a few men and even some women who wanted to administer to the poor aviator so that I began to feel like a hero if it were not for the wonderful tune of pain that my bones were playing like a jazz orchestra from the sharp high 'C' to the dull bass drum.

The postmaster finally suggested bringing a sled and have his mule drag me up to the house to which they all agreed. I did not care. When they got me up I was carried in and laid on a bed and some of the women started to wash the mud off my face and give me some hot coffee and resting there I felt quite easier. Then the Superintendent of the road camp came and he suggested that they take me into their camp and if I needed a Dr, they could send for one 50 miles distant, and in the meantime the camp nurse - another convict by the way, and a very famous one - former Kid McCoy would take care of me. They loaded me in a truck on about four mattresses and with the two men, who got to us first, on either side to brace me, we started out on that six mile drive over one of the worst pieces of road that could exist but with the smoothest driver I've ever seen, who sure saw that I rode easy. Getting into camp they carried me to their hospital and Kid McCoy took charge of me - and how. For the first hour I wanted them to leave me alone. All they got off was my flying suit which was an ordeal.

While I was resting and dreaming, Kid McCoy had bathed my face and hands, bandaged my skinned nose, put hot water bottles on my feet to get them warm, rubbed my hand and massaged the sprained wrist on my left arm, then I began to take a little interest again and talked to Lt. Dunton and the boys, who were mostly convicts. Lt. Dunton was shaken up but could move around and was terribly worried about me. We spent the night there and I must admit it was long as I could not sleep because whenever I coughed I was advised by the aching bones in my chest that something was wrong. Lt. Dunton and Kid McCoy got up about five or six times to talk to me and see if I needed anything. In the morning they asked me if I could move, to which I answered 'yes' as I wanted to get word out. They loaded me in the same truck again and drove up the highway which was under construction and almost impassable. There were several slides on the road which had it blocked, the first one a special gang was working on and after 30 minutes we got through. The second one they carried me over and then they had an improvised ambulance which brought us to San Simeon and the big Hearst Ranch, where the transport was supposed to pick us up and take us to March Field. It got there right after we did and after some delay we took off and arrived at March Field at 7:35 p.m. That night they took me to the hospital and also took care of Lt. Dunton and here I have been going on two days."

Due to necessity for his return, Lt. Dunton was ordered back to Washington, but Sgt. Petersen's injury required his transfer to Letterman Hospital where he is confined to his bed in a cast and with every prospect that, although his injury is not considered serious, he must remain there for several weeks before he can be safely moved. NOTE: Sgt. Petersen is home now and doing nicely.

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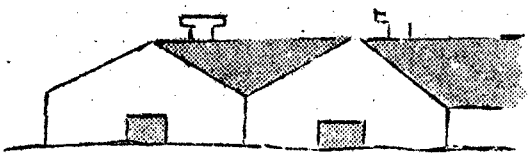
SUPPLY DEPARTMENT OF THE ROCKWELL AIR DEPOT



The principal change in conducting the business of the Depot Supply Department of the Rockwell Air Depot during the past year was the consolidation of the Station Supply Department with the Depot Supply Department. This change proved very satisfactory and greatly improved the general efficiency of the supply units at this station.

Under the old system there were two distinct supply units with separate accountability, the Station Supply Department serving all local organizations by drawing its supplies from the Depot proper. Under the new arrangement, the two offices were consolidated, the former Station Supply Officer serving as assistant to the Depot Supply Officer. The principal effect was the elimination of overhead, reduction of operative personnel and more direct methods of transacting business. Lost motion, overlapping of activities, with the resultant confusion, were completely eliminated. The change became effective June 30,1931, At that time the combined personnel of the two departments numbered 79. At the present time the total civilian strength is 67. This is a reduction of 12 employees, representing a saving of approximately $17,000. per year.

Within the old Station Supply Department, now known as the Local Issue Branch of the Depot Supply Department, many changes and improvements were effected. Practically all wooden shelving were discarded and replaced with modern steel shelves and bins.

The business of the Depot Supply Department continued to increase throughout the year. There is more property now on hand than in any past period. The storage facilities have been taxed to the limit, largely due to the new types of aircraft and equipment developed during the past year. Notwithstanding this increase in volume, together with the inevitable slowing up of activities during the period of the consolidation of the Station and Depot Supply Departments, this department continued to maintain a very fast record in filling requisitions for general use. The general average of time required to fill requisitions, from their receipt until actual shipment, has been approximately two days.

A matter of considerable importance to the Depot Supply Department is the maintenance of close liaison betweel all activities of the Rockwell Control Area and the Depot proper. This involves a general spirit of helpful cooperation and close contact between depot personnel and the personnel of outside activities. This condition of coordination during the past year was developed to a most satisfactory point. Stocks of supplies of all outside stations were reduced to a minimum. All outside supply departments are functioning efficiently and in a most satisfactory manner. From a supply standpoint this depot has no serious problems at this station or in the field. A well balanced stock of all necessary items is maintained at the depot and prompt service afforded other stations

The above results were achieved to a considerable extent by frequent visits to outlying districts by Depot personnel where local problems are studied and discussed on the ground. This eliminates a great amount of letter writing and, of course, was made possible through the use of Government-owned airplanes.

Within the past few weeks an aerial freight transport service was established between March Field and the Rockwell Air Depot. A regular transport plane is being utilized for this purpose. Special freight containers were constructed to facilitate handling of property and to permit of carrying the maximum load. On the last load of this transport, 1900 lbs. of freight were carried. This service results in a saving of freight charges, packing charges and affords a rapid service delivery. One of the principal benefits of this scheme is the development of personnel in handling this business and provides valuable data on the possibilities of freight carriers during periods of emergency. Careful records are being maintained for future reference.

During the past year the various departments of the Rockwell Air Depot were placed on a budget system which governs the allocation of pay for civilian employees. Under this scheme the various departmental heads know exactly where they stand in regard to funds for this purpose and it is thought that they can now more easily and economically supervise the expenditures of such funds. This step is a forward one and in line with modern business methods. The morale of the civilian employees at this Depot has been especially good.

Throughout the year every effort was made to improve the service of the Depot Supply Department. All personnel has been well impressed with the fact

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that the chief function of an Air Corps supply organiz air-planes in the air. Although special demands at times f e regu-lar routine of business, the thought of service was ke mind. When it is considered that the Depot Supply Department ies approximately a million pounds of freight a month and has 35,000 items of stock on hand, valued at over $30,000,000, it is believed that, taking into account the personnel involved and the cost of operation, this Depot will compare most favorably with any civilian concern in the country.

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CAPTAIN FRANK McKEE SUCCUMBS TO HEART ATTACK

Captain Frank M. McKee, formerly a member of the Army Air Corps, on March 12th, was found dead in bed at his home in Columbus, Ohio. The physician who was immediately summoned stated that death was due to organic heart disease.

Captain McKee was born at Anderson, Ind., October 19, 1891. He served an enlistment in the Navy from 1911 to 1915. In February, 1917, he enlisted in the Aviation Section, Signal Corps, and was assigned to the Balloon School at Fort Omaha, Neb. Following his appointment as a 2nd Lieutenant on February 14, 1918, he was ordered to duty overseas, and was placed in command of a balloon repair depot at Is-Sur-Tille. Later he was transferred to Romorantin.

While receiving instruction in dirigibles at Cranwell, England, he was promoted to 1st Lieutenant, February 21, 1919.

Following his return to the United States, he served tours of duty at Langley Field, Va.; Ross Field, Calif.; Scott Field, Ill.; and Norton Field, Columbus, Ohio. He held three flying ratings, being rated Airship Pilot Aug. 13, 1921; Airplane Pilot, January 16, 1922, and Balloon Observer, May 5, 1922. He attended the Primary Flying School at Carlstrom Field, Arcadia, Fla., for six months in 1921, and following his graduation attended the Advanced Flying School at Kelly Field, Texas, September, 1921, to October, 1922.

After his promotion to 1st Lieutenant in the Air Corps, Regular Army, in 1927, Captain McKee was assigned to the command of Norton Field, Columbus, Ohio, and on this duty supervised Reserve flying operations in Ohio, Indiana, Kentucky, and part of West Virginia.

Ill health prompted him to resign from the service in 1929, and immediately thereafter the Curtiss Company secured his services to become base manager for their flying service at Port Columbus, Ohio. He resigned from this position several months ago to accept appointment as State Director of Aeronautics, tendered him by the Governor of the State of Ohio.

While in the Air Corps, Captain McKee was Operations Officer of three National Free Balloon Races, and participated in two of these events as an Air Corps entrant.

Governor White, of Ohio, in commenting on the untimely death of Captain McKee, stated: "I had entire confidence in him in the air as well as on the ground, not only as a pilot but as a public servant. He did much to make aviation safe."

Captain McKee was instrumental in having Ohio cities mark their communities as a guide to airmen. Under his direction, Ohio air laws were revised and the State launched an intensive air safety campaign. The deceased is survived by his widow, two daughters, aged 8 and 11, his parents, two brothers and a sister.

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WAR TIME FLYING INSTRUCTOR DIES IN TUCSON, ARIZ.

A sincere friend and well wisher of the Air Corps, Captain Golden Harold Benefiel, a World War pilot, died Sunday morning, February 28th, a victim of pneumonia.

Captain Benefiel, a native of Lincoln, Neb., was born June 3, 1890. He enlisted in the Aviation Section, Signal Corps, May 20, 1917, and served eight months with the 38th Aero Squadron, attaining the grade of Sergeant. He was then assigned to Chanute Field, Ill., for flying training and, upon completion of same, was commissioned a 1st Lieutenant, January 30, 1918. Ordered to duty overseas in February, he received advanced pursuit training in France at the 3rd Aviation Instruction Center and aerial gunnery training at Cazaux. He was then assigned to duty as flying instructor. Following his honorable discharge, Feb. 4, 1919, he went back into the hotel business and held responsible positions with several prominent hostelries in Omaha, Chicago and Los Angeles. When the Pioneer Hotel was opened in Tucson, Ariz. in December, 1919, he became the General Manager thereof and held this position until his death.

Lieut. Thad V. Foster, A.C., Control Officer, Southwestern Airways, in a recent communication, stated: "Captain Benefiel has been of great assistance to the Air Corps as a coordinator between this office and the City of Tucson. In addition, he has been a helping hand to all pilots, both military and commercial, as shown by the 'Hangar,' a room reserved for 'Air Activities' in the Pioneer Hotel, Tucson."

Captain Benefiel left a widow and three children, aged 15, 9 and 6 years, respectively.

RADIO

Flight "A" of the 16th Observation Squadron, Langley Field, Va., recently flew a three-ship radio mission to Toledo, Ohio, for the purpose of checking Airway Radio Beacons and Airway Weather Reports. No trouble was encountered on the trip to Toledo. On the return flight to Uniontown, Pa., however, the flight was forced down, due to low ceiling, and landed one by one in a small field at New Cumberland, Ohio. When the weather cleared and an attempt was made to proceed to Pittsburgh, the flight was unable to get off the soft field with full load. This made it necessary for passengers and baggage to be carried to the nearest Airport by auto, which was at New Philadelphia, Ohio. This Airport was only eight miles by air from the field where the flight landed, but was not shown on either strip or State maps, so that the field was unnoticed by any member of the flight. After landing at New Philadelphia, the airmen tuned in on the Smoky City and, finding the weather was clearing, proceeded to that city, where the usual good hospitality of Captain Eaton was enjoyed. The next morning the flight proceeded to Middletown, Pa., where one ship was left for a motor change. Lieut. Roy T. Wright remained with it, while the married members of the flight returned home. The only bad feature of the trip was the fact that Lieut. Wright failed to arrive home in time to keep a date with his one and only.

Among the activities of the 7th Bombardment Group, March Field, Calif., recently, was a communications problem carried out in cooperation with the Navy. A Bomber from the 11th Squadron, a Ford Transport from the Navy, the Naval Ground Station at Point Loma, San Diego, and the 1st Wing Ground Station at March Field were involved. After the completion of the mission, a critique was held at the 1st Wing Operations Office, and it was announced that the mission had been successful in every respect. Plans are being made for several repetitions of such missions in the near future.

Two weeks of communications exercises between the 15th Observation Squadron, Scott Field, Ill., and the 6th Infantry were recently brought to a close by a successful demonstration problem at Jefferson Barracks, Mo. The demonstration problem included all the various methods of communication between Infantry troops and an airplane, and was witnessed by the entire garrison at Jefferson Barracks.

During the period of the exercises, two officers from Scott Field, 2nd Lieuts. Edgar A. Sirmyer, Jr., and Evan W. Chatfield, were on detached service with the 6th Infantry and acted as liaison officers. Practically all of the other officers of the 15th Squadron were given practice working with the Infantry troops, and the News Letter Correspondent believes this experience will greatly improve the results to be obtained during the latter part of May when similar work will be conducted at Camp Custer, Mich., in the Corps Area problem.

In the final demonstration, a loud speaker was set up on the parade ground at Jefferson Barracks, and in this way the entire garrison was able to hear all the signals transmitted from the airplane. Lieuts. Joseph A. Bulger and William Schulgen handled the airplane end of the work and everything went through without a slip.

Two-way radio, telephone, pyrotechnics, wing and motor signals, and drop messages were used by the airplane, while radio code, panels, flares and pickup messages were used to send messages from the ground troops.

The airplane used its regular 132 sets, while the Infantry used its 79 transmitter. It was found that this 79 set worked satisfactorily for about 15 miles in sending and about twice that distance in receiving. The powerful broadcasting stations near St. Louis gave considerable interference, especially to the observer in the airplane. The difficulties of the airplane team were also increased by the sending of enemy planes to attack the plane conducting the mission.

The Infantry officers seemed very pleased with the results obtained and their attitude will probably be reflected in the scheduling of more missions at a later date.

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The annual bombing maneuvers of the Third Attack Group at Camp Stanley, Tex., were recently completed, and the personnel returned to Fort Crockett, Texas. From all reports, the bombing was a success. Pilots of the Group were kept busy ferrying the personnel to and from the range.

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Engineering News

Photographic Print Washer. - One print washer was received from the Lenz Washer Company, Lebabon, Missouri. This is one of the largest commercial print washers manufactured to date. It has a diameter of five feet and a depth of eight inches and will be used for washing transformed prints approximately 15 by 16 inches, taken in conjunction with the 5-lens camera. The present Lenz washer is 38 inches in diameter and is not of sufficient capacity for use at the Materiel Division for washing prints of this size. The large washer will be tested at the Materiel Division to determine its suitability for Air Corps use.

Aerial Mapping. - Three representatives of the Materiel Division, Captain Bruce Hill, Lieut. J.F. Phillips and G.A. Magnus, went to Bowman Field, Ky., in the Fairchild XF-1A airplane for the purpose of mapping territory in the vicinity of Fort Knox, Ky. Photographs were taken for the purpose of making a rough mosaic which will be used while photographing an accurate mosaic at lower altitudes. The 5-lens (Type T-3A) camera was used and two strips were flown at 20,000 feet, covering approximately 1,100 square miles. Three strips were flown at an altitude of 15,000 feet, covering an area of approximately 1,500 square miles. Altogether, 145 exposures, producing 725 negatives, were made and will be processed at the Materiel Division preparatory to making a mosaic.

Study of Carbon Monoxide Gases. - A study is being made of the carbon monoxide gases in the cockpits of service airplanes and the necessary changes to the exhaust manifolds to correct conditions where found dangerous. The M-S-A indicators are being used in this project.

Mud Guards for Service Airplanes. - Mud guards are being designed for Douglas Basic and Primary training airplanes.

Fog Navigation. - The installation of the permanent equipment for the full-scale Loth cable landing system at Patterson Field is nearing completion. This installation promises a great improvement over the previous one in respect to range.

Navigation Computer. - Ten Type A-4 navigation computers were procured by the Materiel Division and are being shipped to various Air Corps flying fields for service testing. The computer is used by the navigator for obtaining and maintaining in flight the correct airplane heading under conditions of cross wind. Compass, airspeed indicator and a drift indicator are presupposed as airplane equipment.

The computer consists of a celluloid disk, marked with rimmed parallel lines, and with a brass protractor representing 360 degrees of the compass. Disk and protractor are concentric but work independently of each other. Brass arms and markers, also scaled, represent the ground speed, drift, and air speed of the plane. The air speed and drift are known quantities obtained from the airspeed and drift indicators. The heading of the plane obtained from the compass is a known quantity. By a simple manipulation of the arms and markers based on the known quantities in two distant headings of the plane, and the drawing of two intersecting lines, the heading at which the compass should be set to correct for the cross wind, as well as the ground speed of the plane, is learned.

Mathematically this is a problem of two triangles with a side of each equal (those represented by the air speed of two airplane headings) and one side common (that represented by the wind speed). The prolongation of the ground speed lines of the two triangles gives the new angle from which the correct setting is obtained. The A-4 indicator, however, solves this geometric problem with the precision and simplicity of a slide rule, and with very little practice should be of definite aid to the navigator. The present model, it is thought, can be made an inch smaller, and by substituting a lighter metal or bakelite for the brass, be greatly reduced in weight for convenience in handling in flight.

Photographic Printing Completed. - Printing of photographs taken by Captain Albert W. Stevens, piloted by Lieut. J.F. Phillips, on their recent mapping mission on the west coast for the Coast and Geodetic Survey, has been completed. A total of over 9000 oblique negatives and 3000 vertical negatives were printed, under the direction of Captain Bruce Hill, C.E., at Wright Field, making a total of 1,550 composite 5-lens photographs. The printing on this project was at the rate of approximately 75 transformed photographs per hour, which is a higher rate of speed than heretofore attained.

Special Transport Airplane. - A study has been undertaken of the necessary equipment and rearrangement of a transport airplane into a cafeteria airplane, equipped with steam-heated food table of sufficient capacity to feed a hundred men.

WAR DEPARTMENT ORDERS AFFECTING A.C. OFFICERS

CHANGES OF STATION: To Rockwell Field, Calif.: Major Shepler W.FitzGerald, upon completion course of instruction at Army War College; 1st Lieut. Delmar H. Dunton from Office Chief of the Air Corps.

To Office Chief of the Air Corps, Washington: Captain Theofore J. Koenig and 1st Lt. Charles M. Cummings, from A.C. Tactical School; Captain Harlan W. Holden from Scott Field, Ill.; 1st Lt. Pardoe Martin from Mitchel Field.

To Langley Field, Va.: 1st Lieut. Newton Longfellow, from O.C.A.C., Washington; 1st Lt. Edward A. Hillery, Candler Field, Atlanta, Ga.

To Mitchel Field, N.Y.: Captain John G. Colgan from Lunken Airport, Cincinnati, Ohio.

To Fort Benning, Ga. (For duty as Instructor): Major Benjamin G. Weir, from Command and General Staff School, Ft. Leavenworth, Kansas.

To Lunken Airport, Cincinnati, Ohio, (Duty with Organized Reserves): 1st Lieut. Bushrod Hoppin, from Philippines. Previous orders revoked.

To Chicago, Ill.: 1st Lt. Lewis S. Webster from San Antonio Air Depot, for duty with Organized Reserves, 6th Corps Area.

To Crissy Field, Calif.: 1st Lt. George H. Brown, from Chicago, Ill.

To Norton Field, Ohio: 1st Lt. Oscar L. Rogers from Brooks Field, Texas.

To West Point, N.Y.: Major George E. Lovell, Jr. from Air Corps Tactical School, Maxwell Field, Ala., upon completion course of instruction.

To Brooks Field, Texas: Captain Clarence H. Welch from Randolph Field.

To Fort Sill, Okla.: 1st Lt. John P. Kirkendall from Randolph Field.

To Wright Field, Ohio: 1st Lt. John M. McDonnell from Army Industrial College, Washington, D.C.

RELIEVED FROM DETAIL TO AIR CORPS: 2nd Lt. John William Read to Field Artillery, 2nd Division, Fort Sam Houston, Texas.

DETAILED TO THE AIR CORPS: 2nd Lt. Joseph B. Zimmerman, Field Artillery, to Air Corps Training Center, Randolph Field, Texas.

PROMOTIONS: To Lieut.-Colonel, rank March 1,1932 - Major Horace M.Hickam. To Captain, rank Feb.25,1932 - 1st Lieuts. Malcolm S. Lawton; rank Feb. 26 - Jasper K. McDuffie; rank March 1st - Mark R. Woodward, Howard K. Ramey, Lionel H. Dunlap, Harold R. Rivers, Harold D. Smith, Marion L. Elliott, Earle J. Carpenter, James P. Hodges. To 1st Lieut., rank March 1st - 2nd Lieuts. James B. Burwell, James A. Willis, Jr.

RETIREMENT: 1st Lieut. Hjalmar F. Carlson, Mitchel Field, to proceed to his home to await retirement.

Assignment of 2nd Lt. Milton M. Towner, Panama, to Chanute Field, revoked.

Captain Russell L. Maughan, Philippines, to duty with Department of Commerce for one year.

1st Lt. John P. Doyle, Jr., Cavalry, transferred to Air Corps, rank 12-1-31

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NEW MITCHEL FIELD HOSPITAL

Mitchel Field reports with justifiable pride the opening of its new hospital on Feb. 20th. It replaces the old wooden building previously used as a hospital and constitutes an important part of the $3,000,000 Mitchel Field reconstruction program. It is a two-story brick building, costing $125,000, and accommodates 25 patients. It contains the most modern and efficient equipment, and it is believed to be the most complete of Army Post hospitals yet built.

The first floor houses an 8-bed enlisted men's general ward, flight examination rooms, two dental rooms with a connecting laboratory and waiting room, an X-ray room and a pharmacy, modern kitchen and mess hall and noncommissioned officer personnel quarters. On the second floor are found a surgical ward, officers' private and semi-private rooms, main operating room, sterilization room, laboratory and semi-public ward room which can be used for women patients, and enlisted personnel quarters. The basement contains the prison ward, emergency operating room, first aid and sick call room and morgue, prophylaxis room, heating plant, supply office and vaults. Each ward has a radio outlet from which a choice of two programs may be had. A unique system of silent signaling from the wards to the ward offices calls the attendant wherever he may be. The heating plant is automatic both in heat regulation and coal feed. A water cooling system brings cool water to all parts of the building, and all apparatus installed is up-to-date. The eye examination room is one of the unique parts of the flight examination suite, being completely enclosed and having an exceptionally ingenious arrangement of all eye testing instruments. The officers, Majors Chase, Moulton and Myers, and the enlisted personnel attached to the hospital are doing everything in their power to make it the Army's outstanding Medical Detachment.

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The following officers were detailed as students to attend the Air Corps Engineering School, Wright Field, O., starting August 1st: 1st Lts. James F. Early, James M. Gillespie, Mervin E. Gross, Paul W. Wolf, James E. Parker, A.R. McConnell, 2nd Lts. George F. Smith, Clarence S. Irvine, John T. Murtha, Jr., Robert F. Travis and Roscoe C. Wilson.

(Kane)

NOTES FROM AIR CORPS FIELDS

Material on this and subsequent pages are not for publication.

Kelly Field, San Antonio, Texas, March 11th.

A new class of students began training at the Advanced Flying School on March 7th. The class consists of two Regular Army officers, one German Army officer and 101 Flying Cadets.

The Kelly Field ambulance airplane made two emergency trips to Fort Clark within the past week. On the first trip Lieut. Charles G. Pearcy brought back three enlisted men to the Base Hospital at Fort Sam Houston, and on the second one Master Sergeant Peter Biesiot brought back an enlisted man of Headquarters Troop, First Cavalry, who had been seriously burned.

The 22nd Photo Section was very busy of late making photos of the new class. The Section exposed and developed 101 portraits of students in two days and made 5 contact prints and 2 identification prints, reduced size, from each portrait negative in the next three days.

The Advanced Flying School will soon have 16 new P-12B airplanes. Captain Earl H. DeFord left March 11th for Mather Field to ferry back the first one.

Colonel F.M. Andrews and Captain A.L. Kincaid arrived here March 4th from Santa Monica, Calif., with two Douglas amphibians. They will await the arrival of three Bombers from Langley Field, and upon receipt of orders will proceed to France Field. The following personnel will make the flight in addition to Col. Andrews and Captain Kincaid: Captains George L. Usher and Milo McCune, Lieuts. Marion L. Elliott, Corley P. McDarment, J.M. Gillespie, L.S. Kuter, Sergeants James H. Boyles, W.K. Maginnis and W.J. Heldt.

Lieut.-Col. Glenn I. Jones, Medical Corps, Washington, D.C., and Captain Myron R. Wood, Air Corps, made an inspection of Randolph and Kelly Fields on March 8th and 9th.

Major H.A. Strauss, Materiel Division, Wright Field, was a visitor at Kelly Field on March 4th.

Major John C. McDonnell, Office of the Chief of the Air Corps, stopped here on a ferry trip from the Douglas Plant, picked up Major-General Edwin B. Winans, Corps Area Commander, and took him to Washington.

Capt. Thomas W. Blackburn, Fort Crockett, was a visitor here March 9th.

Master Sgt. Charles S. Meloney left on furlough March 2nd, after which he will be retired. He was Post Sergeant Major for a number of years.

Sergeant Stephen P. Riales 41st School Squadron, left March 10th for service at Luke Field, Hawaii.

Privates A.L. Merrifield and O.V. Price, 41st School Sqdn., returned from Chanute Field, Ill., where they pursued courses in Airplane Mechanics and Photography.

Mitchel Field, L.I., New York, March 16th. (Johnson)

Captain Ira Eaker literally landed his Lockheed Altair here Feb. 14th. His retractable landing gear failed to work when he prepared to set the ship down. Thru his good judgment, the damage was confined to the propeller blades and a section of plywood covering on the bottom of the fuselage.

The dinner dance given by the Officers' Club at the Rockville Center Country Club February 19th to the officers and ladies of Mitchel Field was well attended.

Lieut. Hex McClellan recently ferried a Bomber from Bristol, Pa., to Rockwell Field, Calif., and returned in a Douglass O-38.

Lieut. Joseph W. Baylor and Miss Mildred Kaltenburn, of Louisville, Ky., were married February 20th. Much to our regret, they left us for Hawaii on March 10th, but we wish them all the happiness in the world.

Off to a slow start in the Second Corps Area Basketball League, the Mitchel Field team finished strong, winning the last ten games by comfortable margins. Taking 14 out of 18 games gave them third place in the League. The coaches of the team were Lieuts. R.F. Travis and D.M. Moler, while the team members were Snow, Wilson, Seberle and Rees from the 5th Obs. Sqdn.; Head, Rarick and Lapsley from the 1st; Mozocco, Lindal and Eddie from the 99th, and Spore from the 29th Engineers.

The Squash Team, composed of Lieuts. D.P. Laubach, R.F. Travis, R.J.Dwyer, S.E. Anderson, J.K. Gerhart, C.G. Goodrich and R.O. Cork, won three out of their four squash matches, defeating the Greenwich Country Club 4 to 1, the Ostend Handball Club of Far Rockaway, 4 to 1 and 5 to 0, and losing to the New York Athletic Club, 3 to 2.

Two new Triangular C-1 type parachutes were received here and tested. The results of the tests so far show the Triangular Chute to differ from the standare chute in these respects: Triangular Chute has little or no oscillation, opens from 35 to 50 feet higher, has less drift, is lighter and more comfortable. It has a lower shock load of opening, and handles slightly easier.

Colonel and Mrs. Howard entertained a number of officers and their wives at a buffet supper at their quarters, honoring Mrs. Howard's niece, Miss Katherine Terrell.

Nichols Field, Rizal, P.I., February 12th.

The post was stunned by the loss of two of our most able pilots, 1st Lieut. Raymond C. Zettel and 2nd Lieut. Elmer L. Meguire, A.C., who were killed in the crash of a Keystone B-3A while attempting a forced landing about 5:30 a.m., on January 15, 1932.

Lieut. Zettel, pilot; Lieut. Meguire, Observer, and three enlisted men took off at 5:10 a.m., for a six-hour off shore patrol mission in connection with the annual maneuvers of the Philippine Division. After having been up for about 20 minutes, and while out over Manila Bay, the right motor cut out. At that time it was very dark, and only the outlines of terrestrial features could be made out, which made forced landings exceedingly hazardous. With the aid of the good motor, Lieut. Zettel reached the shore and made a perfect approach to what appeared to be an ideal beach, but what actually was a flat of very soft mud. The ship rolled about 60 feet and nosed over. Lieuts. Zettel and Meguire were hopelessly trapped and were smothered by the watery muck. The nose of the ship was so buried in the mud that rescue was impossible. The three enlisted men escaped with minor bruises and gasoline burns.

Lieut. Zettel was to have returned to the States in June of this year. Lieut. Meguire had just been assigned to this station, having arrived in the Department on the December transport.

On January 13, 1932, eight planes and their crews left Nichols Field for Clark Field to participate in the Philippine Division Maneuvers. The detachment made several reconnaissance missions while at Clark Field. On January 19th, the detachment was split, one half going to Del Carmen, Pampanga, P.I., the other half going to San Miguel, Tarlac, P.I. After three days of almost continuous flying, the maneuvers terminated and the detachment reassembled at Clark Field.

Private Johnson, 2nd Observation Squadron, made an interesting parachute jump on January 28th, that is, the landing was interesting, inasmuch as he landed in the slough in about three feet of mud.

During January, the 2nd Observation Squadron accumulated about 400 flying hours, most of which was spent on the Philippine Division Maneuvers.

The 28th Bombardment Squadron cooperated to the extent of 131 flying hours with the Philippine Division Maneuvers.

Scott Field, Belleville, Ill., March 23rd.

Orders were received relieving Captains Wolcott P. Hayes and Harlan W. Holden from duty at Scott Field. The former will go to the Tactical School, Maxwell Field, for the course starting in September, while the latter goes to Washington for a tour of duty in the Office of the Chief of the Air Corps. Both officers were on duty with the 15th Observation Squadron since its arrival at this station from Selfridge Field in July, 1930.

Scott Field basketball team completed its regular schedule March 12th, when it dropped a closely fought game to Selfridge Field 30 to 24. The Pursuiters ran away to a big lead in the first half, but Scott came to the front after the intermission and made it a real battle during the last quarter. Both teams moved to Jefferson Barracks the following day for the Corps Area championship tournament. Both won their first round games and the luck of the draw will bring them together again in the semi-final round.

Second Lieut. Lloyd L. Sailor, Air Reserve, reported here March 21st for a period of active duty extending to June 30th, and was assigned to the 15th Obs. Sqdn. for duty. Lieut. Sailor had previously been with this organization for about a year, his last tour of duty ending last fall.

Second Lieuts. Oscar K. Harris, Thomas N. Charles and George H. Stokes, whose extended active duty tours ended Feb. 13th, all reported back from their homes, their tours having been extended to June 30th.

Orders for five newly commissioned Reserve officers to report for an extended tour of active duty were received recently. These five officers, graduates from the last class at the Advanced Flying School, will be a welcome addition to the piloting personnel of the 13th Obs. Squadron. They are 2nd Lieuts. Carl F. Bruce, Benjamin H. Dally, Jr., Jack D. Milstead, Lawrence K. Welch and Maurice W. Wiley.

San Antonio Air Depot, Duncan Field, Texas, March 12th.

The Engineering Department overhauled and repaired the following airplanes and engines during February:

Airplanes overhauled - 2 A-3, 1 A-3A, 3 A-3B, 1 LB-6, 2 O2-H, 1 O-2J, 4 O-19B, 3 P-1C, 6 BT-2B, 3 PT-3, 2 PT-3A, 1 C-7A, Total 29.

Airplanes repaired - 2 A-3B, 1 LB-7, 1 O2-H, 5 O-19B, 1 O-19C, 1 O-19E, 1 O-38B, 2 BT-1, 2 BT-2B, 1 YPT-10, 1 C-9, total 18.

Engines overhauled - 17 R-790, 13 R-1340, 4 R-1750, 3 R-540, 1 R-1690, 7 V-1150, 2 R-975, total 47.

Engines repaired - 4 R-1340, 12 V-1150, 2 R-790, 1 R-975, 18 V-1650, total 37.

Captain Robert J. Wagoner, Quartermaster Corps, and family, were welcome arrivals in our midst on Feb. 27th. Capt. Wagoner, formerly on duty in the of-

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fice of the Quartermaster, 8th Corps Area, was assigned to duty here to relieve Captain Longacre, our departing Quartermaster.

Captain Clarence Longacre, QMC, departed from this Depot March 16th, accompanied by Mrs. Longacre, for a leave of absence of 24 days, visiting in the East, at the termination of which he will sail for Paris, France, for duty with the Pilgrimage of Mothers and Widows to the cemeteries of Europe. Captain and Mrs. Longacre have been with this command since March 2, 1931. Their departure constituted a greatly regretted loss to our official family circle, and they take with them the warmest wishes of the Depot personnel for an enjoyable voyage and happiness in their new activity.

Lieut.-Colonel Frank M. Andrews, of the Office of the Chief of the Air Corps, and Captain Alvin C. Kincaid, of France Field, C.Z., who stopped at Kelly Field enroute piloting two new Douglas amphibians from the Douglas Factory, Santa Monica, Calif., to Panama, afforded this station the pleasure of informal visits, renewing old acquaintances while here.

Lieut.-Col. A.G. Fisher, Commanding Officer, and Lieut. C.E. Thomas, Jr., Depot Supply Officer, took off March 6th on a cross-country trip to the Rockwell Air Depot, Coronado, Calif., for a conference on maintenance of Air Corps supplies and equipment, and to Alameda, Calif., to inspect the proposed site for the new Air Depot to be constructed there.

Major H.A. Strauss, of the Materiel Division, Wright Field, while on a visit to Randolph Field, March 2nd to 5th, to ferry a T1PT-11 plane from that station to Wright Field, visited this Depot as the house guest of Captain Warner B. Gates and family.

Major John Van O. Weaver, Air Corps Reserve, business man of San Antonio, and active in aviation matters, is with us for his second 14-day tour of active duty training, beginning March 7th.

Mr. O.H. Kroh, of Cleveland, Ohio, was a visitor here Feb. 18th to March 1st, as the guest of his son-in-law, Capt. Warner B. Gates, and family.

Patterson Field, Fairfield, Ohio, March 17th.

Major A.L. Sneed, Commanding Officer, Lieuts. D.R. Goodrich and F.M. Zeigler ferried P-12D's to Langley Field, Va., March 3rd. Captain H.W. Flickinger assumed command during the absence of Major Sneed.

Planes were ferried from this station, as follows: A BT-2B to Candler Field Atlanta, Ga., on March 3rd by Lieut. G.V. McPike; P-12C's to Maxwell Field, Ala., March 11th, by Lieuts. P.W. Timberlake and C.S. Irvine, these officers returning the following day in an O-25; an O-25 to Maxwell Field, March 12th, by Lieut. M.B. Asp.

Supplies to Scott, Richards and Chanute Fields were ferried March 9th and 10th by Lieut. R.L. Williamson, and to Stout, Scott and Richards Fields, March 11th-13th by Lieut. F.M. Zeigler.

Major-General Hugh A. Drum, Commanding the Fifth Corps Area, made an official call at this station on March 9th.

Capt. Gardner and Lieut. Sloan, from Sky Harbor, Tenn., visited here Mch.2.

The following were cross-country visitors: Lieuts. French, Strunk and Dum from Selfridge Field; Lieut. Beebe, Sgt. Cote (passenger) and Capt. Giles, pilot, Sgt. Liffler, passenger, from Rockwell Field, Calif.; Lieut. Goodrich, pilot, Congressman Horr, passenger, from Bolling Field; Lieut. Shanahan, Middletown Air Depot; Lieut. Anderson, pilot, Lieut. Nicol, passenger, from Detroit; Lieut. Paul, pilot, Sgt. March, passenger, from Chicago; Capt. Taylor, Mitchel Field; and Capt. Haywood from Chanute Field.

The following officers ferried airplanes to this station for major overhaul: Lt. Jackson from Ft. Leavenworth, Kans.; Sgts. Swisher and Hamlin, Chanute Field; Lieuts. Reed and Bulger, Scott Field; Lieut. Smith, Schoen Field; Major Houghland pilot, Major Long, passenger, from Offutt Field.

The following officers ferried overhauled airplanes to their home stations: Lieut. Anderson, pilot, Sgt. Travis, passenger, in an LB-6 to Kelly Field, Texas; Capt. Paul in O-25A to Maxwell Field; Captain Borum in BT-2 to Chanute Field.

Bolling Field, D.C., March 11th.

On Saturday, February 20th, the officers and enlisted men of Bolling Field were stunned to hear that Lieut. Charles F. Pugh, Air Corps, had been killed in a crash at the Hagerstown, Md., Airport. Lieut. Pugh had been on duty at this Field for a year and a half, coming here from Mitchel Field, N.Y. At the time of his death he was Assistant Engineering and Parachute Officer. His friendly and ever present smile and sunny disposition made him very popular with everyone on duty, both at Bolling Field and in the Office of the Chief of the Air Corps.

AIR CORPS TACTICAL SCHOOL, Maxwell Field, Ala., March 22nd.

The Air Corps Tactical School is recovering from the vacation period from March 11th to 22nd, when all class work was suspended. There was a general exodus of instructors and students promptly on the close of the last class. By plane, motor and train they departed for a complete change that they might

return refreshed mentally and physically to resume the conflict on the maps of Gettysburg. Personnel not on school duty carried on as usual, utilizing the vacation for preparing equipment, etc., for the remainder of the school year.

Recent guests by air include the following: Lieuts. Brownfield and Barnett from Fort Benning, Ga.; Lieut. Smith, U.S.N., Naval Air Station, Pensacola; Capts. George Usher, Milo McCune, Lieuts. Marion Elliott, C.P. McDarment, J.M. Gillespie, L.L. Kuter and R.C.W. Booker passed through ferrying three B-6 planes to France Field, Canal Zone. Lieut. R.R. Gillespie was a passenger or stowaway on this flight. Lieut. Melvin Asp delivered an O-25A to the School, returning to Dayton by rail. Lieuts. "Hungry" Gates and Freddy Von Kimble passed through ferrying O-38's for the New Jersey National Guard.

Orders were received detailing Captains F.I. Eglin, A.K. Ladd and J.I. Moore for duty with the staff and faculty of the Tactical School upon the completion of the course at the Command and General Staff School, Ft. Leavenworth, Kans. These officers graduated from the Tactical School, Class of 1930.

Officers not on school duty are eagerly looking forward to orders for officers to Maxwell for duty other than school. To date there has been a steady loss with practically no replacements, and recent orders received indicate that the few replacements are here only for the summer, after which most of them report for duty as students - a sad disappointment for the few aspiring unfortunates.

A number of out-of-town guests were the inspiration for numerous social activities despite the large number of absentees on spring vacation.

Freezing weather delayed construction activities to a marked degree but drew no comment, as anything which delays construction at Maxwell is to be expected and long experience has led to the adoption of an attitude of resignation.

This same cold weather has had a noticeable effect on mounted activities, though it has not prevented the devoted few from carrying on as per usual.

40th Division Aviation, Calif. National Guard, February and March.

At the regular drill period on a recent Sunday, surprise orders were issued for a test mobilization of this organization. Schedule was suspended and the outfit went into action. Full field equipment, including steel helmets, was issued, packs were rolled, section equipment packed for motor transport, interior guard was posted, flying equipment checked for immediate cross-country. Inspection and roll call was followed by conferences, which brought out many practical suggestions for the improvement in efficiency and time of this operation.

The 1st Battalion of the 160th Infantry, Calif. N.G., were out in force on Sunday, Jan. 10th, their headquarters company and communication personnel, with Staff, joining with this unit in a practical problem involving staff work, infantry liaison, visual reconnaissance, photographic, command, radio, drop and pick-up messages and an observation formation. The panel work was particularly interesting to the infantry personnel, as was the pick-up and drop message work. Enemy positions and activity were simulated. Division and Battalion command posts were established, worked and moved. After the problem, which was divided into several phases, conferences were held between the infantry staff and our own.

The following Sunday drill, the 2nd Battalion of the same regiment worked a similar problem with our unit, involving seven distinct phases, and with detail better prepared and functioning because of the previous experience of the staff. These joint problems were found to be very interesting to all personnel concerned, and a great deal of practical benefit resulted, which should be apparent at next summer's training camp, where the 40th Division Aviation will work for two weeks with the 160th and 185th regiments, comprising the 80th Brigade and the 143rd Field Artillery.

Five planes spent three days, based at Carpenteria, near Santa Barbara, Calif., in a systematic search over an area of some 600 square miles, for the missing Century-Pacific passenger plane which was lost between Bakersfield and Los Angeles. The mission was not a pleasant one, with zero weather over very rough and desolate country. The search was well organized and included some 60 planes, all working over a stated portion of country, searching systematically and using excellent, large scale maps. All gas and oil was furnished by the company which lost the ship. Services of pilots and observers were voluntary.

On Sunday, February 21st, this Squadron had the pleasure of entertaining Major-General Booth and Colonel Isaac Jones. The General was much interested in the operation of this unit, and the officers feel that his short visit was a rare treat to us, not only to know such a distinguished representative of the Regular establishment, but to have some contact with the General Staff, and particularly with one who is proceeding to the Philippines for duty at this time.

Pick-up and dropped messages were practiced with a detachment of the 160th Infantry again on February 21st. All men participating are becoming expert in this method of communication between air and ground and appear to be extremely interested in it.

On February 22nd, the 115th Observation put a 5-ship formation over San Pedro, Los Angeles Harbor, for a joint celebration of Washington's birthday and

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Harbor Day.

On February 28th, this unit was inspected by Major-General Barrows, commanding the 40th Division, and his staff. The inspecting officers stayed over for a barbecue lunch in the open with the officers of the squadron.

The first cross-country trip in many months was recently completed by Lieut. Gilmore, Crissy Field, San Francisco, and return. We have missed this training very greatly in the past year, and hope that shortly we may again participate in this necessary form of training.

Four of our enlisted men recently entered the cadet class at Randolph Field for training - Sgt. Gardner, Privates Macintire, Schmid and McHenry. We wish the lads luck, and hope to see them back with us later.

March Field, Riverside, Calif., March 16th.

17th Pursuit Group: The Group took over the pursuit training schedule at March Field on the first of March. Group formation work and tactical problems are being carried out by the three squadrons of the Group. Ground School for officers of this Group is "Organization of the Army." A two-weeks' course in this subject was completed with an examination on March 1st.

Captain Charles Douglas, Commanding Officer of the 34th Pursuit Squadron, made a hurried cross-country trip to Indianapolis, Ind., being called home due to the serious illness of his father. Flying a P-12E, he left March Field on February 28th and landed at Indianapolis at noon of the 29th. He returned here March 6th, his father recovering sufficiently to permit his departure.

The 95th Pursuit Squadron, led by Lieut. Leo H. Dawson, C.O., made a performance flight to Mather Field and return Feb. 23rd. Oxygen equipment was used by the pilots, part of the 800-mile flight being conducted at 21,000 feet.

Two deaths occurred in the enlisted personnel of the Group during the past month. Staff Sgt. John Campbell, 73rd Pursuit Sqdn., was killed by a freight train on the morning of Feb. 8th. It is thought that he started walking the tracks as a short cut to town to get gasoline for his stalled automobile, and failed to hear the approaching train. Private Leo P. Hetzel, 64th Service Sqdn., was fatally injured Feb. 20th, when his automobile struck a tree on a grade between March Field and Riverside.

Two Reserve officers from the 17th Group recently concluded their active duty tour, Lieuts. Floyd Davidson and Lane W. Sharman.

7th Bombardment Group: Captains Y.A. Pitts and Leo Post functioned as Group Commanders during most of February in the absence of Major J.T. McNarney, who was in the East to secure a Keystone B-4A for ferrying to this station.

Private Harry H. Bissel, Jr., 11th Bombardment Sqdn., and Private, 1st Cl. Earl A. Larimore, 34th Pursuit Squadron, were appointed as Flying Cadets, joining the March class at Randolph Field. Cadet Bissel is the son of Lt.-Col. Harry H. Bissel, Retired, of Coronado, Calif. Cadet Larimore's case is worthy of note because of the fact that during his off hours in the past four years at March Field he acquired the necessary school credits to qualify for appointment. Although it was a long, hard pull, Larimore never once faltered in his drive for the goal of Cadet School. The best wishes of the personnel of the field go to these two men from the ranks.

The March Field basketball team again participated in the 9th Corps Area championship tournament and lacked just a wee bit of having enough drive to come back with the championship. Their record was 4 won and 1 lost. They bowed to the Presidio of San Francisco, the final victors. We will try again next year.

Lieut. Harold F. Blackburn, Reserve, on extended active duty for the past year with the 11th Bombardment Sqdn., took a short leave, and was married Feb. 27th to Miss Martha Louise Bondurant, daughter of W.W. Bondurant, well known in San Antonio military circles through his connection with the Texas Military Institute of that city. The wedding in San Antonio was attended by a small number of invited guests. Second Lieut. K.H. Greeson, Brooks Field, was best man.

Foreign service details continue to aid in the turnover of personnel here. First Sgt. Benevides, 31st Bomb. Sqdn., received orders for the Hawaiian Dept. as replacement for Joseph J. Miller, returning First Sgt., 75th Service Squadron, Wheeler Field. Tech. Sgt. Edward E. King is to leave shortly for Hawaii to replace Tech. Sgt. Elga M. Glendy, who will come to this station after release from Walter Reed Hospital.

France Field, Panama Canal Zone, March 3rd.

On February 10th, all planes and troops returned from the annual maneuvers, and the social life of the post resumed its normal swing with dinners, teas, bridge and the usual Saturday night dancing at the Strangers Club.

Latest arrivals at this station were Lieuts. George E. Rice, Cornelius E. O'Connor and William L. Scott, Jr. The first-named was assigned to the Panama Air Depot, and the last two to the 25th Bombardment Squadron. This is Lieut. Scott's first tour of foreign duty. Both Lieuts. O'Connor and Rice are old timers, each having served one previous tour, the former in the Philippines and the latter in Hawaii. By their increasing girths it seems to agree with them. Scott has hopes.

Duty of a new order for Air Corps officers took Lieuts. Overacker and Forrest away from the command on March 1st. They are to be instructed and trained in Anti-aircraft Intelligence. After two or three days' instruction at Fort Amador, each will be given a detail of forty men, a million miles of telephone wire and a more junior second lieutenant to conquer the peaks of Darien. The plan is to establish observation posts on many of the high hills on the Pacific Coast for the purpose of locating any enemy aircraft which may approach the Isthmus. Lieut. Forrest is sufficiently optimistic over the detail to take rifles and fishing tackle for his amusement and to while away the many lazy hours in the jungle. If the Engineers hack out a trail for him, of which there is a shallow rumor, he may get the chance, but if they don't - we are afraid that the deer, boar, tapirs and snook will continue their peaceful existence undisturbed.

The Provisional Observation Group, under Captain Robert D. Knapp, consisting of the 7th and 44th Observation Squadrons, was recently organized to facilitate training. The 7th Squadron now performs only tactical missions relating to the interior training of an organization, such as formation flying, gunnery, photography, reconnaissance, etc., while the 44th Squadron performs all cooperative missions with the Coast Artillery, Anti-Aircraft, Field Artillery, Infantry, etc. In addition to other missions, the 44th runs the "Fresh Air Taxi Service" from one side of the Isthmus to the other. A suggestion was recently made that the 44th's insignia be changed to a field of "Yellow Taxi" yellow and a taxi meter rampant. This distribution of duties was made with the idea of permitting each organization to perfect its training in its assigned duties, with an interchange of pilots at the end of six months.

Captain A.C. Kincaid and Lieuts. T.L. Bryan and D.B. Schannep departed for the States on one of the best ferry trips of the year, sailing on the REPUBLIC on Feb. 10th. After ferrying two Bombers from Langley Field, Va. to March Field, they will receive two new Douglas Amphibians at Santa Monica for delivery to France Field.

France Field, Panama Canal Zone, March 18th.

The good old ship "Humpty Dump" was caught at its moorings in Limon Bay the early part of the month by the 25th Bombardment Squadron when it commenced its annual bombing practice, and now that the record practice is almost over, the "Good Old Ship" is once more just a wreck. This wet "dry season" has stolen many days from bombing practice, but within three or four days we will know who will have the honor to represent the Squadron at the Annual Matches - and automatically have the length of his tour of foreign service extended for the privilege.

The France Field Pistol Team sponsored an informal meet on the 6th when they invited teams from the Cristobal Pistol Club, Canal Zone Police, and the 2nd Field Artillery to shoot over the France Field Range. Teams consisted of five men and, in addition, there were many competing individually. France Field took second place to the Zone cops, and Corporal Brodner, 7th Obs.Sqdn., was third high man of the day. Future matches are already scheduled, and much enthusiasm is expected in this sport.

Lieut. Neal Ausman, who arrived in December, was stricken with acute appendicitis and rushed to Colon Hospital. He is recovering rapidly from the operation and expects to be home shortly.

During February, the Panama Air Depot overhauled 3 P-12B and 3 O-19C airplanes, and 3 SR-1340D and 2 R-1340C engines. The Parachute Department folded 90 parachutes, inspected 119, repaired 32 and drop-tested 28.

Langley Field, Hampton, Va., March 15th.

Three Bombers left Langley Field March 5th for Kelly Field to join with some other planes and form a convoy for a flight to Panama, with Lieut.-Col. F.M. Andrews, O.C.A.C., Washington, in command. Col. Andrews went to California to secure a plane and is to meet the other members of the flight at Kelly Field. Ten days will be spent in San Antonio, Texas, fixing up passports and other State Department papers for the passage of the flight through Latin America.

Two pilots and one mechanic were assigned to each plane. The personnel from Langley Field are Captains George L. Usher, Milo McCune, Lieuts. J.M. Gillespie, Marion L. Elliott, L.S. Kuter and Corley P. McDarment. The flight will make Augusta, Ga., the first day and perhaps spend the second day at Maxwell Field, Ala. The personnel of the flight are much excited over the prospects of the trip. It is the first time any of them have flown planes through to Panama, but several of the pilots have been in Latin-American countries before and can speak Spanish. They are anxious to get below the Rio Grande and see how much of their Spanish they have remembered or, rather, forgotten.

A Post Boxing Team was formed March 9th, with 18 men from practically every organization on the post turning out. This aggregation includes such well known exponents of the fistic art as "Bob" Skriner, 19th Airship Company, and 1931 Third Corps Area Champion; Scott, fighting lightweight of the same organization; Hutchinson, a clever welterweight of 8th Pursuit Group Hqrs.;

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"Bozo" Morano, battling lightweight of the 19th A.S. Co.; and a host of others who have appeared locally during the past few months.

An old disused building was converted into a gymnasium, with most of the appliances and paraphernalia incident to the production of cauliflower ears already installed. It is hoped by all that this team will prove itself second to none. With such an experienced and willing aggregation, a very creditable showing is assured.

Second Photo Section: Lieut. J.G. Pratt, accompanied by Staff Sgt. John A. Taylor, recently flew to Wright Field, Ohio, for the purpose of procurement and installation of close reading photographic altimeter, strut thermometer and similar equipment to facilitate accurate accomplishment of current photographic projects in the F1 airplane.

Second Bombardment Wing Headquarters: The 2nd Bombardment Wing Headquarters bowling team seems to have forgotten which way they were running. Off to a good start, the team steadily decreased its stride until it now occupies one of the cellar (not stellar) positions. However, we have one man to uphold the honor of the organization, to wit: Sergeant Falkowski, who recently bowled high individual game score of 279. This is a record for the Langley League and will probably stand for some time, we hope.

19th Airship Company: During the past news period, the 19th participated in two liaison missions with squadrons of the 2nd Bombardment Group. On these missions the TC-11 flew at an altitude of 2,000 to 3,000 feet while the LB's flew under and bombed the shadow of the airship. Considering the fact that the shadow of the airship was moving at a greater speed than a steamship could be expected to move, the problem of the bombers can be appreciated. Surprisingly accurate results were obtained, direct hits being by no means rare.

Work is to be started on replacing the envelope on the TC-11 as soon as surfaces arrive. As this equipment is due now, the new envelope will probably be inflated about the middle of the month.

The speed tests on the TE-2 have gotten under way. On the first test over a triangular course, a top speed of approximately 53 mph was obtained. Whether this figure will stand or not remains to be proven in future runs.

Baseball moves into the limelight in the organization. The call for candidates for the Company team has gone forth and the response was gratifying. The list indicates that there will be but a slight change from last year's cup winning team. Private Hoehns, who pitched last season for the Fort Eustis Post Team, is now a member of this organization and has turned out for practice.

Fort Crockett, Galveston, Texas, March 7th.

An aerial review was recently flown for the officers and cadets of the German cruiser KARLSRUHE which was in port at that time. As the affair had been announced in the papers of the day before, there was quite a crowd present to view the demonstration.

The 13th Squadron basketball team won its third straight Post League championship on the night of March 3rd, when they took a close game from the 60th Service Squadron loopsters, 29-31. Not a substitute was used by the winners during the entire contest. They relied on team work and plays built around their tall center, Lieut. Leslie O. Peterson, who was second high scorer for the game. Right after the contest started, a foul by one of the Service men gave the 13th a chance for a free throw which they made good. That gave the Ghostmen the lead and from that time on they were never topped. McLaughlin, a new addition to the Service quint, got hot in the second half and accounted for several points, cutting down the lead the winners had built up.

The 13th Squadron team was composed of Pearson and Hogrefe, forwards; Peterson, Center; and Miltz and Polsgrove, Guards. These five men comprise one of the best teams in the city. Although they are eligible to play in the city league tournament by reason of their championship, they have decided to call it quits until next season.

The 60th Squadron team was composed of Arnold and Gibson, forwards; Karnes, center; McLaughlin and White, guards, and Bentley and MacArthur, substitutes.

This win allows the 13th Squadron to keep their unofficial title of champion athletes of Fort Crockett.

Luke Field, T.H., March 1st.

Officers arriving aboard the USAT GRANT on February 10th were assigned to duty, as follows: Capt. Raphael Baez to the 23rd Bomb. Sqdn.; 1st Lieut. James B. Carroll to 5th Composite Group Hqrs as Group Operations Officer, vice 2nd Lt. F. Edgar Cheatle, relieved; 2nd Lt. J.A. Tarro to 4th Obs. Sqdn.; 2nd Lt. C.D. Fator to 50th Obs. Sqdn., and 2nd Lt. J.C. Kilbourn to the 72nd Bomb. Sqdn.

Flying training for February consisted of formation, night and cross-country flying, aerial photography, communications radio, aerial gunnery, aerial bombing, camera obscura, aerial navigation and reconnaissance, instrument flying, performance flights, maneuvers and cooperation with other branches of the service.

In the first week of February, the 5th Composite Group dispatched planes on inter-island flights to various islands to transport supplies, equipment and military personnel necessary for the establishment of ground observation posts and air operating bases, in compliance with BLACK PLAN, Grand Joint Exercise No. 4, Headquarters Hawaiian Department, dated December 16, 1931.

The Army Air Force of the Hawaiian Department, outnumbered two to one by the invading Blue Forces in the Joint Army and Navy Maneuvers, had their work cut out for them in a way that put all men on their mettle and required them to operate and live under conditions of actual warfare in the field. When word reached this field that the invaders had left the Pacific Coast enroute to attack the Territory of Hawaii, it was early predicted that the first clashes would be between opposing air forces, the 200 odd planes housed and operated from the huge and speedy aircraft carriers SARATOGA and LEXINGTON and the forces of half that size on Oahu. The plan was that camouflage and hidden airdromes should be taken advantage of in concealing our forces from overwhelming odds, and furnishing an unknown base from which surprise attacks might be launched against the oncoming foe.

The "Somewhere on Oahu" bases of Bombardment Squadrons proved to be a complete success from the concealment standpoint. The establishment and maintenance of these bases at the same time furnished a check on the ability of organizations concerned to move on short notice, bag and baggage, using planes for transportation, carrying men and equipment to inaccessible hidden points, where camps and improvised flying fields were set up and operated, and where the organizations carried on as separate units without the use of any facilities other than their own men and equipment.

Although we are as yet in the dark as to who won the "War," we feel quite certain that the Air Corps has proven its worth and demonstrated by its resistance against overwhelming odds the efficiency and morale of its personnel, and has proved to skeptics its worth as the main weapon of the nation's defense.

On January 27th, two planes were feared to be lost when, after two hours flying, they radioed their home field that they had failed to sight Kauai, their objective, due to heavy fog and high winds, which blew the planes off their course. The planes included a Sikorsky amphibian and an O-19 Observation plane. In the Sikorsky were Lieut. Theodore B. Anderson, pilot; Private Charles F. Bibb, crew chief; Corp. George Shepherd, radio operator; George H. Miller and Rodney Davis, civilian employees of the Air Depot; and A.J. Caesar of the Hawaiian Welding Company. Those in the Observation plane of the 11th Photo Section were Lieut. Kenneth P. McNaughton, pilot, and Tech. Sgt. Arthur Stolte, photographer.

The planes took off from Luke Field at 9:50 a.m., and at 10:45 reported they were running into an area of poor visibility. Later the two planes lost contact with each other. At 12:58 p.m., they landed at Port Allen, Kauai, and so notified Luke Field. The Navy authorities at Pearl Harbor, with characteristic efficiency, were on the point of dispatching three mine sweepers to the vicinity of Kauai when the glad tidings came that the two planes had landed safely.

50th Observation Squadron: This organization remained at Luke Field for the period of the Maneuvers to act as aerial offshore and inshore patrol for the Island of Oahu. Regular dawn and dusk patrols were dispatched from the sixth to the tenth, inclusive, and pilots were on the alert throughout the 24 hours. Special patrols were flown as ordered throughout the hours of darkness in whatever sector ground observation post reported suspicious craft. The Squadron flew over a hundred hours during the maneuvers, most of this time being spent on radio missions, and to Squadron Communications goes the credit for the excellent results obtained with but one minor failure, a short in some "B" Battery leads to mar a perfect operating record.

Throughout the maneuvers, our engineering department, operating all hours without a complaint, worked with untiring diligence in maintenance of planes, motors and equipment, deservedly had the confidence of all pilots and observers. Inasmuch as all of our patrols were single planes and were over water, several of them cut of sight of Oahu, and no complaints were made of any plane, this department may well be proud of its record.

At noon on February 12th, the war was declared officially over as far as the Air Corps was concerned, and the Squadron returned to normal operations glad to have been in it but also happy to be able to get some uninterrupted sleep.

72nd Bombardment Squadron: During the Army-Navy Joint Exercises, the Squadron, under the command of 1st Lieut. Wm. B. Clarke, undertook to establish itself at an airdrome concealed in the Waianae Pocket south of Kole Kole Pass. The undertaking was a severe test of the mobility and operating efficiency of this squadron, which is under the command of

On Friday morning, February 5th, we moved into the Waianae Pocket. Our camouflage problem was serious. Seventy-five feet of wing span, nine feet wide on each side of nine Bombers was too much to overcome except by the use of paint, which was not allowed. The terrain of the flying field and numerous ditches and gullies around its edges was such that concealment of planes was impossible. A high narrow crown ran down its middle length. This crown was the runway. It was so high that one could stand on it and look out across the top of the surrounding algaroba thickets. It was so narrow that our wing tips overhung. The whole runway was freshly plowed and dragged. It was covered with soft reddish soil which the wind, that came screeching down from Kole Kole Pass, picked up and turned into a sand blast that poured steadily day and night across our dispersed planes and through their Cyclone motors. Pictures taken of these sandstorms show wind indicators stiffened out on bending poles and men with their bodies bent in an effort to move against it, while algaroba bushes appear with their branches streaming down wind like the dishevelled hair of a fleeing virgin.

The terrain of the field anywhere off the narrow crown of the runway was a

series of ridges and depressions, taxying over which was disastrous. We saw a line of light globes and ten foot poles down on one side of the runway. Investigation disclosed that these were the landing lights. It meand taking off and landing in the place at night. Ahead of us loomed the Waianae Mountain Range, on each side were inclosing ranges of from 1,000 to 3,000 feet high. The Potek was about two miles wide. The procedure of take-off was to fly straight at the Waianae Range and turn soon enough to miss it. Then with the help of a wind of gale proportions to exercise extreme caution against banking too steeply, but try to be blown by the wind around the first turn in an arc narrow to miss the mountains enclosing us on the left. Once the 180 degree turn was made, there was nothing to it but to dodge the 1500 ft. peaks downwind between the field and the ocean at Waianae. Once over the ocean, one might begin to breathe again.

4th Observation Squadron: During the recent Joint Army-Navy Maneuvers, this Squadron performed the maximum and best that could be expected from Observation Aviation. The Squadron carried out orders to defend the Hawaiian Islands by putting an observation screen around the entire group.

Seventeen officers and 80 enlisted men composed the Squadron which moved by air from Luke Field with all necessary equipment and rations for field duty at different islands. "A" Flight and Squadron Headquarters, with four O-19B's and one Douglas Amphibian established an Air Operating Base at Homestead Field, Molokai; "B" Flight with three O-19B's at Port Allen, Kauai, and "C" Flight with three O-19B's at Hilo Airport, Hawaii. Moving of the Squadron began on the morning of Feb. 2nd, and was completed by the morning of the 4th, and on the following day the squadron was pronounced ready for actual activities against the "Blue" enemy. Each of the flights was assigned its patrol sector, which was covered by three different routes, three times daily, at daybreak, noon and dusk, all patrols required to fly at least 25 miles off shore, some patrol routes being as long as 225 miles. The actual war activities were declared on the morning of Feb. 6th, and the first enemy vessel was spotted by "C" flight at 7:50 a.m. of that morning approaching Hilo Harbor.

When the "Armistice" was declared on Feb. 13th, it was found that this Squadron during the eight days of the "war" amassed 177 flying hours and covered approximately 15,000 miles without any mishap. This is a record of which any squadron could be proud, especially as most of the missions were performed at a distance of from 50 to 60 miles from the nearest land. The work of the Ground Observation Posts was most successful. Very important information regarding the enemy movements was furnished.

23rd Bombardment Squadron: Grand Joint Exercise No. 4 is now past history, and while the higher commands are still fighting it out on paper, there is little doubt among the readers of this letter as to who "won the War." This Squadron participated to the man, morale and efficiency remaining high as usual, though many brave men died (assumed) with their boots (or shoes, as the case may be) on. Of the nine proud LB-6's and B-5A's which sallied out so gallantly to war, only three (assumed) war-torn hulks remain.

Be that as it may, excellent work was done by all concerned. Moves were made from one field to another, either in daylight or darkness; all personnel and equipment was carried in the airplanes to new positions; long distance flights over water and out of sight of land were accomplished, and the severest strain was imposed on personnel and materiel, all for a period of over a week, without the slightest mishap. The 18th Composite Wing was the recipient of a commendation from the Department Commander, General Wells, for the excellent work done during the Exercise.

18th Pursuit Group, Wheeler Field, T.H., Feb. 25th.

The entire Group found itself working under war conditions during the recent Army-Navy Maneuvers. Pursuit and Attack took up camouflaged positions "somewhere on Oahu." The Communications Section under Lieut. Searcy performed in a highly efficient manner at Group Hqrs. The 75th Service Sqdn. worked night and day keeping all ships in condition, including two Douglas Dolphins and one Sikorsky which were used as rescue ships. (No rescues, however, were necessary). The 75th also manned 18 anti-aircraft machine guns in the vicinity of Wheeler Field, but reported no target other than mosquitoes. Three Navy pilots were assigned to the Group as Umpires during the Maneuvers, Lieuts. (JG) Burch, Dosier and Ahroon. Each officer was assigned to a squadron and accompanied that squadron on all flights performed in connection with the "War."

At the conclusion of maneuvers on Feb. 18th, the Group participated in the Hawaiian Division Review in honor of Admiral F.H. Schofield, Commanding Officer of the U.S.S. PENNSYLVANIA. The following day was declared a holiday, thereby giving us four free days, thanks to a weekend and Washington's Birthday. On the morning of Feb. 22nd, two flights of Pursuit assisted in an aerial demonstration over Honolulu coincident with the Washington Bicentennial parade.

Due to rainy weather, the track and field meet scheduled for Jan. 20th, this Group's Organization Day, was postponed until January 28th. Preceding the events, Major Ernest Clark, Group Commander, spoke to the assembled officers and men of the Group on the occasion of its fifth anniversary. Later the track meet was held, furnishing the large crowd with some keen inter-squadron competition. The turnout from each organization was gratifying, and the fine spirit shown demonstrated the Group's excellent morale. Up until the last event of

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the meet, the 6th Pursuit Sqdn. and the 75th Service Sqdn. were neck and neck, but the 75th won the tug of war from the 6th, thus pulling itself into first place for the day, and retaining possession of the Group Trophy another year.

Official assignments of the new noncommissioned officers' quarters have been made. It begins to look as though we were all about to graduate into the long awaited new homes. Landscaping problems are being studied by Captain Stitt, whose new rank caught up with him only last week.

Lieut. Luther S. Smith was appointed Group Operations Officer, vice Lieut. Rex K. Stoner, who sailed for the mainland on the March Transport.

The outstanding Pursuit mission of the "War" was an attack on a BLUE aircraft carrier, 65 miles at sea, North of Kahuku Point, Feb. 11th. At 4:00 p.m. four Pursuit patrols were dispatched on a reconnaissance mission of the waters surrounding Oahu, returning at 5:20 p.m. The patrol from the Northeast area reported sighting a BLUE Carrier, accompanied by several cruisers and destroyers, about 65 miles north of Kahuku Point. Telephone communication was immediately established with Wing Hqrs. at Ft. Shafter, with the result that all remaining Pursuit planes were ordered to attack the Carrier with 100-lb. demolition bombs (Constructive). By 5:55 p.m., all planes were loaded, removed from their camouflaged positions and assembled in the air. The flight immediately laid a course out to sea, hoping to reach the Carrier before dark. The Carrier was sighted and attacked at dusk, each of the 14 planes theoretically dropping two 100-lb. bombs on her deck. At 6:22 p.m., darkness closed in as the attack was completed. The next problem was to locate and return to the relatively small Island of Oahu in the darkness. Capt. Strickland's navigation was flawless and, after a rather anxious half hour, the searchlights of the Island hove in view. Aided by the airdrome lights, the entire flight landed at Wheeler Field without mishap at 6:55 p.m., having completed a difficult and hazardous mission.

6th Pursuit Squadron: On Feb. 5th, this Squadron moved into its camouflaged position in preparation for the Joint Army-Navy Maneuvers. Camouflage consisted of painted canvas, gunny sacks and Guava bushes, which were spread over the entire ship. The planes were further concealed by being pushed between trees. Evidently our efforts at concealment were successful, as our position was not discovered during the entire maneuver. Twelve pilots and 13 ships were moved into the field. Lieut. (JG) Burch, USN, was assigned to us as umpire. About 40 enlisted men accompanied the ships as crews, and a field mess eas established.

On Feb. 7th at dawn, the enemy attacked Wheeler Field and Schofield Barracks with a large air force, but did not detect our position. Dawn and dusk patrols were flown to distances of sixty to seventy miles off shore to observe enemy activity and locate carriers. Rendezvous problems with Luke Field at dawn offered many anxious moments, as the take-off in formation was made with no lights and the additional weight of full belly tanks. Low ceilings and rain made the rendezvous itself difficult but, with the exception of minor mishaps, all the flights were carried out successfully and with great dispatch and skill. The Squadron returned from the field on Feb. 12th with the six of its original 19 planes that had not been shot down by the enemy.

The Squadron welcomes two new officers who arrived Feb. 10th on the GRANT, Lieuts. Fisher from March Field and Davenport from Mather Field.

19th Pursuit Squadron: The organization participated in Grand Joint Maneuvers, Exercise No. 4, from Feb. 4th to 12th, inclusive. Nineteen planes, including the air umpire and his ship, were established in a concealed deployed position at the Division Review Field, Schofield Barracks, T.H. From Feb. 5th, this squadron became actively engaged in the Group's tactics against the enemy. Seven reconnaissance patrols successfully aided in locating the enemy forces and positions. Seven offensive patrols helped the Group in its destruction of enemy planes and seacraft. As a summary, this Squadron "lost" six planes and "destroyed" a number of enemy planes and vessels.

Lieuts. VanAuken and Burns, from Selfridge Field, arrived on the last Transport, and were assigned to the 19th. The latter was immediately detailed for a course at the School for Bakers and Cooks, depriving us of his services one month.

26th Attack Squadron: The organization took part in the Joint Army-Navy Maneuvers, being stationed at different emergency landing fields during the Exercise. Many interesting flights were made, chief of which was a raid on Hilo Harbor. For this flight the Squadron was commended by Major-General Briant H. Wells, Commanding the Hawaiian Department. Officers taking part in the maneuvers were: 1st Lieuts. Nathan F. Twining, Leonard H. Rodieck, 2nd Lts. Walter S. Lee, George McCoy, Jr., John C. Horton, James L. Majors, Thomas B. McDonald, Air Corps; 2nd Lieuts. Weldon E. Rhoades, Wilfred Rotherham, Nelson B. David, John E. Nuhn and William R. Graham, Air Reserve.

Corp. Rufus A. Artmann left Feb. 20th for 3 months' furlough on mainland.

The AERO-VUE, a weekly mimeographed publication devoted to news of the activities of the 18th Pursuit Group at Wheeler Field, T.H., made its debut early in February. This publication, edited by Lt. Rudolph Fink, A.C., Personnel Adjt., assisted by Sgt. Carl G. Carroll and enlisted representatives of all squadrons on the field, is published without expense to the government, and contains editorials, cartoons, news of athletics and other activities, and humor. The first two issues were well received by the command. The professional appearance of the magazine with its clear type, artistic subject headings, and neat layout, is proof of the work required of all those connected with it. It should go far to elevate the already high morale of the 18th Pursuit Group.

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38TH. DIV. AVIATION
113 OBSERVATION SQD.
INDIANA NATIONAL GUARD.
STOUT FIELD, INDIANAPOLIS.

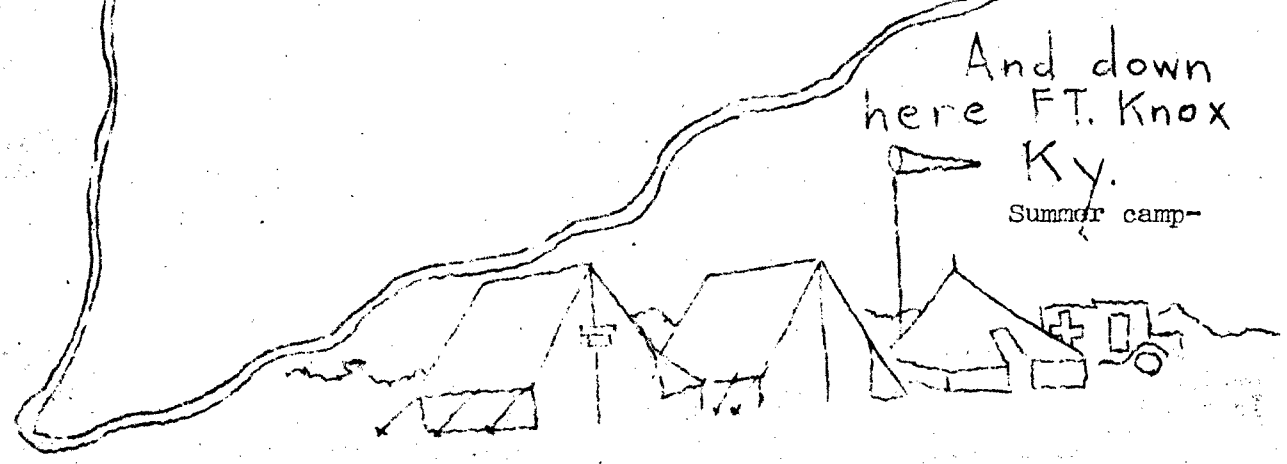
The Squadron has just received five type B-C 152 radio receivers to take the place of the old SCR 134 receiver. The communications section and the observers are very much enthused over these improved sets. The BC 152 has a frequency range from 250 to 1500 K.C. which extends both higher and lower than the old set.

The wide range is made possible by three sets of plug-in coils which may be interchanged in the air. It is a one dial control and the interphone connections are built in the set.

Our 'blind flying' equipment is being installed on one of the radio ships so that the safety pilot or instructor may talk with the pilot who is flying blind, explaining his mistakes and corrections while flying, by means of the radio interphone. This will greatly increase the ease in learning to fly blind.

Our instructor, Captain Albert M. Guidera, is in Walter Reed Hospital recuperating from a case of Flu. He had been in Panama for some time and did not take our northern flu seriously until it put him in a flat spin. The squadron extends to him greetings and is hoping for a speedy recovery and return to duty.

The squadron has a new officer, Henderson H. Wheeler, who has just been promoted from the ranks. Lieuts R. F. Wirsching, E. W. Bryan and Neil Waterbury all J. A. O's have just completed the requirements and exams for Pilots ratings



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INSPECTION DIVISION NOTES

USE OF TECHNICAL ORDER COMPLIANCE CHARTS AIR CORPS FORMS NOS. 60A and 60B.

Recent technical inspections of Technical Order Compliance Charts, Air Corps Forms Nos. 60A and 60B, maintained at various Air Corps activities, have shown that certain technical instructions have been entered on these forms when such entries were not specifically required by such technical instructions. Under the system now employed, all technical instructions issued requiring entries on these forms specifically state so in paragraph 1 of the technical instruction, substantially as follows:

"These instructions will be entered on Technical Order Compliance Chart, Air Corps Form No. 60A (or 60B, as the case may be) as specified in paragraph 1 of Technical Order 00-15."

This system should preclude the possibility of question as to whether or not technical instructions are to be entered on Technical Order Compliance Charts.

In connection with the maintenance of these charts, all personnel concerned are urged to read carefully the instructions printed on the back of the forms; the instructions contained in Technical Order 00-15 and the information contained in circular letter from this office to commanding officers of all Air Corps activities, subject, "Technical Order Compliance Chart, Technical Order 00-15," dated July 28, 1931, the following extracts of which are reprinted below for the information of all concerned:

"Such of those technical orders, letters and instructions which have not been complied with will be entered on the proper charts in accordance with the instructions contained in subject Technical Order and those printed on the back of Forms 60A and 60B."

"Stations upon receipt of equipment transferred from another station will not request copies of technical instructions when the letter received from the transferring station, as required by paragraph 4, Technical Order 00-15, indicates that the requirements of the technical instructions have been complied with by the station from which the equipment is being transferred."

In connection with the letter which is required to be forwarded on transfer of airplanes and engines in accordance with paragraph 4 of Technical Order 00-15, recent technical inspections have disclosed that many activities are preparing original letters in each case of subsequent transfer. This is not in accordance with the procedure contemplated by the above reference which specifically prescribes that, "when the airplane or engine is again transferred all additional instructions complied with and those not complied with for that particular airplane or engine will be listed on the original letter which will be indorsed directly to the organization receiving the airplane or engine." The object of indorsing such communications upon each additional transfer is to provide receiving activities with a log or continuous record of technical changes concerning the airplane or engine being transferred. The original letters and the indorsements, prepared when the airplane or engine is again transferred, should list only those technical instructions which have been complied with and those which have not been complied with since the receipt of the particular equipment in the activity and up to the time of transfer. This information should be available from the Forms 60A and 60B maintained by the activity. It should be understood, therefore, that it is not necessary to relist in indorsements as "complied with," all those technical instructions so reported in preceding indorsements and in the original communication. In other words, the indorsement should include as "complied with" only those technical orders that were complied with by the organization during the time the aircraft was maintained by that organization. Only those technical orders and letters, etc., should be listed as "not complied with" that the maintaining organization should have accomplished and did not. Thus the indorsement prepared by tactical activities or detachments will not list under this heading those technical changes that should be accomplished only at overhaul.

It is imperative that a separate letter or indorsement, as the case may be, be prepared for each airplane and for each engine transferred. This is required by TO-00-15 and is necessary in order that a complete record of all technical instructions complied with and not complied with on the equipment transferred may be available. It will readily be seen that the airplane and engine should not be reported in the same letter or indorsement, since engines, especially during overhaul, do not usually remain installed in the same airplane.

INFLATION PRESSURES FOR TAIL WHEEL CASINGS.

The following information was supplied by the Chief, Field Service Section:

"Pending the revision of Technical Order 01-1-38 which will give inflation pressures for all standard airplane tail wheel casings, the following information is submitted relative to the following airplanes:

Type Airplane	Tail Wheel Casing Pressure
O-19	30 lbs.
BT-2B	22 lbs.

Landing gear casings will be inflated in accordance with the present instructions of Technical Order 01-1-38."

The following Technical Letters and Technical Orders have been distributed since the last issue of the Air Corps News Letter on March 15, 1932:

Date and No.	Subject	Distribution
TL-32-25 2/29/32	General information on the Maintenance and Operation of Fokker Y1C-14 and Y1C-15 Airplanes.	Chanute, Crissy, Kelly, March, Mather, Selfridge, MAD, FAD, SAAD, RAD, Bolling and Shreveport.
TL-32-27 2/13/32	Modification of Type G-6A Bomb Rack on Model B-3A and B-5A Airplanes.	March, Langley, Kelly, MAD, PAD, PhAD, HAD, Aberdeen.
TL-32-38 3/4/32	Cleaning, Treating and Servicing of Stromberg Aircraft Engine Carburetors.	Chanute, Wright and all Depots.
TL-32-40 2/29/32	Installation of Parking Brake Controls, Thomas Morse O-19B, O-19C and O-19D planes	Chanute, Wright and all Depots.
TL-32-41 3/4/32	Inspection of Stromberg Carburetor Throttle Hold Down Screws, Channel and Headless Screw Plugs.	General
TL-32-42 3/4/32	Installation of Oil Cooler Center Engine - Ford C-4A Airplane.	MAD, FAD, SAAD, RAD, Chanute, March, Langley, Selfridge, Wright and Bolling.
TL-32-43 3/4/32	Change on Mixture Control Rod, Rear Cockpit - Curtiss A-3, A-3B, O-1B, O-1E, O-11, O-1G and O-39 Airplanes.	MAD, FAD, SAAD, RAD, Wright, Chanute, Hawaiian AD.
TL-32-44 3/7/32	Removal of Cooling System Fluid Level Cock - Douglas O-25C Airplanes.	General
TL-32-45 3/8/32	Change on Mixture Control Rod, Rear Cockpit - Thomas Morse O-19B, O-19C and O-19D Airplanes.	Wright, Chanute, and all depots.
TL-32-47	Modification of Hand Band for Mask, Flying, Face, Type B-5.	General
TL-32-48 3/8/32	Installation of Plate, Fuselage Fabric Protection - Boeing P-12B, P-12C and P-12D Airplanes.	Bolling, Langley, March, Mather, Maxwell, Chanute, Selfridge, France, Luke, Nichols, Boeing Co., Wright and all Depots.
TL-32-49 3/4/32	Correct size of Vent Hole in Float Chamber Vent Tube of Stromberg NA-Y60 Carburetors.	MAD, FAD, SAAD, RAD, Chanute and Wright.
TL-32-37 3/11/32	Oil Strainer Housing Studding Assembly Part #C-14682, V-1570 Series Engines.	MAD, FAD, SAAD, RAD, Bolling, Chanute, Crissy, Brooks, Ft. L'worth, Kelly, Langley, 6th CA, Lawson, March, Marshall, Maxwell, Mitchel, Phillips, Selfridge and Wright.
TL-32-50 3/14/32	Mildew Preventive for Parachutes	General.
TL-32-51 3/11/32	Installation of Clamp, Part #6071, on Pratt and Whitney Engines.	Chanute, Wright and all Depots.
TL-32-52 3/11/32	Replacement of Oil pump Covers, Part #C-5361, on V-1150 Engines.	MAD, FAD, SAAD, RAD, Chanute, Wright and Hawaiian Depot.
TL-32-56 3/18/32	Aircraft Engines Starters and Generators.	Chanute, Wright and all Depots.
Tech. Radio 32-57 3/14/32	Changes on Fuel Lines on Keystone B-3A, B-4A, B-5A, B-6A, Y1B-4 and Y1B-6 airplanes to eliminate water collecting traps.	Aberdeen, Langley, Chanute, Maxwell, March, Kelly, RAD, Hawaiian Dept., Panama Dept and Philippine Dept.
TL-32-58 3/22/32	Replacement of Screen Carburetor Air Intake Keystone B-3A Airplane.	MAD, FAD, SAAD, RAD, PAD, PH AD, Chanute and Wright.
TL-32-59 3/25/32	Clutch Setting on Pratt & Whitney Engines equipped with 12:1 and 14:1 Blower Ratios.	Chanute, Wright and all Depots.
TL-32-63 3/25/32	Modification of V-1570 Series Engines	MAD, FAD, SAAD, RAD, Chanute and Wright.
TO-00-0-2 3/1/32	Monthly Index of Technical Instructions	
TO-02-1-8 3/23/32	Engines and Spare Parts. (This TO replaces TO 02-1-8 dated 11/16/31).	

AIR CORPS CIRCULAR LETTERS

No Circular Letters issued.

The following Air Corps Circulars were published and distributed since the last issue of the News Letter on March 15, 1932:

AIR CORPS CIRCULARS

Number	Subject	Date
Cir. 40-4	CIVILIAN PERSONNEL. Travel (This Circular replaces Circular 40-4, dated 3/3/26 and Circular 40-4A, dated 4/7/26).	3-1-32
Cir. 60-1A	FLYING. Crash Tools and Equipment.	3-22-32
Cir. 65-15	SUPPLY. Disposition of Usable Containers. (This Circular replaces Air Corps Circular 65-15, dated 2/20/32).	3-29-32
Cir. 5-4	PUBLICATIONS - PRINTING AND BINDING. Specifications.	3-30-32
Cir. 15-29A	BLANK FORMS AND REPORTS. Requisitions.	3-30-32

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ADDITIONAL NOTES FROM AIR CORPS FIELDS

Randolph Field, Texas, February 27th.

On Feb. 20th, Caronel Chachro, Consul-General of Mexico, accompanied by the Asst. Consul-General Major Martines of the Mexican Air Corps, paid Randolph Field an official visit. They were conducted around the field by General Danforth and Major Martin, Commanding Officer, and were guests of General Danforth for luncheon.

Nine Naval officers from the Naval Training School, Pensacola, Fla., were recent visitors here. These officers visited the Air Corps Primary Flying School with a view of studying the training methods used in the Army Air Corps. The officers were: Captain R.F. Zogbaum, Commandant, Pensacola; Commander R.F.Wood, Executive Officer; Lt.-Commander A.C. Davis, Superintendent of Aviation Training; Lieuts. W.M. Updegroff, In Charge of Ground School; J.A. Cassady, Primary Land Plane Squadron Commander; O.A. Rule, Advanced Land Plane Squadron Commander; B. Rhoades, Primary Seaplane Squadron Commander; C.R. Oexle, Aide to the Commandant; Lt.-Commander L.E. Iverson, Flight Surgeon. These officers spent the day inspecting Randolph Field, and expressed surprise at such modern installation. Luncheon was served at the Bachelor Officers' Mess.

On February 19th, General Danforth and Major Martin were hosts to Captain Erwin Wassner, Lieut.-Commander Rudolph Oeters, and Lieut.-Commander Ernst Felix Krueder, German Naval officers. Captain Wassner commands the German Cruiser KARLSRUHE, which was docked at Galveston at that time. These officers were accompanied by Clark W. Thompson of the Galveston Chamber of Commerce, who is a Lieutenant in the Marine Corps Reserve, and represented the Navy. These officers drove to Randolph Field with General Danforth and Captain Baier, a German student undergoing training at Randolph Field, from Austin, Texas, where they had attended a luncheon in their honor by Governor Sterling. They were met at the entrance of Randolph Field by Major Martin, who accompanied them throughout the visit.

Lieut. Ned Schramm departed February 20th for Chanute Field, Rantoul, Ill., in a Transport, carrying nine enlisted men to the Air Corps Technical School for duty as students in various courses, viz: Photography - Pvt. Frank L.Bringham, 46th Sqdn.; Air Mechanics - Pvt. Edwin D. Augenstine, 46th Sqdn.; Pvt. James H. Early, 53rd Sqdn.; Pvt. Sp. 6/cl. Clifford W. Tuck, 47th Sqdn.; Aircraft Machinist-Private Rudolph B. Schroder, 52nd Sqdn.; Armorer - Pvt. Edmund L. Gallia, 52nd Sqdn.; Aircraft Welder - Pvt. Joe L. Chelf, Jr., 52nd Sqdn.; - Radio - Privates Paul L. Williams, 52nd Sqdn. and William H. Wheeler, Headquarters.

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At the present time, about 95 percent of all tactical units of the Army Air Corps have approved coats-of-arms or insignia. This embraces practically all of the older units and a large majority of the newer units.

All units having an insignia approved by the Secretary of War and not having a copy of the authorization for same for their files may obtain copies thereof from the Information Division, Office of the Chief of the Air Corps.

A drop test of the 28-foot triangle parachute was recently conducted at Wright Field from the Douglas XO-38B airplane, using a 1,000-pound weight. The parachute was not damaged, demonstrating that it is sufficiently strong to withstand the most severe service conditions. A new design seat pack assembly for the triangle type has been completed which contains metal stiffeners to hold the pack in shape. This has proved more satisfactory than the Type S-4 pack, which was recently service tested by various activities. Drawings are being prepared to cover the new design for use with the Triangle Type S-3 parachute.

SERIAL NO. 316 LIST OF NEW MATERIAL ADDED TO INFORMATION DIVISION FILES
March 16th to April 5th Incl.

Available for loan to Air Corps Organizations only upon request to the Air Corps Library, Munitions Building, Washington, D.C.

DOCUMENTS

A 00.1/15 The Present Status of Military Aeronautics, by G.O. Squier, Maj. Signal Corps, USA. N.P. Dec. 10, 1908.

A 10/192/#662 Accurate Calculation of Multispar Cantilever and Semicantilever Wings with parallel webs under direct and indirect loading by Eugene Sanger. Nat. Advisory Committee for Aero. Tech. Memo. #662. Wash. N.A.C.A. March, 1932.

A 10/192/#663 Problems concerning the Stability & Maneuverability of Airplanes. by Jean Biche. N.A.C.A. Tech. Memo. #663. Wash. NACA., March/1932.

A 10/192/#664 German Aircraft Accident Statistics, 1930 by Ludwig Weitzmann. N.A.C.A. Tech. Memo. #664 Wash. N.A.C.A. March 1932.

A 10/US/133 #2 Report of the Division of Aero. for the Fiscal Year ending June 1931 - by Albert F. Zahn. Wash. Government Printing Office 1932. Pub. #2.

A 10.01/India 1 Report on the Progress of Civil Aviation 1930-31- by Govt. of India, Directorate of Civil Aviation. Calcutta, Government of India Press, 1931

A 10.23/109 #410 Experiments on the Distribution of Fuel in Fuel Sprays by Dana W. Lee. N.A.C.A. Tech. Note #410 Wash. N.A.C.A. March 1932.

A 10.23/109 #411 Rapid Chemical Test for the Identification of Chromium-Molybdenum Steel Aircraft Tubing by John C. Redmond. N.A.C.A. Tech. Note #411 Wash. N.A.C.A. March, 1932.

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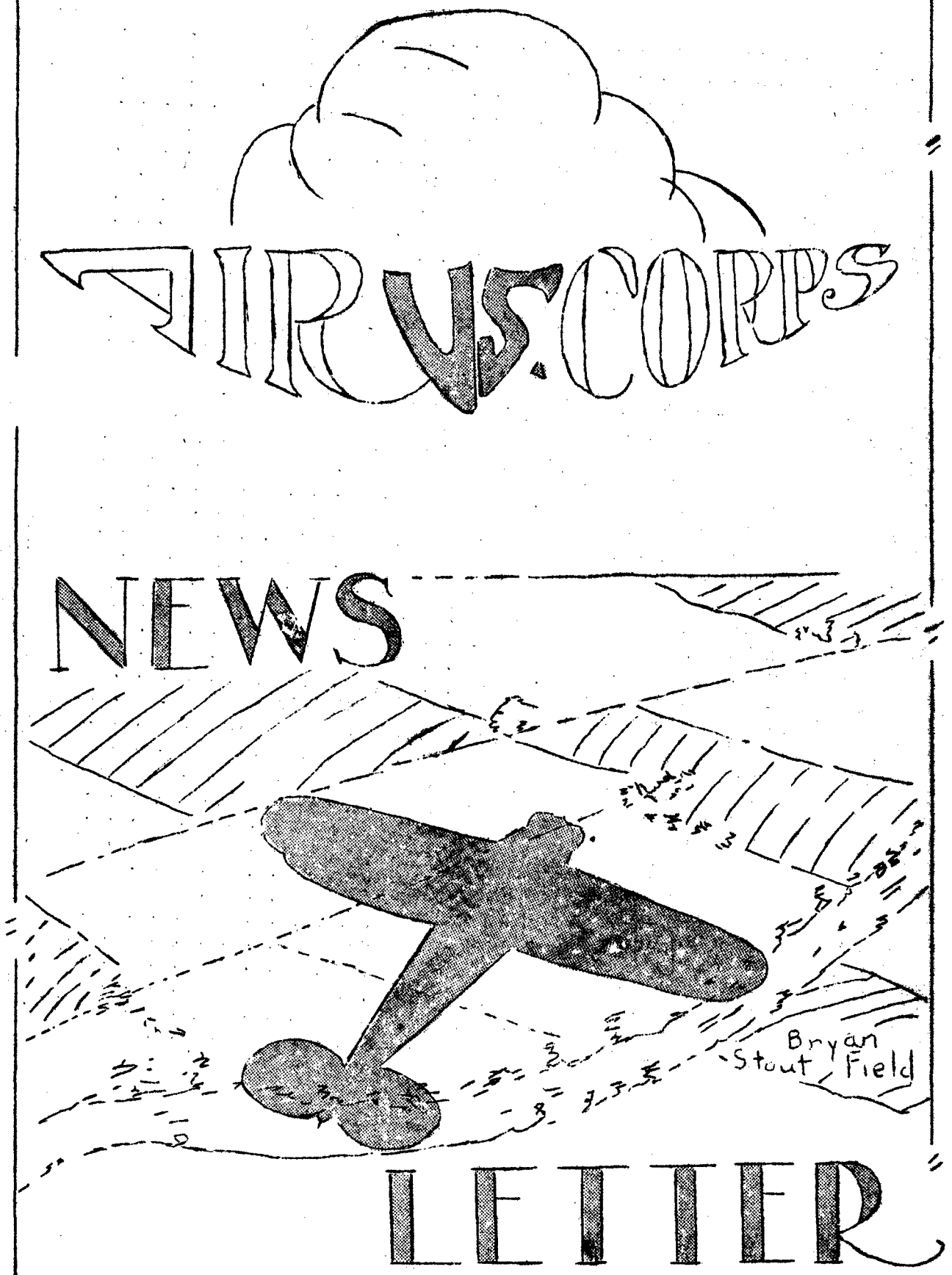
AIR CORPS NEWS LETTER



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Information Division
Air Corps

May 3, 1932

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The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard and others connected with aviation.

Publishers are authorized to reprint material appearing in this publication.

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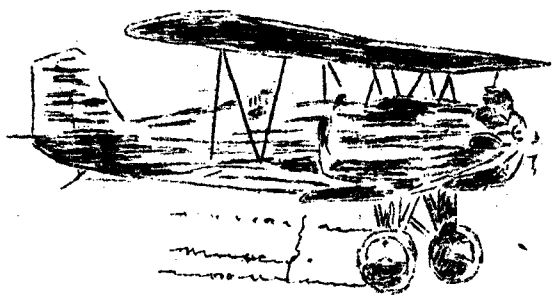

THE 1932 AIRCRAFT SHOW AT DETROIT

By F. N. M. Brown

The single item that was probably accorded the most general interest in the past month by those associated with aeronautics was the 1932 Aircraft Show in Detroit. Engineers and those attached in some way to engineering departments did not go on record, except for publication, as being particularly inspired by the Show. This writer finds nothing in that which is in any way related to the success of the exposition. It is true that evidence of lavishly spent money was lacking and that there were not ten or fifteen ships on the floor that had been completed too late for test flight, but there was evidence of solidity and continuity of effort that was pleasing. The engineer (B.S. in Aeronautical Engineering 1930, as likely as not) and the pilot who did not like the Show because "there was not anything new" are easily accounted for. No engineer or pilot who values his professional reputation ever found anything new at a Show; he has been in possession of the most minute details of all research for periods varying from three to ten months before the results are published or the finished product shown.

The 1932 Aircraft Show in Detroit was good even without making the proper allowances for the period in which it was given. The airplanes shown looked as if some care and workmanship had gone into their manufacture. The same cannot be said of those shown at previous exhibits. Exhaust stacks did not bristle so alarmingly, landing gears were not so shockingly similar to sea anchors, and the orange box motif in fuselages seemed to be losing ground. The lacquer finishes began to look as if their application had been entrusted to some one besides the third-rate barn painter of two and three years ago, flying instruments were making their way timidly into the cockpits of stock jobs, and at least one pair of streamline wheels was in evidence (the low drag effect of which, incidently, was largely destroyed by an unfortunate landing gear design).

The queer airplanes and the Sky Terriers were not at the show this year - the best indication of a healthy exhibit that this writer can name. In their place, and furnishing just as much pleasure to the laity, were Army and Navy craft of proved worth and design. It would be desirable if the Show manager could remember the interest shown in the Military Airplane when he begins to arrange his exposition for next year.

The engine exhibits provided one departure from conventional practice which should prove interesting when construction and performance data are released - the Pratt & Whitney double bank radial engine. There was, too, a new Diesel with a valve release mechanism of interesting design. The cut-away engines provided the usual opportunity for the young man to demonstrate encompassing knowledge of internal combustion engine design before his slightly bored companion. Just why do cut-away engines persist?

The accessory booths provided a real interest. In several instances the items shown represented up to two years of research by responsible organizations who seem to have taken advantage of the existing industrial vacation period to investigate "little" things that the airplane has needed for the past twenty years. One internationally known and respected organization showed for the first time a collection of items of outstanding importance. Among them was an automatic propeller hub whose weight is less than fifty pounds that of a standard adjustable hub. This alone, if it works properly and the report of service test by the company producing it indicates that it does, will be of inestimable value to military craft and commercial craft alike. It will improve the flexibility and performance of an airplane as much and in much the same way as locking four

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speed automobile transmission in third would detract from the automobile's performance. There were at least three controllable pitch propellers exhibited, one of which recently underwent satisfactory test here at Wright Field. Details of operation and performance of these propellers when published will be of interest to anyone who flies.

An air-oleo shock strut of outstanding design was shown by the same company that exhibited the automobile propeller. The details of the strut are very well worked out with the possible exception of the design of the metering pin and all of the former objections to air as a taxiing absorber seem to have been answered. It is reported that a pair have been in service on a three-place commercial airplane for a period of months and have given entire satisfaction both from the standpoint of shock absorption and reduction of weight. They are especially well adapted to low pressure tires and their performance with hard tires indicates almost negligible rebound even when dropped on a test rig from rather extreme heights.

The 1932 Aircraft Show at Detroit was one of the finer, harder rings of growth in the tree trunk of aviation progress.

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AIRAFTS

By the Wright Field Correspondent

The new experimental airafts are not so different in appearance, but they involve a principle of design in the tubing which holds the gas by which they are kept afloat that is quite different from that of the standard rafts. In the standard raft the tube is divided at either side into two separate parts. If the stern half of the tubing is punctured, the stern half of the raft dips beneath the water at a precarious angle, probably spilling the occupant overboard while the bow end stays atop; and vice versa. In the present tube arrangement the division is handled in quite a different manner, the tube being divided laterally through all its length by a loosely-hung fold which in effect creates two concentric tubes extending about the raft's circumference. Either of these concentric tubing compartments is capable of sustaining the weight of the occupants, and either, in case of failure of the other, can be inflated to the original size of both tubes. The inflation is accomplished by the application to the inflation apparatus of a sealed tube gas cylinder of CO_2 gas.

The inflation apparatus contains an equalizing valve which permits both tubes to be equally and simultaneously inflated in 15 seconds. A check valve regulates the flow and prevents leakage of gas from one tube to the other. A topping off valve at the opposite end of the raft from the inflation apparatus provides for the use of a hand pump for inflation in the emergency that the gas cylinder apparatus cannot be used.

The raft, which is canoe-shaped, with raised bow and stern, is provided with paddles which are jointed together and which, if preferred, may be used as oars, as oarlocks are also provided. It is constructed of rubberized fabric and is the strongest collapsible life raft yet constructed for airplane use.

The larger size is designed for 4 passengers, but the floatation strength is sufficient to carry six or seven, with an additional five men supporting themselves on the life line which is attached to the circumference of the raft.

The smaller, or one-man raft, is 3 feet wide by 6 feet long and weighs 27 pounds. The supporting tube is 12 inches in diameter. The larger, or 4-man raft, is 5 feet wide by 12 feet long, with a supporting tube of 15 inches in diameter. Procurement for service testing of this equipment is contemplated.

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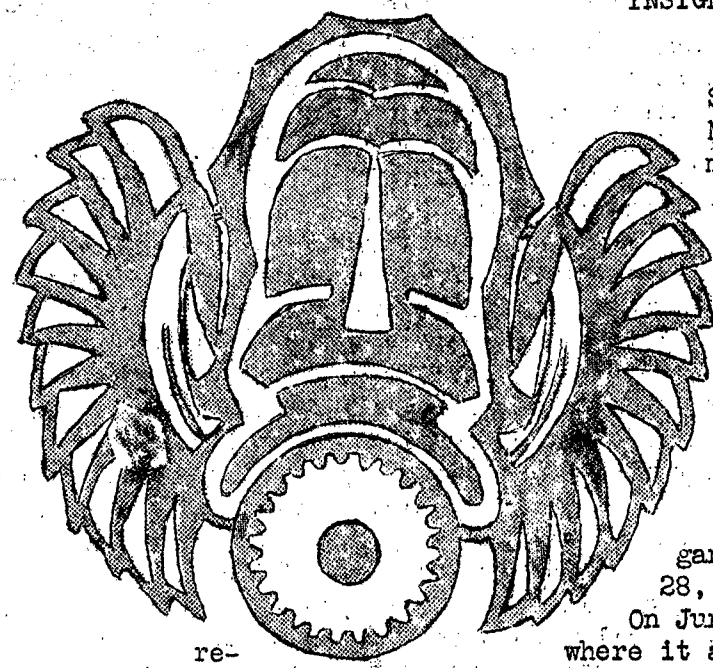
Approximately fifty officers stationed in Hawaii completed the course in Avigation (Air Navigation). This course included study in air pilotage, methods of dead reckoning, and the study of avigation by astronomical means.

One of the most outstanding methods of instruction in this course was through the medium of a model cockpit which was placed in the center of the class room. Installed in this cockpit were all the instruments and equipment necessary to give the students practical instruction and demonstrations under simulated flight conditions.

This novel arrangement was developed by Captain Harvey H. Holland.

INSIGNIA OF 57th SERVICE SQUADRON



The insignia adopted by the 57th Service Squadron, Selfridge Field, Mich., approved by the War Department, was accompanied by the following letter from the Office of the Secretary of War:

"The following insignia hereinafter described for the marking of airplanes of the 57th Service Squadron, Air Corps, is approved:

A black and white conventionalized winged mechanical head, under the chin a black disk charged with a white spur gear.

The 57th Service Squadron was organized at Kelly Field, Texas, January 28, 1918, as the 360th Service Squadron. On June 30, 1918, it sailed for France where it arrived July 12, 1918. In October, 1918, it was designated the 2nd Air Park. As such it sailed from St. Nazaire for the United States June 16, 1919. Upon arrival, it was stationed at Camp Mills until July 1, 1919, and Garden City, Long Island, until the latter part of August, 1919, when it moved to Ellington Field, Texas, arriving September 1, 1919. On November 8, 1919, it moved to Kelly Field, Texas. It was redesignated Air Park No. 2, March 31, 1921. On June 30, 1921, it returned to Ellington Field, and on June 28, 1922, left for Selfridge Field, Michigan, where it has since been stationed. On January 25, 1923, it was redesignated the 57th Service Squadron.

The 57th Service Squadron participated in the St, Mihiel and Meuse-Argonne Operations of the World War.

The head represents knowledge of mechanics; the wings having the appearance of a worm gear, denote aeronautics, while the spur gear signifies service and maintenance. The white symbolizes sincerity, and the black the foundation of experience.

By Order of the Secretary of War:"

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TRAPPING MOSQUITOES DURING AIRPLANE FLIGHTS

The 18th Composite Wing Headquarters, Fort Shafter, T.H., is working on the problem of trapping mosquitoes in aerial combat, in conjunction with a war which is being waged on the pest by the Board Health. Insect traps, if the problems are solved, will be attached to an Army Bombing plane and flown over the mountains of Oahu. In this way, an attempt will be made to determine what insects reach the Honolulu area from the windward side of the Island.

The Board of Health received the insect traps from Washington recently, and missions will be flown as soon as the problem of attaching the traps to the airplane is solved. The trap is a bulky device and the problem of installing it was a difficult one. It would not be feasible to have the trap in the slip stream while the plane was making 120 miles an hour, and the problem of placing it in quieter air is being studied. The theory is that many insects cross over the mountains into Honolulu, principally by way of Nuuanu Pali. Most come while cane is being burned on the windward side, it is believed. The traps include plates covered with adhesive substances, which are expected to gather many insects during the flights.

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A new record for the March Field-Mather Field "hop" was set on April 5th by Lieut.-Col. Henry H. Arnold, Major Carl Spatz, Captain Frank O'D. Hunter and Lieut. D.D. Graves. Returning from a tactical problem at Mather Field, the four pilots clipped ten minutes off the previous records for pilots from March Field. Aided by a stiff tail wind, they made the 400-mile flight in two hours and twenty minutes, or at an average speed of 171 miles an hour.

TRAINING OF THE FIRST PURSUIT GROUP

DURING the past several weeks, the First Pursuit Group, Selfridge Field, Mt. Clemens, Mich., after encountering many difficulties, has at last been able to begin its training as a Group. Due to the restrictions on flying hours, inclement weather and lack of airplanes, practically no Group training could be accomplished during the winter months. With the coming of Spring and the influx of new airplanes, the Group Commander had long planned to start Group training in earnest. Technical difficulties with the new P-6E's and sudden, untimely and unexpected blizzards have further delayed the beginning of the program.

In order to make the problems as interesting and instructive as possible, Major George H. Brett, Commanding Officer of the Post, has developed a situation in which the opposing armies are battling over an area in the vicinity of Selfridge Field. The First Pursuit Group, of course, is a unit of the air force which is assigned to this sector of the problem. Major Brett, in addition to supplying the general situation, furnishes the special situation for each new problem. He acts as Wing Commander and transmits to Major Gerald E. Brower, commanding the First Pursuit Group, his orders for the day. Major Brett also issues orders for the enemy, when an enemy is used in the problem.

Upon receipt of the Wing order, usually about the middle of the morning, Major Brower issues a Group order either formally or by telephone, to the squadrons of the Group. Some time immediately after lunch, depending upon the conditions of the problem, the units of the Group take off on their respective missions, and during the daily problem fly and perform as a Group a considerable portion of the time.

On these problems the teachings of the Air Corps Tactical School in tactics and in types of formations are being tried out in an endeavor to ascertain the merits of the prescribed formations and tactics, and how the teachings of the text may be applied to actual conditions in the air. It is needless to say that this program has resulted in interesting and instructive problems, and the Group personnel will gain much in their knowledge of Group tactics from this training.

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UNAUTHORIZED FLIGHT LANDS WOULD-BE PILOT IN GUARDHOUSE

The Kelly Field Personnel Adjutant registered a complaint with the Secretary of the Advanced Flying School recently, stating that he had not been advised of changes in instructor personnel in the Attack Section, after one, Private Carroll L. Johns, a painter in the 41st School Squadron, took off in an A-3 Attack airplane and made a perfect three-point landing back on the field 30 minutes later. Lieut. Lester J. Maitland, Director of Attack, is considering putting Private Johns on his staff of instructors after that individual's vacation in the guard house is terminated.

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BEAUTIFYING THE GROUNDS AT PATTERSON FIELD

The Commanding Officer of the Fairfield Air Depot, Patterson Field, Ohio, anticipating the requirements of trees and shrubbery for beautifying the grounds when contemplated new construction is completed, directed that a nursery be planted. Lieut. Zeigler was placed in charge of this work and, through the assistance of Mr. Edmund Secrest, State Forester at Wooster, Ohio, and other State officials, and through the cooperation of the University of Ohio at Columbus and the Ohio Agricultural Experiment Station at Wooster, the project has been successfully initiated and approximately three thousand plants, ranging in size from six inches to six feet, have been set out. Some of the particularly desirable stock obtained are Chinese Elm, Dogwood, Washington Thorn, Red Oak, Scarlet Oak, Colorado Spruce, Japanese Yew, Korea Arborvitea, Canadian Hemlock and Mugho Pine. A great many cuttings from shrubbery now planted on the Post are being rooted.

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Lieut. Cecil Hefner, who has been supervising the painting of the new Boeings of the 27th Pursuit Squadron, Selfridge Field, has achieved praiseworthy and truly colorful results. The 27th emblem, an extremely irritated Falcon diving with outstretched claws, is a fearsome thing and has been destroying the peace of mind of every vagrant sparrow near the field.

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CONSERVING THE DUCK POPULATION

Director George R. Hogarth, of the State Conservation Department at Lansing, Mich., recently requested Major George H. Brett, Commanding Officer of Selfridge Field, Mich., to furnish an airplane to drop feed, corn and wheat to the mallard ducks wintering in the flats of Lake St. Clair. No less a personage than the Commanding Officer of the First Pursuit Group, Major Gerald E. Brower, undertook to carry out the wishes of Director Hogarth. Flying the C-4 airplane, carrying twenty 25-pound paper bags of feed, he took off from Selfridge Field and when over the middle channel of the St. Clair River sighted many flocks of ducks in spots where the water had not frozen. Many bags were dropped at each of these open spots on the ice, so that the bags broke and the grain scattered. Upon returning to Selfridge Field, arrangements were made for another allotment of feed. The bags were dropped at open spots in the vicinity of Goose Bay, Fisher Bay and Pollet Bay.

According to the News Letter Correspondent, this distribution of grain will aid the ducks and they will be able to care for themselves after the first thaw. More grain will be dropped if it becomes necessary.

A letter received by Major Brett from the Director of Conservation, Lansing, Mich., states:

"It has come to my attention that through your efforts two airplanes from Selfridge Field were used on March 21 and 22 for the purpose of distributing grain to ducks on St. Clair Flats.

It is felt that this very materially relieved an acute situation, and in behalf of the Department I wish to express our thanks for this splendid cooperation."

Bolling Field has again been called upon to perform a most unusual mission, one which is being performed for the Department of Agriculture. A small boat is worked in very close to where a flight of ducks is resting on the water. The nose of the boat is pointed towards the ducks. At a given signal, a panel is displayed with a letter on it, and the circling photographic plane takes a photograph of the boat, ducks and the shore line all in one picture. In the meanwhile, those aboard the boat are sketching the position of the various groups of ducks and their relationship to the shore line. This maneuver is repeated at each group of ducks, using a different letter each time.

Upon the completion of the mission, the pictures are developed and then begins the cross word puzzle of fitting the pictures and sketches together. The object of all this is to obtain a key in order to be able to recognize at a glance what particular ducks comprise a certain group. Various ducks form various patterns resting on the water.

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CALIFORNIA EXECUTIVE VISITS MARCH FIELD

Governor James Rolph, Jr., of California, was the guest of Lieut.-Colonel Henry H. Arnold, Commanding March Field, Calif., on March 29th last. Escorted by Colonel Arnold and Major Carl Spatz, Commanding Officer of the First Bombardment Wing, the Governor inspected the more than 75 Pursuit and Bombardment planes of the Wing. A review was flown immediately afterwards in his honor. After the review and inspection, the Governor expressed himself as "amazed at the strength concentrated at March Field for the protection of the Pacific Coast." It was estimated that there were about 15,000 visitors at the Post on the day of the review. Despite the unusual traffic conditions, confusion was held to a minimum by the orderly regulation of an extra force of Military Police.

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The News Letter expressed thanks to Lieut. E.W. Bryan, 113th Observation Squadron, Indiana National Guard, Stout Field, Indianapolis, Ind., for his cover design for this issue. Comeon, you artists, and send in your designs. They will be used in future issues of the News Letter, and due credit given.

V-6264, A.C.

ARMY DAY ON THE WEST COAST

"ARMY DAY," April 6th, was observed in a big way by March Field and the First Bombardment Wing. Despite the fact that at that time about 90% of the United States Fleet was concentrated in the Los Angeles - San Diego Area, 75 Pursuit and Bombardment planes of the Wing proceeded to Los Angeles on Army Day and flew a review at the Municipal Airport for the edification of some 20,000 air-minded citizens of that city. Major Carl Spatz, Wing Commander, led his aerial fleet through intricate maneuvers. Lieut.-Colonel Henry H. Arnold, Post Commander, occupied the reviewing stand with Mayor Porter of Los Angeles and other dignitaries and explained the reason for and result of the various formations.

Perhaps the fact that the fleet was at sea for battle practice accounted for the fact that the Army forces "took the city" with no opposition. "Open House" prevailed at March Field in the afternoon from 1:00 to 5:30 p.m., and there were special exhibits of armament, radio, machine guns, etc., as well as platforms built near several of the big Bombers to afford Mr. and Mrs. Public a close-up view of the big planes. The 95th Pursuit Squadron barracks was thrown open for inspection in the afternoon so that the public might see how "John Soldier" lives.

Much interest was shown by the visitors in the Guard Mounting ceremonies at 3:30 p.m., at which time the various squadron commanders addressed their commands on the significance of Army Day, the part the Army has played in the development of the United States and the history of their particular organization.

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NEW OBSERVATION PLANE FLOWN ACROSS THE CONTINENT

Ferrying a new YO-31A airplane from the Douglas Aircraft Company's factory at Santa Monica, Calif., via Wright Field, to Mitchel Field, N.Y., 1st Lieut. C.S. Johnson, accompanied by Master Sergeant W.D. Lucy, of Rockwell Field, Calif., stopped at the San Antonio Air Depot for check up and servicing of the plane. This new gull-wing Observation plane is the first of its type to come through the San Antonio Air Depot. It attracted considerable attention and certainly appears to be an unusual job. It is powered by a Curtiss Conqueror 600 h.p. engine.

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ASSIGNMENT OF GRADUATES OF THE ENGINEERING SCHOOL

Students scheduled to graduate this coming summer from the Air Corps Engineering School at Wright Field, Dayton, Ohio, have been assigned by War Department orders to duty at stations, as follows: Captains Wendell H. Brookley and Myron G. Estabrook, Jr., to the Office of the Chief of the Chief of the Air Corps, Washington; Captain Frank D. Hackett, 1st Lieuts. Samuel R. Harris, Jr., Frederick M. Hopkins, Jr., Shelton E. Prudhomme, 2nd Lieuts. Charles A. Bassett, Leonard F. Harman, Irvin A. Woodring to Materiel Division, Wright Field; 1st Lieuts. Joseph T. Morris to Rockwell Air Depot, Calif.; Leslie P. Holcomb to Scott Field, Ill.; Raymond Morrison to Brooks Field, Texas; Donald F. Stace to San Antonio Air Depot; 2nd Lieuts. John A. Austin to Middletown, Pa. Air Depot; Ernest K. Warburton to Selfridge Field, Mich.

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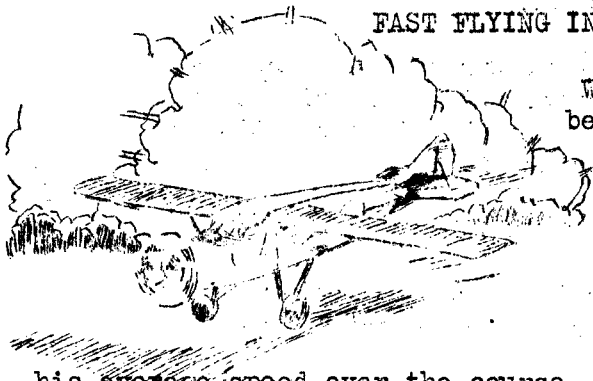
NEW HEADQUARTERS AND OPERATIONS BUILDING AT SELFRIDGE FIELD

The new combined Headquarters and Operations building at Selfridge Field, Mt. Clemens, Mich., is now completed and in use. The Post Operations Office occupies the first floor and Headquarters the second floor.

In the new building, with all departments segregated and efficiently arranged, the News Letter Correspondent believes that the First Pursuit Group has one of the best administrative buildings in the Air Corps. The office of Major Brett, Commanding Officer of the field, on the second floor gives an excellent view of the entire flying field, as well as the apron in front of the hangars. The office of Major Brower, Group Commander, located directly under Major Brett's, has the same vision of the field. Efficient control is assured.

V-6264, A.C.

FAST FLYING IN P-6E PURSUIT PLANE



What is believed to be a new speed record between Selfridge Field, Mt. Clemens, Mich., and Indianapolis, Ind., was set up by 2nd Lieut. E.W. Maschmeyer, Air Reserve, pilot on duty at Selfridge Field, when he flew the course April 9th on a cross-country training flight. Lieut. Maschmeyer took off from Selfridge Field at 10:00 a.m., and reached Indianapolis one hour and 17 minutes later, his average speed over the course, 275 miles, having been 214 miles an hour.

The extremely high speed was made possible by the fact that Lieut. Maschmeye was flying one of the new high speed planes with which the Army Pursuit squadrons are being equipped. The ship which made this particular trip was a Curtiss P-6E Pursuit plane, which cruises at 170 miles per hour and gets up a high speed of 200 miles per hour. Lieut. Maschmeyer said he never throttled over the normal cruising speed of his plane, the increase in his ground speed over his air speed being accounted for by a north wind which helped him along his way.

The News Letter Correspondent is of the belief that many new records will be set up by Army flyers in the near future because of the high speeds of the new planes now being delivered by the factories to Army fields. Planes which are now in development for future manufacture attain even higher speeds than the new Curtiss, Boeing and Berliner-Joyce planes just received.

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CAMPAIGN AGAINST MOSQUITO STILL PERSISTS

More anti-mosquito raids have been made in the past few weeks by Lieut. R.T. Zane, who is aiding in the experiments being conducted by the Canal Zone Health officials, under the direction of Col. John F. Siler and Dr. D.P. Curry. Tests are being conducted on Miraflores Lake with a Thomas-Morse O-19C, equipped with a 40-gallon tank. Previous tests, using a mixture of crude oil and kerosene were not very successful, but the elimination of the kerosene in the later tests seems to have solved one of the problems. Early tests indicated that the plane should be flown very low over the water, about 25 feet, but it has since been learned that equally good results are obtained at altitudes up to 150 feet. Compressed air, which has been used so far to eject the oil from the tank, works none too satisfactorily, and before working up to larger tanks a better method of forcing the oil must be developed. When perfected, this method of warfare against the mosquito, which is an incessant one in the Canal Zone, will be an immense labor saver.

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RANDOLPH FIELD'S NEW LANDING LIGHTS SEEN 30 MILES

Lighting engineers recently focussed the Randolph Field landing lights preparatory for night flying training for the incoming class of students. The revolving beacon atop the 110-foot administration building tower was turned on for the first time, as was the battery of powerful searchlights around the 1,900-acre landing area. Brigadier-General Charles H. Danforth, Commanding General of the Air Corps Training Center; Lieut. Robert Douglass, his aid, and Captain John K. Cannon, Director of Training, inspected the lights from the air. The officers reported the lights visible from a distance of more than 30 miles.

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SELFRIDGE FIELD'S NEW STREET LIGHTING SYSTEM

The new street lighting system installed as a part of the construction program now going on at Selfridge Field, Mich., was recently inaugurated when Major George H. Brett, Commanding Officer of the field, threw the switch which made the contact to illuminate the entire system on the post.

The electric system is entirely underground and includes street lighting and service connections to all buildings on the post. The installation was made under contract with the Modern Electric Company of Mt. Clemens, Mich.

V-6264, A.C.

"LOCAL BOYS MAKE GOOD."

ABOVE the mammoth Fairfield Air Depot near Dayton, Ohio, one day last month, the air was rough and treacherous. Light flurries of snow eddied across the bleak expanse of the airdrome. The air was biting cold, and raw ether straight from the frozen wastes of the North stabbed down over the Miami River. In front of the operations office on the flying field stood a group of air veterans of Uncle Sam's aviation forces, wind-tanned faces turned skyward.

"I wonder where they're from?" queried a thick-set, muscular man, whose shoulders boasted the twin bars of a Captain and whose chest carried proudly the cross of the French Legion of Honor.

"Dunno," answered another, "but they picked out a punk day for close formation flying. And shades of Guynemer! What a swell job they're doing of it! You'd think t'was the Three Musketeers themselves."

"We haven't got any regular outfits near here flying that type of ship," observed a young Lieutenant. "There's a reserve outfit due in from Kansas City any minute, but they sure can't be them."

The others agreed. No reserve outfit, no matter how good, could fly like that. They sailed across the field in perfect array, passing back and forth, each time executing a different maneuver. The wing men kept their places as if glued there - despite the turbulent air - wing tips nestling in to the leader as if held by a magnetic wand. Banks, zooms, dives - it was all the same. Finally, still in close formation, they landed.

As the ships taxied up to the line, the waiting flyers, stepping forward to offer their congratulations, discerned an insignia that caused them to scratch their heads. They failed to recognize it as that of one of the proud, old-line regular outfits. It was the figure of an Indian astride a pony with hand raised to his forehead, peering out into limitless distances, the background being a red heart - the emblem of the Organized Air Reserve Unit at Kansas City.

The hard-bitten air veterans were astounded!

The leader of that three-ship flight was Captain William B. Wright, in charge of Air Reserve activities at Kansas City, the heart of America's own "skipper" of its aerial brood. The two wing men were Lieuts. J.N. Going and J.M. Pincomb, both young eagles of the local Reserve outfit.

It so happened that this particular group of Regulars had never seen an exhibition of flying by the Kansas City pilots. They, however, were the exception. All over the country has gone the word, among Air Corps and commercial circles, of the calibre of Kansas City's crack Reserve clan. All through the Middle West their excellent flying has been admired and applauded. Now their reputation has extended to each coast.

"And those Kansas City ships can't be mistaken, either," to quote from one of the Regulars. "They have that darned Indian riding a horse on a red heart and just so no one will go wrong they have the words Kansas City in big letters just back of the nose!"

That the Kansas City outfit is recognized by Washington as a crack group is evidenced by the fact that on a basis of past performances and widespread interest among the Reserve pilots at Kansas City, the War Department has extended the local unit all possible encouragement. Captain Wright and his boys are endeavoring to secure hangar facilities which will be on a par with their flying equipment. In congratulating the Reserve officers on their exploit while they were inspecting the Fairfield Air Depot, Major A.L. Sneed, Commanding Officer, said:

"Kansas City may well be proud of you. You are not only a crack flying unit but you are scattering to the far winds the message of Kansas City's hospitality and well wishes."

The active two weeks camp just concluded is but the first of many which will be conducted in 1932. During this one camp, over 2,000 miles of cross-country flying was carried out by seven service type airplanes. Among places visited were Omaha, Neb.; Lambert Field, St. Louis; Scott Field, Ill.; Fairfield Air Depot and Wright Field nearby, where all experimental and testing work is done for the Air Corps, and Chanute Field, Ill., base of the A.C. Technical School.

It is the purpose of such trips to keep the Reserve officers in constant contact with the latest Air Corps activities and developments.

The Camp just concluded was divided into Flight "A", composed of Capt. Wm. B. Wright, Air Corps, Leader, and Lieuts. Otto Ferguson, J.M. Pincomb, J.N. Going, R.M. Burtt, E.P. Curry. Flight "B," Lieut. Graham M. St. John, Air Corps, Leader, and Lieuts. L.W. Jurden, H.C. Lewis, E.O. Klose, C.D. Dailey, A.G. Hunter, Air Reserves.

V-6264, A.C.

17TH PURSUIT SQUADRON STARTS GOING

March 15th was the first day in 1932 that the 17th Pursuit Squadron, Selfridge Field, Mich., could call itself a fighting aviation organization, ready for active service. On the morning of that day the first squadron problem was carried out, with 18 ships participating, all of them new P-6E's which had finally been put in commission after much delay due to unavoidable circumstances. On the afternoon of March 15th, the Squadron participated as a unit in the first Group problem carried out in 1932 by the First Pursuit Group. Everybody (at least everybody in the 17th) was satisfied with the showing made by the organization on this first day, but at the same time everybody was imbued with a determination to make each successive problem an improvement over the last one, and to let nothing stand in the way of the best possible efficiency record.

Now that all the ships are kept consistently in commission by the hard working and conscientious mechanics, the squadron is enabled to undertake several eighteen ship formations a day. New and more maneuverable formations are being tried, and landings speeded up. Flight organization is being emphasized, with the result that each flight is a compact unit which can work with more sureness and speed in the squadron team.

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NEW TYPE A-5 OXYGEN FACE MASK

A new type of oxygen mask and winter face mask was subjected to test recently in the cold temperature chamber at the Materiel Division, Wright Field, and promises to prove a definite improvement over previous types. The mask which is of leather, lined with chamois, is designed to completely cover the face and front of the neck and to conform closely with the contour of the face except for a special compartment over the mouth having to do with the intake of oxygen and exhalation of the breath. The mask is held on by two elastic bands which extend around the back of the head.

Two tubes enter the oxygen compartment of the mask; one for the carrying of oxygen to be breathed in through the nostrils as a man naturally takes in air, the other for carrying off the exhalations from the mouth. The exhalation tube is held between the lips. A small baffle forms an inherent feature of the oxygen compartment. This prevents the oxygen from coming into direct contact with the face by distributing the concentration of flow, and also prevents the exhalation from gathering around the corners of the mouth and ascending inside the mask to befog the goggles. The baffle arrangement is an outstanding feature of the new mask.

To further protect goggles from fogging, the eye openings are so designed that the rubber cushions of the goggles can be inserted through them. These are held closely to the face, so that there is no chance of breath or oxygen vapor seeping inside them. The design of these eyepieces is also an important feature of the new mask. When oxygen is not required, the intake and exhalation tubes can be removed from the mask, which then forms a conventional and efficient face mask for winter flying.

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ASSIGNMENT OF GRADUATES OF A.C. TECHNICAL SCHOOL

War Department orders recently issued assign graduates of the Air Corps Technical School, Chanute Field, Rantoul, Ill., to stations for duty, not later than June 30, 1932, as follows:

1st Lt. James W. Spry, 2nd Lieuts. Donald J. Keirn, Robert L. Schoenlein, Roy H. Lynn, Charles B. Stone, III, to March Field, Calif.; Robert M. Kraft to Mather Field, Calif.; Daniel C. Doubleday, Albert W. Shepherd, Karl G.E.Gimmler, Minthorne W. Reed, Herbert H. Tellman to Selfridge Field, Mich.; Richard I.Dugan, Samuel O. Redetzke, Carl R. Storrie, Lorry N. Tindal to Brooks Field, Texas; Draper F. Henry, Julius K. Lacey, Arthur F. Merewether to Mitchel Field, N.Y.; Lawrence C. Westley, Fred O. Tally to Fort Crockett, Texas; Frederick A.Bacher,Jr. Alva L. Harvey, Thomas S. Power to Langley Field, Va.; H.F. Gregory to Fort Sill Okla.; Harold L. Mace to Fort Benning, Ga.; Charles K. Moore, Anthony Q.Mustoe to San Antonio Air Depot, Texas; Forrest G. Allen, Lawrence H. Douthit, Robert Loyal Easron, Ralph E. Holmes and Daniel B. White to Chanute Field, Ill.

V-6264, A.C.

ALBROOK FIELD ABOUT TO BE OPENED

ON or about May 1st, the Constructing Quartermaster at Albrook Field, Panama Canal Zone, will officially accept the new barracks and quarters now being completed there by the contractor. To insure the safety of these new buildings, the 44th Observation Squadron from France Field, under the command of Major E.A. Lohman, was ordered to occupy that field as soon as possible after that date. Accompanying Major Lohman will be Captain Jasper K. McDuffie, 1st Lieuts. Cornelius E. O'Connor, Earl W. Barnes, James C. Pratt, 2nd Lieuts. Arthur J. Lehman, Samuel V. Stephenson, Edwin M. Day, Neal E. Ausman, Thomas L. Bryan, James H. Rothrock, Jr., Air Reserve, and Eugene H. Mitchell, Air Reserve. In addition to the above officers, the complement of the Squadron will include ninety enlisted men and eight O-19C airplanes. Until the field is well organized, the principal duties will be, most probably, guard and police, but after that the squadron is expected to take over the performance of all cooperative missions with the line troops stationed on the Pacific side.

It is anticipated that the movement will be made by mine planter and barges from Gatun to Gamboa and by trucks the first and last parts. To date no furniture was received for the quarters, so old issue must be utilized until it comes, and gas ranges are not expected to arrive until the next trip of the MEIGS and maybe not then. No buildings other than the barracks and the quarters were constructed, and it is expected that work will be in progress for the next year and a half to complete the field. Three hangars have been started and will be completed some time in June. As rapidly as the buildings are completed, more troops will be ordered in, probably two Pursuit squadrons. The old road which divides the airdrome in two parts will shortly be removed, as a new one has been completed and turned over to the Panama Canal. This new highway skirts the airdrome on the south and west. The grading of the entire field is rapidly nearing completion and the planting of grass leaves only a small runway in front of the hangars for take-offs and landings. Flying will be carried on from Albrook until the wet weather makes the field impossible for landing, when operations will be switched to the field at Fort Clayton. Eventually, surfaced runways will be installed for the rainy season operation.

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FIVE PLANES FERRIED TO THE PANAMA CANAL ZONE

Three new Bombers and two new Douglas Amphibians arrived at France Field, Panama Canal Zone, from the States. The Amphibians are really new, but the Bombers are only new to France Field, having been in service at Langley Field about two years. The trip down was reported as being devoid of excitement, and all were sorry it ended so soon. Little difficulty was encountered. An oleo leg was bent on one Bomber, and a cracked exhaust manifold on another delayed it at David one day. No rain was met on the entire trip, but the day after the arrival at France Field - April 1st, the official opening of the wet season - saw plenty as per schedule.

Lieut.-Colonel Frank M. Andrews from the Office of the Chief of the Air Corps; Major David Grant, Flight Surgeon from Randolph Field; Captain A.C. Kincaid Lieuts. T.L. Bryan and D.B. Schanne from France Field made the flight in the Amphibians, while Captains George L. Usher, Milo McCune, Marion L. Elliott, Lts. J.M. Gillespie, C.P. McDarment and L.S. Kuter, all from Langley Field, brought down the Bombers. The enlisted personnel participating in the flight were Master Sergeant M.L. Susemiehl, Tech. Sgt. A.M. Auer, Staff Sgts. H.F. Senter and W.H. Sadler in the Amphibians, and Staff Sgt. J.H. Boyles, Sergeants W.K. Maginnis and W.J. Heldt from Langley Field crewed the Bombers. The visiting personnel enjoyed the various diversions Panama has to offer until the sailing of the Transport REPUBLIC on April 16th.

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FLYING ACTIVITIES OF THE SECOND BOMBARDMENT GROUP

The flying activities of the 2nd Bombardment Group, Langley Field, Va., were somewhat curtailed lately, due to continued engineering difficulties experienced with "Cyclone" motors. Nevertheless, all three Squadrons have performed some good work for news cameramen who were at the field "getting the dope" on Bombardment aviation. They obtained some good shots of formation maneuvering, high and low altitude bombing on fixed and movable targets, loading of bombs and operation of bomb sights and releases. The shadow of the blimp over Chesapeake Bay was used for the moving target with excellent work by all squadrons.

A successful mission was carried out by the 96th Bombardment Squadron with the Navy from Hampton Roads Naval Air Station on April 11th.

Direct and indirect radio-telephone communication was maintained between two Bombers in flight; one at Dahlgren Naval Proving Ground and one over Virginia Beach. The distance involved was just short of one hundred miles. Indirect communication was maintained through the Group ground station.

V-6264, A.C.

AWAY FROM THE ROUTINE THINGS IN LIFE

WANTED: A "C-6A" Sikorski Amphibian airplane guaranteed not to collapse when landed on wings, tail assembly or any other parts not particularly designed to carry the load of landing. Address Lieuts. Saunders and Biggs, or Lieuts. Murphy and Vos.

"It seems that Lieuts. Murphy and Vos," says the Langley Field Correspondent, "recently landed our one and only Sikorsky "Duck" in the Back River, immediately after which it was placed in close confinement in the Repair Section. After recovering from this terrifying experience, the Sikorsky was again taken into the air, this time by Lieuts. Saunders and Biggs. Not to be outdone by their cohorts and fellow pilots, these two intrepid airmen decided to attempt a landing on the water, too. From 300 feet the water looked as smooth as a mill pond, so the pilots cut the gun and coasted in. It is really remarkable how the waves in this section of country pile up so quickly. From the pilots' stories we deduce that those waves reached the height of twenty feet or more in nothing flat. Be that as it may, the Sikorsky skipped merrily from wave-cap to wave-cap, finally sticking its nose in the briny fluid, with the left rudder snapped out of place and a horizontal longeron supporting the tail assembly badly bent. As SOS call was immediately sent out and soon after the Navy (God bless 'em) came galloping upon the scene to tow the Sikorsky, with its much chagrined crew, back to good old terra firma.

Such accidents are naturally more or less common to all pilots flying regularly, but each should serve as an object lesson to others."

Says the Langley Field Correspondent again: "It seems two of our young eagles, namely, Lieuts. Vos and Crawford, must have vexed the Gods to such a state that the said Gods decided to put them on the spot, or as they say in our penal institutions, they were doomed to 'burn.'

Lieuts. Vos and Crawford took off in a PT to simulate pursuit against a squadron formation and also practice stunting. On their first landing they accidentally picked up on the tail skid an old tow target cable which had been lying on the field, and in taking off again dragged about 500 feet of the cable across some high tension lines on the edge of the field. Our intrepid young eagles didn't realize what was happening, but we on the ground did when we saw the sparks and blue flame. In fact, we were all set to chip in for some lilies.

After taxying back to the line, they evinced much surprise when told what had happened. To quote 'Heinie' Vos, 'We sure must have been hot pilots for a few minutes!'"

Lieut. P.M. (Jake) Jacobs has found that unexpected pleasures can materialize from an otherwise unpleasant cross-country trip. While returning to Selfridge Field from Chanute Field recently, he ran into very soupy and nasty weather. So soupy and nasty was it that he finally had to get down into a likely looking Alfalfa field with a likely looking farmhouse attached to it near Devil's Lake, Michigan. The farmhouse was even more hospitable than it looked, for the owners of it, Mr. and Mrs. George Wheaton, regaled Jake with a real country dinner, with all the fixings, and insisted that he stay overnight as their guest.

Two years ago several sets of service test Pursuit ship skis were sent to Selfridge Field, Mich. Last winter was very mild, and there was no snow available on which to try out the skis. However, the fact that the season was so mild led everyone to believe that this past winter would be an exceptionally severe one. Just the contrary was true; if anything, this past winter was even warmer than the preceding one. By this time something had to be done regarding the lack of snow and the inability to complete the service test. The last part of February, five Pursuit ships and one Transport left Selfridge Field for the northern part of the country to look for snow deep enough for the ski requirements. After a diligent search, a two-foot snowfall was located in northern Minnesota. The service test was completed satisfactorily, and the airmen returned to Selfridge Field.

Just a short time after the mission was completed, on the first day of Spring to be exact, Michigan suffered the most severe blizzard in the history of a period of three years.

Ten minutes after a soldier was struck by a propeller at Luke Field, T.H., the same airplane on which the accident occurred landed him on the new flying field at the Fort Shafter golf course. Three minutes later, the injured man was in Tripler General Hospital. It was the first time the field was used for the handling of a hospital case by airplane.

The injured man, Private, 1st Cl. Israel Robinson, who later died from skull fracture, was placed in a litter which was then fastened into the bomb bay of a B-5A Bombing plane. The plane was flown to Fort Shafter by Lieut. David M. Ramsay, 72nd Bombardment Squadron. The Bombing planes are equipped for hospital work in emergencies. On account of inclement weather, the completion of this emergency field at Fort Shafter has been somewhat retarded, but it is hoped to finish it as soon as the sodding of the field is completed.

V-6264, A.C.

Lieut. Wm. C. McDonald, Jr., 94th Pursuit Squadron, Selfridge Field, Mich., had a queer accident a short time ago. While out on a squadron flight he had a forced landing due to Prestone leaking out of the radiator of his motor. He negotiated the landing in a very commendable manner, got out of his ship, looked it all over and signaled to the rest of the squadron that all was well. Then, while taxying toward a more advantageous position on the field, the right wheel of his ship dropped into a hole, broke both spars of the right wing and damaged the propeller.

War Department officials in Washington may never know it, but a new name was added to the list of Army flying fields near San Antonio on April 5th. The new field, christened Kreuger Field in honor of the owner of the farm of which it is a part, is a tract of a few acres used as a practice airdrome by students of the basic stage at the Primary Flying School, and is located a few miles east of Randolph Field. Many a municipal airport of larger dimensions was dedicated with a lesser array of aircraft participating in the ceremony of naming the field.

The impromptu "dedication" originated with the flight of Lieut. A.G.Liggett, basic stage instructor, but before it was over approximately 75 planes had landed to permit instructors and students to witness the event. The field has no permanent personnel, but a shack of homely nature on the property was christened the "administration" building by Lieut. H.F. Dyer, who explained that some day men might have to report there for duty and that they would be glad there was a place ready to serve in any emergency. It was the Army's business to be prepared for unforeseen emergencies, he declared.

Captain P.L. Williams was master of ceremonies and broke a bottle of lubricating oil, specially obtained for the occasion, over one corner of the structure and Major A.W. Smith laid the cornerstone. A quartet sang, and Randolph Field members of the Air Corps Training Center Band played several appropriate selections. Captain E.D. Jones, principal speaker at the mock ceremony, said that the field did not belong to him, but he would present it to the flying students. Lieut. L.A. Guenther, student officer in the basic class, accepted the field on behalf of the class. Lieut. Townsend Griffiss, Commandant of Cadets, urged the students to take the best care possible of the field, not to land on it too hard, and properly select its headquarters. As the gathering broke up, the slipstream from the propeller of Lieut. H.C. Wisehart's plane nearly blew the "administration" building over, but it was rescued it capsized. According to present plans, an insignia will be devised to emblazon on the "administration" building.

Absorbing some of the male vigor and desire for physical diversion which manifests itself on courts, fairway and gym, when a goodly portion of the sturdier sex at Mitchel Field answer the exercise call, a number of enterprising women at the field put their heads together and decided that they were not to be outdone. It was decided, after much cogitation, that a weekly round of various and not too strenuous sinew-strengthening exercises in the gym would fill the bill. As a result, every Tuesday, Thursday and Saturday mornings, at nine o'clock, a string of autos may be seen bouncing towards the gym in the interests of vim, vigor, vitality, and the maintenance of that school-girl complexion.

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A NEW HOUSE OF WORSHIP AT LUKE FIELD

A new chapel, seating approximately 150 persons, was recently completed at Luke Field, T.H. For the first time since Luke Field was established on Ford Island, the personnel of this flying field are to have a fitting place for religious services. The new chapel is the result of cooperation between the Quartermaster's Department, the Post Educational and Recreation Officer, and the personnel of the field. The wrought iron lighting fixtures were designed and constructed by Roger T. Morris, 23rd Bombardment Squadron. Morris has had several years' experience with a Philadelphia architect who has designed lighting fixtures and grill work for many metropolitan banks and churches. Gothic windows and heavily accentuated woodwork add to the attractiveness of this addition to existing facilities of the field.

The chapel was used for the first time on Easter and was comfortably filled three times.

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The 1932 gunnery and bombing season at Mather Field, Sacramento, Calif., had its grand finale recently with a match between the 77th and 55th Pursuit Squadrons. Expert shooting was done by all officers of the command, and many new high records are expected. Several officers of both squadrons shot well over 800 in ground gunnery alone, and some have exceeded the 850 mark. Bombing scores have gone over the 225 mark. The keen rivalry between the two Pursuit squadrons is expected to bring about astounding results, says the News Letter Correspondent. Mather Field's average scores were very high last year, and this year the average is even higher.

Caterpillars

While practicing an aerial attack from 10,000 feet on 2nd Lieut. Rowe, Air Corps Reserve, 2nd Lieut. Wyatt H. Alexander, Air Corps Reserve, was amazed at 7,000 feet to discover his wings coming off. He finally managed to leave the spinning fuselage at around 1,000 feet and landed safely in the vicinity of Newport News, Va. He suffered minor cuts and bruises. Langley Field personnel are extremely happy over his escape and hopes to have him back to duty soon. "We sincerely trust, and hope," says the New Letter Correspondent, "that no more accidents of this, or any other nature, will occur. Amen!

While on a maintenance cross-country flight from El Paso to Kelly Field, Texas, recently, Flying Cadet James M. Treweek was forced to jump from his plane between Sanderson and Dryden, Texas, on account of motor trouble, and was injured in landing from the jump. Flying Cadet Leonard F. Rice, who was on the same flight in a P-1 airplane, saw the jump and notified Lieut. Robinson at Dryden. Lieut. Robinson started to the scene of the wreck at once by automobile, directing Cadet Rice to fly above the wreck at about 1,000 feet, in order to assist him in locating it. As Lieut. Robinson neared the scene of the wreck, Cadet Rice spun in and was instantly killed. At daylight the next morning, two ambulance airplanes were dispatched to the scene, ferried by Lieut. Keillor and Sergeant Biesiot. Lieut. Keillor returned with the injured Cadet Treweek, but Sergeant Biesiot was unable to return on account of motor trouble at Fort Clark and Dryden, and it was necessary to dispatch the Y-1C airplane at 4:15 for Dryden on another trip. Lieut. Ramey, piloting, made excellent time to Dryden and return, two hours each way, landing at Kelly Field after dark at 8:15.

The efficiency of the parachute was again proven on April 8th last, when Lieuts. L.R. Black and B.W. Davis, both of the 94th Pursuit Squadron, jumped to safety after a collision near Selfridge Field, Mich. These officers were members of a formation which was engaged in squadron training. The squadron had come over Selfridge Field in echelon and had dived in column of individual ships at a ground installation for moving picture and sound reproduction. The squadron pulled up in column and made a climbing turn to the left. The collision occurred when both pilots lost sight of each other and came together about a quarter of a mile southwest of Selfridge Field. Lieut. Davis, whose plane was locked on top of Lieut. Black's, had little difficulty in getting clear of the plane. Lieut. Black was forced to delay his exit until the interlocked planes pulled apart sufficiently to allow him to leave the cockpit. Both pilots landed safely in a soft field none the worse for their adventure.

Another incident in the operations of the First Pursuit Group was ended when Lieut. Ronald C. McLaughlin, Air Reserve, of the 94th Pursuit Squadron, after his plane became uncontrollable following a collision with another plane in formation leaped to safety with the use of his parachute. Lieut. Jesse Auton, also of the 94th Pursuit Squadron, was piloting the other plane and, although it was considerably damaged by the collision, he was able to land it safely at Selfridge Field.

On the afternoon of April 4th, the First Pursuit Group had passed in review before Major Max S. Murray, Inspector General for the Sixth Corps Area, and was proceeding westward towards Pontiac, practicing various Group formations, when at about 2:00 p.m., the collision occurred which necessitated the parachute jump. While flying in drill formation, Lieut. McLaughlin's plane was thrown upward into the propeller of Lieut. Auton's plane. The empennage of Lieut. McLaughlin's plane was practically removed and, upon finding the ship uncontrollable, the pilot jumped from an altitude of about 800 feet.

Much credit is due Lieut. Auton for bringing his badly damaged airplane back to the field. Although deploring the necessity for the forced exit from his plane, the personnel of Selfridge Field are extremely happy that Lieut. McLaughlin is a new member of the Caterpillar Club without personal injury.

The Caterpillar Club continues to be a growing organization, latest figures covering jumps made by American flyers showing that up to this writing a total of 453 lives were saved and that 469 jumps were made, 16 being repeaters.

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KILLING SEVERAL BIRDS WITH ONE STONE

Major Gerald E. Brower, Commanding Officer of the First Pursuit Group, departed from Selfridge Field one afternoon recently for Ithaca, New York. He carried with him moving pictures of the "Air Force" and "Air Corps Maneuvers, 1930," which he used in connection with his lecture on "The Employment of the Air Force" before the Officers' Club, Cornell University.

Major Brower proceeded from Ithaca to Langley Field, Va., where he delivered the P-12 he was flying to that station. He then proceeded by rail to Baltimore, Md., and flew home in one of the new P-16 Berliner-Joyce planes.

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NEW CLUB-HOUSE FOR NONCOMMISSIONED OFFICERS AT LANGLEY

NOW that the swanky new club-house at Langley Field, Va., has been completed, the organization of the Noncommissioned Officers' Club has been speeded up. A board of governors has been selected, constitution and by-laws drawn up, and plans for furnishing the club-house formulated.

This new club-house, by the way, ranks with the best the Army has provided. It is an imposing one-story structure, following along the lines of the English country houses. Entering the lounge from a flag-stone terrace, one is struck by the beauty and spaciousness of the interior, which is decorated in the Elizabethan motif. Panelled walls, with soft, subdued wall lights, are crowned by a high timbered ceiling from which a beautiful crystal chandelier is pendant. To the left of the entrance is a spacious card room, while just to the fore are the cloak rooms. A cosy reading room, its walls flanked by row upon row of books, snuggles in one corner of the building. Just off the main lounge to the right is the dining hall, while the kitchen with its modern equipment and labor saving appliances, is just off the dining hall.

Passing through the lounge, we open the French doors and come out upon a cool veranda, or lanai, as it is known in the land of palm trees and surf-boards. This lanai looks out upon the broad stretches of the bay, with the water's edge a scant fifty yards away. This modern club-house promises many hours of enjoyment to the members of the Noncommissioned Officers' Club of Langley Field.

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FIRST BOMBARDMENT WING STARTS TRAINING

Both the 7th Bombardment Group and the 17th Pursuit Group at March Field, Riverside, Calif., completed their Group training schedule on March 31st, and the combined units started functioning on the training schedule of the First Bombardment Wing on April 1st. The Wing training to date has included a tactical problem calling for a daylight take-off to Mather Field, 400 miles to the north, and a return the same day; a radio problem calling for the distribution of the various squadrons at airports surrounding Los Angeles and their assembly by radio to proceed to March Field and protect the station from attack by a squadron of 17th Pursuit Group planes representing an attacking unit speeding north from their airdrome at Rockwell Field; a firing problem in the vicinity of that part of the coast between Oceanside and San Diego. "Perhaps some place in the military establishment," says the News Letter Correspondent, "an antagonist may find that which would enable him to sustain charges of Loitering, but believe us when we say not at the home of the First Bombardment Wing."

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PERFECTING LONG RANGE ARTILLERY FIRE

The elaborate equipment recently installed in the Douglas amphibian in Hawaii for the correction of long range artillery fire has proved equal to all expectations. Test flights and constant adjustment for the period of a month brought this apparatus to perfection, and same was placed in regular use on April 1st. Intricate, yet rugged, these instruments cover all phases of artillery adjustment work perfectly. The splash of the shell is noted, distance from the target is computed, the vertical angle from the plane and its true bearings are determined. This information is radioed back to headquarters, and meanwhile three radio beams intersecting on the plane have fixed its position at sea absolutely. These separate groups of information are plotted together, and in a very short time the necessary corrections are in the hands of the battery commander.

"As these experiments progress," says the News Letter Correspondent, "it is believed that by sighting the target and using this information, together with the accurately determined position of the spotting plane, preliminary ranging shots will be greatly reduced in number and may even become unnecessary, and an entirely new conception of the accuracy of long range artillery fire will be established.

A camera records, by oblique photographs, the splash of every shot in the practices, and these pictures will serve as a basis for study towards the elimination of the least possible error."

Army Day

"Army Day," April 6, 1932, was celebrated with appropriate ceremony at Rockwell Field, Coronado, Calif. A committee, consisting of Capts. H. M. McClelland, C.P. Kane and 1st Lieut. R.K. LeBrou, was appointed by the Post Commander to make preliminary arrangements for Army Day. Several meetings were held and, after careful consideration, it was decided that the most satisfactory results would be secured by inviting the school children of San Diego and Coronado to visit Rockwell Field. Accordingly, contact was made with the Superintendent of Schools and members of the educational department of San Diego and Coronado.

Approximately 2,000 school children accepted the invitation and visited Rockwell Field on Army Day. A well organized corps of guides were on hand to receive the children and act as their special escorts on their tour through the shops and warehouses of the reservation. Special care was exercised to avoid any possibility of danger or injury to the children. Every effort was made to make their visit as instructive and educational as possible. This was accomplished by the use of specialists who lectured in the various departments and sub departments of the Air Depot and explained the functions of these units.

In addition, wooden stands were constructed over large Bombers and other aircraft so that the visitors could obtain a close-up view of the cockpits and general interior arrangement of these airplanes. Pilots and mechanics were with these airplanes to answer the countless questions the visitors asked. This scheme worked out very satisfactorily and occasioned much favorable comment.

In connection with the visit of the school children to Rockwell Field, there was held an essay contest. All children were invited to enter this contest and present an essay entitled - "What I saw at Rockwell Field on Army Day." All children, 15 years or under, were invited to submit an essay of 300 words to the Commanding Officer of the station. All children over fifteen years were asked to submit an essay of 500 words on the same subject. Appropriate prizes, consisting of two airplane models, were offered the winners of the contest. All essays were required to be in the mail on or before April 13th. With the cooperation of the school teachers, the essays will be corrected by Army personnel and the names of the winners announced shortly. It is planned to present the models to the essay contest winners at appropriate exercises to be held at Rockwell Field in the near future.

All school children from San Diego were transported by special boats operated between San Diego and Rockwell Field. A special rate of 10¢ per round trip was obtained from the boat company. All school children from Coronado were transported to and from Rockwell Field by Army trucks. Other guests drove their own cars to Rockwell Field. Radio talks of 15 minutes were delivered by Captain Kane over Radio Station KFSD, San Diego, and Dale Hurst, District Commander of the American Legion, made a radio address over KGB, entitled "The Significance of Army Day." Mayor Walter W. Austin, of San Diego, issued a proclamation to all San Diegans which was given extensive publicity in the local newspapers.

The observance of Army Day at Rockwell Field commenced at 8:30 a.m., at which time all members of the command, including officers, enlisted men, civilian employees, members of their respective families and specially invited guests, assembled for a ceremony commemorating Army Day. The special guests included Mayor Walter W. Austin of San Diego; Mayor Wilson of Coronado; City Clerk Wright of San Diego, and Admiral Senn, Commandant of the Eleventh Naval District. The Commanding Officer of Rockwell Field acted as master of ceremonies, and Captain McClelland, Post Adjutant, delivered the principal speech of the day. The Mayors and Admiral Senn made appropriate talks. Mayor Austin especially stressed the very excellent reputation which the civilian employees of Rockwell Field enjoyed in San Diego. Mrs. Hoyle, wife of Lieut. Hoyle of Rockwell Field, brought the ceremony to a close by leading the assembled guests in singing the Star Spangled Banner.

At 7:30 p.m., a parade in observance of Army Day, and participated in by members of organizations of San Diego and vicinity, marched up Broadway, San Diego. The parade was led by Colonel McHuey, Marine Corps, Retired. The parade included a platoon of police, the Marine Band, Spanish War Veterans, combined Drum Corps, U.S.W.V. Auxiliary, Navy Band, American Legion Drum Corps and Auxiliary, Shrine Band, fraternal service organization, Bonham Brothers Band, Boy Scouts, Boys' Band of San Diego, Girl Scouts and Camp Fire Girls.

In addition to the school children visiting the field, it is estimated that one thousand civilians also visited the field and Depot on Army Day. The large number of people present on Rockwell Field on this day frankly surprised the committee in charge of the arrangements. However, preparations had been well made, and there was no hitch of any kind to mar the success of the day.

Many expressions of appreciation of the opportunity to visit the field and the shops of the Depot have been heard.

In the Hawaiian Department on Army Day an aerial review was held, wherein approximately 70 planes participated. The reviewing parties consisted of Governor Lawrence M. Judd; Major-General B.H. Wells, commanding the Hawaiian Department; Major-General Albert J. Bowley, commanding the Hawaiian Division; and the several departmental heads of the Hawaiian Department and the Hawaiian Division. The planes of the 5th Composite Group, together with the planes of the 18th

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Pursuit Group, were led by the Wing Flight - Lieut.-Col. G.C. Brant as flight leader. The review formed a spectacular part of the Army Day Demonstration.

The celebration of Army Day was participated in very actively by the First Pursuit Group, Selfridge Field, Mich. Led by Major Brower, the Group Commander, and his staff, the Group, consisting of four squadrons of 18 planes each, took off from Selfridge Field at 11:30 a.m. and, after flying over Mt. Clemens, Mich., proceeded to a point over the City Hall of Detroit at 12:00 o'clock. It was here that the main celebration of Army Day in this vicinity was centered.

After flying in Group formation for several minutes over the center of Detroit, the Group proceeded to the Municipal Airport where the National Aircraft Show of 1932 was in progress. Awaiting the Group on the ground were Major Geo. H. Brett, Commanding Officer of Selfridge Field, and several transports loaded with Selfridge Field enlisted men. The pilots were met by Mr. Ray Cooper, Manager of the Show, were conducted through the various exhibits and were guests of the National Aeronautical Chamber of Commerce at luncheon.

The following letter was received by the Commanding Officer of Selfridge Field from Mr. J.T. Sheafor, of the Michigan Committee for Army Day:

"Dear Major Brett:

The Michigan Committee on Army Day observance is again indebted to you for your splendid cooperation in connection with the occasion.

The appearance of your squadron over the city is the most spectacular part of the exercises and always calls forth a great deal of comment, both in the press and otherwise.

We missed you at the luncheon this year, but understand fully why you could not be present. We feel that the celebration this year was a real success in every way, and we give a large share of the credit to you."

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THE SELFRIDGE FIELD METEOROLOGICAL STATION

The Post Meteorological station at Selfridge Field, Mich., performs a multitude of duties outside of routine work. It is an extremely efficient station, and has the good will of all the surrounding country as evidenced by some of the data it is called upon to furnish to the civilian industries over the State of Michigan. The immediate population surrounding the field and the City of Mt. Clemens make use of the station to answer their questions concerning the weather, and the Mt. Clemens Daily Leader and some of the Detroit papers publish the Selfridge Field daily weather report and forecast.

This correspondent had the usual idea that the station had only routine work to perform, such as giving pilots the weather data over their proposed cross country route, and predicting flying conditions for the next day, but as it happens, this important duty is a small part of the service they render to the civilian population of Michigan. The Water Commission of Macomb County makes use of the velocity and wind direction statistics of the station to determine how the wind affects the usual speed and direction of flow of the water in Lake St. Clair, for this affects the water supply of Detroit and all cities bordering on the Lake. The Michigan State Road Commission calls up the Field Weather Station for weather forecasts and temperatures to decide whether the atmospheric conditions are suitable for pouring concrete.

All telephone companies and the like, such as the Detroit Edison Company and the Michigan Bell Telephone Company, ask for predictions as to storms. A storm evidently affects all electrical lines to a great extent, causing increased resistance in the lines, and the power plants of these different companies ask for the storm forecasts to determine how much increase in power is necessary to keep up their standard service.

The personnel of the Meteorological station are frequently called as witnesses in civilian law suits where a question of the weather arises in the trial. A short time ago a chain grocery store in Mt. Clemens called Sergeant Wolfson to testify as to the state of the weather on a certain date. The question of the weather at a certain time was brought up in a law suit over demurrage. Very frequently rain insurance companies ask for the records of the weather to decide technical questions in paying damages.

All this information is only in an advisory capacity and is entirely a favor to the civilian courts and companies. Even individuals call for information frequently. When a long automobile trip is planned by a resident close to the field, the motorist generally calls for the weather predictions for the next two or three days. The humorous part of all this is the fact that many housewives in Mt. Clemens call up the field to find out if Monday will be a clear day and suitable for washday.

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The entire 36th Pursuit Squadron, Selfridge Field, recently participated in a rendezvous problem which called for the ships to all leave Selfridge Field singly, rendezvousing at different points along the route from Selfridge to Dayton, Ohio, and ending with the organization landing as a unit at Wright Field, where the pilots made a tour of inspection of the Experimental Branch of the Materiel Div. The return to Selfridge was made the same day in squadron formation. The trip, especially for those who had never visited Wright Field, was one of great interest

GONE BUT NOT FORGOTTEN

On Easter morning, March 27th, it became the sad duty of the 17th Squadron at Selfridge Field to record in its morning report the death of one of its most popular and efficient junior officers, Lieut. Charles A. Coolidge, III, Air Reserve. In making the formal announcement of the passing away of this brother-in-arms of ours, Captain Hoyt, the Commanding Officer of the 17th Squadron, expressed not only the personal grief felt by every member of the Squadron, but his own realization of the loss to the service caused by the departure of this promising young officer. Capt. Hoyt said that during the year Lieut. Coolidge served with the 17th Squadron he endeared himself to brother officers by his likeable personality and made a reputation of having unusual ability. Lieut. Coolidge became ill early in March, 1932, and an intestinal operation was found necessary. Although everything possible was done for him, including blood transfusions from fellow officers, the operation failed to save his life.

Lieut. Coolidge was born in Lakewood, Ohio, in 1903. He went to school there and later matriculated at the State University of Michigan at Ann Arbor, where he was a member of Sigma Phi Fraternity. He graduated in 1927 as an architectural engineer and entered the architect offices of Halliburton & Rood in Chicago. But the aviation urge proved irresistible and, after passing the requisite examinations, he reported as a Flying Cadet at Brooks Field. He graduated with the March Class of 1931 from Kelly Field, receiving his commission in the Air Corps Reserve. All of his active service was spent at Selfridge Field, Mich.

Lieut. Coolidge is survived by his wife, Jessie Coolidge, and by his two aunts, Mrs. C.A. Coolidge, Washington, D.C., and Mrs. John Rigley, Blenheim, Canada. To these loved ones the service extends heartfelt sympathy in their time of sorrow.

Randolph Field suffered its first fatal accident on the morning of March 21st, when the ship of 2nd Lieut. William Lamar Parham, a student officer, crashed one mile west of the airdrome. Lieut. Parham was flying alone when his ship crashed near Marion. The plane burst into flames upon striking the ground. The plane hit in a field near the Seguin Road, but no one appeared to see the actual crash, and it was not known from what altitude the ship fell. The pilot was practicing maneuvers outlined by his instructor of the basic stage when the accident took place. He was flying a BT type Observation plane.

Lieut. Parham was unmarried, and his home was listed as Nashville, Ga. His father is Charles S. Parham of that city. The crash victim was 23 years old and graduated from West Point last June. He also attended the Georgia Agricultural College before going to West Point. Lieut. Parham was a member of the second class to enter Randolph Field. The first class graduated only a few weeks ago. It did not lose a man, and no member of it experienced any serious accident.

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NEW QUARTERS AT WHEELER FIELD

The opening of new quarters for officers and noncommissioned officers, grading of the new flying field, construction of the new hangars comprised the ground activities at Wheeler Field during March. The quarters are one-storied, flat-roofed buildings, particularly appropriate to the atmosphere of the Islands. They range in color from pale pink and green to biege and brown, thus facilitating the return of the occupant to his proper set after an excursion away from home.

About 28 officers have already moved, and they are busy with the problem of furnishing and decorating. The new Quartermaster furniture has not yet arrived, but is expected at an early date. The bachelor building will open shortly. In the meantime, a committee composed of Lieuts. Luke Smith, Sterling and Fink is engaged in planning furnishings for the public rooms of the club. The building includes 16 sets of quarters (two rooms and a bath) in addition to the usual lounge, library, etc. It is planned to open a mess as soon as possible, Lieut. Lee having been chosen as the logical Mess Officer. The living quarters are built around a patio - the entire building being very attractive and especially adapted to the Hawaiian climate.

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The Flight and Turn Indicator received at Luke Field, T.H., recently, was turned over to the 72nd Bombardment Squadron for a 30-day service test. Engineering personnel had some trouble installing the instruments, due to the fact that there was not sufficient room on the instrument board to mount them. This was overcome by removing a section of the windshield and replacing with celluloid. Holes were then cut in the celluloid large enough to turn the instrument on and off. Pilots who have flown the B-5A equipped with these Indicators are high in their praise of them. After completion of service test, it is hoped that the Squadron will be allowed to retain them, says the News Letter Correspondent, and that a sufficient number will be supplied to equip all the 72nd Squadron planes.

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Experimental tests are being conducted at Wright Field of a two-wheel type bomb trailer and a tractor equipped with hoisting crane to determine the usefulness of this type of equipment in connection with moving bombs about the airdrome and loading same into airplanes.

WAR DEPARTMENT ORDERS AFFECTING AIR CORPS OFFICERS

CHANGES OF STATION: To Langley Field, Va.: Capt. Wm. B. Souza from Chanute Field, Ill.; 2nd Lieut. Robert M. Kraft from duty as student at Technical School; 2nd Lieut. Roger V. Williams, from Sheffield Scientific School, Yale University.

To Bolling Field, D.C.: 2nd Lieut. Carl F. Theisen, upon completion of course at Massachusetts Institute of Technology, Cambridge, Mass.

To Selfridge Field, Mich.: 1st Lieut. Alfred A. Kessler, Jr., upon completion of course at Massachusetts Institute of Technology, Cambridge, Mass.

To Chicago, Ill., as Air Corps Procurement Planning Representative: 1st Lt. James B. Jordan, upon completion course of Graduate School of Business Administration, Harvard University, Cambridge, Mass.

To Mitchel Field, N.Y.: 1st Lieut. John S. Gullet, from graduate school of Business Administration, Harvard University.

TRANSFERS: 2nd Lieut. David H. Baker, Coast Artillery Corps, transferred to Air Corps March 24, with rank from June 12, 1930; 2nd Lt. David R. Gibbs, Cavalry, March 24, with rank from June 9, 1928.

PROMOTION: To Captain - 1st Lieut. Frank L. Cook, rank March 20, 1932.

RETIREMENTS: For disability incident to the service - Major George E.A. Reinburg, April 30, 1932, with rank of Lieut.-Colonel; 2nd Lieut. Frank L. Skeldon, April 30, 1932.

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PRIVATE SMITH PRESENTED WITH CHENEY AWARD

For performing an act of valor and self-sacrifice, Private John B. Smith, of the 16th Observation Squadron at Fort Benning, Ga., was presented the Cheney Award for 1931 at Bolling Field, D.C. on Saturday morning, April 23rd. This award, which consists of a Medal and a substantial cash contribution, is given each year for the outstanding act or acts of heroism, extreme fortitude or self-sacrifice in a humanitarian interest in connection with flying in the Army Air Corps. Co-winner of the award with Private Smith was Lieut. Robert D. Moor of Holland, Ohio, who received the award posthumously, he having lost his life in sticking to a disabled airplane while his passenger jumped. Lieut. Moor's mother, Mrs. Agnes W. Moor, received the award in her son's name.

Private Smith, a member of the 3rd Attack Group at Fort Crockett, Texas, at the time of his act of heroism, won the award for having slid head first into the cockpit of a wrecked and burning airplane on January 27, 1931, and releasing the foot of Lieut. C.W. Causey, the pilot, which had become jammed in the wreckage. He then pulled the pilot to safety from the blazing wreck.

The presentation was made by the Hon. F. Trubee Davison, Assistant Secretary of War for Aeronautics, the citation being read by Brig. General Oscar Westover, Assistant Chief of the Air Corps. The ceremony took place before all the troops comprising the Bolling Field Detachment. Attending the ceremonies were Mrs. Mary L. Schofield, of Peterboro, N.H., and Mrs. Thomas W. Streeter, of Morristown, N.J., mother and sister of the late Lieut. William H. Cheney, Air Service, killed at Foggia, Italy, in January, 1918. The Cheney Award was established in 1927 in memory of this deceased war-time flyer.

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SERGEANT NEFF RECEIVES THE DISTINGUISHED FLYING CROSS

Sergeant Frank D. Neff, 2nd Balloon Company, Air Corps, was awarded the Distinguished Flying Cross for heroism while participating in an aerial flight at Pope Field, Fort Bragg, N.C., on the night of December 3-4, 1931. During a severe wind and rain storm, the Army dirigible TC-71 broke from its moorings while preparations were being made by the crew to start the engines and cast it off to ride out the storm. Sergeant Neff succeeded in getting the right motor started, but was unable to start the left motor from within the car. Realizing that the airship was not under full control and in great danger of being wrecked and the crew injured, he immediately discarded his parachute, and with complete disregard of his own safety climbed out of the car onto the unprotected outrigger of the wildly plunging dirigible and, working in the darkness in this perilous position, succeeded in hand-cranking the left motor, thereby bringing the airship under full engine control. Sergeant Neff's heroic action in risking his life to save the airship from destruction and the crew from injury was in accordance with the best traditions of the Air Service and reflects great credit upon himself and the military service.

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An experimental model of a ferrotype print drying cabinet has been designed and fabricated at the Materiel Division, Wright Field. This cabinet accommodates sixty of the new chromium-nickel alloy ferrotype plates and will be given a practical test to determine its suitability for Air Corps use. This dryer proved very satisfactory on the initial test.

LONG DISTANCE AERIAL PHOTOGRAPHY

THE aerial photograph of Mt. Shasta from a distance of 331.2 miles, made in January, 1932, from a height of 23,000 feet from a position 8 miles east of Salinas, Calif., is the longest range photograph ever obtained and constitutes the greatest amount of the earth's surface ever covered in one exposure. The negative was made from a point more than 100 miles farther south than the last point from which Mt. Shasta was visible to the unaided eye. Inasmuch as Mt. Shasta was invisible, Mt. Diablo was used as a land mark in connection with the flight map, for purpose of pointing the camera in the correct direction.

The usual visible range in high altitude photography is from forty to fifty miles. When the picture was takem, the Bay region was wreathed in fog and some smoke, hindering the visibility of the human eye, but not that of the specially constructed camera, worth many thousands of dollars. The film used, technically known as Kryptocyanine, hypersensitized, is similar to that supplied to astronomers for photographing stars. It is not only sensitive to the very darkest visible red, but also highly sensitive to a region of the spectrum invisible to the eye and known as infra-red.

In using the film, a heavy ray filter is put over the lens. So dark in color is this filter that it looks like a piece of black glass, impossible to see through. Therefore, the photograph taken through such a filter is made by infra-red or invisible light waves. The focal length of the lens is 500 millimeters, while the focal aperture is F-5.0. Although called an instantaneous exposure, the picture is actually a very slow snapshot of one-fifth of a second. To secure a sharp picture with such a slow exposure, it is necessary that the pilot keep the plane at high altitude on a perfectly straight course, while the photographer holds his camera rigidly at time of exposure.

Due to the altitude, the airplane, although traveling 100 miles an hour, is relatively stationary in space. The film is developed very much as any other film or negative, except that the developing takes twice the ordinary amount of time, or 20 minutes.

The monoplane from which the picture was taken is one of fourteen planes of the F-1-A type owned by the United States Army. It has a supercharged engine of 450 horsepower, and carries special equipment for high altitude photography. The San Francisco - Mt. Shasta "snapshot" was taken in the course of work performed for the United States Coast and Geodetic Survey. The flyers on this photographic mission, officers of the Materiel Division, Wright Field, Ohio, used oxygen masks to combat the rarefied air conditions.

The Materiel Division, Wright Field, is largely responsible, together with the Research Laboratory of the Eastman Kodak Company, for the production of apparatus and materials that make high altitude and long distance photography so successful. If the earth were flay, the area visible between Mt. Shasta and the camera, included in the field of the lens, that is to say in the photograph, would be 26,000 square miles. Due to the fact that the earth curves, the view is interrupted nearly midway between the mountain and the camera. The terrain actually visible in the photograph is computed at 7,200 square miles.

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READJUSTMENT OF FIVE-YEAR PROGRAM

A letter, dated April 11, 1932, from The Adjutant General, addressed to All Corps Area and Department Commanders, and All Chiefs of Arms and Services, on the subject "Air Corps Five-Year Program," states:

"1. Fiscal conditions require a readjustment of the dates on which the various steps in completing the Five-Year Air Corps Program have previously been scheduled.- see Exhibit to Letter of June 30, 1931 (AG 580 (2-11-31) Misc. (Ret) M-C), subject: 'General Plan for Completion of the Air Corps Five-Year Program.' Dates will be announced from time to time as conditions permit.

2. In addition to the above, the following changes in the above program are announced:

a. The formation of the pursuit group (less two squadrons now active) for Panama and of two additional pursuit squadrons for Hawaii is deferred until the fiscal year 1934.

b. The Bombardment group (less the two squadrons now active) for Hawaii will be formed at Rockwell Field in lieu of at Mather Field.

c. The Pursuit groups for Barksdale Field and Langley Field will be formed from new units, the units now at Mather Field, the additional pursuit squadron now at Selfridge Field and the additional service squadron now at Brooks Field. Details will be announced later.

d. Mather Field will be closed as an active field after movement therefrom of its present garrison.

e. The band previously scheduled for formation at Nichols Field is removed from the program."

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The Wright Field Sunshine Club, from Jan. 1 to March 12th, collected for its welfare work $1984.37. This is disbursed only after investigation mostly in food for the poor.

NOTES FROM AIR CORPS FIELDS AND STATIONS

March Field, Riverside, Calif., April 14th.

During April, the following enlisted men were detailed to Chanute Field for training as indicated: Corporal Stephen J. Krause, 9th Bomb. Sqdn.; Pvts. Malcolm C. Underwood and Elia Ficarella, 64th Service Sqdn.; Pvts. Ernest G. Werner and Wm. T. Quentin, 11th Bomb. Sqdn.; Pvts. John V. Dolan, 31st Bomb. Sqdn.; Bentley B. Rowe, 73rd Pursuit Sqdn.; Walter D. Walker and Ellis A. Peterson, 34th Pursuit Sqdn.

Colonel William C. Gardenshire, Construction Quartermaster at this station, was relieved on March 10th and expects to retire at the end of a four months' leave. He expects to make his home in Riverside. Captain Lawrence S. Woods, QMC, succeeded Colonel Gardenshire as Construction Quartermaster.

Tech. Sgt. Ben J. King, 70th Service Sqdn., was ordered to the Panama Canal Department as replacement for Technical Sergeant Edward D. Thomas. Staff Sergeant Edward A. Peters, 64th Service Sqdn., was ordered to the Hawaiian Department as replacement for Staff Sgt. Joseph G. Yonkese.

The March Field basketball team journeyed up to the Presidio of San Francisco last month to engage in the Corps Area Basketball Championship Tournament. While it cannot be said that they returned with "the whole hog," they came home with some of the bacon at least. They finished second to the 30th Infantry team, losing a 38 to 30 contest to that organization. It was anybody's game up until the final whistle. The team was under the charge of 2nd Lt. M.F. Stalder, and the personnel were as follows: Pvts. 1st Cl. L.L. Lash (Captain), Henry (70th), Arnold and Goldberg (64th), Pvts. Hill, Horning and Shadko (34th) and Heacock and J.D. Smith (73rd).

The new P-12F's are arriving at March Field now from the Boeing factory and are being assigned to the 73rd Pursuit Squadron. Pilots making the ferry trip so far are Captains Wm. C. Morris, Claude E. Duncan, Lieuts. Bernard T. Castor, John H. Dulligan, Norman H. Ives, John H. Bundy, P.K. Morrill, E.W. Anderson, Robert W. Goetz, Anthony E. Curcio, O.R. Deering and Daniel A. Cooper. The plane piloted by Lieut. Castor was badly damaged in a forced landing near Grants Pass, Oregon, but Lieut. Castor was uninjured.

7th Bombardment Group: Staff Sgt. John Hilderbrand, 9th Bomb. Sqdn., passed away at the Post Hospital Sunday, April 10th, as a result of injuries sustained in an accident in the armament section of the 9th Sqdn. the previous day. His remains were interred at Riverside on Tuesday following. The 9th Bomb. Sqdn. attended as a body. Hilderbrand was stationed at March Field for the past several years and was Instructor in Armament in the Ground School prior to the removal of the Primary Flying School to Randolph Field. He had approximately 18 years' service, seven of which were in the Air Corps. He entered the Air Corps in 1925, coming from the 3rd Ordnance Company. His home is listed as Vinita, Okla. He is survived by his widow, Mrs. Minnie Hilderbrand and small son, Bobbie.

A "Corned Beef and Cabbage" dinner dance held at the Officers' Club, March 18th, was quite appropriately sponsored by the officers of the 11th Bombardment Squadron, whose planes have carried the picture of the doughty "Jiggs" as their insignia since his adoption at Maulan, France, in 1918. The Club's quarters, arranged as "Dinty Moore's Place," presented a realistic atmosphere for the festivities.

Capt. Younger A. Pitts, one of the "oldest settlers" at March Field, received orders to sail July 29th from San Francisco to New York and then proceed to the Tactical School at Maxwell Field, Ala. for duty as student. The personnel here wish the Captain the best of luck.

17th Pursuit Group: Tactical problems, supporting the 7th Bomb. Group, Wing Inspections and Reviews formed the training program in the air. On Army Day, April 6th, this Group took part with the Bombers in a review for Mayor Porter of Los Angeles at the Los Angeles Municipal Airport. Following the aerial review, the entire Wing landed and was inspected by the Mayor and Lieut.-Col. Arnold.

The 95th Pursuit Squadron, led by Lieut. Leo H. Dawson, Squadron Commander, formed special support for the 7th Bombardment Group in a problem involving the "bombing" of Mather Field on April 5th. Spending the preceding night at Visalia, the 95th furnished protection for two Mather Field Pursuit squadrons on the way in to the objective. A stiff headwind furnished the additional problem to the attacking forces. Returning to March Field the same day, Headquarters Flight, composed of Col. Arnold, Major Spatz, Capt. Hunter and Lieut. Graves, set a new record for the 400-mile Mather-March hop.

Nine Reserve officers from the recent Kelly Field graduating class were assigned to the 17th Pursuit Group. They will fly with the following squadrons: Lieuts. Carl M. Christenson and James M. Treweek, 95th Pursuit; George E. Batty, Robert J. McLean and George I. Rhoades, 73rd Pursuit; Elbert E. Gentry, James C. Jensen, Silas M. Miller and Charles L. Sharp, 34th Pursuit.

Lieuts. Hewitt F. Mitchell, Thomas W. Davis, John B. Preston and J.R. McCleskey, 73rd Pursuit Squadron, made voluntary parachute jumps over March Field

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on the morning of March 15th. The four jumpers landed without even a bruise, and reported the biggest thrill was the ride up in the Fokker. The jumps were made from 2,000 feet, with Lieut. Stewart W. Towle, Jr. piloting the Transport.

The marriage of Lieut. Burton H. Hall, 34th Pursuit Squadron, and Miss Mildred Louise Pearson, of Riverside, took place March 23rd. The couple are making their home at the Magnolia Courts in Riverside.

Langley Field, Hampton, Va., April 16th.

Flight A, 16th Obs. Squadron: A new officer in the person of 2nd Lieut. James R. Williams, Air Reserve, reported in from Kelly Field on March 27th.

Corp. Oldson and Pvt. Haug were awarded Langley Field Basketball Letters as members of the Langley Field team which won the Third Corps Area Championship.

Flight "A" took off for Mitchel Field, April 8th, on a formation training flight. After dodging rain and fog all the way up the coast, it was found that Mitchel Field was closed in, and after three successive tries to get in at Newark Airport, the Flight was forced down at Hadley Field, N.J., some 12 miles southwest of Newark. The ships were hangared and personnel went into New York City by train. The following Tuesday the weather cleared and the flight returned to Langley. All members agreed that some valuable experience was obtained in bad weather flying.

2nd Bombardment Group: Orders sending Lieut. Jamison, one of the old timers in the Group, to Bolling Field are met with regret by the whole Group. The Group is sadly lacking in older experienced officers for key positions in the squadron as it is. We are sure "Jamie" will turn out some fine work on his new assignment.

The Inter-Squadron Officers' Playground Baseball League has gotten off to a flying start, each team having played three games. At present the 49th and 96th are tied for the lead with two games won and one lost. The 20th and a combined team of Group Headquarters and 59th Service Squadron are tied for last place with one win and two losses. Cut throat competition is shown at all games, a beach party to be given the others by the losers being the penalty for "bum" playing.

20th Bombardment Squadron: For the past couple of weeks, this Squadron, along with the 49th and 96th, has been participating in Group tactical missions, specializing in occupying advanced airdromes and practicing defensive formations against Pursuit attacks.

49th Bombardment Squadron: On March 21st, the entire personnel of the field, and the 49th Squadron in particular, were saddened by the loss of one of its members, Lieut. Richard P. O'Keefe, who was killed when the P-12 in which he was engaged in a "dog fight" with Lieut. R.O.S. Akre, collided with Lieut. Akre's plane at 5,000 feet over Plum Tree Island. The plane landed in Chesapeake Bay in 18 feet of water and was raised by a Navy salvage ship. By exceptional handling of his ship, Lieut. Akre was able to get it over open country, minus the right lower wing. He then jumped and landed safely. Funeral services for Lieut. O'Keefe were held at the chapel at Fort Monroe, the entire command attending. The 49th Squadron honored its comrade, flying a nine-ship formation, with one plane missing, over the funeral procession as it proceeded to the dock at Old Point Comfort, Va. Lieut. O'Keefe was buried at Arlington National Cemetery.

The Squadron was engaged with the Group in tactical problems on "occupation of advanced airdromes" lately, being attacked along the routes from assembly point by P-12's flown by members of the newly organized 8th Pursuit Group. Some very good results were obtained with camera guns mounted in the rear of the Bombers.

The Squadron welcomes Lieuts. Shannon, Taylor and Freiburger, former members, whose active duty was renewed, and Lieuts. McAnulty, Collins and Waldron, Air Reserve, who recently reported from Kelly Field.

Lieut. Troup Miller, Jr., narrowly averted an accident when, after taking off in formation with the aileron locks on, he brought the plane back to the field and landed it without mishap. This intrepid bit of flying cost one of our crew chiefs his chevrons.

96th Bombardment Squadron: The Squadron regrets the loss of Lieut. Roy D. Butler to the 8th Pursuit Group and welcomes Lieut. Sykes, whose active duty was extended, and Lieuts. Patrick, Delonge and Riley, reporting from Kelly Field for active duty.

59th Service Squadron: Captain Dunlap is to be congratulated on his recent promotion. Lieut. Torrill, former member of the Squadron, was welcomed back, his active duty having been extended to June 30, 1932.

8th Pursuit Group: April brought us the noise of throbbing Hisso's pulling PT's through death-defying chandelles. This was the new 8th Pursuit Group putting in their flying time. Now, however, with the new P-12's in flying commission, two flights fly every day. These flights are composed of 19 Reserve officers stationed here from Kelly Field. They are 2nd Lieuts. Wyatt H.Alexander, Earnest H. Briscoe, Kenneth R. Case, Fred O. Easley, Jr., Willard J. Foley, John E. Patterson, Frederick L. Gunter, Harold L. Kreider, Thomas B. Mixon, Sterling R. Newman, Robert J. Potter, George H. Prince, Charles W. Reineke, Charles M. Robertson, Joshua W. Rowe, Ira D. Snyder, Gilbert V. Tribbitt, Terry M. Turner and Harry H. Wells. These 19 officers, with Lieut. Henderson, transferred from Bombardment, comprise four flights and are led by Captain Harold H. George, 1st Lieuts. Lloyd E. Hunting, George F. Schulgen and 2nd Lieut. Roy D. Butler.

On April 7th, 2nd Lt. John E. Bodle was assigned to the Group as Armament

Officer.

The new barracks are now completed and occupied by approximately 250 men. These men are being fed at their own mess under the capable direction of Sergeant William A. Hunter.

France Field, Panama Canal Zone, April 12th.

The strength of the command was considerably augmented by the call of the REPUBLIC on her trip from New York to San Francisco, when she left with us Lt. Harvey L. Boyden, Lt. and Mrs. James G. Pratt and four new Reserve officers, Lieuts. William G. Benn, Frank D. Sinclair, Eugene H. Mitchell and James H. Rothrock, Jr.

Mrs. Kirtland, wife of Col. Kirtland, Commanding Officer of Langley Field, and Mrs. Naiden, whose husband, Major Earl Naiden, is an instructor at the Army War College, Washington, were passengers on the REPUBLIC, and while the ship was in the Zone were the guests of Major and Mrs. Brereton at their quarters on the field.

During the month of March, the Panama Air Depot overhauled 2 O-19C, 1 C-6A, and 1 P-12B airplanes, 3 SR-1340D and 3 R-1340C engines, rechecked and tested 2 R-1690B and 3 R-1340B engines. The Parachute Department folded 105 parachutes, inspected 121 and repaired 15.

The following officers received orders for duty in the United States, their tours of foreign service terminating in each instance shortly before the sailing date. Leading the list of departures is Major Leo G. Heffernan, our former Commanding Officer, who sailed on the REPUBLIC on April 16th for Langley Field. Others to go are Captain Otto G. Trunk on the May 7th boat for duty in the office of the Chief of the Air Corps, and sailing with him will be 2nd Lieut. D.W. Buckman for duty at March Field. On May 18th, Lieuts. A.Y. Smith and Berkeley E. Nelson will depart for Langley Field, while the August boat will include 1st Lt. James M. Bevans for Randolph Field and 2nd Lieut. Charles A. Harrington for duty at the United States Military Academy.

36th Division Aviation, Texas National Guard, Houston, Texas, April 5th.

The training program is moving ahead and now includes radio and photographic missions, navigation and blind flying problems. The navigation problems consist of triangular cross-countries by the use of instruments only.

The courses are figured beforehand and maps are not followed on the trip. A varying amount of success has been had on these problems. The blind flying problems consist of flying a straight course to a previously determined point. Perhaps after a few more attempts the objective will be reached.

The Officers' Club monthly social function consisted of a chicken barbecue, which was held on the banks of the Brazos River in Wharton. All officers and their ladies met at the home of Lieut. Gifford and enjoyed his hospitality until it was time to repair to the barbecue grounds. Lieut. Eagle knew where to go! So he was delegated to lead the others there. The chickens were cooked to a turn upon our arrival, and our appetites had been so sharpened by the long drive into the country that they did not last long. Everyone enjoyed himself to such an extent that this type of gathering might be held again.

Some of the happenings of interest during the past month were that Lieut. Alex Greig joined the benedicts and Lieut. Earle T. Showalter was operated on for appendicitis. According to Capt. Pratt, our Flight Surgeon, who performed the operation, Lieut. Showalter went into a flat spin an couldn't come out of it The crash carried him into oblivion. However, we feel that it was only the ether after all.

The only cross-country of any magnitude was when Major Blackburn delivered our sole remaining O2-H to Birmingham, Ala., to the 106th Observation Squadron.

The noncommissioned officers formed a club, and their first affair was a weiner roast at Garden Villas Park. According to all reports, it must have been good.

Randolph Field, Texas, April 16th.

Officials of the Noncommissioned Officers' Club were in charge of arrangements for the first dance held by the Club on March 23rd. They are: Arthur J. Shanley, President; Clarence H. Westover, Vice President; Arthur Groves, Secretary; Alfred H. Bailey, Treasurer; and Ezra Nendell and Clyde M. Strosnider, who with the officers, form the Executive Board. The Entertainment Committee consists of Joseph Montana, Oscar H. Davenport and W.J. Napier. On the Equipment and Funding Committee are Nendell, Paul Kurtz, B.M. Frick, L.V. Ward, E.W.A. Becker and Irving DeWitt.

The plane of Lieut. D.H. Alkire, which was damaged in a landing by parachute flare on Sunday night, April 10th, near Yorktown, Texas, was brought back to Randolph Field by truck. Both wings on one side of the plane were broken off when the ship struck a tree in landing in a small field after the fuel supply had bee exhausted. Lieut. Alkire, who was returning from Eagle Pass, Texas, was un-

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injured. Capt. C.W. Dingman, Flight Surgeon, joined the Caterpillar Club when he jumped with his parachute shortly before Lieut. Alkire attempted his landing, and he also landed safely.

Captain Robert Peterson, Executive Officer, recently announced that nine Reserve and National Guard officers of the Medical Corps completed their six weeks of practical training at the School of Aviation Medicine, Randolph Field, Texas, viz: Lieut.-Col. John A. Schroader, Cincinnati, Ohio; Captain Guy H. Moates, Tarentum, Penna.; 1st Lieuts. George H. Geyer, San Antonio, Texas; John F. Gardiner, Omaha, Neb.; Burr C. Bostom, Waterloo, Iowa; Roy S. Hubbs, North Chicago, Ill.; Frank C. Svoboda, San Diego, Calif.; Everett D. Hockenberry, Zelienople, Penna.; and Captain Harry H. Maynard, New Haven, of the Connecticut National Guard. All will receive the rating of Flight Surgeon.

Ten other Reserve and National Guard medical officers, who are taking the entire Flight Surgeon's course at the School, will complete same May 4th.

Members of the Society of A.I.E.E. and A.S.M.E., numbering about one hundred, visited this station April 18th and, after visiting points of principal interest throughout the post, had luncheon at the Bachelor Officers' Mess. The majority of the members who visited here were students who graduated this year from the respective technological universities in this locality. Texas A. & M. College, Texas University and Rice Institute were represented.

Clark Field, Pampanga, P.I., February 25th.

Following a very pleasant holiday season, the 3rd Pursuit Squadron went back into harness and started work on preparations for Philippine Division Maneuvers and Gunnery season. Maneuvers were held from January 13th to 23rd, and during that time the Squadron flew a total of 192 hours. The missions called for covered a wide range - patrols, protection, special support, straffing of troops, supply trains, boats, etc., night ground straffing of an area lighted by parachute flares and, at the same time, maintained a messenger service, and had a two-seater on the alert at all times to fly line commanders over their troops to observe the disposition of their forces.

After the "Armistice," the pilots who are "Short-timers" settled down to intensive gunnery and bombing practice, and the men used up their meager allowance of 45 calibre ammunition on the pistol range.

Upon their arrival on the December Transport, two newcomers, Lieuts. Burwell and Henry sojourned for a short time at Nichols Field and then joined us.

On the evening of February 19th, the officers of the Squadron gave a party at the Bamban Hotel in honor of Major Harry Andreas, M.I.R., as an expression of their appreciation for his untiring efforts to make everyone's tour pleasant. The Major will be remembered by all officers who have served at Clark Field.

On February 23rd, Captain Hornsby, Squadron Commander, with Captain Hewitt and Lieut. Taylor took off in three P-12's on a tactical patrol flight to locate a suitable emergency field to be used by the organization during field exercises. Landings were made on the beach at Bauang and Luna. On the return trip they landed in the new Loakan Field at Baguio. This is the first time Army planes had used this new commercial field.

The Squadron is marking time at present, anxiously awaiting the results of Record Gunnery and Bombing which has been started.

San Antonio Air Depot, Duncan Field, Texas, March 30th.

Lieut.-Col. A.G. Fisher, Depot Commander, and 1st Lieut. C.E. Thomas, our Depot Supply Officer, returned March 16th from a cross-country flight to the West Coast, where they conferred with the Commanding Officer of the Rockwell Air Depot on supply and maintenance matters, and the proceeded to inspect the proposed site for the new Air Depot at Benton Field, Alameda, Calif. They report a very interesting trip, and were much pleased with the prospects of the new Benton Field addition to Air Corps activities.

We were sorry to learn of the illness of 1st Lieut. David J. Ellinger, on a three months' leave of absence since Feb. 27th, prior to joining this Depot from Panama. He entered the Army Medical Center, Washington, on March 10th for observation and treatment, and we have heard nothing beyond the bare official notification. We trust it was nothing serious and that he is now recovered.

Orders were received for the assignment of Captain Ralph B. Walker to duty at this Depot from the Hawaiian Department. He was granted three months' leave of absence, effective on the date of his arrival in the United States.

First Lieut. R.R. Gillespie, on leave from Langley Field, and 1st Lieut. J.P. Kirkendall, transferred from Randolph Field to Fort Sill, were visitors here as the house guests of Captain and Mrs. Warner B. Gates, March 16th-19th.

First Lieut. Wallace G. Smith, accompanied by Mr. L.A. Hendricks, Associate Radio Engineer of the Air Corps Materiel Division, Wright Field, who visited Kelly Field by air for the purpose of installing a harmonic suppressor designed to eliminate interference in the radio beacon at that station, and for the purpose of inspection of radio equipment at Randolph and Brooks Fields, also visited this Depot on March 28th to confer with our Engineering Department on radio

shielding in airplanes turned out by the Depot.

On Easter Sunday, March 27th, all the children of the Post enjoyed the hospitality of Mrs. Edward V. Harbeck, Jr., in an Easter egg hunt, and the occasion was one of whole-hearted joyousness and glee for every child.

San Antonio Air Depot, Duncan Field, Texas, April 15th.

Visiting officers from out of town, represrnting Air Corps activities of this area at the regular monthly conference here on Air Corps supply and engineering matters, April 15th, and the luncheon following the conference, were: Capt. S.J. Idzorek and 1st Lieut. J.J. O'Connell, Fort Crockett; 1st Lt. Wm.L.Ritchie, Post Field, Fort Sill, Okla., and 1st Lieut. Raymond M. Wilson, 45th Division Aviation, Colorado National Guard, Denver.

First Lieut. Edward M. Robbins, Rockwell Field, visited here, bringing a B-4 plane on April 7th, and departing April 9th in a B-4A for his home station.

April 15th, this Depot had the pleasure of a visit from Major-General John F. Preston, The Inspector General, who included this station in his tour of inspection of military posts throughout the west.

Capt. Warner B. Gates, Adjutant, and Capt. E.V. Harbeck, Jr., Chief Engineer Officer of the Depot, made a cross-country tour March 31st-April 4th, to Fort Crockett and Houston, Texas; Barksdale Field, Shreveport, La.; Muskogee, Okla., and Hensley Field, Dallas, Texas, for the purpose of coordinating Air Corps supply and engineering matters with the Commanding Officers of Regular and National Guard activities at those stations.

First Lieut. Lewis S. Webster, on duty at this Depot in Supply and Engineering since June 30, 1929, was relieved and detailed with the Organized Reserves, 6th Corps Area, Chicago. He is now on leave for a month and 20 days. Great regret is felt at the departure of Lieut. and Mrs. Webster and their children, and our sincerest wishes are for their happiness and success at their new station.

During March, the Engineering Department overhauled 1-A3, 1 A-3A, 6 A-3B, 3 O2-H, 3 O-19B, 3 O-19C, 4 P-1F, 6 BT-2B, 8 PT-3, 3 PT-3A, total 38 airplanes; repaired 1 B-5A, 1 LB-7, 1 O-2J, 1 O-11, 4 O-19B, 1 YO-31, 1 P-1C, 1 P-1F, 1 C-24 1 BT-2B, 2 C-9, total 15; overhauled 13-R790, 6 R-975, 16 V-1150, 18 R-1340, 4 R-1750, 4 R-1690, 1 R-1820, total 62, engines, and repaired 3 R-975, 7 V-1150, 3 R-1340, 3 R-790, 1 R-1750, 22 V-1650, total 39 engines.

Fort Sill, Oklahoma, March 28th.

As the weather clears up, cooperative work with the Field Artillery School takes on a decided increase. The classes are now coming out into the field to put into practice the things they learned during the long winter sessions. Flight "E" participated in 6 Field Exercises and flew 96 Aerial Adjustments, all using radio, both voice and code. The Machine Gun Company, 38th Infantry, practiced anti-aircraft formations against attacks by Flight "E" on two occasions. The Flight, using flour bombs, registered effective hits with all of the 15 bombs dropped, the most noteworthy hit being made by Master Sgt. Dawkins, when he powdered the nose of a doughboy mule. The 1st Balloon Company participated in 3 Field Exercises and 12 Artillery Adjustments.

Pilots and passengers visiting this station on cross-country trips were: 1st Lt. Don W. Mayhue; 1st Lt. A.H. Foster, Pvt. Reylar, Fort Crockett; Major H. H. Young, Sgt. Byron, Brooks Field; Capt. M.D. Mann, Brig. Gen. Immel, Wisconsin National Guard; Lieut. Walker, Pvt. Williard; 2nd Lt. E.H. Alexander-Pvt.Gustaphson; 2nd Lt. S.R. Brentnall-Pvt. H.L. Jones; 2nd Lt. L.H. Watnee-Sgt. Wehyling, Randolph Field.

On March 21st, Master Sgt. P.C. Biesiot flew the C-15 Hospital Ship from Kelly Field to Post Field, returning same day with two patients for the Station Hospital, Fort Sam Houston.

On March 23rd and 24th, 1st Lt. R.K. LeBrou and 2nd Lt. H.G. Bunker, ferrying two B-4A's, serviced here enroute to Rockwell Field.

Cross-country flights by pilots of this command were made - March 16th by 2d Lt. Douglas T. Mitchell, ferrying an O-19B to Duncan Field, returning an overhauled O-19C March 17th; March 12th - by 2nd Lt. Douglas T. Mitchel, who flew 2nd Lt. F.M. Steadman, F.A., to Oklahoma City, returning via Pauls Valley on March 13th.

The Fort Sill Basketball team made a clean sweep of its series with the Championship 23rd Infantry team from Fort Sam Houston. Both games were stubbornly contested, and in each game an extra period was required to decide the contest. This team was built around the Air Corps team, winner of the Fort Sill pennant, and carried on the same fighting spirit and team play which characterized the Air Corp Five throughout the local tournament. The result was seen in the terrific last minute drives that swept the doughboys off their feet in the two extra periods. The Air Corps was represented on the squad by the following personnel: 1st Lieut. Wm. L. Ritchie, Flight "E," Coach; Staff Sgt. Joseph A. Murray, Assistant Coach; I.A. Noakes, R.C. Motley, J.R. Varnell, J.B. Hagen, O. Kohl, F.H. Clark and A. Hafley, all of the 1st Balloon Company.

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INDIANA NAT. GUARD.

STOUT FIELD, INDIANAPOLIS

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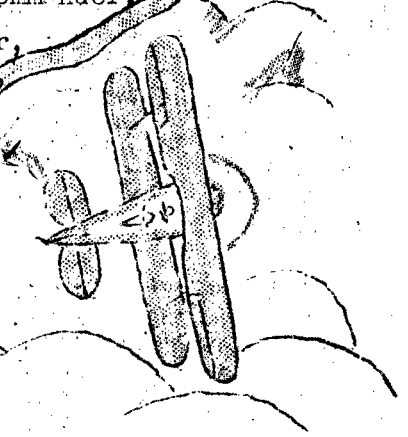
The Squadron was highly honored by the visit of The Secretary of War, Patrick Hurley, at Stout Field, April 9 and 10. We were also pleased to become acquainted with the crew of his tri-motored Ford plane. The crew consisted of the pilot, Lt. Cornulous W. Cousland, a radio operator and two mechanics. Come back and see us again.

Lieutenant Maschmeyer from Selfridge Field set a new speed record between Selfridge and Stout Fields on April 9th, in a P6-E. He covered the distance of 275 miles in 1 hour, 19 minutes and thirty seconds, an average speed of about 215 miles per hour, thanks to a good old tail wind. It is quite appropriate that Lieutenant Maschmeyer should set his record between these two fields; for he was originally a member of this organization before going to Kelly Field, and he is now on active reserve duty at Selfridge.

This warm bright weather is expected to bring out the camera guns and the observers are expecting to register their share of hits if our fellow targets will stay out of spins. Some day a smart observer is going to put his legs in a couple of iron pipes so he will be on his feet instead of his knees after a few dives and zooms, while standing up to a camera gun. The squadron is continuing intensive training in order that each member shall receive sufficient practice in every phase of observation work prior to the field training period.

The Squadron assisted Lieut Stanton T. Smith and squadron at Schoen Field, Ft. Harrison in its Army Day program, on Wednesday April 6th. Commendation was made by Major General Hugh A. Drum, Corps Area Commander.

Our Commanding Officer, Major R. F. Taylor, expects to make a cross country to Portland, Oregon, starting April 20th, taking the National Adjutant, American Legion to make arrangements for the Legion Convention to be held in Portland in September.



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Mather Field, Sacramento, Calif., April 15th.

The quota of P-12E's for Mather Field will be completed very shortly. Twenty-five new ones were ferried by officers of this command to this station from the factory at Seattle, of which 21 went to the 55th Pursuit Squadron and 4 to the 20th Pursuit Group Headquarters. The 77th Pursuit Squadron is being equipped with 21 P-12E's from the 17th Pursuit Group at March Field. New designs are being tried out on their present C's, and will be painted on the E's as soon as a suitable one has been decided upon. From the looks of the present C's in the 77th, smoked glasses will be worn when looking at the E's when they have been painted with the Squadron colors and design.

77th Pursuit Squadron: Gunnery and service test are completed now, leaving a train of varied scores. We may with pride, however, say that most of them were good. Now there remains the task of licking the 55th in an inter-squadron competition.

With the advent of our P-12E's, we certainly have a conglomeration of vari-colored, vari-motored and vari-modeled planes. It is a motley appearing but superb flying gang at present. This squadron has just completed several sessions of night flying. The method used was very much like the system at the training school. Lights were mounted on Headquarters hangar and were in charge of Lieut. L.M. Williams, Assistant Operations Officer. The flying was done primarily to service test different types of navigation lights, and their effect in formation flying. Consequently, quite a little formation work was done. The still quiet of the night accentuated the roar of the planes in dives, and it was not long before the populace of adjoining towns were flocking to the field. Lieut. Kingham who was in charge of the landing flood light, enjoyed himself and amused the crowd by taking the lens off the light, thereby making a spot light out of our flood light. He then proceeded to pick up the various formations and put them "on the spot." Whether the pilots liked to do day flying at night we do not know, as we were not able to ascertain. Judging from their tactics, they were trying to get out of the light or trying to amuse those whom they knew were watching. It is our opinion that they were blinded and were not responsible for the way they flew.

Lieut. Hopkins proceeded to "service test" our nice new steel fence which the Quartermaster was so good to have erected around the field, by landing his element just fifty feet on the outside and rolling through. Luckily, it was their last landing, as none of the pilots realized their accomplishment until after they had taxied up to the line. Holes were torn in the wings and fuselage, while the propellers and landing gears had dents in them. Landing into the beam of the flood light, thereby blinding the pilots, is given as the reason for landing so far out. No other damage was done during the course in night flying.

80th Service Squadron: Lieut. Lee, Squadron Adjutant, just returned from a six-day leave of absence in conjunction with his official duty as escort to the late Lieut. Meguire. Lieut. Lee was picked for this detail, as they were both classmates at West Point, and also at the Primary and Advanced Flying Schools. During his stay at the Point, Lieut. Lee renewed many old acquaintances.

Capt. H.N. Heisen, our Squadron Commander, is now on nine days' leave of absence and is visiting points in Southern California.

This organization received a new P-12E, ferried by Lieut. Williams from the factory at Seattle, Wash. It is one of the very many now in use at this station.

Our C-14 Transports are undergoing major overhaul at the Rockwell Depot.

55th Pursuit Squadron: The past month was devoted to Aerial Gunnery and Bombing. Firing was done by flights and was competitive. Towards the end the competition was very keen and resulted in excellent scores being made by all flights. The average for the entire Squadron was over 900, exclusive of tow target scores.

The Squadron just received the last of 21 new P-12E's from the Boeing Factory. This is the first time since Maneuvers last year that we had a ship for every pilot in the squadron. We are now working the Squadron into shape for the forthcoming annual tactical inspection. What little time we have left is being devoted to formation and tactical training.

A new insignia has just been submitted to the Chief of the Air Corps for approval. It combined a winged arrow and a winged sword in a fret and has a background of blue and gold.

The Squadron baseball team was out early this year and holes to win the Post Championship. We have quite a handicap to overcome, having won one and lost two.

All the bachelor officers are gaining weight since the local Officers' Mess was taken over by Lieut. Holtzen. Yea, even the married officers bring their wives around quite often. We don't know if they do that to enjoy a good meal or to dine in the gorgeously furnished dining room. It is rumored, however, that one married officer who lives off the post is sending his wife away for two months so he can live with the bachelors and enjoy his meals.

Patterson Field, Fairfield, Ohio, April 19th.

Eighteen students from the Technical School, Chanute Field, arrived at this station the latter part of March on an inspection tour.

Captain William B. Wright, leading a flight of four Observation planes with

Reserve officers, arrived from Kansas City, Mo., to make an inspection of Patterson and Wright Fields.

Cross-country visitors were Captain Strahm and Lieut. Mills from Maxwell Field; Major McDonnell, Miller Field; Lieut. Anderson with Lieut. Madarasz from Chanute Field; Major Lackland with Sgt. Bogdansky, Brooks Field; Lieut. Carpenter with Sgt. Hansen, Stour Field; Lieut. Eckert, Selfridge Field; Lieut. McNeil, Roberts Field, and Lieut. Gerhart from Mitchel Field.

Lieut. Cummings from Cleveland Airport; Capt. Colgan, Lunken Airport and Lt. Smith, Schoen Field, ferried planes to this station for major overhaul.

Planes were ferried by pilots from this station, as follows: an O1-E to Candler Field, Ga., March 16th, by Lieut. C.S. Irvine; a BT-2B to Schoen Field, March 17th, by Majors Sneed and Burwell; a P-6A to Selfridge Field, March 18th, by Lieut. P.W. Timberlake; a BT-2 to Logansport, Ind., March 18th, by Lieut. R.L. Williamson; a BT-2B to Chanute Field, March 24th, by Lieut. D.R. Goodrich with Lieut.-Col. L.E. Goodier, Jr., returning in an O-25; a BT-2B to Detroit, March 29th, by Capt. B.F. Lewis, with Mr. Weinland.

Orders were received transferring Lieut. Melvin B. Asp to Maxwell Field, July 1st, and Lieut. Clarence S. Irvine to the Air Corps Engineering School, Wright Field, August 1st.

Lieut. Cousland from Bolling Field, Lieut. Keim from Bowman Field, and Capt. Mann from Chicago ferried planes to this station for Major overhaul.

Cross-country visitors during the period April 1st to 15th were: Capt. Gardner from Sky Harbor; Lieut. Robbins, Rockwell Field; Lieut. Bartron, former Supply Officer at this station, from Randolph Field; Major Jones from Bolling Field; Lieut. Welsh from Bowman Field; Capt. Souza from Chanute Field; Lieut. Duckworth from Candler Field; Capt. Colgan and Lieut. Hart from Lunken Airport, and Lieut. McCormick from Selfridge Field.

The Wilbur Wright Golf Course was officially opened April 9th. Due to inclement weather, however, there were no golfers on the course Saturday afternoon. It has been noted that certain officers on the post have been practicing "Fly-Casting." Look out, Fish!

Major overhauls were made to 19 planes and minor overhauls to 17 during March. Engines, Major overhauls 40, minor overhauls 23.

Lieut. P.W. Timberlake ferried an O-19C to Scott Field, April 2nd.

Lieut. Williamson, accompanied by 5 employees from Patterson Field, attended the Air Show at Detroit on April 7th, making the trip in a C-14 plane.

Major A.L. Sneed flew cross-country to Selfridge Field, April 7th. While there he visited the Detroit Air Show.

Mitchel Field, L.I., New York, April 4th.

Several of the officers and ladies on this field have been wrestling with the flu of late. Captain Taylor, Lieuts. McCulloch, McClellan, Olive, McCleod, Steed, and Mrs. Cullen have or had it. It is hoped this flu weather won't last much longer and the field will soon be free from it.

Lieut. McCulloch's latest innovation is blind flying goggles. The lens are painted black, with peep holes allowing the pilot to see only his instruments. Efficiency? Nothing else! Now we can double up on our missions and do blind flying and mosaics all at one time.

During the week of March 7th, Lieuts. James F. Olive, Willard R. Shephard and Staff Sgt. Charles F. Wilson went to Wright Field, Ohio, to receive instructions on the new T-3A five-lens Aerial Camera.

Captain Taylor was signally honored by a commendation from General Foulois, Chief of the Air Corps, for his efficient and diligent performance of an aerial photographic survey in Michigan during 1931. Mr. Mendenhall, Director of Geological Surveys, sent a letter of commendation to General Foulois commending Capt. Taylor on the thoroughness of his reports of the Michigan Survey.

General Fechet dropped in at Mitchel Field on his way to Hartford, Conn., recently.

The monthly dance of the Officers' Club was held Saturday evening, April 1, at the Rockville Center Country Club. There was a large attendance, all officers being at the dance with the exception of those of the 99th Obs. Squadron, who were participating in the maneuvers at Aberdeen, Md. Music was furnished by the Post Orchestra. A buffet luncheon was served at midnight. The occasion was very successful and a good time was had by all.

The 99th Observation Squadron, consisting of 11 ships, under the command of Capt. Frederick W. Evans, left Mitchel Field April 1st, enroute to Aberdeen, for the annual gunnery and bombing practice. The 99th is to remain at Aberdeen until April 29th.

Selfridge Field, Mt. Clemens, Mich., March 29th.

Several War Department orders were recently received, effecting changes in the personnel of Selfridge Field in the near future. Major Gerald E. Brower, at present in command of the 1st Pursuit Group, was ordered to duty in Philippines, effective the latter part of the summer. Major Brower reported at Selfridge on May 5, 1930, and was in command of the Group since then. Capt. Harry A. Johnson

received orders for the next class at the Air Corps Tactical School. In point of service here, Capt. Johnson is an "old timer", having reported March 24,1928. He commanded the 57th Service Squadron and acted as Post Engineering Officer during the first six months, and since then was in command of the 94th Pursuit Squadron. The Air Corps Engineering School at Wright Field is claiming two Selfridge Field officers for its next class, Lieuts. Paul W. Wolf and George F. Smith. Lieut. Wolf reported here from the Philippines, March 19, 1929, and, after commanding the 17th Pursuit Squadron for a year, served as Assistant Operations Officer and later as Post Operations Officer and Adjutant of the 1st Pursuit Group. Lieut. Smith, who reported for duty Nov. 14, 1929, served continuously with the 27th Pursuit Squadron.

The Selfridge Field Basketball team, composed of Lieuts. McCoy McFerren, Staff Sgts. Freelund, Howard, Corporal Schmitt, Privates Everett, Beane, Hughes, Bates and Harvey, journeyed to Scott Field March 19th, and that night won a practice game, 30-24. The team then proceeded to Jefferson Barracks for the 6th Corps Area Athletic Meet. Monday night, Selfridge eliminated Fort Wayne, 50-33, in the play-off for the semi-finals. Wednesday night, drawing Scott Field in the semi-finals, Selfridge, after a hard-fought game, was defeated 34-27. Fort Brady and Selfridge tangled Friday night for the consolation game and the three points awarded the team gaining third place. Selfridge was again off form and gave Brady little opposition, losing 41 - 34. Selfridge Field boxers met with too stiff opposition in their branch of the Meet, losing all four bouts.

Officers of Selfridge Field continue great activity in various forms of exercise. In the Bowling Tournament, Headquarters won two and lost one; the 36th won its only game played; the 27th won two and lost two, and the 94th lost two. Squash, handball and basketball continue in popularity. Badminton, an alleged ladies' game, is rearing its feathered head, and all scoffers are urged to try it once.

CASTLE

17th Pursuit Squadron: The 17th wishes to make formal announcement of the return, on or about March 1st, of our prodigal son, Lieut. E.W. "Chief" Maschmeyer. "Chief" left the 17th to be a rah-rah collidge boy for a month. He intended to complete his senior year at Purdue, but due to a "drag" with the dean of men was told he could come back for some more active duty in the Air Corps Reserve and thereby gain credit for courses in navigation, meteorology, and theory of flight. "Chief" tried to persuade them to include art appreciation among the credits gained by his Air Corps experience, but the dean balked at that. We are glad to see "Chief" back in our midst, but can't understand why or how the dean at Purdue could bear to let "Chief" leave his institution, nor what the co-eds will do for entertainment in his absence.

We wish also to announce the resumption of the local social season now that Lieuts. Robinson and Bledsoe returned from a week spent in what the social column would call "sunny" Virginia. The trouble was that the sun wouldn't shine, so they spent their time enjoying themselves in Washington and Uniontown, waiting to complete what had started out to be an ordinary week-end cross-country trip, and ended by being an extended visit in the South. The local belles sighed with despair as they imagined what must have been happening to Robinson and Bledsoe among the Southern charmers.

Led and inspired by Captain and Mrs. Hoyt, the 17th "put their collective shoulder to the wheel" to make a success of the Post Dance which they sponsored on March 18th. The party was titled a "Hard Times - St. Patrick's - Leap Year Ball," and was sponsored not only by the 17th Squadron, but the Amalgamated Steam Fitters' Union. The Entertainment Committee (composed of the entire officer personnel of the 17th) points with pride to the fact that at 1:00 a.m., everyone was having such a good time that they voted to have the orchestra bribed to stay an extra hour.

27th Pursuit Squadron: With the belated arrival of winter and subsequent frigid temperatures has come for the 27th resumption of high altitude Group maneuvers and high altitude individual tests. The high point of the month was reached, both figuratively and literally, when one of the P-12E's "clawed" its way up to 32,150 feet with Captain R.C.W. Blessley, Squadron Commander, shivering at the controls and industriously nursing an ice-coated oxygen tube. The flight was made in a standard ship and required an hour and ten minutes of more or less steady climbing. Captain Blessley was confident the ship would go higher. Other pilots of the Squadron, less ethereal minded, managed to reach noticeably lesser altitudes and all deplored the flight immensely. One result of the tests was the transfer of large quantities of ice from the higher regions to the floor of the 27th hangar.

Another big day was written into the history of the 27th last month when Lt. Curtis (Rah! Rah!) E. LeMay returned from a six months' detail involving completion of an engineering course and a study of performance characteristics of present day co-eds at the State University of Ohio. LeMay presented himself at the post attractively attired in the latest model collegiate pinch-back suit and a liberal sprinkling of second-rate fraternity hardware; the latter so worn that it could be seen when the wearer was in any position except lying on his face. His flying chums of the 27th immediately joined hands around him and spontaneously broke into an old college yell. However, this grim business of military flying apparently is not long to be so charmingly relieved, and the entire post has joined the 27th in mourning the fact that LeMay now wears only a few of his fraternity pins on his blouse.

Some of the Squadron's more dashing pilots have been attempting the usual personal cross-country flights, and Lieut. Clark Piper, recently pride of the

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school squadron at Kelly, proved his mettle by getting to Mitchel Field in only two days, via various cities in the northeast. The entire 27th was depressed for days after Piper reported his compass as defective.

36th Pursuit Squadron: The Squadron finally received six of the new two-seater Pursuit airplanes, known as the YIP-16, manufactured by the Berliner-Joyce Co., so that speculation as to their performance is gradually turning into actual experience. Those pilots assigned to the new type ship are quite enthusiastic about its performance and flying characteristics. Apparently its speed is but little below that of the single-seater type of Pursuit ship now in use by the Air Corps, and the feeling of added security the addition of a flexible gun for use toward the rear given the pilots of these planes more than offsets this slight difference in speed and rate of climb. These new ships are used almost daily in connection with the Group operations of the First Pursuit Group, serv-in all capacities from Observation and Attack to the missions for which built.

94th Pursuit Squadron: Lieut. J.V. Crabb found that to scoff at a brother pilot's misfortune does not pay, for as he was compiling his contribution for last month's News Letter, Lieut. Feldmann had a minor crack-up on the field - directly in front of the 94th Operations Office. This was really service - so thought Crabb - and he wrote up an account immediately. This was all well and good, but in his story he inserted several joking references to the pilot of the ship, and the entire story tended to hold Lieut. Feldmann up to ridicule. Two weeks later the author of the above mentioned story had an accident of his own. In returning from a week-end cross-country to Chicago, Lieut. Crabb ran into a severe snow storm at Pontiac, Mich. He was forced to land, and in doing so ground-looped and turned over on his back. Inasmuch as Crabb is extremely short coupled, his head did not hit the ground and he was able to write on his forced landing report: "No injury to personnel."

Lieut. E.H. Schlanser returned from Buffalo March 25th with the last of the consignment of new P-6E's. The 94th is now equipped with 21 Pursuit ships.

Permanent individual clothing lockers were installed in the 94th hangar. They are large, roomy lockers capable of holding all necessary flying gear without crowding, and are quite a change from former times when two or three pilots were forced to use the same small locker. No doubt the dispositions of 94th officers will improve now, for arguments as to "who has my parachute" and "take off my flying suit" will cease.

Kelly Field, San Antonio, Texas, April 11th.

The Panama Flight left Kelly Field on the morning of March 25th. While they were awaiting orders, Col. Andrews, Capt. Kincaid and other members of the flight renewed old acquaintances at Kelly Field and San Antonio.

In the past several weeks trips to California were made by Kelly Field pilots in order to ferry back P-12 Pursuit planes for use in training students. The first trip was made by Capt. E.H. DeFord, the second by Capt. H.K. Ramey and Lt. E.E. Glenn to Rockwell Field; the next by Capts. T.S. Voss and L.N. Eller, and Lts. L.J. Maitland, H.R. Baxter, O.A. Anderson and E.H. Underhill to Mather Field. Lt. C.I. Ferris to Rockwell Field, and by Capt. L.A. Dayton, Lts. J.W. Monahan, J.A. Baird, T.L. Gilbert and J.F. Haney to Mather Field.

A flight of 18 planes, led by Lt.-Col. H.B. Clagett, sent to Eagle Pass, Apr. 9th, to be guests of the city in celebration of opening of Maverick County Irrigation Project.

Lieut. R.L. Boyd was transferred here from Randolph Field.

A new Attack plane, the XA-8, flown by Lt. J.F. Whiteley, was under observation at Kelly Field for several days. It was flown by Kelly Field officers, who will submit recommendations on its approval. Lt. Whiteley flew the plane from Wright Field to the Tactical School, Maxwell Field; to the 3rd Attack Group at Fort Crockett; then to Kelly Field. From here he returned to Wright Field.

Kelly Field now has a new Captain, namely, Howard K. Ramey, Director of the Observation Section. On the morning of March 25th he was presented with a pair of bars, about one foot square, with proper ceremonies, by Capt. DeFord, the Post Adjutant, and various others.

Capt. E.J. House ferried here a P-1 airplane from Bolling Field.

Training has been progressing satisfactorily in all the sections of the Advanced Flying School. Night flying was completed in the Observation Section the last of March, and the Attack Section started in on this type of flying.

The 40th School Squadron received Pvts. Whitmore, 5th Cavalry, Ft. Clark; Edwards from Randolph Field and Morrow from Ft. Sam Houston.

Pvt. John W. Ross, Hqrs. Advanced Flying School, returned from 90-day furlough - Sgt. Sheffield, 40th School Sqdn., is enjoying a 90-day reenlistment furlough in Washington, D.C. -

Pvts. Edward Wall, George M. Biel, John D. Lanier and Hubert H. Cross returned to the 41st School Sqdn. from Chanute Field, where they have been taking cours at the Technical School. - Master Sgt. Gervais J. Garner is back with the 41st School Sqdn. after a tour of service at Nichols Field, P.I. - Sgt. Stephen Riales left the 41st School Sqdn. for service with the 72d Bomb. Sqdn., Luke Field, T.H. The 40th School Sqdn. gained Pvts. Charleton Oliver from the 12th Field Art. and Flanagan from Camp Normoyle. - Pvt. Busby, 40th School Sqdn. was called to his home in Forrest City, Ark., on account of illness in his family.

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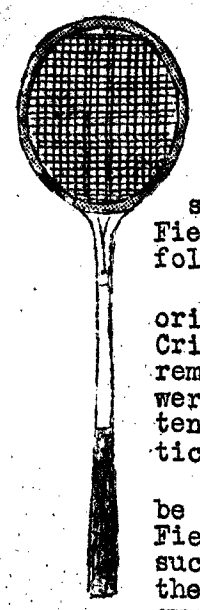

CRISSY FIELD COMPLETES SQUASH COURTS

In the belief that Squash is the ideal form of exercise for flying personnel and that this game bids fair to become the standard form of athletics in the Air Corps, Crissy Field just completed two squash courts. In accomplishing this project, the splendid example and lead of Langley Field, Bolling Field, Rockwell Field, Mather Field and possibly a few other Air Corps stations was followed.

The building in which the squash courts were constructed was originally built as a hangar for the mail planes which formerly used Crissy Field as a regular authorized base. Later, this building was remodeled to serve as a barracks for the Air Corps ROTC Camps which were held at Crissy Field for a number of summers. To a certain extent, the building was used between summer camps as a gymnasium, particularly to afford practice for the Crissy Field basketball teams.

As the Air Corps ROTC unit at the University of California will be discontinued at the end of the present school year, the Crissy Field ROTC Camp held during the summer of 1931 was probably the last such camp. The Commanding Officer, therefore, lost no time in further remodeling the building in order that it may serve as a real gymnasium for the personnel of this station. In addition to the two squash courts, facilities exist for basketball, volley ball and badminton. So far as is known, Crissy Field is the first station, Air Corps or otherwise, to adopt the latter game. It is suggested that personnel unfamiliar therewith withhold criticisms until they have had an opportunity to play the game or at least see it played. It is not so bad.

In addition to the facilities already enumerated, it is contemplated building two handball courts as soon as funds, labor, etc., become available therefor. In view of the limited funds and personnel available for building the Crissy Field squash courts, it is thought that some details as to their construction might be of interest to other stations which may be confronted with the same handicaps. For this reason, some of the more important construction details are briefly described hereafter.

It may be interesting to note that it was necessary to tap four different sources of funds to secure the sum of $757.80, which was found necessary to complete the project. The commissioned and enlisted personnel at Crissy Field, who will undoubtedly keep these courts well occupied from now on, owe a debt of gratitude to Captain Shiras A. Blair, Air Corps, who, during his five months' stay at Crissy Field, served as Utilities Officer. The construction of the squash courts is due to no small extent to the initiative and enthusiasm of Captain Blair. Unfortunately, he leaves Crissy Field within the next few days for his new station in Panama.

Two squash courts were recently completed at Crissy Field at a total cost of $757.80. These courts were constructed in the west end of the gymnasium building, the inside dimensions of which are 79'5" by 98'8". The walls and ceiling had been previously entirely sealed with wainscoting. As the courts were constructed in the northwest and southwest corners of this building, it was only necessary to frame one side and the rear wall for each of the courts. All four walls and the floor were covered with 4" edge grain Oregon pine flooring, and after constructed the floor and walls sanded. The sanding of the floor was accomplished with the regular floor sanding machine, and the walls were sanded with a small hand belt electric sander which was rented for this purpose. The original ceiling was satisfactory. Each court is illuminated with 15 lights. A bank of six lights, using X-Ray Reflectors No. 510, are located in the ceiling, five feet from the front wall. These reflectors are so designed as to throw maximum light on the front wall. The other nine lights, using X-Ray Reflector No. 575, are located in the ceiling in three rows of three lights each, equally spaced over the balance of the court. The method of lighting and the equipment used was recommended by the Illumination Engineer of the General Electric Co. All lights are flush with the ceiling, holes being cut the size of the reflectors. The reflectors rest on a piece of 3/32" plywood in which the hole is cut the same size as the inside dimension of the reflector. The lights are protected by 1½" mesh chicken netting nailed under the plywood. The entire inside of the court is painted white with one priming coat and one second coat, paint being especially mixed for this purpose by the Fuller Paint Company. The inside dimensions of the courts are 32'6" long by 17' wide by 15' high, the height being governed by the height of the original ceiling.

For the construction of these courts, the Post Exchange, Presidio, donated $500.00; $60.00 was received as the Crissy Field share of the Corps Area football profits; $82.00, representing the Crissy Field Recreation Fund balance, and $115.68 was taken from the Crissy Field Barracks and Quarters fund.

All carpenter work was accomplished by a civilian contractor. The sanding, painting and electrical installations were accomplished by enlisted labor. The following is an itemized list of expenditures in connection with the construction of these courts:

Lumber, $221.83; Rental of sanding machine, $25.00; Sander belts, $10.60; Eight-gallon Paint, Priming coat, $18.40; Eight-gallon Paint, second coat, $20.40;

Eighteen No, 575 X-Ray Reflectors @ $3.06 each, $55.08; Twelve No. 510 X-Ray Reflectors @ 3.06 each, $43.20; Eighteen No, 10500 X-Ray Rings, $6.48; 43 linear feet Galvanized Hex. netting, 1½" x 18-72, $6.58; Two sheets No. 24 Ga. Gal. Iron, 36 x 120, $3.20; three pair Soss Invisible Hinges 3½" x ¾", $6.60; Two pair Soss Invisible Hinges, 2-3/8" x 1½", $1.30; Two Flush Bolts, .54; Carpenter work (by contract) $288.00; Miscellaneous electric supplies, conduit wire, etc., $50.59, total $757.80.

The Officers' Squash Tournament at Mather Field, Sacramento, Calif., was brought to a close by Lieut. L.Q. Wasser defeating Lieut. L.M. Williams in three games - 15-12, 15-13 and 15-14 in the finals. Lieut. Wasser will be rewarded with a silver trophy cup donated by a local sporting goods store. Lieut. L.M. Williams defeated Lieut. J.G. Hopkins, and Lieut. Wasser defeated Captain Clark in the semi-finals. The six highest players in the Tournament have formed a Post Squash team and will play a team from March Field in the near future.

On the evening of April 5th, a team of squash and hand ball players, made up from the officer personnel of Selfridge Field accepted the invitation of the Detroit Athletic Club for a match with some of its members. The officers arrived at the Athletic Club about 8:00 p.m. and were soon introduced to their opponents for the match. The officers team was completely outclassed and succeeded in winning only one match out of six. This was due largely to inexperience, but a great deal may be attributed to the dazzling light and fast bounces of the courts which were entirely different from the home made courts being used at Selfridge Field.

Major G.E. Brower, Lieuts. Paul W. Wolf, and R.M. Ramey composed the squash team, and Lieuts. N.B. Harbold, E. O'Donnell, J.F. Egan and S.P. Wright played hand ball. After the games, the Athletic Club entertained with a beautifully prepared buffet supper which was attended by a number of its members, with the officers of Selfridge Field as their guests. Although sorry not to have been able to make a better showing, the officers enjoyed the entire evening and accepted an invitation for a return match in the near future.

Again the Mitchel Field squash racqueteers have shown themselves equal to the task set before them. This time they won from Bolling Field in eight matches by the score of 21-6. General Benjamin D. Foulois was the only Bolling Field player who was able to win a match, and the score shows he had no easy time of it. The players and scores follow.

General Benjamin D. Foulois versus Lieut. S.E. Anderson in the first match. First game, 15-7, second, 16-15, third, 16-13, won by Bolling Field.

The second match was staged between Lieut. Hez McClellan and Captain Arthur B. McDaniel. First game, 15-12, second, 15-6, third, 15-10, won by Mitchel Field.

In the third match, Lieut. Robert F. Travis represented Mitchel Field, and Lieut. Newton Longfellow doe Bolling. The players were evenly matched and the scores were close, but Mitchel Field won the match, socres 15-7, 18-15, 15-19.

Lieut. David P. Laubach, of Mitchel Field, and Major Templeton Joyce from Bolling were scheduled for the fourth match, which was won by Mitchel Field in the resulting scores: 20-5, 15-7, 15-10.

The fifth match was between Lieut. Robert O. Cork, Mitchel Field, and Lieut. David Goodrich, Bolling Field. The games - 15-11, 20-15 and 15-10 were won by Mitchel Field.

The sixth match lasted the entire five games, played by Lieut. Pardoe Martin of Mitchel Field and Major Willis Hale of Bolling Field. The games were: 1st, 10-15; 2nd, 15-19; 3rd, 10-15; 4th, 15-11; 5th, 15-18, won by Mitchel Field.

The seventh match was between Lieut. George F. Kehoe, of Mitchel, and Capt. Hugh M. Elmendorf, of Bolling. Lieut. Kehoe won the first game, 15-11. The second game was won by Captain Elmendorf, 15-12. Lieut. Kehoe won the third and fourth games, both by the score of 15 to 8, thereby clinching another match for Mitchel Field.

The eighth and last match was played by Lieut. John K. Gerhart, of Mitchel Field, against Captain Edwin House, of Bolling Field. The games: 1st, 15-12; 2nd 15-6; 3rd, 15-8, resulted in the victory going to Lieut. Gerhart.

Messrs. Alan Cummings and Walter Kincella, both professionals, staged an exhibition match. Cummings, through his brilliant playing took the first three games and Kincella staged a comeback and took the remaining two.

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The Annual Tournament for the Brandon Smith Golf Cup, of the Air Corps Golf Association at Duncan Field, comprising officers of the Air Corps stations in thi vicinity and of the Normoyle Quartermaster Depot, was concluded April 13th. A most delightful time, as well as some mighty serious golfing, was had by all participants. The winner of the Men's Championship was 1st Lieut. Orvil A. Anderson, of Kelly Field, and of the Women's Championship, Mrs. Ethel Glenn, wife of Lieut. E.E. Glenn, Kelly Field. The names of the winners will be placed on the cup. Once more the Golf Association has demonstrated that it can hold its own with any similar aggregation in the country.

On March 16th, the 1932 baseball season was ushered in at Mather Field, Calif., with a game between the 55th Pursuit Squadron and the 80th Service Squadron. The rivalry between these two Squadrons is expected to attain great heights, as the 80th Squadron team represents last year's champions, while the 55th is reinforced with Lieut. Jacobson, who pitched for the University of California team on two tours of Japan. The 55th Squadron is one jump ahead, as they won the first game seven to three. The 77th Squadron surprised everybody by beating the 55th 8 to 3 in the most recent game. Most anything may happen before the season closes.

The France Field baseball club started the Department League season off with a bang by defeating the doughboys at Fort Clayton by the score of 5 to 4 in a thrilling opener and by following this up with a 10 to 5 walloping administered to the Fort Randolph team in the next game. A large part of the post personnel made the trip to Fort Clayton in a special train. Bowman cracked out a homer to start the ball rolling in the second, and three runs were tallied for the inning. Clayton, however, knocked out two homers in their half of the inning and brought in another man, thus tying the score. The tie was not broken until the ninth inning, when France Field brought in two more runs and won the game when Clayton's rally netted only one. The Randolph team, although rated slightly higher than Clayton by those who are supposed to know, was taken in much easier in a free hitting game, featured by many errors on both sides.

April 18th was marked off with a red cross on the calendars of all the base ball fans of March Field, Riverside, Calif., for on that day Captain Leo F.Post, Athletic Officer, held the formal opening at his mammoth "Stadium of Swat." On that day, promptly at 3:30 p.m., His Honor, "The Umps," none less than Captain Frank O'D. Hunter, Commanding Officer of the 17th Pursuit Group, shouted the time honored "Play Ball" and the Commanding Officer of the Field, Lieut.-Colonel Henry H. Arnold, let loose a fast one at Major McNarney, Commanding Officer of the 7th Bombardment Group, who had the assignment at home plate that day. The batter was Wing Commander, Major Carl Spatz. Immediately thereafter the 64th Service Squadron and the 31st Bombardment Squadron settled down to the serious business of getting to the top of the "6" team Inter-Squadron League and retaining that position. The Athletic Officer, not content with supervising the erection of one of the best baseball plants (with grandstand, bleachers and all) on any Army post, has further strengthened his standing with the fans by arranging for a corps of peanut merchants to be on hand at all ball games.

The Group Officers' Inter-Squadron Baseball League, 2nd Bombardment Group, Langley Field, Va., has just started, and it looks like the Fighting 20th will come out on top again this season, judging from the first game in which they defeated the combined team of the 59th and Group Headquarters by the score of 11 to 2 behind the stellar pitching of "Heinie" Voss and "Hutch" Hutchinson.

The 72nd Squadron baseball team, Luke Field, T.H., is working out under the master hands of Lieut. Don Z. Zimmerman and Staff Sgt. "Old Folks" Fitzpatrick. It lost the first game of the season to the 65th Service Squadron, score 5 to 3.

The "Fighting 4th" Observation Squadron, Luke Field, opened the Inter-Squadron baseball season recently, trouncing the 23rd Bombardment Squadron by the score of 9 to 4. Judging by the first game and the hard work of the boys in training, under the direction of Lieut. S.A. Ofsthun, the team hopes to be around the top all the way.

Lieut. Meloy Brings New Observation Plane Across the Continent for the use of Militia Bureau.

Capt. Vincent J. Meloy, Air Corps, reported to the Douglas Aircraft Company, Santa Monica, Calif., April 15th, to accept delivery on an O-31B airplane for the Militia Bureau. The new gull wing Observation plane was flown to Rockwell Field for check and while there was flown by practically all the Depot pilots, all of whom expressed themselves as being greatly pleased with its flying qualities.

Captain Meloy proceeded east via Tucson, El Paso, Dallas, Little Rock, Nashville, Dayton and Washington. While at Dayton, the plane was flown by several test pilots, all of whom were of the opinion that the increased fin area added to the directional stability of the plane. This belief is concurred in by the ferry pilot and the Air Corps Inspector at the Douglas Plant. The entire trip east was uneventful and, upon arrival at Bolling Field, Captain Meloy expressed entire satisfaction with the new plane.

Rockwell Field, Coronado, Calif., April 21st.

Several months ago the civilian employees of Rockwell Field and Depot organized a "Rockwell Field Relief Association." The old Welfare Association of this field turned over to the new organization all funds on hand and same was turned over to the Parent-Teachers' Organization and Veterans of Foreign Wars as per vote of the members of the Old Welfare Association. The object of the Rockwell Field Relief Association has been to help relieve the condition brought about by the unemployment situation and to assist those Relief Agencies believed to be in need of assistance. After carefully considering the various appeals made for help and relief, the Rockwell Field Relief Association, although depending on voluntary contributions of the employees, set the sum of $2,000 as a goal for three months. The response to date was more than successful. Each employee determined just where his donation should go and, as a result, the following agencies have benefitted from the Rockwell Field Relief Assn.: Rest Haven Home; Parent-Teachers' Association; Salvation Army; Rescue Mission; Veterans of Foreign Wars Relief Committee; City Mayor Relief Committee; Children's Shoe Fund, Good Will Industries, individuals named and individual relief.

Major-General Malin Craig, Corps Area commander, visited Rockwell Field on April 15th, for purpose of making annual inspection.

Col. Edward P. O'Hern, Ordnance Dept., 9th Corps Area, arrived April 19th, and inspected Ordnance material on hand and the work of Ordnance mechanics.

Capt. B.M. Giles, Chief Engineer Officer of the Depot, accompanied by Geo. W. Robinson, Foreman Motor Section, spent several days at Crissy Field for the purpose of inspecting GIV-1570C Prestone-cooled engines in an effort to determine causes of trouble experienced at Crissy Field.

Members of the San Diego Federal Business Association were luncheon guests at Rockwell Field on April 21st. Capt. Harold M. McClelland addressed the Association on "Aids to Aerial Navigation." The guests then inspected the Field.

Captain Harvey H. Holland, recently on duty in Hawaii, reported for duty here and was assigned as Post Personnel Adjutant.

Lieut. Guy Kirksey, formerly of the Office of the Chief of the Air Corps, recently reported at Rockwell and was appointed Post Operations Officer.

Major-General J.F. Preston, The Inspector General, arrived April 22nd to inspect the activities here and to confer with the Commanding Officer.

Colonel Clarence J. Manly, Medical Corps, Corps Area Surgeon, also arrived April 22nd, for the purpose of making annual medical inspection.

40th Division Aviation, Calif. Nat'l Guard, Los Angeles, April 10th.

Sunday, March 20th, this Squadron carried on joint operations with a detachment of the 160th Infantry, involving a staff problem and communication between air and ground via message pick-up, dropped message, ground panels and radio. These operations with the Infantry have become a regular Sunday drill custom, resulting in increased efficiency in both ground and air troops. This understanding of the problems involved in air-ground communications should materially assist the operations at summer training camp, as both Aviation and the 80th Brigade attend camp at the same time.

Lieuts. Leonard Thomas and Clifford Gard returned early March 20th for drill, having taken two ships to San Francisco several days before on a cross-country training trip. The return flight, made under poor weather conditions, necessitated an overnight stop at Fresno.

General Seth Howard, Adjutant General of California, paid this organization q gracious visit on April 3rd, remaining for lunch. On the same day, a five-ship formation, plus a camera ship, were sent on a cross-country trip of several hours to Mt. Whitney and return via Death Valley.

It is with real regret that we announce the resignation from the 115th Obs. Sqdn. of Lts. Earl Noe and Richard Hoffman. These officers, who have been with us for a considerable time, have excellent records. However, being in commercial aviation, they felt they could not attend drills regularly, as their runs kept them out of town frequently. We hope they may be back with us again.

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GUILTY

Lieut. Paul Wolf, of Selfridge Field, erstwhile holder of the A.C. News Letter's Trophy for Literary Effort, is relinquishing said Trophy to the author of "Local Boys Make Good," appearing on page 162 of this issue.

Lieut. Wolf in assembling a string of flat cars on which to ship this Trophy to Kansas City is wondering what "hard-bitten" means (See line 29, page 162). Some of the boys who have spent a night or two at second-rate hotels while on cross-country, have an idea of the meaning.

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Three Squash courts for use of March Field officers are in the last stages of completion, under direction of Lt. J.E. Mallory, 34th Pursuit Sqdn. The courts are floored and walled with maple, painted white and marked in red. Artificial lighting is provided for night games, and skylights give ample day lighting facilities. A large spectators' balcony, locker and shower rooms complete the building, which is a model of its kind.

18th Composite Wing, Fort Shafter, T.H., April 13th.

In honor of the late Lieuts. Raymond Zettle and Elmer Meguire, who were recently killed in an airplane accident in the Philippines, there was an Aloha Flight on March 25th, eight Bombing planes from Luke Field escorting the Army Transport GRANT into Honolulu Harbor. The planes flew two "V" formations, each with a blank file. The formations would normally include five planes.

Jumping from a speeding plane high over Luke Field, "Poki," official mascot of the 23rd Bomb. Squadron, qualified for membership in the Caterpillar Club by making a perfect landing on the Navy side of the Island. Barking happily, he was none the worse for his thrilling experience. "Poki" is a 7-month old boarhound and would rather fly than chase cats. Every morning he is at the hangar line, arriving there long before his master, Lt. Floyd E. Nelson. The dog has visited all the islands by air, so another airplane ride more or less is nothing in his life. His master arranged the parachute jump to give him a chance to get rid of that bored feeling. A chute taken from a parachute flare was adapted for the purpose and a harness tailored to fit. "Poki" will continue flying and will probably make other jumps to keep up his reputation of being the only "chutehound" in the Islands.

The 11th Photo Section, Luke Field, was kept unusually busy during February and March. Almost every clear day found one of its planes in the air. Photographic mapping, surveying and recording for the maneuvers took up the major part of this organization's flying time. Some very interesting movies of attacking destroyers and laying a smoke screen were secured, under very difficult conditions. The Section is commanded by 1st Lt. K.P. McNaughton.

Luke Field, T.H. - The work with the 13th Field Artillery and Harbor Defenses of Pearl Harbor consisted of simulated and actual fire adjustment. Searchlight tracking missions were flown for the 64th Coast Artillery (AA) and experimental flights for the purpose of target location for the Coast Artillery at long range were conducted in a specially equipped Douglas Dolphin. The experiments involve the use of some of the newest instruments developed at the Materiel Division. With the aid of these instruments, it is claimed pilots will be able to report the exact position of a target, its speed and direction. The experiments are under the direction of 2nd Lt. R.E.L. Choate. Other officers participating are Lts. O.P. Weyland, K.P.McNaughton, L.H. Tull, G.W. Peterson and E.N. Coates.

The 23d Bomb. Sqdn. carried on with its aerial gunnery schedule, completing the record firing of most of the officers. Considerable headway was made on the Communications Training prescribed, and the usual amount of formation flying, cross-country and small field practice was indulged in. It is hoped the end of the month will see the completion of the new Squadron buildings and a return to normal flying operations. - This Squadron added two more scalps to their already large string, winning the Atterbury-Mills Trophy for 1931, and the Kuntz-Moses Trophy for 1931 and 1932. Both trophies are for superiority in Inter-Squadron athletics. The 23rd placed second in the Inter-Sqdn. Swimming Meet.

The 50th Obs. Sqdn. participated in missions in cooperation with the Field Artillery and Harbor Defenses of Honolulu. One night tracking mission was flown for the 64th Coast Artillery (AA) Searchlight Batteries. Other cooperative missions were participated in, such as simulated Field Artillery Adjustments. - The Basketball season is over and everybody is getting very excited over the coming Baseball Season. The Squadron League started playing Sunday, March 20th.

72nd Bomb. Sqdn. The Department Inspector General paid his annual visit and, after his inspection, congratulated the Squadron Commander on the excellent condition of the Squadron as a whole. - During the past few months, the remainder of the old canvas tents were replaced with four-man huts. This work has been well done and was accomplished under the supervision of Tech. Sgt. F.J. Tufts.

Wheeler Field, T.H. - The 6th Pursuit Squadron changed its type of formation flying. We are now using an open formation, which puts the pilots more at ease while flying and gives them a chance to look around and see what is happening. The close formation is now used only for show purposes. Our formation has improved at least 50% since we adopted this open formation. The flights and squadron are handled with ease and with comparatively few signals.

CRAW

The 19th Pursuit Squadron cooperated with the 11th and 13th Field Artillery regiments in their anti-aircraft firing on towed targets. All missions were successfully performed, and the personnel participating gained valuable training and knowledge in firing on aerial targets.

The 26th Attack Squadron has been occupied with the usual tactical flying, including work as a bi-place Pursuit in close, open and extended formation. One ship has been in use every day for blind flying training, and the P-12B assigned to us was used extensively for work in acrobatics. Due to inclement weather, only one night flying problem was carried out this month.

Hawaiian Air Depot: Capt. Byron T. Burt, Jr., was relieved from the command of the Depot March 14th and assigned to Hqrs. 18th Composite Wing. Captain Carl F. Greene assumed command of the Depot in addition to his duties as Engineering Officer, Contracting and Purchasing Officer.

The Engine Repair Section overhauled 4 R-1750B, 2 SR-1340D and 1 R-1340C engines, and repaired 2 R-975E, 3 SR1340D and one V-1150. In addition, the Engine Repair completed 175 jobs on instruction slips. From Feb. 25th to March 25th, the Machine Shop and sub-departments completed 47 jobs on work orders and 319 on instruction slips.

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INSPECTION DIVISION NOTES

DEPARTMENT OF COMMERCE AIRWAY PUBLICATIONS & FACILITIES

During the past three years great developments have been made in the air navigation facilities afforded by the Department of Commerce. These consist principally of:

- Airway course lights.
- Intermediate landing fields.
- Radio beacons.
- Radio broadcasts of the weather from all Department of Commerce airway broadcasting stations on the average of three times during an hour.

The airway course lights and Intermediate Landing Fields are available to all Air Corps pilots and radio facilities to pilots flying in planes equipped with proper radio receivers.

In order that Air Corps activities may have available all information published on the above subjects this office requested the Department of Commerce on December 28, 1931, to place all Air Corps activities and all National Guard Air Corps Units on their list for the semi-monthly Air Commerce Bulletins, and any Aeronautics Bulletins published in the future. In addition, the Airways Division of the Department of Commerce will furnish direct to the above activities future issues of Airway Bulletin No. 1, "General Airway Information" and Airway Bulletin No. 2, "Descriptions of Airports and Landing Fields in the United States".

Inspection Division Notes published in the January 25, 1932 issue of the Air Corps News Letter contained an article on the availability of meteorological data now broadcast by Department of Commerce stations on a frequency between 237 and 350 kilocycles on an average of three times during each hour. This article was printed due to the fact that few Air Corps pilots knew of these broadcasts and generally did not avail themselves of this very useful service.

A great deal of very valuable information is contained in the various Department of Commerce publications covering the facilities mentioned above and it is urged that all Air Corps pilots familiarize themselves with these publications and wherever possible make use of all aids to navigation and weather data now operated and furnished by the Department of Commerce.

An Air Corps Circular covering Department of Commerce Airway publications is now being prepared and a course of instruction on the Department of Commerce Aids to Air Navigation will be included in future Air Corps Training Directives. In the meantime, however, it is urgently recommended that brief courses of instruction as to the proper method of using Department of Commerce Air Navigation facilities be given all rated flying personnel at all Air Corps activities.

The various information covering aids to navigation now published by Department of Commerce, and especially Airway Bulletin No. 1, "General Airway Information", in themselves supply comprehensive outlines for local instruction, and cover specifically the following:

- Navigation data which should be secured by every pilot before taking off.
- The proper method of determining position, if lost, by use of airway lights and radio beacons.
- The airdrome and emergency landing field data which can be secured and the sources of information.

The following Technical Letters and Orders have been distributed since the last issue of the Air Corps News Letter on April 8, 1932:

Date & No.	Subject	Distribution
TL-31-138 4/14/32	Change of Aileron Bell Crank Stops-Keystone LB-6, LB-7, B-3A, B-4A, B-5A, B-6A, Y1B-4 and Y1B-6 airplanes. (This TL replaces TL-31-138 dated 11/2/31)	Aberdeen PG, Chanute, Kelly, Langley, Ft. Leavenworth, March, Maxwell, France Luke & all depots, Wright, 4th Composite Group.
TL-31-202 4/15/32	Installing Cylinder Cover and Intake L and Y Manifold Gaskets on V-1150 and V-1570 Series Engines. (This TL replaces TL-31-202 dated 8/22/31)	General
TL-31-306 3/23/32	Leakage of vellumoid under cap of relief and by-pass valve assembly #0153547. (This TL replaces TL-31-306 dated 12/28/31)	General
TL-32-7 3/29/32	Safetying Fillister Head Machine Screws used to assemble the Throttle and Main Body & to correct Warped Throttle Valve Body Castings of Stromberg Aircraft carburetors. (This TL replaces TL-32-7 dated 1/21/32)	Chanute & Wright and all depots
TL-32-46 3/25/32	Replacement of Exhaust Rocker Arms on R-1750-E and R-1820-E engines.	Aberdeen, Bolling, Chanute, Crissy, Kelly, Langley, March, Mather, Maxwell, Selfridge, Wright and Ft. Shafter, Hawaii AD & Depots in States.

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Date & No.	Subject	Distribution
TL-32-53 4/9/32	Installation and Operation of type M-8 Parachute Flare	General
TL-32-55 3/25/32	Replacement of Varnished Cambric Insulator in Panel Assembly Receptacle, Type B-4, No. 0166644	General
TL-32-60 3/25/32	Reinforcement of support Bracket, Engine Ring Cowl, Front-Boeing P-12 airplanes.	Chanute, Boeing, Rep., Langley March, Selfridge, Wright & depots in states.
TL-32-61 3/25/32	Reinforcement of Carburetor Air Intake Stacks & Adapters-Keystone B-4A, B-5A, Y1B-4 and Y1B-6 airplanes	Aberdeen, Chanute, France, Kelly, Langley, Luke, March, Maxwell, Wright, Depots in States, Hawaii AD & Panama AD.
TL-32-62 3/25/32	Reinforcement of Skin, Rear Fuselage Section-Thomas-Morse O-19B, O-19C, O-19D and O-19E airplanes.	Chanute, Wright & all depots
TL-32-64 3/29/32	Gasoline tank vent tube support B-3A, B-5A, B-6A, Y1B-4 and Y1B-6 airplanes	Aberdeen, Chanute, France, Kelly Langley, Luke, March, Maxwell, Randolph, Wright, 18th Composite Wing, 4th Composite Group, Depots in States, Hawaii AD, Philippine AD
TL-32-65 3/29/32	Replacement of aluminum alloy rivets in ring cowl support on O-38, O-38A, O-38B, BT2B and C airplanes.	General
TL-32-66 3/28/32	General information on the maintenance of O-39 airplanes.	General excepting NG.
TL-32-67 3/29/32	Forged Type Pistons for V-1150 and V-1570 Series engines	Chanute, Wright, Depots in states and Hawaii AD.
TL-32-68 4/8/32	Fluids for hydraulic equipment	General
TL-32-69 4/6/32	Disconnecting of controls, cabin heater -F-1 and F-1A airplanes.	Bolling, Chanute, Crissy, Langley March, Maxwell, Mitchel, Scott, Wright, depots in states.
TL-32-70 4/14/32	Changes in parachute flaps, ripcords, pockets and harness keepers. (This TL replaces TL 31-121.)	General
TL-32-72 4/12/32	Operation of Carburetor Air Heater on R-975, R-1750 & R-1820 Series engines	Aberdeen, Bolling, Brooks, Chanute, Crissy, Ft. Crockett, Kelly, Langley, Mitchel, March, Mather, Maxwell, Randolph, Scott, Selfridge, Wright, All depots, 18th Composite Wing, 4th Composite Group.
TL-32-74 4/14/32	Reinforcement of Wing Fairing, Rear-Boeing P-12E and P-12F airplanes.	Chanute, Bolling, March, Mather Selfridge, Luke, Nichols, Wright, Depots in States, Philippine AD Hawaiian AD, 18th Composite Gp. & 4th Composite Group.
TL-32-75 4/14/32	Change on Lubrication Bolt, Control Column Base-Thomas-Morse O-19B, O-19C and O-19D airplanes.	Chanute, Wright & all depots.
TL-32-78 4/13/32	Reworking tube assembly, Part #C-9356 to Part #43246 on V-1570 engines	Chanute, Wright & Depots in States.
TL-32-80 4/15/32	Pump Assembly, Fuel, Type F-4 Part No. 1223-E-2 (Romec)	General.
TL-32-82 4/21/32	Change on Landing Gear Oleo Leg-Curtiss O-11, O-1B, O-26, O-13C, O-1E, A-3 & A-3B airplanes.	Chanute, Wright & Depots in States
TR-32-93 4/26/32	Tail Wheel Oleo Unit of Douglas Y1C21 airplanes.	Bolling, Wright & all Depots
TO-00-1 1/2/32	Annual Index of Technical Instructions and information.	
TO-00-0-3 4/1/32	Monthly Index of Technical Instructions	
TO-01-1-51 4/15/32	Annealing of fuel, oil and water lines.	
TO-23-5-1 3/30-32	Steel - Method of Identification in Storage.	

The following Air Corps Circulars and Circular Letters were published and distributed since the last issue of the News Letter on April 8, 1932:

AIR CORPS CIRCULARS

Number	Subject	Date
Cir 15-62A	BLANK FORMS AND REPORTS Forced Landing Report. (This Cir. amends AC Cir. 15-62 dated 3/23/31.)	4/12/32

Number	Subject	Date
Cir 60-1	FLYING Crash Tools and Equipment. (This Cir. replaces AC Cir. 60-1 dated 1/30/32 & AC Cir 60-1A dated 3/22/32.)	4/4/32
Cir 60-9A	FLYING Acrobatic Maneuvers Performed with Air Corps Airplanes. (This Cir. amends AC Cir 60-9 dated 10/6/31)	4/20/32
Cir 60-10	FLYING Night Flying Equipment	4/20/32
Cir 95-4	PHOTOGRAPHY Use of K3,K-3A, K-4 and "T" type Cameras.	4/20/32

AIR CORPS CIRCULAR LETTERS

Stencil No.	Subject	Date
W-2052 A.C.	Rescission of Circular 15-70, OCAC, dated March 21, 1928.	

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ADDITIONAL NOTES FROM ARMY AIR CORPS FIELDS

Wright Field, Dayton, O., April 5th.

On March 25th, one flight of five Berliner-Joyce two-seater Pursuit planes and three flights of 15 P-12's arrived from Selfridge Field, returning to their base after noon. The mission of the visiting pilots was in the interests of formation practice. Capt. Ennis Whitehead was in charge of the 15-plane squadron.

Major W.E. Kepner reported for duty March 19th, having won his airplane pilot's rating in the recent graduating class from Kelly Field. Major Kepner is one of the few Air Corps officers holding the four ratings given for heavier-than-air and lighter-than-air craft. When formerly at Wright Field, Major Kepner served as Chief of the Lighter-than-Air Branch. He was assigned to the Procurement Section where he is scheduled to serve as Chief of the Purchase Branch.

Lieut. H.W. Anderson, in charge of three flights of 6 planes each, arrived from Chanute Field March 18th. The officers inspected the Armament Branch and on the following day the Fairfield Air Depot.

Lieut. H.H. Carr returned from Newark, N.J., after witnessing a 100-hour endurance test of the Wright GIR-1820 E Cyclone motor at the plant of the Wright Aeronautical Corporation at Paterson, N.J.

Capt. H.R. Wells, Lieuts. J.D. Corkille and K.B. Wolfe flew in formation during the funeral services of Capt. Frank McKee at Anderson, Ind., March 15th. Capt. McKee was well known at the Materiel Division.

Major W.H. Frank and Capt. John Beveridge, from the Office of the Chief of the Air Corps, were visitors on March 14th for a conference with General Pratt.

Capt. D.L. Bruner and Lt. C.D. McAllister flew to Cleveland and Selfridge Field, March 8th, to inspect cartridge starters and to confer with the Willard Storage Battery Co. regarding integrally shielded batteries.

Major J.L. Hatcher and Lieut. C.S. Thorpe flew to New York and Washington, and conferred with engineers of the Sperry Gyro Co. and the C.L. Norden Co. regarding bomb sights.

Lieut. W.J. Hanlon reported for duty and was assigned to Field Service Sec.

Officers ferrying planes from Wright Field were - Lieut. G.V. Holloman, a YO-31 to Aberdeen, Md.; Lt. H.P. Rush, a YIC-21 to Bolling Field, returning in a YIC-22; Capt. A.C. Foulk, a YI-B4 to March Field, Calif.; Major H.A. Strauss, an XPT from Randolph Field to Wright Field.

Lieut. W.B. Hough, from the Office Chief of the Air Corps, spent several days here conferring on radio equipment.

Brig.-Gen. H.C. Pratt and Lieut. L.L. Beery flew to Akron, Ohio, March 7th.

Lieut. W.N. Amis ferried the first P-12F from the Plant of the Boeing Co., Seattle, Wash., on March 14th.

Lieut. A.R. Crawford proceeded to Buffalo to ferry the first PT-12 plane here from the plant of the Consolidated Company.

Lieut.-Col. A.W. Robins and Major Hugh J. Knerr were visitors in Washington recently, for the purpose of conferences with the Office Chief of the Air Corps.

Lieuts. D.G. Lingle and H.P. Rush proceeded to Nashville, Tenn., to supervise repairs on the YB-9 airplane. Lieut. Rush flew it back to the Division.

Lieut. D.W. Watkins proceeded to Langley Field, Va., to investigate service difficulties experienced with Wright R-1820E engines.

Lieuts. John Whiteley and J.A. Woodruff flew to Buffalo to inspect mockup of the YA-8 airplane.

Major H.A. Strauss and Capt. A.W. Vanaman proceeded to Baltimore, Bristol, Williamsport, to confer with the Berliner-Joyce Corp., the Glenn L. Martin Co., Keystone Aircraft Corp. and the Lycoming Mfg. Co. regarding Air Corps contracts.

SERIAL NO. 317 LIST OF NEW MATERIAL ADDED TO INFORMATION DIVISION FILES
April 6th to May 2d, Incl.

Available for loan to Air Corps Organizations only upon request to the Air Corps Library, Munitions Building, Washington, D. C.

DOCUMENTS

A 00.3 England/91 — Statement "showing the gross and net total cost of the Civil Services and Revenue departments and the Navy, Army and Air Services for the year ended the 31st day of March,1931." Ordered by the House of Commons, to be printed 4th Feb.1932. London H.M.Stationery Office, 1932.

A 10/151 — L'Air, 1924-1931. Paris, G. Roche d'estrez, 1924-1931. 6 vols. These numbers consist of special numbers. Library has: L'Aeronautique Francais en 1924. French aircraft in 1925. L'Aeronautique Francais en 1926. Also English ed. X Exposition Aeronautique Internationale de Paris, 3 Decembre - 19 Decembre 1926. L'Effort Technique Aeronautique Francais en 1931

A 10/192 #665 — The Mutual Action of Airplane Body and Power plant by Martin Schrenk. Nat. Advisory Committee for Aero. Tech. Memo. #665. Wash. N.A.C.A. April 1932.

A 10/192 #666 — Development of Tailless and All-wing Gliders and Airplanes, by Robert W.E.Lademann. Nat. Advisory Committee for Aero. Tech.Memo. #666. Wash. N.A.C.A. April, 1932.

A 10/Poland. — Przeglad Lotniczy Organ Lotnictwa Wojskowej, Vol. 3-4. July 1930-Sept. 1931. Warsaw, Ed. by Kuzminsli Stanislaw, July 1930-Sept. 1931.

A 10.23/109 #406 — The Use of Large Valve Overlap in Scavenging a Supercharged Spark-Ignition Engine Using Fuel Injection, by Oscar W. Schey and Alfred W. Young. Nat.Advisory Committee for Aero. Tech. Note #406. Wash. N.A.C.A. April, 1932.

A 10.23/109 #413 — The Compressive Strength of Duralumin Columns of Equal Angle Section, by Eugene E. Lundquist. Nat.Advisory Committee for Aero. Tech. Note #413. Wash. N.A.C.A. March 1932.

A 10.23/109 #414 — Considerations of Air Flow in Combustion Chambers of High-speed Compression-ignition Engines, by Spanoglo &Moore.Nat. Advisory Committee for Aero. Tech. Note #414. Wash. N.A.C.A. April,1932.

A 30.2/66 — Bear Tooth Mountain - Montana,U.S.Air Corps Geological Survey Photographic Project, Red Lodge-Nye Quadrangles, SW.Montana, 15th Photo Section, Crissy Field, San Francisco,Calif. 1931.

A 30.2/67 — Report of Alaskan Aerial Survey Detachment, 1929, by Lieut. Commander Arthur W. Radford, U.S.Navy, Officer in Charge. San Diego, Calif. U.S.Fleet,Aircraft Squadrons,Battle Fleet,Alaskan Aerial Survey Detachment, Oct. 31, 1929.

A 40.3/25 — Bulletin d'Information #16. LaHaye, Bureau Central, 1931(?) Association Internationale du Trafic Aerien. Hungarian Parliament. Summary of minutes of 26th I.A.T.A. Session held at Budapest.

D 00.12/2 #5 — Soufflerie Aerodynamique a Dynamometres electrometriques du service des Recherches de L'Aeronautique, par P. Rebuffet. Paris. Publication Scientifique et Technique du Ministere de l'Air #5. Ed. Blondel la Lougery, 1932.

D 00.12/2 #6 — Deviations Radiogoniometriques a bord d'Avion, par E.Fromy. Publication Scientifique et Technique du Ministere de l'Air #6. Paris. Ed. Blondel la Rougery, 1932.

D 00.12/103 #153 — Corrosion of Operating Aircraft Engines, Prevention of, by Navy Dept., Bureau of Aero. Tech.Order #153. Wash. Navy Dept. 3/17/32.

D 00.12/103 #154 — Materiel for Making up Gasoline Tight Joints, by Navy Dept. Bu. of Aero. Tech. Order 154. Wash. Navy Dept. 3/30/32.

D 00.12/122 #3533/I.C. — Vibration Characteristics of Aircraft Engine Crankshafts. Prepared by F.L. Prescott, Materiel Div. A.C. Air Corps Information Circ. Vol. VII, Feb.22,1932,#664. A.C. Tech.Report #3533. Wash. Government Printing Office, 1932.

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D 00.12/122 #3598 — Additional Formulae for Beams Subjected to Axial and Lateral Loads, by E.E.Blount. A.C.Technical Report #3598 A.C.Materiel Division, March 8, 1932.

D 00.12/122 #3599 — The Development of a Method of Measuring the Loads in Control Cables during Flight and a Study of Rudder Control Cable Loads of the Keystone Y1B-4 Airplane when flying with one engine idled by Charles J. Spere. A.C.Tech. Report #3599. A.C.Materiel Div. March 8, 1932.

D 00.12/123 #108 — Air Speed Corrections, by Navy Dept. Bu. of Aeronautics. Tech. Note #108, Series of 1930. Wash. Navy Dept. 3/31/32.

D 00.12/123 #109 — Carbon Monoxide Indicator, by Navy Dept. Bu. of Aeronautics. Tech. Note #109, Series of 1930. Wash. Navy Dept. 3/30/32.

D 00.12/123 #110 — Rapid Chemical Test for the Identification of Chromium-Molybdenum Steel Aircraft Tubing by Navy Dept. Bu. of Aeronautics. Tech. Note #110, Series of 1930. Wash. Navy Dept. 4/4/32.

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Information Division
Air Corps

May 2[illegible], 1932

Munitions Building
Washington, D.C.

The Chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard and others connected with aviation.

Publishers are authorized to reprint material appearing in this publication.

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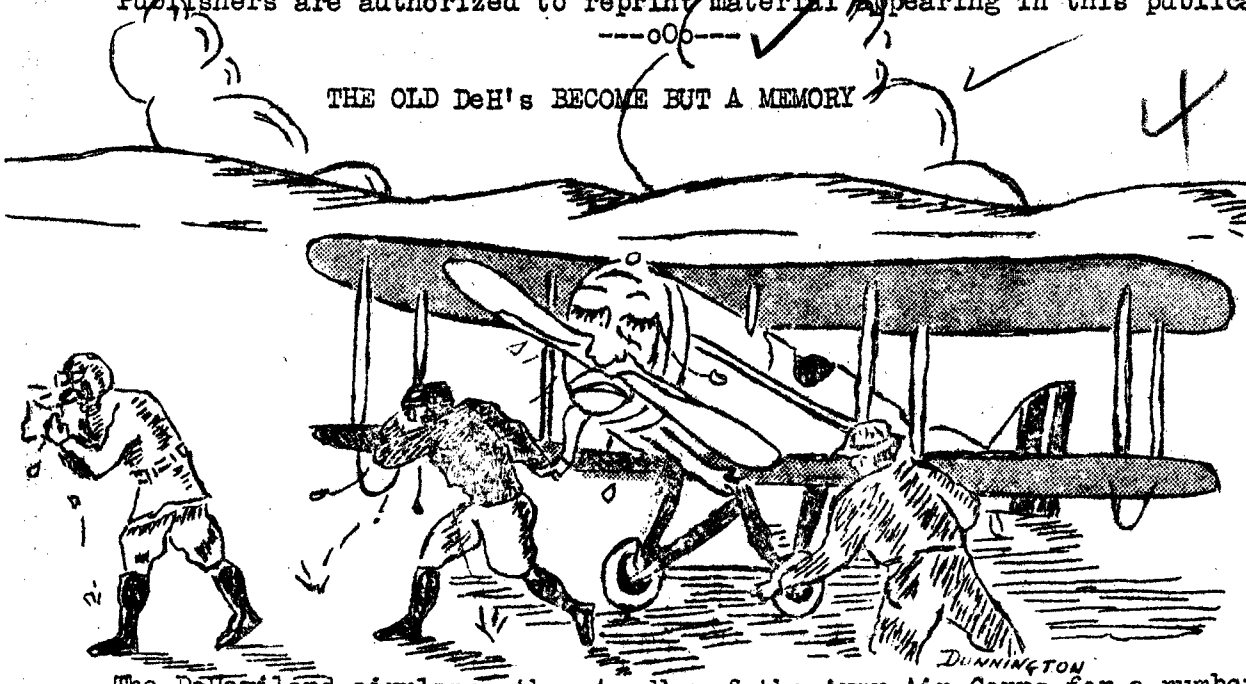
THE OLD DeH's BECOME BUT A MEMORY



The DeHaviland airplane, the standby of the Army Air Corps for a number of years, is now but a memory. It is true that this one time "old reliable" plane, upon which America based its hopes for great achievements in the air during the World War, has not been used in service flying for several years. Nevertheless, there were a few still left of the more than a thousand which formed the backbone of the Air Corps flying equipment for a space of about six years following the close of the war. These few remaining DeH's were carried on the Air Corps inventory reports from time to time until just recently, when it was noted that the item "4 DeH airplanes" was conspicuous by its absence. These few relics of days gone by were used now and then for training purposes at the Air Corps Training Center at Randolph Field, Texas.

While no bitter tears are being shed by Army pilots over the complete obliteration of this plane of war-time vintage, nevertheless some of the veteran flyers in the Air Corps still retain some feelings of affection for the "old crate," as they were wont to call it, for quite a number of notable flying records were made with it in the early days of the Air Corps as the new combatant branch of the Regular Army.

Back in 1920, Captain St. Clair Streett, now Chief of the Flying Branch of the Materiel Division, Wright Field, Ohio, headed an expedition of four DeH's from New York to Nome, Alaska, and return - a most noteworthy accomplishment.

The late Lieut. William D. Coney, in February, 1921, flew a DH-4B plane across the continent from Rockwell Field, San Diego, Calif., to Jacksonville, Fla., a distance of 2180 miles, in 22 hours and 27 minutes actual flying time. It is interesting to note that of this distance, 1960 miles were flown at night. His average speed for the journey was 97 miles per hour.

In August, 1922, Captain W.P. Hayes, accompanied by Master Sergeant C.W. Kolinsky, flew from Kelly Field, Texas, to New Orleans, La., a distance of 560 miles, in 4½ hours, or at an average speed of slightly over 124 miles an hour.

In September, 1922, "Jimmy" Doolittle, one of America's outstanding pilots, made a one-intermediate-stop flight from Jacksonville, Florida, to San Diego, Calif., and negotiated this transcontinental air journey in 21 hours and 18 minutes. In the following year, Doolittle accomplished an outstanding cross-country flight in a DeH, equipped with an extra size gasoline tank. Flying from Dayton, Ohio, to the Pacific Coast and return, he covered a total distance of 6,765 miles between August 6th and August 14th.

The year 1923 was replete with remarkable flying achievements by Air Corps pilots, utilizing the DeH plane, the most outstanding of which was the Porto Rican Flight. An expedition of six DeH's, carrying 12 pilots, and headed by

V-6271, A.C.

Major Thomas G. Lanphier, successfully completed the journey by air from San Antonio, Texas, to San Juan, Porto Rico, and return, covering a distance of approximately 6,000 miles. This flight, between April 3rd and May 3rd, 1923, was made in easy stages with no attempt to break any records.

On May 26, 1923, Lieut. H.G. Crocker flew non-stop from the Gulf of Mexico to Detroit, Mich., in 11 hours and 55 minutes.

With the aid of a friendly wind, the DeH piloted by Lieut. Albert F. Hegenberger, of Hawaiian Flight fame, streaked it between Dayton, Ohio, and Langley Field, Va., February 14, 1923, at an average speed of 202 miles an hour.

Former Lieut. Harold R. Harris, in a DeH, equipped with a supercharger, reached an indicated altitude of 29,400 feet on December 13, 1923, and encountered a temperature of 29 degrees below zero.

Lieut. W.R. Peck, flying a DeH, equipped with an extra size gasoline tank, flew non-stop between Kelly Field, Texas, and Kokomo, Indiana, a distance of 1,118 miles, in 9 hours and 20 minutes.

Captain Lowell H. Smith and Lieut. John P. Richter, pioneers in refueling duration flights, on June 27-28, 1923, demonstrated the practicability of sustained flight through the refueling process. Failure of the reserve gasoline tank forced these flyers to descend after being in the air continuously for 23 hours and 48 minutes. Four months later, on October 25th, these two pilots flew non-stop from the Canadian to the Mexican border, a distance of 1,280 miles, in 12 hours, 13 minutes and 40 seconds, their plane being refueled in the air over certain pre-arranged points.

Two months subsequent to their first refueling endurance flight, on August 27-28, 1923, Captain Smith and Lieut. Richter attempted to eclipse the record then established, and succeeded admirably. With the same old reliable DeH, they flew continuously around a marked triangular course for a total duration of 37 hours, 15 minutes, 14-4/5 seconds, covered 3,296.26 miles, and established six new official world's records. Two refueling planes were utilized to transfer the gas and oil to the endurance-flying plane, one manned by Lieuts. Virgil Hine and F.W. Seifert, and the other by Capt. R.G. Ervin and Lieut. O.R. McNeel, ORC.

The late Lieut. E.H. Barksdale, on March 7, 1924, created a new speed record between Dayton, Ohio, and New York. Flying a DeH navigation plane, he traversed the distance of 575 miles between these two points in 3 hours and 53 minutes, or at an average speed of slightly over 148 miles per hour. This achievement was all the more remarkable considering the fact that considerable fog was encountered during the trip and that a favoring wind aided him only as far as Altoona, Pa.

Other notable flying achievements were credited to Air Corps pilots who flew the DeHaviland airplane and yet, any attempt to compare it with the modern day planes now supplied the Army Air Corps would simply be wasted effort.

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MANEUVERS IN THE PHILIPPINES

The month of January was marked by the annual maneuvers of the Philippine Division. The maneuvers proper, January 19 to 21, were preceded by a period of intensive training from January 13 to 18, during which all units to and including the regiment engaged in unit exercises. The 4th Composite Group, Nichols Field, P.I., participated in both phases. The 2nd Observation Squadron moving from Nichols Field to Clark Field and later to advanced airdromes at Del Carmen, Pampanga and San Miguel, Tarlac. At the two latter fields one flight of observation planes was attached to each of the two opposing armies, furnishing planes for contact and command missions, Infantry liaison, visual and photographic reconnaissance and for the regulation of artillery fire (simulated).

During the preliminary phase prior to the start of the actual maneuvers, the balance of the Group, consisting of the 28th Bombardment Squadron, the 3rd Pursuit Squadron, and one flight of the 2nd Observation Squadron, acting as friendly (Blue) aviation, conducted inshore and offshore reconnaissance missions to detect the approach of an enemy (Red) fleet. Such a fleet convoying a large expeditionary force was located on 14 January steaming toward Lingayen Gulf. With the fleet were two large airplane carriers. In subsequent operations contact with the enemy was maintained until he dropped anchor and proceeded to establish a beach-head. His landing operations were then attacked, and throughout the hours of darkness on two succeeding nights his fleet and transports were the targets of our bombardment aviation. A daylight attack by the latter succeeded in rendering one of the Red airplane carriers hors de combat. Pursuit aviation participated in all missions, affording special support to our bombardment and furnishing air patrols. "In spite of our best efforts," says the News Letter Correspondent, "the overwhelmingly superior numbers of Red Aviation took their toll and on January 18th the Blue Air Force had been annihilated."

At the beginning of the second phase on the morning of January 19th, the opposing ground forces had made contact. The 4th Composite Group, less one flight of Observation planes attached to the Blue forces, then functioned as Red Aviation, with the mission of assisting the advance of the Red Army by attacking the lines of communication of the Blue Army, destroying enemy shipping and by furnishing observation for our forces. Military operations of the invaders were increasingly successful, and on January 21, when the Blue defenders found themselves in full retreat, the maneuvers were terminated.

During the maneuver period, airplanes of the 4th Composite Group flew a

a total of 502 aircraft hours. That this time was well expended was attested by Major-General John L. Hines, Commanding General of the Philippine Department, who, speaking at the general critique following the cessation of hostilities, stressed the increasing importance of aircraft in modern warfare and made some very complimentary remarks anent our air operations."

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GENERAL PARKER INSPECTS SELFRIDGE FIELD

Major-General Frank Parker, Commanding General of the Sixth Corps Area, made his annual inspection of Selfridge Field, Mich., on Tuesday, April 12th. The General, accompanied by Captain Frank C. Peters, arrived on the post shortly before noon from Fort Wayne, Detroit, where a similar inspection had been held. Major George Brett, Commanding Officer of Selfridge Field, met General Parker at the entrance to the post and accompanied him to post headquarters, at which time a salute of 13 guns was fired for the General.

An attractive luncheon had been arranged at the Officers' Mess in honor of General Parker. The entire officer personnel of the field was present, seated by squadrons and organizations at separate tables. At the head table, to meet the General, were a number of guests prominent in all types of business in the Detroit area, and all vitally interested in aviation.

General H.C. Pratt, Commanding the Materiel Division, Wright Field, and Lieut.-Col. A.W. Robbins, Executive, Materiel Division, were forced down by bad weather in Ohio on their way to attend the luncheon.

General Parker, upon being introduced by Major Brett, talked for a few minutes on the close relationship of civilians with the military and our scheme of national defense. After he concluded, Mr. Harvey J. Campbell, Jr., of the Detroit Board of Commerce, made a few interesting remarks.

After the luncheon, General Parker first inspected the flying personnel, the airplanes, transportation and other equipment of the First Pursuit Group, which were lined up for inspection on the ramp in front of the hangars. A review and an exhibition of formation flying and tactical maneuvers had been contemplated for the benefit of General Parker and the other guests. A very severe snowstorm, however, accompanied by wind and poor visibility, made it necessary to call off all flying for the afternoon. Upon completion of the inspection on the line, the General was conducted by Major Brett through several of the new buildings throughout the post, while the other visitors were conducted by officer guides to view the new hangars and their equipment. The General and his party, as well as the other guests, showed keen interest in the part of the post establishments they were able to observe during the period of their visit.

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AIR CORPS OBTAINS NEW MOTION PICTURE CAMERA

For some time the Air Corps has felt the need of a small motion picture camera which would prove efficient in any position that an airplane might assume, which could be operated when necessary by remote control and which would visualize action impossible to observe from the cockpit of an airplane or from observation on the ground. Especially has it been desired to photograph the action of bombs on leaving a Pursuit plane which is in a steep dive. A 16-mm. Bell & Howell camera recently obtained is believed to fulfill these requirements.

This camera is small and compact, offering little in the way of air resistance. It is spring wound, which makes the action more positive, and takes 128 pictures per second which, when projected on the screen, supplies the slow motion so valuable in the study of any action. The speed as shown on the screen is one-eighth that of normal motion. It can take approximately eight strips of film of five seconds each with a 100-foot roll of negatives. A wide-angle lens makes possible the photographing of greater area at close range than usual with the ordinary lens. The camera may be lashed to any part of the plane. It is planned to mount it under the wing to register the effect of skis on take-offs and landings. It has been used to picture the release and attachment of tow targets in flight.

This employment of remote camera control is the first instance of its use in aerial motion picture photography in the Air Corps, and results of accurate picturization of many more mechanical operations than have ever before been obtained are anticipated.

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On April 17th and 23rd, the 1st Balloon Company Pistol Team, Fort Sill, Okla., shot a pistol match against the R.O.T.C. University of Oklahoma Team, intercollegiate champions for the past two consecutive years, and lost both contests by a narrow margin. Sergeant Ingmundson, Balloon Company, was high man in the first match with a 271 x 300. Miller, for Oklahoma University, was high man in the second match with a 266 x 300. The score of the first match was 1250 for Oklahoma University to 1193 for the Balloon Company. In the second match, the Air Corps team scored 1245 against 1278 obtained by the University team.

VAPOR HEATING SYSTEM FOR AIRPLANES

By the News Letter Correspondent

A cabin heating system designed and developed in the Equipment Branch at Wright Field has been accorded more than the usual amount of interest. It is a vapor system with a boiler inside an exhaust line and a radiator inside of the cabin similar to that of an automobile hot water heater. It has been called a safety heater largely because it eliminates the necessity of drawing exhaust gases or heated air that may have been contaminated by mixture with exhaust gases into the cabin, but in reality it also provides ingeniously that the pressure of the vapor in the system may not get high enough to cause rupture with attendant loss of liquid and danger to the occupants of the cabin.

The latter condition presents a more difficult problem than is ordinarily encountered in vapor heating systems because the amount of heat furnished the boiler by the exhaust gases cannot be regulated, nor can a pop valve be employed because of the limited amount of liquid that may be carried in the system. The difficulty is overcome by carrying a reservoir directly below the radiator of a capacity equal to that of the boiler. The vapor then flows from the boiler through the radiator in the usual way and leaves the radiator at the bottom, passes through a hand valve and enters the bottom of the reservoir. The condensed liquid leaves the reservoir at the bottom, passes through a hand valve and flows, since the reservoir is vented to the atmosphere by gravity back to the boiler. The control rests in the valve between the radiator and the reservoir. When so much vapor flows through the radiator that it cannot all be condensed and some of it passes out through the vent in the top of the reservoir, the valve is shut down, limiting the steam through the radiator and building up pressure in the vapor line. This pressure then acts back through the boiler and forces liquid up through the return line into the reservoir. This in turn reduces the amount of liquid in the boiler and therefore the amount of vapor that may be generated. A cold spot in the boiler sump prevents surging or "percolating" of the liquid when the boiler is nearly empty. When no heat is required the valve in the return line may be closed and all of the liquid (as vapor) forced through the radiator and trapped as liquid in the reservoir.

It may be readily seen that the pressure, in inches of fluid, in the radiator and boiler never exceeds the height of liquid between the top of the reservoir and the boiler.

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NEW CLUB FOR BACHELOR NONCOMS. AT WHEELER FIELD

Considerable interest has been shown in the new bachelor Noncommissioned Officers' Club which recently opened at Wheeler Field, T.H. It is one of the first clubs providing living quarters, club rooms and separate mess for bachelor noncommissioned officers of the first three grades.

The building internally and externally is very attractive, being built in the same flat-roofed, stucco style as the other quarters on the post. Living quarters are occupied by 18 bachelors. The key position of Mess Sergeant and Steward is held by Sergeant Gilman H. Clark, 6th Pursuit Squadron. Reports are that the mess is excellent. At this time, a small extra charge is required of each participant, in addition to the regular ration. The belief is expressed that after the mess has been established this charge may be eliminated. Married noncommissioned officers living in the area are enabled, when they desire, to eat occasional meals in the Club, charges for which are handled in the same manner as at an Officers' Club.

The Board of Governors of this Club is planning decorations for the lounge, which they intend to furnish in stick reed. Captain Etheridge is the officer in charge of the building and mess, but Club matters are run exclusively by members. All men now living in the Club are enthusiastic about their new home and, says the News Letter Correspondent, "we hope that its success may mean more clubs of this nature for other stations."

One of the first contributions received by this Club was a complete set of photos of all General Officers of the Air Corps, past and present, together with that of the Commander of the 18th Composite Wing.

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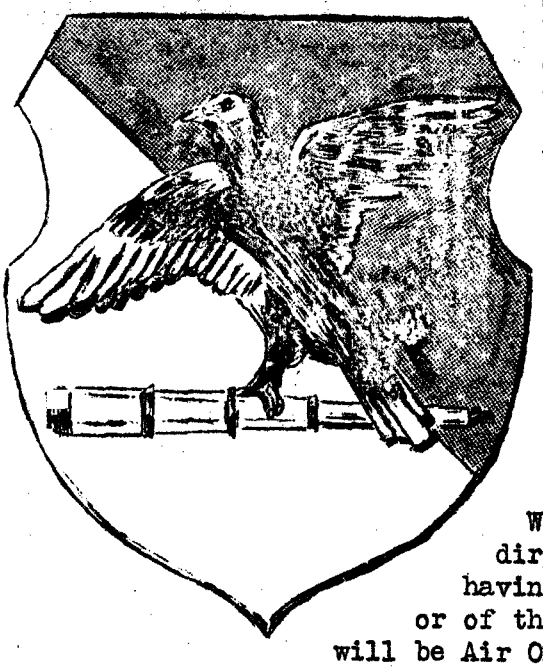
General Benjamin D. Foulois, Chief of the Air Corps, visited Wright Field on April 18th for a conference with the Chief of the Materiel Division.

FIELD DUTY FOR THE 15th OBSERVATION SQUADRON

Field activities promise to keep the personnel of the 15th Observation Squadron, Scott Field, Ill., on the jump, beginning on May 13th, when a large portion of the organization was scheduled to move to Camp Custer, Battle Creek, Mich.



The two weeks' stay at Camp Custer will be of a three-fold nature. It will give the Squadron its required two weeks of field duty; the organization will participate in the annual command post exercises of the Sixth Corps Area, and Major-General Frank Parker, Corps Commander, will conduct the annual tactical inspection of the outfit. In addition to the regular missions to be performed by the Squadron, a number of officers will be afforded an opportunity to receive training in staff duties. Captain Wolcott P. Hayes, Commanding Officer, will direct the Squadron activities in addition to having staff duties and being an assistant director of the problem. First Lieut. Frederick A. Johnson will be Air Officer for the 1st Corps, and 2nd Lieut. Edgar A. Sirmyer, Jr., has a similar position with one of the divisions. In addition to these, several other officers will act as assistants to the various Air Officers, and it is expected that all of the regular officers with the Squadron will get some staff work.

In addition to the 15th Squadron officers, two lighter-than-air officers from Scott Field will have staff positions. Major Norman W. Peek will act as a Corps Air Officer and Captain Douglas Johnston will be Air Officer for the Army.

Following the maneuvers, which close on May 28th, the personnel and airplanes of the Squadron will proceed at once to Camp Skeel, Oscoda, Michigan, for the annual gunnery practice. With at least 25 pilots to fire both front and rear guns, the three following weeks should see plenty of activity with the machine guns.

The Squadron is due back at Scott Field for a short four-day stay on June 20 and then proceeds on the 24th to Chicago to take part in the big military relief program. This will keep the squadron planes busy until July 4th, and then the following days the planes will be put into use for the annual Reserve Officers' Training Camp at Scott Field. The Reserve Officers check in at Scott Field for the period July 3rd to 16th.

The Reserve Camp training closes the activities in which the entire squadron takes part, but there are numerous other missions which will keep planes of the organization on tactical missions until sometime in September. One airplane is now at Fort Sheridan for two weeks of tow-target work at that station and at Milwaukee. Beginning July 1st, three airplanes will be at Fort Sheridan for a full two months on this same work. They will tow targets for the Regular Army, Reserves and the ROTC, for the purpose of tracking, searchlight practice and firing with both anti-aircraft artillery and machine guns.

Other summer missions include the sending of two planes to the 5th Corps Area Reserve Camp at Indianapolis from August 14th to 27th and several artillery missions at Camp McCoy, Sparta, Wis., with the Regular Army troops and the Reserves. With this full schedule for the summer and with the loss of about ten Reserve officer pilots on June 30th, the remainder of the Squadron will probably be ready for a complete overhaul by the time September arrives.

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The Secretary of War has designated Major-General Benjamin D. Foulois, Chief of the Air Corps, as the Air Corps Member of the Division of Federal Relations of the National Research Council, vice Major Henry W. Harms, Air Corps, relieved, the latter now being stationed in the Philippines.

The Division of Federal Relations, as organized under the President's Executive Order establishing the National Research Council, is made up of representatives of the Government Bureaus having to do with or actually using scientific research in the natural sciences.

V-6271, A.C.

THE USE OF OXYGEN IN HIGH ALTITUDE FLYING

EXCERPTS from a report made by Major Irwin B. March, Medical Corps, Flight Surgeon at Crissy Field, Presidio of San Francisco, Calif., were forwarded by the News Letter Correspondent in the belief that the information will be interesting and informative to Air Corps personnel in general. Major March states:

"On January 22, this year, Captain Albert W. Stevens, Air Corps, and Lieut. J.F. Philips, C.E., while on temporary duty at Crissy Field, on photographic work, were in the air for eight hours and two minutes continuous flying. About two hours of this time was spent at twenty-three thousand feet and one hour at between twenty and twenty-three thousand, and the remainder of the time at an average of about five thousand feet. Both pilots took off without breakfast and had only three soda crackers each to eat during the entire flight. At six o'clock that evening I examined both pilots and found them physically normal. Their ocular muscle balance, visual acuity, depth perception, nervous reaction, blood pressure and pulse rate were all within normal limits.

Captain Stevens recorded blood pressure: systolic 130 - diastolic 84, pulse rate 64 minute, sitting. Lieutenant Philips recorded blood pressure: systolic 114 - diastolic 84, pulse rate 64 sitting. Neither pilot complained of fatigue or nervous symptoms.

Captain Stevens stated that on a previous high altitude photographic mission two years ago, he and Lieutenant J.D. Corkille had flown for three and one-half to four hours at an altitude of twenty-one thousand feet and for about three hours at a lower altitude, and both had eaten a normal amount of food before the flight. Upon landing that time, Captain Stevens stated that he felt somewhat weak or fatigued and wanted to rest but felt nervous and restless and couldn't rest. He had taken his own pulse rate and found it to be over 90 to the minute. Lieutenant Corkille, who was pilot on the flight, complained of the same symptoms.

The difference in the symptoms experienced by Captain Stevens and the other pilots on the two flights is believed to be due to the different manner in which oxygen was taken and in the amount of oxygen taken by each flyer. On the flight of January 22, 1932, Captain Stevens stated that they had an ample supply of oxygen and began taking it at about eight thousand feet altitude and continued to take oxygen until below ten thousand feet on the descent, while on the flight two years ago they did not have as much oxygen with them and were compelled to take it sparingly during the entire flight.

The experience of Captain Stevens and the two other Air Corps officers on these two flights emphasizes the importance of an ample supply of oxygen on high altitude flights, and, if the full and more lasting benefits of oxygen are to be obtained under similar circumstances, these experiences indicate the use of oxygen early in the flight, that is, before higher altitudes are reached, and its continued use until lower altitudes are again reached."

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MASSACHUSETTS AERONAUTIC OFFICIAL PASSES AWAY

First Lieut. Robert L. O'Brien, State Supervisor of Aeronautics in Massachusetts, National Guard and Reserve officer, passed away after an illness of several months, dating from a severe cold contracted while at a training camp with the 101st Observation Squadron, Massachusetts National Guard, last summer.

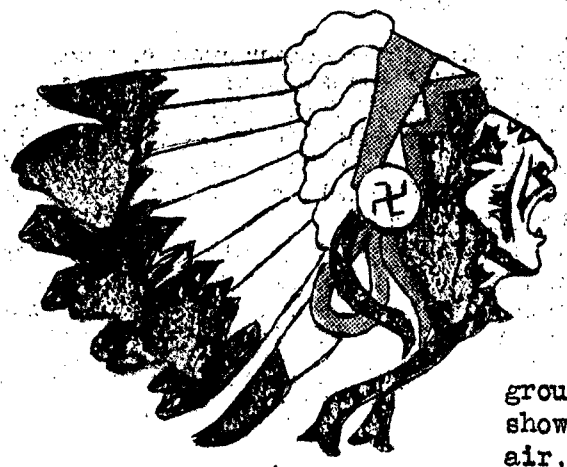
On April 22nd, a military funeral was accorded this popular officer, with National Guard and Reserve officers as honorary pall bearers. The entire squadron turned out to render appropriate honors, and their volunteer band played the necessary dirges. After services in St. John The Evangelist Church in Winthrop, Mass., where Lieut. O'Brien lived with his wife and seven-year old boy Robert, Jr., the cavalcade proceeded to the other side of Boston where the interment was held at St. Joseph's cemetery, Wext Roxbury.

During the procession to the church from his home, and during the services at the grave (which were conducted by Father John Sullivan, of New York, who flew to Boston for the occasion), a squadron of planes flew a blank file formation overhead, led by Lieut. Crawford Hollidge, Massachusetts National Guard, and with Captain Glenn Salisbury representing the Reserves and Regular Army.

Lieut. O'Brien was born in Boston, March 11, 1896. He went to Boston College Prep., then to Boston College, graduating with an A.B. degree in June, 1917. He then enlisted at once in the Marine Corps, and was stationed at Paris Island and later at Quantico. In October, 1917, he transferred to the Army Air Service, and received his ground training at the Massachusetts Institute of Technology, and his flying training at Park Field, Tenn. He obtained his commission, and after the war returned to Boston, where he became an inspector in the Motor Vehicle Registry. When the Aviation Department was established, he obtained the position, due to his fine abilities and his connection with the Reserve Corps where he continued his flying. Within the last three years he studied at a night school and obtained an LL.B. from Northeastern College. He also had flown commercially.

All who came in contact with Lieut. O'Brien, officially or otherwise, admired him, and his loss is keenly felt.

HEAP BIG "INJUN" ON FLOWER BED



During the new construction at Selfridge Field, Mich., space was designed in rear of the hangars of the 94th Pursuit Squadron for flower beds. It turned out to be rather a problem to find flowers which would look good during any length of time in this climate. Here is the way it ended - Master Sergeant Simmons with several good men came through in a pinch and laid out the 94th Squadron Indian Head insignia in colored stones on a sloping bank of ground. The entire design, outlined with grass, shows up exceptionally well. especially in the air, and the Correspondent of the 94th extends an invitation to "take a look when you fly over."

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RADIO WORK IN HAWAII

A total of 22 enlisted men completed the course of extensive study of 24 weeks in the School of Radio in the Hawaiian Department recently. Lieut. Robert E.L. Choate was Director of the School, and Private Charles G. Archer, Instructor Twenty-six men enrolled in the course at its commencement six months ago, and the small number dropped indicates the thoroughness of the instruction and the ability of the students. Combining theory and practice on standard equipment and operating methods, these classes furnish the trained operators and mechanics which operate and maintain the Air Corps' radio nets.

Two hours a day of class time was given to code practice, and the class has attained an average speed of 18 words per minute. An elaborate installation of code practice equipment enabled the instructor to send to the whole class at one time, each man having individual receiving equipment. Lectures and class recitals were alternated with laboratory and shop work, and during the last few weeks of the course the school was literally moved into the field. Student-mechanics made actual service installations of transmitters and receivers in Air Corps planes, and student-operators received practice in the handling of messages under usual operating conditions.

During the recent maneuvers in Hawaii, 13 students were sent to outlying stations after only 12 weeks of training, and these men successfully kept their stations in operation, handling a large number of important messages with commendable efficiency. Three picked students were employed as aerial observers and had a vital part in reporting the movements of the "attacking"fleet. Receivers were connected to the incoming code table to allow the remainder of the students to obtain practice copying difficult signals through interference and under conditions similar to those that may be expected in case of actual combat.

All officers who have had any experience with these men have been enthusiastic in praise of their efficiency. The instructor, Private Archer, has had eight years of varied experience in all phases of radio communication and mechanics, and is a graduate of the Signal Corps at Fort Monmouth, N.J., and the Air Corps Technical School at Chanute Field, Rantoul, Ill.

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A meeting. ~~a~~ Board of Officers was called at Wright Field on April 18th for the purpose of examining and testing the YO-31A, YO-40 and YO-35 airplanes and submitting recommendations as to their suitability for the purposes for which they were designed. The following officers served: Major A.N. Duncan and Lieut. Newton Longfellow, Office Chief of the Air Corps; Captains Geo. C. Kenny, Langley Field; W.S. Gravely, Brooks Field; H.W. Holden, Scott Field; F.W. Evans, Mitchel Field; J.G. Taylor and Lieuts. J.A. Woodruff and John Whitely, Wright Field.

Capts. Albert F. Hegenberger and Clements McMullen, granted leave from their duties to attend the meeting of Transoceanic International Fliers (May 22-30 in Rome, Italy) recently sailed on the ROMA. That their experience will be profitable and interesting goes without saying.

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CATERPILLAR NO. 454 INITIATED

By the News Lotter Correspondent

Saturday afternoon, April 30th, your correspondent was watching Lieut. John H. Patterson, Air Corps Reserve, who is attached to a Pursuit squadron at Langley Field, Va., flying his Boeing Pursuit. Lieut. Patterson, who had been visiting his parents in Dorchester, Mass., while on cross-country flight, was preparing to return to Langley Field and had put his ship through one or two simple maneuvers.

Your correspondent was interested in a spin which was started at an altitude of about 4,000 feet. After ten turns of normal type, the ship suddenly tightened the spin and a decided whip could be seen to each turn. On the 14th turn a black object appeared to hurtle from the ship in an upward arc. None of us at the field (Boston Airport) realized what the object was until the slender white line of the chute snaked out behind the object, and then it was realized that Lieut. Patterson had bailed out.

The plane, after a turn more, straightened and dove with high speed into the muddy flats nearly a mile and a half from the airport. It was a total washout. Lieut. Patterson drifted inland, landing in a street near Orient Heights section of Boston.

Army, National Guard and Reserve flyers who witnessed the accident were loud in their praise of Lieut. Patterson's courage in sticking with the plane so long before bailing out. He had fought to bring the plane out of the spin from the second turn on. He finally bailed out after all methods had failed - and he had reached 2000 ft. altitude with the ship tightening into the most wicked spin your correspondent has witnessed. Even after bailing out, Lieut. Patterson's first thought was of his plane. Noting where it hit, he tried to slip his chute to effect a landing on the beach near the scene, but the wind was so strong it carried him by, and then he had to work the shroud lines to avoid landing on housetops. He suffered only a scratch on his chin.

Ed. Note: According to Lieut. Patterson's official report, he reported at the Boston Airport about 3:30 p.m., Saturday, April 30, 1932, for the purpose of testing his ship. "The reason for this," he stated, "was that the left wing flying wires had been violently vibrating as I was approaching Boston the previous day, coming up from Langley Field, Va. A mechanic had tightened them and I wanted to be sure the ship was alright before starting back to Langley Field on the following day.

The Commanding Officer authorized this flight and I took off at 3:50 p.m., after having the auxiliary tank removed. I could not notice any vibration except while gliding. I climbed to about 4,000 feet, two miles northeast of the airport, and attempted a 'falling leaf.' The ship fell into a tight inside spin to the left. I immediately tried to bring it out but there was no response to the controls. I tried every way - reversing the controls, gave the motor a few bursts, but it kept on spinning. I then climbed out over the left side, was thrown clear, pulled the rip cord and landed safely. The Commanding Officer of the Air Corps Detachment at Boston said my ship had made fourteen turns before I left it. I jumped at about 800 to 1,000 feet.

Had hard time getting out of cockpit. After climbing half way out I was thrown the rest of the way. Then started to find rip cord ring. Didn't have much trouble doing this, even though I was turning over. Parachute opened immediately. Heard ship crash immediately after parachute opened. Was more nervous after landing than during jump."

Lieut. Patterson at the present time is at the bottom of the list of Caterpillar Club members - No. 454.

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TACTICAL SCHOOL PERSONNEL VISIT WRIGHT FIELD

Thirty-two airplanes, bearing approximately 52 officers of the Tactical School, its faculty, and staff of Maxwell Field, arrived at Wright Field on May 16th for a three-day visit. On the following day, General Pratt opened ceremonies by delivering an address in the auditorium. This was followed by a brief discussion of the engineering program by Major Howard, Chief of Engineering. Visits by sections to the different engineering branches for a closer study of the work being carried on in each was then undertaken. On May 18th, the early part of the day was devoted to a visit to the Flight Test branches and the hangars. Later the groups departed for Patterson Field for a visit to that arm of the Materiel Division. In charge of the various inspection groups were Capt. Bayard Johnson, Lieuts. John Whitely, C.S. Thorpe, R.J. Minty and H.P. Rush, all of Wright Field. Among those from Maxwell Field who were formerly stationed at Wright Field or McCook Field and who were warmly welcomed for old association's sake were: Majors D.C. Emmons, W.H. Crom, F.M. Kennedy, O.P. Echols, A.H. Gilkeson J.F. Curry, Capt. Robert Keuch and Lieut. E.R. McReynolds. Major Curry, Commanding Officer of Maxwell Field, was formerly Commanding Officer of McCook Field.

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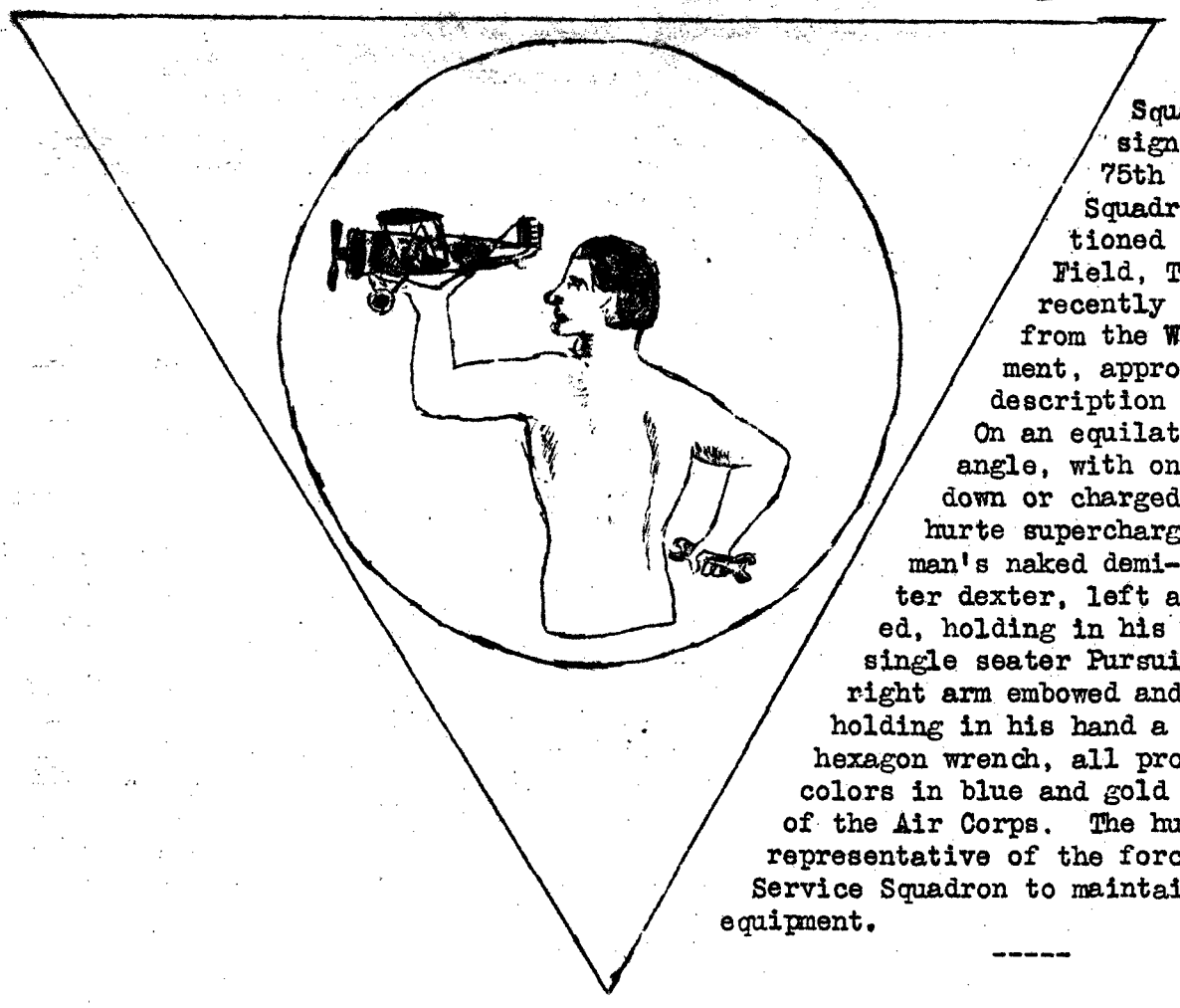
INSIGNIA OF THE 75th SERVICE SQUADRON



The Squadron insignia of the 75th Service Squadron, stationed at Wheeler Field, T.H., was recently returned from the War Department, approved, and a description follows: On an equilateral triangle, with one point down or charged with a hurte supercharged with a man's naked demi-body facter dexter, left arm elevated, holding in his hand a single seater Pursuit plane, right arm embowed and inverted, holding in his hand a double-end hexagon wrench, all proper. The colors in blue and gold are those of the Air Corps. The human figure representative of the force of the Service Squadron to maintain flying equipment.

MATHER FIELD PERSONNEL PLEASED WITH TACTICAL INSPECTION

"Tired but happy" is the feeling of all the personnel of Mather Field these days. The annual tactical inspection for 1932 is a thing of the past. For weeks everyone at Mather Field from the Commanding Officer to the newest recruit had been busy in preparation for the annual event. When the day arrived, all equipment as well as personnel was spotless. Judging from the remarks made to the officers by the Commanding General, he was quite pleased with the appearance and performance of the 20th Pursuit Group. A fine tribute was paid Major Tinker by Major-General Craig, and we are all proud to think we had a little to do with the whole thing. A job well done is a grand and glorious feeling, and we are all glad that it is all over and that it turned out successfully.

The exercises for the inspection consisted of a Pursuit-Bombardment problem. The Bombers were furnished by March Field. They left their home station at four o'clock in the morning and were supposed to have bombed Mather Field. However, after fighting headwinds for over five hours they were quite relieved as well as surprised to see the 55th Pursuit Squadron from Mather Field suddenly attack from above. They did not argue but were only too glad to consider they were shot down so they might land. The Bombers brought along some protection in the form of the 95th Pursuit Squadron, and this outfit and the 77th Pursuit Squadron from Mather Field engaged in combat at 20,000 feet. Although the 95th Squadron claim victory over the 77th Squadron, Mather Field was the victor, as the "destruction" of the Bombers was the primary mission.

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A ROUGH FREE BALLOON FLIGHT

Captain Neal Creighton, pilot, and 1st Lieut. J.P. Kirkendall, aide, stationed at Fort Sill, Okla., recently participated in a free balloon flight, using a 19,000 cubic foot free balloon. They took off at 7:45 a.m., in a northerly wind, and made a flight of approximately two hours' duration, landing eighty miles from the starting point. The balloon encountered high winds throughout the flight, and the landing was made in a forty-five mile ground wind. When the basket hit the ground in landing, the impact threw both Captain Creighton and Lieut. Kirkendall out. The former suffered a broken left collar bone and abrasions, and the latter sustained minor cuts and bruises.

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The 36th Pursuit Squadron, Selfridge Field, finally received a full nine of the new two-seater Pursuit ships manufactured by the Berliner-Joyce Co. This allows the Squadron to begin test and experimentation upon the usefulness of the two-seater in earnest. Those pilots of the Squadron not equipped with B-J's are flying Boeing P-12D's.

AWAY FROM THE ROUTINE THINGS IN LIFE

THAT portion of Kelly Field, Texas, where the Observation Section of the Advanced Flying School holds forth, was recently the scene of a most unusual incident. A crowd of student flyers and enlisted men were gathered in a circle, their eyes riveted on two writhing objects on the ground. Some of the more excitable of the spectators were dancing around and wildly waving their arms, while others were giving shouts of encouragement. Evidently a battle of some kind was waging fast and furious and, as it turned out, a most unusual battle it was.

"Come on, you Rattler! Give him the works!" shouted one of the excited onlookers.

"Bit his head off, Kingy!" was the advice of another. "I've got my pile on you.

"Get a toe hold on him, Rattles old boy!" piped forth a mechanic, who was executing a war dance in his excitement.

"Squeeze him, Kingy old top! Squeeze him!" pleaded a Flying Cadet. "Baby needs a pair of new shoes!"

These and various other shouts and pleadings tended to swell the crowd of interested and eager onlookers. Meanwhile, the strange battle on the ground between a rattle snake and a king snake was being fought with grim determination.

When first found, the two snakes were closely entwined, and the king snake had a death grip on the head of the rattle snake. After some fifteen minutes of combat, the king snake succeeded in killing the rattler. He then swallowed his erstwhile adversary, bones and all, and happily went on his way.

There was no need for any decision from the judges and referee as to the outcome of this bout. No information is at hand as to whether the king snake is a lineal descendant of Aaron's rod which Moses transformed into a serpent and which swallowed the serpents created by Pharoah's magicians at the time these two patriarchs of ancient times were pleading for the release of the Israelites.

Recently Lieut. A.R. Kingham succeeded in getting himself in the spot light as well as in the Mather Field "dog house." It seems that he went on a cross-country to Colusa. Just what the purpose of this trip was is not known, but it is known that he became so busily engaged that it never occurred to him to wire his home station. Along late in the afternoon a plane was sent out to locate this belated pilot, who finally arrived just before dark. As a result of his forgetfulness or whatever prevented him from sending a wire, Lieut. Kingham does no individual flying for one month.

The Cooks and Bakers School at Corozal, Panama Canal Zone, had just received its finest compliment and expression of appreciation. On April 1st, Captain Roderick N. Ott of France Field matriculated at the said school, and on April 30th graduated "cum laude." Mrs. Ott was so pleased with the thoroughness of the course of instruction that her husband had taken that she immediately gave up the management of her household to him and departed on a two months' vacation to visit with her parents in San Antonio. "For the sake of her peace of mind and the safety of her children," says the News Letter Correspondent, "we all hope that her confidence is justified."

The First Pursuit Group Operations Office recently received a concise and laconic telegram which was almost too concise and laconic to be intelligible. Lieut. McDonald, sender of the telegram, had evidently been so well instructed in the virtues of conciseness in official correspondence that he apparently tried to tell a story of book length in ten words, and thereby keep down the government's telegraph bill.

Lieut. McDonald left Selfridge Field in a P-6E airplane on a mission of cross-country training. The next word from him from Portsmouth, Ohio, was a wire reading as follows:

"ARRIVED THREE FORTY FIVE NEED NEW WINGS CAN FLY TO FAIRFIELD OR HOME OK ANY ORDERS.

McDONALD."

While aid was being rushed to Lieut. McDonald, speculation was rife at Selfridge Field as to just what happened to cause his flight to end so unhappily, also what was the status of plane and pilot. Careful reading of the telegram revealed that there could be grounds for several different schools of thought as to the proper interpretation of the message. One guess is as good as another.

Captain Joseph A. (Smoky Joe) Wilson recently returned to his command at the Boston Airport after a Mediterranean cruise of many weeks. It is rumored that he took the controls of a "ship" of the desert. It proved to be rather unstable and "bumpy."

Gunnery and Bombing

The 12th Observation Group at Brooks Field, San Antonio, Texas, under the command of Major Frank D. Lackland, began annual gunnery, bombing and field exercises at Bayside Beach, near Port Lavaca, Texas, on April 1st, and continued same through May 15th. The camp site is an ideal location, situated about 125 miles from Brooks Field, and was used by the 12th Observation Squadron last year. Each of the three tactical squadrons of the Group was scheduled to spend two weeks at the camp.

The entire supply of the camp was maintained by transports of the Service Squadrons, a daily schedule of one plane in a round trip being maintained. To care for emergencies, such as sickness, accidents, etc., one transport remained at the gunnery camp. The personnel of the Service Squadron maintained and operated all transports at the gunnery camp.

All communication from Bayside Beach was conducted by the communications section of the squadron in the field and the Group communications section at the post. A continuous schedule was maintained daily, at one-half hour periods, until 7:30 p.m. In addition to the messages incident to the camp, the communications section furnished all weather reports. Through arrangement with the Weather Bureau at San Antonio, storm warnings on the coast were furnished Brooks Field for communication to the camp.

The radio sets which are part of the equipment of the communications section of each squadron are credited with having a maximum range of 75 miles. It is interesting to note that no trouble at all was experienced in communicating from the camp to the post station, a distance of 135 miles - almost double the maximum range of these sets.

The Group Commander, Major Frank D. Lackland, made frequent trips to the gunnery camp and expressed himself as being well pleased not only with the progress of the gunnery but with the functions of the various sections of the squadrons and the general condition and functioning of all the activities at the camp. He was especially pleased with the excellent operation and maintenance of the crew of the transports on whose successful operation the entire supply of the camp depended.

The Armament Sections of the two Squadrons, the 22nd and 12th Observation, that have already fired, are deserving of a great deal of credit, for on their work to a large extent depended the smooth operation of the gunnery.

One of the arduous jobs in connection with the gunnery camp rested upon the shoulders of 2nd Lieut. James E. Darby, Air Reserve, who was designated as Camp Liaison Officer at the field. All communications for supplies of all sorts came to him, and upon him fell the full responsibility of securing whatever the camp required.

The Third Pursuit Squadron, stationed at Clark Field, Pampanga, P.I., which is now composed of sixteen pilots, had a very busy time during March, the flying activities comprising gunnery and bombing, night flying, combat, performance flights, attacks on formations, radio practice, and other routine training missions. The following officers completed their annual gunnery and bombing training, with scores as listed after their respective names:

	Ground Targets.	Towed Targets	Low Altitude Bombing	Total	Qualification
Capt. Hornsby	785	216	211	1212	Expert
Lieut. Hardy	840	46	199	1085	"
Lieut. Gregg	766	47	194	1007	"
Capt. Ellis	699	5	212	916	"
Lieut. Hawkins	663	58	187	908	"
Lieut. Murphy	451	115	174	740	Sharpshooter

Owing to the fact that Clark Field is situated on the slope of a mountain range and the air is quite rough for ground-target firing, it is necessary to fire as much of the course as possible immediately after daybreak in order to avoid this handicap.

The 55th and 77th Pursuit Squadrons at Mather Field, Calif., recently indulged in a competitive gunnery match. A gusty 20-mile an hour wind greeted the teams on the morning of the match and made shooting very difficult. The rough air eliminated all chance of turning in good scores and both teams were working under the same handicap. With the exception of one man, nobody had previously fired the new P-12E airplanes.

The 55th Squadron team, composed of Lieuts. Marshall E. Roth, John Kroeger and Melie Coutlee, won the match by 201 points, the scores being 1564 to 1363. The members of the 77th Squadron team were Lieuts. Joseph G. Hopkins, Franklin Shroyer and Philo Rasmussen. Lieuts. Kroger and Roth turned in the high scores for the 55th, while Lieut. Shroyer held the high score for the 77th Squadron. Lieut. Kroger was high point man with a score of 600. This gunnery competition

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was well attended by civilians from adjoining towns. Local photographers were on the job and pictures of the officers partaking in the match appeared in the papers. From the civilian standpoint, the match was a success, inasmuch as it gave people their first opportunity to see the methods and tactics of pursuit ground gunnery. From the point of view of the officers of Mather Field, the match was disappointing. The highest score made during the match was lower than the average of either Squadron. It is planned to have more matches of of this kind in the near future, as it tends to stimulate competition among the organizations.

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MORE ABOUT TRAPPING MOSQUITOES DURING AIRPLANE FLIGHTS

Mention was made in the last issue of the News Letter of a project under way in Hawaii of trapping mosquitoes in airplane flights in order to determine what insects reach the Honolulu area from the windward side of the Island of Oahu. Further developments in this war on the mosquito are related by the News Letter Correspondent, as follows:

"The Hawaiian Air Depot at the present time is busy working on a device to be installed on an airplane for the purpose of catching mosquitoes, which consists of a box-like magazine fitted with 10 slides, each covered with fine wire mesh, the wire mesh being coated with a solution of resin in castor oil, and the entire outfit mounted on the nose of a Bomber. The plot of the piece seems to be the exposure in turn, and at a given time and place, of each slide with its nice coating of resin and castor oil. The airplane, once so proud and haughty, is used to propel the slides, so to speak.

After each slide is examined, so great are the powers of observation of the Government entomologists, we are told, that not only is each and every mosquito counted, its species determined, its age and sex noted, but, believe it or not, these scientists will ascertain whether, at the time it met up with the airplane, the mosquito was going toward Honolulu or coming away from Honolulu, or just hanging around. Seems like prying a long way into the private lives and habits of a number of critters, but the fact remains, if we may be so bold as to state, that there are a ------ lot of mosquitoes in and around Honolulu just at present. 'Unusual,' we are told - something like the cold spell of 1920, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 and 31 at Riverside, Calif."

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DEATH OF LIEUT. RICHARD CRABBS, AIR RESERVE

On the afternoon of May 15th, Selfridge Field was shocked to learn of the death, near Davenport, Iowa, of 2nd Lieut. Richard Crabbs, Air Reserve. This officer had left the day before on an individual navigation training flight from Selfridge Field to Davenport. On May 15th, he started to return, but shortly following his take-off from the airport his plane went into a spin from which he could not recover. He was killed instantly.

Lieut. Crabbs was born in Brooklyn, N.Y., December 4, 1906. He was educated there and at the University of Illinois. He graduated from the Air Corps Advanced Flying School at Kelly Field, Texas, in June, 1931, and was assigned to one year's active duty with a tactical organization. He reported at Selfridge Field in July and was attached for duty with the 17th Pursuit Squadron. He served with much credit with this organization until the time of his death.

The loss of this promising young officer is felt deeply not only by his own organization but the entire command at Selfridge Field.

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PURSUITERS PARTICIPATE IN COMBAT MANEUVERS AT MILWAUKEE

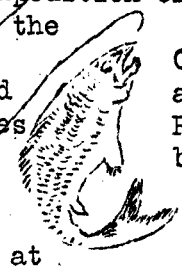
"B" Flight of the 17th Pursuit Squadron, Selfridge Field, Mich., led by Lt. D.L. Putt, flew six of the new fast P-6E single-seater Pursuit ships on May 5th to Milwaukee. In accordance with orders issued from Corps Area Headquarters, the flight established its headquarters at the Milwaukee County Airport and prepared to take part in the Annual Combat Maneuvers held at Milwaukee by Reserve and National Guard units of Wisconsin and Illinois.

Unfortunately, the weather at Milwaukee proved poor during the entire three-day stay there, curtailing activities considerably. On the evening of May 5th, a demonstration flight, in which formation combat tactics were flown, was witnessed by a very large crowd of civilians as well as military personnel, and they were thrilled at the maneuverings of the six ships and of the National Guard aviation units which also took part. Extremely poor visibility prevented the scheduled combined maneuver of all the ground and air units for May 6th.

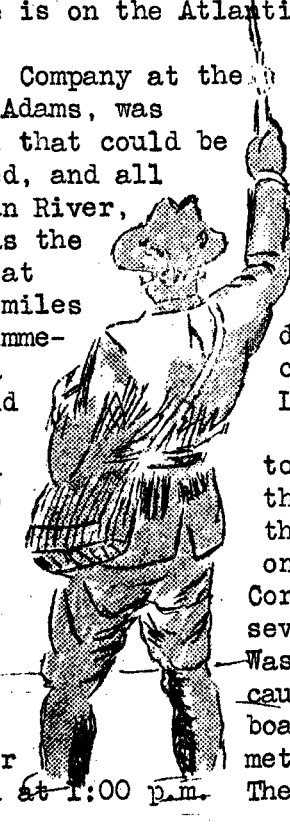
The personnel of the flight returned to Selfridge Field with very pleasant memories of the welcome extended to them by the citizens of Milwaukee. Nothing was left undone in a social way to make their stay pleasant and to give them the best possible impression of the friendliness and hospitality of the Wisconsin city.

A FISH STORY FROM PANAMA

During the brief stay of Lieut.-Colonel Frank M. Andrews in Panama, after leading an expedition of five planes (3 Bombers and 2 Amphibians) which were ferried from the United States to the Canal Zone, Major Lewis H. Brereton, Commanding Officer of France Field, has occasion to assist him in his cherished ambition to land a tarpon. Several previous expeditions to the Chagres River in hopes of catching one had resulted in zero tarpon and beaucoup sunburn. A party was gotten together, consisting of Col. Andrews, Major Brereton, Lieuts. Rice, Studeman, and Staff Sgt. Sadler of the 7th Observation Squadron, and in due time arrived at Almirante Bay. Almirante is on the Atlantic side and about 175 miles west of the Zone.



The party were the guests of the United Fruit Company at the "Banana Club" for luncheon and, although the manager, Mr. Adams, was absent, the hospitality offered by the remaining staff was all that could be desired. After luncheon, a supply of provisions was procured, and all boarded the local "scooter" and were carried to the San San River, where they were met by three outboard motor boats. As soon as the boats were loaded, they shoved off down the river and landed at the cabin of the employees of the United Fruit Company, ten miles down, where headquarters were established. Tackle was immediately broken out and the river fished until dark, when a check showed that two fish had been landed. Colonel Andrews and Lieut. Studeman had each brought a fifty pounder to gaff.



The Colonel was justly proud of his prize and took no end of delight in giving such little bits of advice to the less fortunate as is the joy of all fishermen of spirit - the same advice probably having come from the same friends on his more barren days. "We trust," says the News Letter Correspondent, "that the fifty pounder has not grown to sixty, seventy or eighty pounds since the Colonel's arrival in Washington, as so many fish have been known to do. A heavy rain caused the fishing to be called off in the morning and the boats were loaded for the trip back up the river. The scooter met them, and all were back in the "Banana Club" for lunch again at 1:00 p.m. Then the trip was started for home.

That is about all there is to the story except the actual battle with the fish, and, not caring to take any of the Colonel's rightful pleasure from him, we shall end here."

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BEATING THE INSPECTOR GENERAL TO IT

"Running down rabbits in an automobile is nothing new," says the Mather Field Correspondent, "but the sight of a General in his car chasing a Second Lieutenant on foot down the road is not so sommon." He then goes on to say: "The above actually happened on the morning of our Annual Tactical Inspection. This peculiar phenomena came about in the following manner. The officers were ready to line up in front of their ships for the inspection when Lieut. Losey suddenly realized that his leather jacket was locked up in the paint house undergoing repairs along artistic lines.

Inasmuch as that particular jacket was a part of the required uniform for morning inspection, Lieut. Losey all at once became very much worried. The only solution was to obtain another jacket - the nearest available one being in the Bachelor Officers' quarters some distance away. Consequently, the particular one concerned decided upon a marathon in the general direction of the much coveted jacket and at once departed on foot at high speed. Realizing that the time of the Inspector General's arrival was at hand, the remaining officers took their places by their planes. The sight next afforded to the eyes of the waiting pilots is something not often seen.

Down the road came the General in his car, accompanied by Majors, Captains, etc., but out in front, scarcely ten feet in advance and on foot came a much excited second lieutenant wildly waving his arms in a vain attempt to do the century in less than ten flat and at the same time don a leather jacket. Just how Lieut. Losey kept ahead of the Inspector's car we do not know, but he proba-

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bly was spurred to super strength by the thought of what would happen to him if he were not in his place when the Inspector passed by. At any rate, the General did not make any mention of a certain perspiring and puffing young pilot as he stood out in front of his plane in correct dress and position during the inspection. He was probably thinking about those numerous suppressed grins he saw on the faces of others as they tried to appear dignified and at the same time recall the comical sight they had witnessed only a few seconds before. Whether or not it is in training for such another similar event we do not know, but in the afternoons of late we have seen Lieut. Losey in his track suit running the limits of the post. If such another event does transpire, we wish Lieut. Losey all the success that he had the first time."

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DEPRESSION HITS FLYING CADET

Flying Cadet Louis R. Hughes, attending the Advanced Flying School at Kelly Field, Texas, when returning from a cross-country flight from San Angelo the other day, was forced to land at San Marcos, Texas, for gasoline and, being in the usual financial condition of a Flying Cadet, he was broke and hungry. The Station Supply Officer at Kelly Field gnashed his teeth and swore many an oath upon receiving a Government invoice taken from the cross-country envelope, from which it appears that Cadet Hughes had serviced his LB-5 airplane with one ham sandwich and a bottle of milk purchased from the City Cafe.

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LOSES RANDOLPH FIELD ON HIS FIRST SOLO FLIGHT

Randolph Field may seem a big place to some people, but to Su Lee Change, Chinese student at the Primary Flying School, on his first solo flight, it became a needle in a haystack. He took off from Randolph Field early in the morning on his first flight alone with every intention of circling the field and landing. Instead, he came down at Kelly Field an hour and a half later just as the last drop of gasoline in his airplane was exhausted.

At Kelly Field he admitted that Randolph Field mysteriously disappeared after he took off. For an hour and a half he searched for the flying field and San Antonio and, finding himself over a lake and river, picked up a highway which led him to San Antonio. As he approached the city, he saw two airplanes and followed them. They landed and he followed them down to learn that it was Kelly Field. It was his first visit there. Asked about his fuel supply (he was flying a ship that carried only sufficient gas for two hours with the tanks full), he replied that the motor was working fine but suggested the gas be checked. Examination revealed that the last drop of gas was gone.

Change was unwilling to take off for Randolph Field alone after his ship had been refueled, for fear he might not be able to find it, so a Kelly Field plane was sent along to lead the way.

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MATHER FIELD AS A PICNIC GROUND

Mather Field, near Sacramento, Calif., is a picnic ground. So think quite a few civilians, who bring their lunch along and proceed to spread it out on the ground and enjoy themselves. They might have finished unmolested had they not decided to eat within a few feet of the Commanding Officer's quarters. As a result, the Officer of the Day was called upon to present his authority and ask that the picnickers picnic some other place. Just why Mather Field should be considered a proper place for a picnic has not been determined, unless it is due to the fact that the California Golden Poppies are now in full bloom. The post was particularly blessed with a bounteous crop, and they looked quite pretty against a background of green. Just how beautiful a place Mather Field is may be gained from the fact that civilians who come out there feel the urge to picnic upon arriving.

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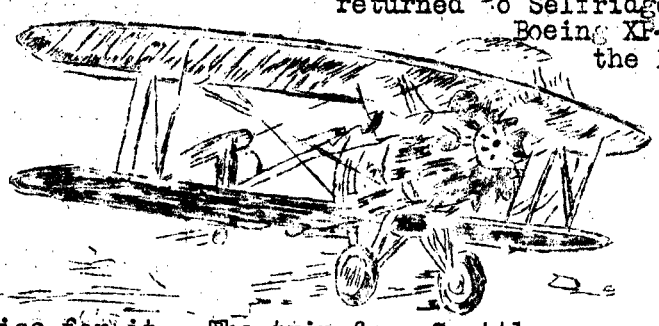
Major A.L. Sneed, commanding the Fairfield Air Depot, spent several days on a fishing trip down in "Sunny" Tennessee. Upon his return someone kindly inquired regarding the results of the catch, but the only response from the Major was "No Catchum."

NEW PURSUIT SHIP TESTED AT SELFRIDGE FIELD

Major G.E. Brower, Commanding Officer of the First Pursuit Group, recently returned to Selfridge Field in the new experimental Boeing XP-936 plane which he had ferried from the Boeing plant in Seattle Wash.



Although the maintenance qualities, ruggedness and tactical efficiency of the new plane cannot be definitely determined until it has completed the service tests it must undergo at Selfridge Field, Major Brower said that, from the performance the plane showed on its trip from Seattle, he had nothing but praise for it. The trip from Seattle was made at an average ground speed of 187 miles per hour, although the engine was run at less than rated cruising speed during the first part of the trip, and head winds were encountered on many of the legs of the route. The engine is a Wright SR-1340-G, with a 14 to 1 blower ratio. "It is believed," says the News Letter Correspondent, "that the maximum efficiency will be obtained at 12,000 feet." In tests at Selfridge Field, a speed well above 200 miles per hour (true air speed) was obtained at 8,000 feet. This was the first of many tests which will be made.

The plane itself is of low wing metal monocoque construction. An interesting and unusual feature is that changes in longitudinal balance are obtained not through a movable stabilizer but by means of a movable section (controlled from the cockpit) on the elevators. The section on the elevators is hinged and changes the mean camber of the elevators when it is moved.

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BIG AERIAL WING REVIEW AT LUKE FIELD, T.H.

The first aerial review of the 18th Composite Wing to be held at Luke Field, T.H., was successfully carried out on April 29th. The Bombardment and Observation units that make Luke Field their home station, were on the reviewing line promptly at 7:30 a.m. The Pursuit and Attack Squadrons from Wheeler Field droppe down out of the sky shortly afterward, landing in three-plane "V's" with machine-like precision, and taxying to the end of the long line.

A total of 12 Keystone Bombers, 12 Thomas-Morse Observation planes, 12 Curtiss Attack planes and 30 Boeing Pursuit planes constituted the array. The eleventh Pursuit plane to taxi into place put the line past the half mile mark. Over a half mile of fighting planes, with only three feet between their wing tips! The Wing Commander and his staff inspected the planes and crews, and at th signal of "attention," given by bugle from the control tower, the motors of these planes roared into life.

A white flag waved a signal from the control tower, and the Bombers moved ou to the take-off area. Observation, Attack and Pursuit planes followed in the order named. Throttles were opened wide and the planes fairly leaped off the groun in an effort to avoid the ever-growing cloud of dust. After forming into their proper position, the entire Wing passed in review, a scant 50 feet off the ground with 200 feet between elements, flying in perfect formation at 110 miles per hour They circled wide and repeated the maneuver.

Precise and careful flying was needed to avoid any possibility of accident, with 62 planes maneuvering in a limited area and landing and taking off in less than half a square mile. The Wing formation banked in to land and the fun began. The Bombers came first and cleared the field quickly, followed by the Observation Squadrons. Their cushioned landing wheels raised little dust, and they had no difficulty. Scarcely had they taxied to the hangar line, when the Attack landed, sharp tail skids biting deep into the soft earth at a 60-mile per hour clip. A cloud of dust all but obscured the landing area and into this the Pursuit mushed in three-plane "V's." Air Corps officers who have been stationed at Luke Field can appreciate the technique required to land a Wing of 72 planes on an area as small as Luke Field with clocklike precision.

A critique was held by the Wing Commander and, shortly afterward, the Wheele Field planes took off for their home station.

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The Engineering Department of the San Antonio Air Depot, Duncan Field, Texas overhauled and repaired airplanes and engines during the month of April, as follows:

Overhauled, Airplanes - 2 A-3, 5 A-3B, 4 O-2H, 1 O-19B, 5 O-19C, 1 P-1C, 9 Bt-2B, 4 PT-3, 6 PT-3A, 1 C-7, 1 F-1, total 39; Engines - 18 V-1150, 15 R-790, 15 R-1340, 5 R-1750, 4 R-1690, 1 R-1820, 6 R-975, total 65.

Repaired, Airplanes - 1 B-4A, 1 B-5A, 2 LB-7, 1 O-2J, 3 O-19B, 3 O-38B, 1 P-1C, 1 P-1E, 1 PT-3, 1 YPT-10C, 1 C-9, 2 C-14, 1 YIC-24, total 19; Engines - 14 V-1650, 2 R-790, 3 R-975, 4 R-1340, 3 V-1150, 2 R-1690, total 28.

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FIRST SOLO BLIND FLIGHT A SUCCESS

By Lieut. Joseph S. Edgerton, Air Reserve.

ANOTHER milestone in aviation progress was reached a few days ago when Capt. Albert F. Hegenberger, Army Air Corps, made the first "blind" solo flight, seeing nothing but the instruments before him from take-off to landing. If the elements which made Hegenberger's achievement possible can be applied to air transport operations, one of the greatest foes of aviation will have been whipped.

Dense ground fog on an air transport today brings all flying to a halt. As long as the fog holds no mail or passengers move by air. The only solution is artificial fog dispersion or "blind landings" through the fog. Fog dispersion so far is impracticable, if not impossible. Blind landings, apparently, form the practicable solution.

Until Captain Hegenberger's solo flight, no man had landed "blind" and alone. though "Jimmy" Doolittle three years ago landed blind with a check pilot aboard to take over duplicate controls in case Doolittle's skill failed or his calculations went awry.

Hegenberger used radio to guide him into the field, to mark for him the point at which to begin his glide and to warn him when he neared the field boundary. He employed a super-sensitive altimeter to indicate his altitude above the landing area. Other flight instruments were normal, including artificial horizon, gyro compass, radio compass and standard flight instruments. The flight was made at Dayton, Ohio, home of the Air Corps Materiel Division, where Captain Hegenberger is stationed as navigation officer.

Modest to a fault, quiet and unassuming, Captain Hegenberger is a brilliant figure in aviation, though seldom in the limelight. He first came to public fame when he flew from California to Hawaii with Lieut. Lester Maitland, the first Pacific flight. He is regarded as one of the world's three foremost aerial navigators.

So retiring is Hegenberger that the world remained for many days in the dark as to his achievement. Captain Hegenberger was on the high seas, enroute to Rome to attend the first international meeting of ocean flyers when the story of his success was given to the world by F. Trubee Davison, Assistant Secretary of War for Aeronautics, who learned of the flight from Hegenberger's official report.

Of the crucial moment when Captain Hegenber, alone in his swiftly moving plane, felt his way toward the surface of the earth which he could not see, he has little to say in his report. It is difficult for the layman to put himself in Hegenberger's position during that moment. To get something of the idea, imagine yourself driving an automobile. The windows are all curtained so that you can get no glimpse of anything outside the car, no sky, no road - nothing but the blank curtains and the instruments. You have a radio direction finder, with a little arrow showing when you deviate to the right or left of a given course. You are driving at 50 miles an hour across an open field. At the far side of the field is a great yawning chasm of appropriate depth - say something like the Grand Canyon. There is but one avenue of safety, a very narrow bridge. If you miss the bridge, curtains. A radio beacon is guiding you to the bridge and your only indication is the little pointer. You may not slacken speed but you must hit the bridge precisely.

Your problem, however, would be much simpler than Hegenberger's. Gravity would hold you on the ground and you wouldn't have to worry about that. You would have to worry only about whether you were too far to the left or right. Hegenberger had to worry, not only about whether he was to right or left of the runway, but also whether he was too high or too low and whether he was actually over the landing field or over some other place or terrain not at all suitable for the landing of airplanes.

It must have been with a feeling of exquisite relief that he felt the wheels touch the ground and the plane roll to a stop safely. Of this feature of the experiment, however, Capt. Hegenberger has only this to say: "The radio transmitters mark the fieldboundary and all you have to do is just fly along the ground, take things very gently and easily, and when you feel it hit - well, just ease back on the stick."

A magnificent flight, and one worthy of a large and imposing monument on the green fields of aeronautical progress. - Washington STAR.

Ed. Note:

According to the announcement of Mr. Davison regarding this first solo Blind Flight, Captain Hegenberger took off and, after flying for five minutes, landed solely by the aid of the instruments on the panel in front of him without once seeing outside of the cockpit. This successful flight was the seventh in a series of nine attempts. During the first three flights, observers were carried in the plane who knew nothing of flying. On the seventh flight, Capt. Hegenberger took off alone, made two 180-degree turns and landed at the take-off point. He was guided during this flight by the various instruments already enumerated. On the ground were three radio sets, two of which were of obsolescent type. The cockpit occupied by Captain Hegenberger had a shielded cover which cut off all view outside the plane. He first tuned in on a transmitter distant from the field to simulate cross-country flying. After executing the first 180-degree

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turn, he tuned in first on a portable transmitter placed 1,000 feet from the border of the field and then on another a mile and a half away. Although flying away from the field, he was able by lining up the two radio transmitters to ascertain the correct flight path on which to return for his landing. Executing his second 180-degree turn at a height of 1,000 feet, he began gliding down as he headed for the mile-and-a-half station.

Captain Hegenberger explained that for regular blind landings certain refinements of equipment will be needed. He expressed the desire to start a graduate class of Air Corps officers for training in blind flight take-offs and landings. This Army pilot of Hawaiian Flight fame is now on duty as navigation officer at the Materiel Division, Wright Field, Dayton, Ohio. His blind flying experiments are a continuation of those carried on under the Daniel Guggenheim Fund for the Promotion of Aeronautics by former Lieut. James H. Doolittle, now a Major in the Air Corps Reserve, and as brilliant a figure in commercial aviation as he was while actively connected with the Air Corps. On September 24, 1929, Major Doolittle first demonstrated to the world the possibility of landing an airplane by instruments alone. He carried a check pilot to take over the controls in case of emergency.

It may be stated that Captain Hegenberger is a pioneer in blind flying, for nearly nine years ago, on September 6, 1923, he flew the greater part of the journey from Dayton to Boston completely out of sight of land. Of course, there were no hooded cockpits in those days but, so far as vision of the ground was concerned, Captain Hegenberger and his passenger, Mr. Bradley Jones, Navigation Engineer at McCook Field, were not much better off than the present day airman piloting a covered wagon, aerial type.

Despite unfavorable weather conditions, they took off from McCook Field in a DeH at ten o'clock and landed at the Boston Airport 7 hours and 25 minutes later. The sky was obscured by clouds which stretched from 300 to 7,000 feet altitude. After sighting the Ohio State University at Columbus, the clouds became so dense that the fliers climbed above them and found themselves in clear sunlight a little above 10,000 feet. A solid layer of clouds stretched beneath them. Not a glimpse of a land mark was obtained for a number of hours. The entire State of Pennsylvania was passed over without their obtaining a glimpse of it. Flying by instruments alone, Captain Hegenberger, at about 3:40 p.m., estimated that he should be close to the Hudson River, so he descended through the clouds and crossed this body of water not five minutes later. The remainder of the journey to Boston was made under the clouds. The successful termination of this flight demonstrated the efficiency of air navigation instruments even in those early days of Army aviation.

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NEW WRECKING TRUCK FOR SELFRIDGE FIELD

Selfridge Field, after years of more or less patient waiting, has a new wrecking truck. The formidable giant arrived amid cheers and had only three days of rest before it was given its first test. On May 11th, a P-16, bound for the gunnery camp at Oscoda, Mich., was forced down and partially wrecked in a soft field about 150 miles north of Selfridge Field. The truck took off immediately to bring back the remains. On the trip, operators discovered that it is satisfactory in every way, that it is strong, fast, powerful, and that it can traverse over practically any kind of road. Its length is its only handicap, requiring maneuvering on very sharp turns. The truck is powered with a 164 h.p. Hercules motor, has a six-wheel drive, and its transmission has eight forward speeds and two reverse. No one in the 57th Service Squadron has attempted to determine its top speed, but it will make fifty miles an hour comfortably.

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The Aviation Lighting Committee of the Society of Illuminating Engineers convened at Wright Field during April for a session of several days. About 20 engineers, representatives of electrical and lighting equipment companies, Navy, Bureau of Standards, and the Department of Commerce attended. General Pratt, Major Coleman, Captain D.L. Bruner, Lieut. C.D. McAllister, and W.T. Harding, civilian engineer of the Electrical Unit, Materiel Division, were in charge of the meetings. The meetings included a thorough study of the experiments being performed at the Wright Field Laboratory, a visit to Patterson Field and a program of night flying performed by Capt. St. Clair Streett and Lieut. McAllister.

Lieut. William D. Eckert, 36th Pursuit Squadron, Selfridge Field, Mich., experienced a totally unexpected ending to a flight which he had begun for the purpose of practice in individual combat at that station a few days ago. While busily engaged in realistic appearing combat with Lieut. Mark E. Bradley, at an altitude of 4,000 feet, in two of the new two-seater Berliner-Joyce Pursuit ships Lieut. Eckert's engine suddenly appeared to disintegrate with a violent shudder. He hastily cut his switches and, after selecting a field, he made a perfect three point landing with a dead stick. It took only a second's inspection to see what had happened. A connecting rod had come loose and drove its way through the side of the crankcase, tearing a hole through which a man could put his fist.

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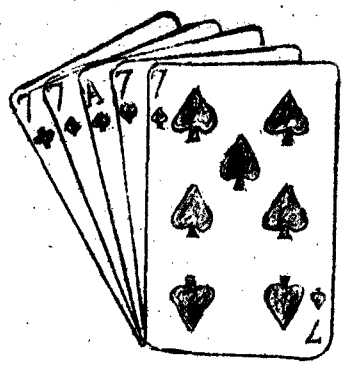
INSIDE STORY OF THE 77TH PURSUIT SQUADRON INSIGNIA



"The original 77th Pursuit Squadron insignia consisted of two pair of sevens separated by a joker," says the News Letter Correspondent from Mather Field, Calif., and he then adds: "At a discussion between the Squadron Commander and his painters, one of the men asked: 'Sir, what does the joker stand for - is that you?' The officer looked stunned for a moment, turned red, and then roared: 'Take out that d----- joker and make it an Ace!' And so a new Von Richtofen was created - by the stroke of a paint brush. I reckon the brush is as powerful as the Spad - and a lot safer."

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PURSUIT PLANES TRANSFERRED TO LANGLEY FIELD

Eighteen P-12C Pursuit planes took off from Selfridge Field, Mt. Clemens, Mich., bound for Langley Field, Va., where they will be used in equipping a newly organized Pursuit Squadron. The flight was under the command of Captain Ennis C. Whitehead, who personally led a formation of six planes. The two other flights of six planes each were led by Captain Johnson and Lieut. Wolf.

Unfortunately, the general weather conditions along the route taken by the planes was very poor. It was expected to reach Langley Field in one day, with a brief stop for gas at Uniontown, Pa. Only six planes, however, managed to reach Uniontown on Tuesday, May 10th. The other twelve were forced by the rain and fog to split their formation and land at Pittsburgh, Pa., and Moundsville, West Va., respectively. The next day all 18 ships assembled at Uniontown and serviced preparatory to departing for Langley Field. However, very rainy and misty weather, the severity and duration of which astonished even the natives, forced the Pursuiters to remain at Uniontown that day and also the next. Finally, on May 13th, the ceiling over the mountains was declared to have lifted, though rain and mist still prevailed at Uniontown. The ships took off and, after getting through the local bad weather, found good flying conditions over the mountain country. All 18 ships would have reached Langley Field were it not for engine trouble with two of the planes. Lieut. Todd's motor quit just across the ridge from Uniontown, and Lieut. Hersam's quit about twenty miles from Washington. Both planes were slightly damaged in landing, but neither pilot was hurt.

The remaining 16 planes reached Langley Field in good time, and the pilots were greeted by their friends stationed there. After a few hours' stay, Capt. Whitehead gathered his coterie of pilots together and all, except Lieut. Wolf, embarked on the boat at Hampton Roads and started the long boat and train trip back to Selfridge Field. Lieut. Wolf went on leave status at Langley and proceeded to New York for a few days' stay. Lieuts. Hersam and Todd remained temporarily with their disabled ships and, after arrangements for their disposition had been made, returned to Selfridge Field.

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BOAT TO PLANE RADIO CONVERSATION BETWEEN FATHER AND SON

Not every father is able to talk from the deck of a ship to his son flying above him in a Bombardment airplane, but that is just what happened in Hawaii recently. Mr. A.D. Pugh, Attorney, and Special Correspondent for the REGISTER, Des Moines, Iowa, hove around Diamond Head on the SS MALOLO bright and early one morning recently, and was eating his breakfast grapefruit as usual, when he was notified that his son, Lieut. Lawrence T. Pugh, of the 23rd Bombardment Squadron, Luke Field, would like to speak with him by radio. Imagine his astonishment, on picking up a receiver of the radiophone, to hear his son say: "Hello, dad, here I am overhead." The following week, Lieut. Pugh took his father in a Sikorsky airplane around the Hawaiian Islands to gather material for an article for the National Aeronautic Association on flying conditions and airports in the Territory of Hawaii. Mr. Pugh was much pleased with this flight and other short flights he took in the vicinity of Oahu with his son and, says the News Letter Correspondent, "we believe he left here with a feeling of regret that his flying days had temporarily come to an end."

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WAR DEPARTMENT ORDERS AFFECTING AIR CORPS OFFICERS

Changes of Station:- To Mitchel Field, N.Y.: 1st Lieut. James T.Cumberpatch, from University of California, Berkeley; Capt. Edward W. Raley, upon completion of course of instruction at Air Corps Tactical School, Maxwell Field, Ala..

To Langley Field, Va.: Major Maxwell Kirby from Hawaiian Department; Major Leo G. Heffernan from Panama Canal Zone; Capt. Arthur J. Melanson, from duty as Procurement Planning Representative, Chicago, Ill.

To Chanute Field, Ill.: 1st Lieut. John L. Davidson from Wright Field, Ohio.

To Panama Canal Zone: 1st Lieut. James K. DeArmond, upon completion of course of instruction at Air Corps Tactical School; Major Robert Candee from duty with Staff and Faculty of Air Corps Tactical School, Maxwell Field.

To Bolling Field, D.C.: 2nd Lieuts. Norris B. Harbold from Selfridge Field; Elwood R. Quesada from duty as Asst. Military Attache, Havana Cuba; 1st Lieut. Glenn C. Jamison from Langley Field, Va.

To the Philippines: 2nd Lieut. James A. Ronin from March Field, Calif.; 2nd Lieut. August W. Kissner, upon completion of duty as student at Air Corps Technical School, Chanute Field, Ill.; Capt. Harold R. Rivers from Chanute Field.

To Rockwell Field, Calif.: 1st Lieut. Morton H. McKinnon, upon completion course of instruction at Air Corps Tactical School.

To Crissy Field, Calif.: 1st Lieut. George H. Brown from duty with Organized Reserves, 6th Corps Area, Chicago, Ill.

To March Field, Calif.: Capt. Edwin R. Page from Wright Field, O.

To Selfridge Field, Mich.: Capt. Fred C. Nelson from the Philippines.

To Fort Benning, Ga.: 2nd Lieut. Marion Huggins from the Philippines.

To Mitchel Field, N.Y.: Captain Leo F. Post from March Field, Calif.

To Chanute Field, Ill.: Capt. Earle G. Harper from March Field, Calif.

To Hawaiian Department: Major Vincent B. Dixon from Fort Leavenworth, Kans.

To Office of the Chief of the Air Corps: Capt. Max F. Schneider from Middletown, Pa. Air Depot.

Relieved from Detail to the Air Corps: 2nd Lieuts. Peter O. Ward and George E. Fletcher to Infantry, 2nd Division, Fort Sam Houston, Texas; Richard S.Carter to Field Artillery, 2nd Division, Fort Sam Houston, Texas; Gaspare F. Blunda to 6th Coast Artillery, Fort Winfield Scott, Calif.; 1st Lieut. Fremont S. Tandy to 1st Engineers, Fort DuPont, Del.

Promotions: To Captain, rank from April 1, 1932: 1st Lieuts. Oakley G. Kelly Bernard T. Castor, James A. Mollison, Harold W. Beaton; to 1st Lieutenant, rank from April 1, 1932: 2nd Lieuts. Charles H. Deerwester, Charles W. O'Connor, Bernard A. Bridget and Charles A. Bassett.

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BOARD ON PURSUIT PLANES HAVE MEETING

Major G.E. Brower, Capt. E.C. Whitehead and Lieut. J.S. Griffith recently flew from Selfridge Field, Mich., to Wright Field, Ohio, to take part in meetings of the Pursuit Board. They were scheduled to remain at Wright Field for about ten days, during which time they, together with the other members of the Board, will make recommendations on the technical and tactical efficiency and usefulness of new Pursuit material which is being considered for adoption at the present time. Other members of the Air Corps taking part in the tests and conferences are Major Carl Spatz and Capt. F. O'D. Hunter, March Field, Calif.; Capt. J.G. Taylor, Lieuts. A.R. Crawford, J.E. Parker and J.A. Woodruff, Wright Field; Capt. C.L. Chennault, Maxwell Field, Ala., and Capt. Hugh M. Elmendorf, Office of the Chief of the Air Corps.

Two Pursuit planes under consideration by the Board as to their desirability for Air Corps use are the XP-23 and the XP-936.

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Major George H. Brett, Commanding Officer of Selfridge Field, Mich., was the guest of the Pontiac, Mich., Rotary Club recently at a luncheon of that organization. The gathering included 75 of the leading business men of Pontiac and vicinity. They were all greatly interested in what Major Brett had to say on the subject of aviation in the short talk he gave at the request of the toastmaster. Their interest was revealed by the large number of questions on the subject of military aviation which the Rotarians asked Major Brett to answer when he had finished his prepared speech.

At Wright Field a design for engine dollies was completed in which the dollies are mounted on wheels with pneumatic tires for loading engines in the side of the fuselage of cargo airplanes. These dollies were designed to support radial type engines. It is contemplated building one of these dollies for experimental testing.

NOTES FROM AIR CORPS FIELDS

Brooks Field, San Antonio, Texas, May 1st.

A moving picture theatre replete with all up-to-date details, including apparatus for talking pictures, is now in progress of construction at Brooks Field. Hangar No. 7 of the Field is being utilized, for which money has been appropriated and preparations already begun. Upon its completion, this theatre will be one of the best, and will offer current pictures at prices in reach of all the personnel.

Funds have been received and plans made for the conversion of the School of Aviation Medicine building into a Post Infirmary, and work on this building has already been started. Both projects will be completed before June 30th.

Captain Wm. S. Gravely, Operations Officer, was a member of the Board of Officers convened at Wright Field, Dayton, Ohio, for the purpose of testing the O-31 and YO-40 type aircraft.

Second Lieut. William C. Sams, Jr., was relieved as Adjutant of Brooks Field and transferred to the 88th Observation Squadron. First Lieut. Winfield S. Hamlin, Commanding Officer of the 88th, was relieved from that duty to succeed Lieut. Sams as Adjutant. Captain C.E. Giffin is now commanding this Squadron.

Second Lieut. J. Will Campbell, Air Reserve, of San Antonio, Texas, was ordered to active duty at Brooks Field for a period of 2½ months. Formerly with the 88th Observation Squadron while stationed at Fort Sill, Okla., Lieut. Campbell was reassigned to this Squadron for duty.

Brooks Field was "host" to the Goodyear Tire & Rubber Co. dirigible on an advertising flight through the Southwest. Before the trip was completed, however, the giant balloon ship was forced to return to its home station for repairs, after which it will return to Texas. Arrangements were made with the Commanding Officer of Brooks Field to house the dirigible on its return trip.

Second Lieut. Henry Fisher, Air Reserve, reported for duty and was assigned to the 58th Service Squadron for the three months' period of his active duty. He is the son of Col. Fisher, Commanding Officer of the San Antonio Air Depot, Duncan Field, Texas.

Captain C.H. Welsh assumed command of the 58th Service Squadron, April 4th, replacing 1st Lieut. O.L. Rogers, who was transferred to Columbus, Ohio, for duty with the Organized Reserves.

Capt. L.R. Knight, Commanding the 62nd Service Squadron received orders for transfer to the Massachusetts Institute of Technology, Cambridge, Mass., as Professor of Military Science and Tactics. It is not known at this time who will replace Captain Knight at this station.

Master Sergeant Chester F. Colby, Enlisted Pilot, 88th Observation Squadron, received orders to sail for the Hawaiian Islands for a two-year tour of duty. He will leave on Government Transport PRESIDENT GRANT from San Francisco on or about June 7th. Sergeant Colby is a veteran among Army pilots, having flown over 4,000 hours since starting flying training at Carlstrom Field, Arcadia, Fla. Master Sergeant Kristjan Bredvadt will replace Sergeant Colby at this station.

Staff Sgt. L.E. Bullington, 88th Obs. Squadron, will also sail for Hawaii on the PRESIDENT GRANT.

Clark Field, Pampanga, P.I., April 9th.

Three of our single-seaters made another trip to Baguio and landed on the new field. Owing to the fact that the field is rather small and located in a low spot among the hills, only P-12's from the 3rd Pursuit Squadron have ventured there so far.

One day of the month was devoted to Army-Navy Maneuvers in which the whole

group turned out and cooperated with the Navy in day and night missions against the defenses of Corregidor. Three of our P-12's were employed in laying day and night smoke screens to cover the passage of Navy ships through the channel.

Our old C-1C Transport, after laboring in and out of various and sundry fields throughout the Philippines for many years, is now about to be ferried to the junk heap. Some of our pilots who have had the old crate fold up under them at unexpected moments, and for no good reason at all, herald this piece of news with much glee.

Lieut. Murphy became famous all of a sudden last month when he accompanied "another" sportsman on a hunting expedition which resulted in the execution of an "alleged" wild caribou. We were surprised at Murph, having believed that all such honors fell to the lot of "Two Gun" Hitchings, the Nichols Field elephant hunter.

Captains Hornsby and Ellis, Lieuts. Hardy, Gregg and Murphy are all planning D.S. at Baguio, trips to China, etc., prior to leaving on the June boat for the States.

Clark Field is proud of its members who have apparently sewed up most of the golf tournaments on the main post. Mrs. Hardy won the Ladies' Tournament. Captain Hornsby won the Lee Handicap Tournament, and Lieut. Hardy finished by bringing home the bacon in the Annual Open Championship.

Both bowling teams, officers and enlisted men, have started practice and will probably give a good account of themselves during the next rainy season when the bowling tournaments start. Our Air Corps Officers' team took first place last year in the Medical Corps-Cavalry-Artillery-Air Corps Tournament. Lt. Hawkins now holds high single record game with a 267; Private Laman, high triple with 687.

Lieut. Harper, our Adjutant, in addition to his other duties, holds the position of Entertainment Director for the main post. Evidently this title covers a multitude of duties. Any time you want arrangements made for a tea, show, dance. baseball game, tennis match, horse race, airplane ride, polo game, Easter egg hunt, golf match or a Baluga dance, just call up Bob - he'll fix it.

Scott Field, Belleville, Ill.; April 27th.

Recent assignments to extended active duty at Scott Field for periods ending June 30th included four 2nd Lieutenants, Air Reserve, viz: Claris E. Johnson, Francis A. Wilgus, Harry L. Clark and Theodore G. Graff. All of these officers were assigned to duty with the 15th Observation Squadron.

Master Sergeant Henry G. Wilkes, 15th Obs. Sqdn., received orders for a tour of foreign service in Panama, sailing from New York June 10th. Sergeant Wilkes served with the 15th about two years, and prior to that time was with the 94th Squadron of the 1st Pursuit Group. His replacement is another former member of the 1st Pursuit Group - Master Sergeant Cody Dalton.

Richards Field, Kansas City, Mo., April 12th.

The 430th Pursuit Squadron, Reserve, has been taking on some of the aspects of its name this second week in April through the temporary acquisition of a P-1C. This loan was accomplished through the efforts of Captain William B. Wright, Jr., Commander, who is now busy qualifying men on this type. No less than 35 pilots will qualify in the next few weeks. Judging from the queer noises heard about the field in the last few days, the boys are having a delightful time in their initial trial of the new Pursuit.

Fort Sill, Oklahoma, April 28th.

Night adjustment of Field Artillery fire featured the cooperative work of Flight "E" during the past month. Six nights were devoted to this work and six successful adjustments were accomplished, using all available forms of communication. Transfers of fire based on these adjustments and checks by flank and forward observers proved the accuracy of these adjustments to be exceptionally high. The Flight participated in 16 problems and exercises of the Field Artillery School and flew 51 artillery adjustments during the month of April.

The first trip of the newly inaugurated air transport service with the San Antonio Air Depot was made to this station April 19th. Lieut. D.F. Fritch, flying a C-14A brought in 350 lbs. of freight and took out 300 lbs.

The following cross-country flights were made by pilots of this command: 1st Lieuts. Wm. L. Ritchie, pilot, and J.P. Kirkendall ferried an O-19B to Duncan Field April 3rd, returning an overhauled O-19C on April 5th; Lieut. Ritchie and 2nd Lt. Claire Stroh ferried an O-19B to Duncan Field, April 14th, returning two overhauled O-19C's here on the following day; Lieut. Stroh flew Major Stimson, Army Nurse Corps, to Little Rock, Ark., April 17th, returning same date; Captain Pritchard with Corp. Goins flew cross-country to Fort Leavenworth, via Kansas City, Mo., April 20th, returning on the 22nd.

Pilots and passengers visiting here on cross-country trips were: 2nd Lt. Wilson, Colo. Nat'l Guard, Denver; 1st Lt. D.W. Mayhew, Fort Crockett; Major Stimson, Army Nurse Corps; 1st Lts. H.S. Vandenberg, E.F. Glenn, L.C. Craigie, T.G. Keen, Major T.J. Hanley and Corp. Miller from Randolph Field, Texas.

Major R. F. Taylor, Squadron Commander, has returned from a corss country flight to Portland, Oregon, with Ollie Davis, State Adjutant of the American Legion. Hotel arrangements were made for the coming National Americal Legion convention.

On his trip he flew 6000 Miles, his total time being 52 hours and 25 minutes. He returned by the Southern route for better wether and flying conditions. On his trip he visited with many of our outfits olf friends including Captain Voss, former instructor of the 113th, Colonel A. J. Daugherty, formerly Chief of Staff, 84th Division, Organized Reserves, Indianapolis. Captain Vawter and Lieut Doak, former pilots in our squadron and now Department of Commerce Inspectors in California. We were glad to hear from these old friends and congratulate them on their success in their new positions. We hope they will return the Majors visit soon.

Captain Borum, Supply Officer, Chanute Field, and Captain Marriner flying a BT -2B, stopped at Stout Field for lunch today on their way to Wright Field.

Captain Stout and Sgt Inman, flew to St Louis, in an O-38, stopping at Scott Field, and Lambert Field.

The 1st Sgt J. Hudson Deardoff, will start a Non-commissioned officers school commencing May 16th, under the supervision of Master Sergeant J. C. Hansen, the class to cover all subjects in connection with such school.

The squadron now has a machine gun range for forward and rear gun practice, on a hill top about five miles from our field, where the pilots and observers hold gunnery practice very similar to camp training, each Sunday.

Pictures taken in camera gun practice are being shown on the screen during officers class each drill period, and study made of the results.

Captain Dudley A. Pfaff, Medical Officer, is now taking the flight surgeons course, having entered the class school of aviation medicine, Randolph Field, Texas, which commenced May 3rd. Captain J.H.Greist is filling the place of Captain Pfaff while the latter is away at school. We are glad to Have Captain Greist with us and hope his assignment with us will be a pleasant one.

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Kelly Field, San Antonio, Texas, May 11th.

A total of 15 P-12's were received within the last two months. Capt. C.C. Nutt and Lieuts. W.P. Morgan and Russell Keillor arrived with the last three from Rockwell Field on April 28th.

Lieut.-Col. H.B. Clagett, Commandant of the Advanced Flying School, is visiting in the East on 20 days' leave, at the expiration of which he will be placed on special duty in the Office of the Chief of the Air Corps for seven days. Major H.H.C. Richards, Asst. Commandant, has been in command during his absence. (Col. Clagett returned May 7th).

First Lieut. Edward M. Powers, from the Materiel Division, Wright Field, visited here on an inspection trip.

Pursuit students completed their night flying training April 27th with a cross-country trip from Waco to San Antonio.

Lieut. W.D. Old flew Lieut. A.F. Shea to Muskogee, Okla., April 21st. Lt. Shea was hurrying to Syracuse, New York, where his mother is seriously ill.

Enlisted personnel of the 41st School Squadron on furloughs are Master Sgt. Gervais Garner, 30 days; Pvts. Whittenberg and Underwood, 45 days and 90 days, respectively.

Private Kuykendall, 41st School Squadron, returned from Chanute Field after completing the course for Airplane Mechanics, while Pvt. Vining, same organization, proceeded to Chanute Field to take the same course.

Staff Sgt. Pittman was recently transferred to the 41st School Squadron from the 72nd Bombardment Squadron, Luke Field, T.H.

Lieut. R.C. McDonald ferried an O-11 to Chanute Field where the plane is to be used for instructional purposes.

Colonel Art Goebel, chief test pilot for the Guiberson Diesel Engine Co. of Dallas, gave a demonstration of this engine at the field on May 10th. The demonstration was witnessed by all students and instructors.

Capt. H.K. Ramey and 1st Lt. Odas Moon applied for five days' leave for the purpose of fishing in Mexico with Lieut.-Col. Mills.

Master Sgt. Peter Biesiot piloted the Kelly Field XA-1 ambulance plane to Ft. Bliss, Texas, May 9th, to operate with the 1st Cavalry Division in maneuvers.

Major H.A. Straus, piloting an O-25, flew from Wright Field to this station with Lieut.-Col. Clagett as passenger.

Lieut. A.F. Shea left Kelly Field May 11th with the ambulance plane for Ft. Clark, Texas, to bring a patient to the Base Hospital at Fort Sam Houston.

Mr. and Mrs. George A. McHenry, of San Diego, Calif., are visiting their son, Lieut. George A. McHenry, Jr., at this field. They celebrated their 50th wedding anniversary with an airplane ride, the plane being piloted by their son.

Sgt. O'Sullivan, 40th School Squadron, is enjoying a 60-day furlough, and Staff Sgt. A. Kacziba is on 30 days furlough with his new outboard motor boat and fishing tackle.

Private Fay E. Frazier returned to the 40th School Squadron after completing the Air Mechanics' course at Chanute Field.

Corporal Johnny Johnson, 40th School Squadron, departed for New York in his new DeSoto 8 to enjoy a 60-day reenlistment furlough.

Staff Sgt. Coke left the 41st School Squadron for Hawaii on May 3rd.

Private J. Lollaus recently transferred to the 40th School Squadron from the Quartermaster Corps at Randolph Field.

Staff Sgts. Stapp and Gard are absent from the 41st School Squadron on furloughs.

France Field, Panama Canal Zone, May 2nd.

The past month was one of great social activity on the post, what with visitors from the States, new arrivals and short timers all coming in for their share of the limelight. On the 15th, the Officers' Club gave a supper dance at the Carleton Hotel in honor of Major Heffernan, until recently the commanding officer, who left for the States the next day. The following week saw two tea dances at the same place, one given by Major and Mrs. Brereton and the other by Capt. and Mrs. Knapp and Capt. and Mrs. Ott. Numerous dinners were given the departing families, those on Thursday evening usually winding up at the Strangers Club, and on Saturdays at the Carleton.

France Field gained a file or, to be more precise, three, when Capt. Shiras A. Blair from March Field arrived on the REPUBLIC. He will take over the duties vacated by Captain Trunk, who sailed for the States.

On April 27th, the 6th Group effected a rendezvous with all available aircraft at Rio Hato, where the France Field Officers' Club entertained with a stag lunch in honor of members of the 44th Squadron leaving for Albrook Field. Mr. Kierulf, owner of the hotel at Rio Hato, cleared a field about a quarter of a mile from the hotel, which made landing there most convenient and enabled all pilots to utilize it. Forty-seven officers attended the luncheon, while 30 of the men of the 25th Bombardment Squadron ate a picnic lunch provided by the squadron mess. Baseball, swimming, fishing and cards occupied most of the time before lunch. The lunch turned out to be a large sized turkey dinner which so engrossed every one that there were no speeches.

At the regular morning review on April 25th, three men of the command received medals which were won during the annual Departmental pistol matches in February, and they reviewed the troops with the Commanding Officer. Corporal Brodner, 7th Observation Squadron, received a silver medal for second place; Staff Sgt. Brinkman, 63rd Service Squadron, a silver medal for third place, and Pvt. Sefcovic, 25th Bombardment Squadron, a bronze medal for last place. Only six medals were given out in the whole Panama Department, and the fact that half of them came home to France Field is not so bad for the Air Corps.

Patterson Field, Fairfield, Ohio, May 2 - 17th.

The Wilbur Wright Officers' Club was recently beautified by the construction of a new cement sun porch along the south and west side of the Club, directly facing the golf course. This porch is protected from the sun and rain by a row of striped awnings. Porch furniture of the same color scheme as the awnings was constructed by the Quartermaster.

Lieut. Kenneth S. Stice, Signal Corps, received orders transferring him to Washington for temporary duty of about a month in connection with plans for coordinating meteorological activities and communications relating to aircraft in the 5th Corps Area.

The "Hick and Hayseed" Party given by the Wilbur Wright Welfare Association in the Post Gymnasium on the evening of April 21st was well attended. About 600 guests were present and an enjoyable evening was spent in cards and dancing. There were also games for the children and two special acts staged by employees of the Field. The Annual Picnic is next on the program by the Association.

Major Malcolm C. Grow, Medical Corps, received orders transferring him to Washington for a period of six weeks in order to undergo a course of instruction.

Major A.L. Sneed made an official visit to Washington on April 20th for conference with the Chief of the Air Corps.

Captain R.C. Bower was assigned to duty at Lunken Airport as Constructing Quartermaster, in addition to his duties at this field.

Thirty-nine students from Purdue University visited this station on April 30th on an inspection tour.

The Hon. Patrick J. Hurley, Secretary of War, was an overnight visitor as guest of General Pratt.

The second informal party of the Wilbur Wright Officers' Club was held on th evening of April 23rd. There was dancing, cards and other games. Movies were shown, including those taken at General and Mrs. Pratt's Easter Party.

Arrangements were completed for the visit here on May 18th of the Tactical School staff and student body - a total of 53 officers.

Captain R.C.W. Blessley, leading a flight of 17 officers in Pursuit planes, landed here May 3rd on a cross-country training flight from Selfridge Field.

Cross-country flights by officers at this station were made as follows: Lt. G.V. McPike to Chanute Field, April 22nd; to Scott and Richards Field, April 26; to Scott Field, May 5th - Capt. B.F. Lewis to Scott Field, April 20th; to Selfridge Field, May 14th - Lieut. F.M. Zeigler to Columbia, S.C., April 22nd; to Chanute and Scott Fields on May 6th - Lieut. D.R. Goodrich and Major Malcolm C. Grow to Schoen Field, April 27th; Lieut. Goodrich to Cleveland Airport, May 9th; to Selfridge Field, Mich., May 10th; to Lunken Airport with Major Grow, May 4th - Lieut. Asp to Scott and Richards Fields, May 3rd - Lieut. McPike to Bolling Field May 2nd.

The following officers ferried airplanes to this station for Major overhaul: Captains Moffat from Wright Field; Peck, Maxwell Field; Lieuts. Kyle from Fort Leavenworth; Miles, Maxwell Field; McCoy, Maxwell Field; Mustoe, Powers, Stewart from Chanute Field; Skanse, Pope Field; Talbott, Selfridge Field; Dolan, Marshall Field.

Mr. T.H. Albery, Aeronautics Inspector for the Department of Commerce, lande here on a flight from Detroit to Cincinnati.

The building program at this station has progressed far enough for the contractors to start pouring concrete for the foundations.

Majors A.L. Sneed and R.E.M. Goolrick attended the meeting of the American Legion at the School Auditorium at Osborn on April 25th.

Building No. 95 (Hangar #7) at this Depot was completely destroyed by fire at about 4:20 p.m. on May 4th, the cause of which is unknown. This hangar was erected in 1917 and for the past ten years was used for dismantling ships preparatory to overhaul. Nine airplane fuselages, 5 sets of wings and approximately all the spares for the nine ships and one Wright air-cooled motor, located in this hangar at the time, were completely destroyed. The approximate value of the property stored in this hangar is as follows: Air Corps property, $104,000; Quartermaster property, $550; Signal Corps, $65.

Cross-country visitors to this station during the past month were: From Selfridge Field, Lieuts. French; Smith; Wolf; Wright; McCormick; Dunn; Meehan; Myers; Sutherland; Giovannoli; Garrison; Capt. Whitehead; Major Brett; Capt. Whitehead, leading a flight of 12 P-16's and one Y-1C - from Randolph Field, Lieuts. Wimsett, Butler, Henderson, Hanson and Capt. Williams - From Chanute Field, Captain Skemp, Lieuts. Doubleday, Laughinghouse and Anderson - From Schoen Field, Lieuts. Smith, Noble, Smith with Lieut. Nicholson (passenger) -

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From Bowman Field, Capt. Woody with Lieut. Welsh, Lieut. Russ with Lieut. Moran, Lieut Welsh, Lieut. Keim with Capt. Bennett - From Lunken Airport, Captain Colgan, two trips, Lieut. Wining, Lieut. Hoffman - From Columbus, O., Major Price, Lieuts. McConnel and Juergensmeier, Capt. Melvin with Capt. Smith, Capt. Cotner with Lieut. Mitchel, Lieut. McConnell - from Mitchel Field, Lieut. Gross, Lieut. Williamson, transporting 9 students to the Technical School at Chanute Field - From Stout Field, Lieut. Carpenter - From Chicago, Capt. Mann with Lt. Newhall - from Maxwell Field, Major Gilkeson - from Bolling Field, Lieuts. White and Goodrich - From Detroit, Lieut. Nicol - from Cleveland Airport, Lieut. Gill - From Sky Harbor, Lieut. Catron - From Chanute Field, Lieuts. Spry and Baston.

Lieut. Williamson ferried an A-3B to Fort Crockett, May 3rd; Major A.L. Sneed, an O-19C, and Capt. H.W. Flickinger an O-19C to Scott Field, May 5th.

San Antonio Air Depot, Duncan Field, Texas, May 14th.

Athletics and sports in general have always been ably represented at Duncan Field, and the coming of Spring has seen renewed vigor along these lines. A Gun Club for trap shooting was organized, and practice is carried on at the traps installed in the old gravel pit in the lower part of the field. Many officers and civilians are displaying their skill - or acquiring the same - in this activity. The shooting on Saturday, April 16th, was honored by the presence of Mrs. Adolph Toepperwein, of San Antonio, the better half of that internationally famous pair of astounding sharpshooters, and other professionals of San Antonio, who assisted in coaching the participants, donating their services, which are gratefully acknowledged. We are right up with the times in this branch, too, having installed one of the new skeet outfits which are being taken up so enthusiastically all over the country, and which offer actual conditions of field hunting on the practice range and thus afford much better practice than clay pigeons.

Bowling has always claimed a large following among the personnel of this Depot; in fact, we have four teams in the Federal Bowling League, which is composed of teams from various government activities in and around San Antonio. The lead is now being held by the Post Office Team, followed closely by the Duncan Field Mechanics. It would be invidious to mention any one player above any other of this station, but E.J. Briggs, Frank Fields and Rudolph Tesnareski, of the Engineering Department, and Charles H. Leipart and Frank LaPenta (Secretary of the League) of the Q.M. and Utilities Departments, may be mentioned as among those sharing the limelight.

Mr. Albert Jarvis, representative of the Wright Aeronautical Corporation, who is in this vicinity to look into Wright engine difficulties for his company, has been visiting the Depot from time to time in that connection since April 22d.

Lieut. Donald F. Fritch flew to Hatbox Field, Muskogee, Okla., and Hensley Field, Grand Prairie, Texas, and return, April 18th to 20th, in a transport, delivering Air Corps supplies to those stations and bringing a return cargo here.

Visiting Air Corps officers to attend the regular monthly conference on supply and engineering matters and luncheon following same, on May 3rd, were: Major Davenport Johnson, Commanding Officer, Captain S.J. Idzorek and Lieut. J.J. O'Connell of Fort Crockett, Texas; Capt. F.H. Pritchard, Fort Sill, Okla.; Lts. I.L. Proctor and H.A. Bartron, Randolph Field; Lts. R.G. Harris and J.A. Samford, Kelly Field, and Lts. I.W. Ott and J.P. Newberry of Brooks Field.

Major W.S. Woolford, M.C. and Capt. H.L. Clark, A.C., of Barksdale Field, Shreveport, La., were cross-country visitors here May 3rd-4th, flying down in an XO-14 plane and returning in an O-19.

Lieut. Wm. L. Boyd, Biggs Field, Fort Bliss, Texas, visited the Depot over the week end of May 7th and 8th, ferrying in a BT-2B for overhaul and securing another plane of that type to ferry back to Biggs Field.

While on a recent visit to Kelly Field, Capt. Samuel M. Connell, Chanute Field, dropped in at this station to pay his respects to some of his old friends.

Lieut. A.W. Martenstein, Field Service Section, Materiel Division, Wright Field, was a visitor here April 15th to 21st, for conference with officers of the Depot regarding a model complement of personnel for an Air Depot.

Lieut. Edward M. Powers, accompanied by Mr. R.L. Shumaker, Mechanical Engineer of the Materiel Division, arrived here on a cross-country trip April 23rd, and have been conferring with the engineering officers here and at other Air Corps activities in this vicinity, also at Fort Crockett, Texas, regarding magneto failures. Lieut. Powers was on duty at this Depot some years ago, and has been greeting old friends in this neighborhood.

Lieut. David J. Ellinger, from the Panama Canal Department, reported for duty here April 19th, after a leave of absence. He was assigned as Assistant Depot Supply Officer. Mrs. Ellinger is continuing her visit in the East and will arrive in about a month. Both are welcome additions to our official family circle.

Mather Field, Calif., May 10th.

The Group at Mather Field are beginning to think that the boys from March Field either do not like their home station or there is some great attraction up here for them. Twice during the past month they have paid us a visit. We are always glad to see them, but the problem of gassing 24 planes that think nothing

of consuming hundreds of gallons of fuel on one flight is something to remember. The enlisted personnel is to be congratulated on the way they coped with this problem.

It never rains but it pours. This saying proved true in the respect that Army Day followed immediately after our Annual Inspection. The citizens of adjoining cities and towns were thrilled by the sight of the 20th Pursuit Group flying in one formation and led by our Group Commander, Major C.L. Tinker. Open house was held for those who wished to come out and visit the field and look over the planes and equipment. Acrobatic flying was done for those who came out, and they seemed well satisfied with their visit. All were interested in our new ships, and they were all looked over very carefully. A detail of at least one man was stationed at each ship and interesting points to answer any questions that might be asked. The hangars and shops were also open, the Armament Sections and Aero Repair receiving the most attention.

About seventy officers attended a banquet at the Senator Hotel on the evening of March 24th following the invitation extended by the Sacramento Chamber of Commerce to all officers of Mather Field and visiting officers from March Field.

"Bless the early risers." So think the personnel of Mather Field every morning when they are awakened in the wee small hours of the morning by the drone of Curtiss Conquerors. Liquid-cooled motors usually sound sweet, but to be awakened repeatedly each morning by them makes them sound anything but that. Crissy Field is up here doing their ground gunnery and using our ranges. From early in the morning until late in the afternoon they fly. Just how much longer they shall be up here we do not know, but we are hoping for the best.

Rumors, rumors, rumors; that is the prevailing element going around this post at the present time. With the recent printing in the press of the War Department's plan to abandon Mather Field, bets and wagers are making their rounds as to where we all shall be sent. Whether it be the Islands, Langley, Barksdale or Panama, no one knows, but everyone had his pet idea. Some say we shall be moved immediately, while others say we shall be here for another year. Some maintain that the Group will be split up, while others deny it. The answer to it all is probably in the Chief's Office, and until it is made public those who like to start rumors have a great chance to do their stuff.

We who have spent a gunnery season at Honey Lake pride ourselves in calling the dry lake bed the best airport in the world. Until recently we all would have sworn that there was not a rock on the premises. It must have been Lieut. P.O. Rasmussen's inherent expert shooting ability, his love for accuracy and his ability to make spot landings that caused him to single out the only rock on the hundreds of square miles of dry lake bed and set his P-12E down on it. The only damage was a broken tail skid assembly, and the necessary replacement was taken to him by a brother officer.

Dances in the Post Gym have been held under the supervision of the enlisted personnel of this field with the utmost success. Two have been held during the past month and more have been planned. Over 250 couples attended the last one, and all had a thoroughly enjoyable time. Requests have come in from different sources as to having these dances become a regular affair. The fact that Mather Field may be abandoned in a short time makes this impossible. Sergeants Henneck, Williams, Galloway and Corporal Jorgensen were in charge, and they state that all expenses incurred were taken care of by the small admission fee charged. The men had worked for several days decorating the Gym, and on the night of the dance it looked like a real pavilion. The men are to be congratulated upon the great degree of success obtained in holding the affair.

<u>40th Division Aviation, Calif. National Guard, May 10th.</u>

This unit took part in a joint problem with the Naval Reserve Aviation and the Army Reserve Air Corps, both stationed at Long Beach, Calif., on April 17th. Orders called for a rendezvous of 18 planes by elements at a given time, altitude and place. The combined formation composed leading attack elements, bombardment and protective pursuit at three levels. Formation passed over initial point at a given time and altitude, then proceeded to its objective and carried out its mission. The formation then broke up, reforming in fifteen minutes over another point, passed in review, broke up, then landed by element at Griffith Park. A critique was held, after which lunch was served. Considerable newspaper publicity resulted in many hundreds of spectators viewing the maneuvers. The 40th Division Aviation has had many joint problems with the Army Reserve, but this was the first time the Naval Reserve participated. All combatants were very enthusiastic over the results from a training standpoint, and more of these operations are planned for the future by the three components.

Other planes of the 115th Observation, National Guard, participated in gunnery, front and rear guns, at tow target, and in a radio mission with our ground station and one of the 160th Infantry in the field.

Sunday, May 1st, the usual drill program was carried out, with operations covering gunnery at tow target, two artillery adjustment missions, and a radio mission. Reginald Denny spent the morning with us and was entertained at lunch. Reg talks the language, having been a pilot with the RAF in England during the War, and was interested in the new equipment for observation work now used by the Air Corps.

We all mourn the passing of our faithful BT-1, which is going to an Eastern Squadron.

On Monday night, May 5th, this unit took part in a joint radio communication

problem with two planes and two ground stations - our own and that of the 160th Infantry, located at the Armory in Olympic Park. The small output of the Infantry set made it difficult for the planes to keep in communication with them. Otherwise the mission was successful and interesting.

Crissy Field, Presidio of San Francisco, Calif., May 5th.

The tactical inspection of Crissy Field was recently completed by the Corps Area Commander. We are very proud of the rating of "excellent" thus attained.

Bombing and ground target gunnery was completed for the officers of this station during April. Rosult: Over 50% rated expert, a fact looked upon with satisfaction by Lieut. Bobzien, Officer in Charge.

The completion of two squash courts at Crissy Field has enlivened general interest in the game. Challenge is extended to any and all visiting officers. We have just started and hardly know the rules, but we are good.

The 91st Observation Squadron and the 15th Photo Section, consisting of 21 officers, 70 enlisted men and 5 airplanes, departed May 5th for two weeks' field exercises at Salinas, Calif. The shortage of available airplanes at Crissy Field made it necessary to call on four alert March Field Pursuit pilots, with their ever-ready Pursuit ships to act as attack aviation. We will cooperate with a reinforced brigade containing artillery and cavalry.

36th Division Aviation, Texas National Guard, Houston, May 8th.

The 111th Observation Squadron successfully passed through the ordeal of the ordeal of the annual Federal inspection. On April 10th everyone arrived at the field at the specified time, showing the fruits of their labors in the shine of their leathers and brasses. The inspection was carried on without any difficulty and everyone felt satisfied in that he had expended his best effort. No laxity in the training program occurred after the inspection, and everyone is working hard on radio, photography, navigation and blind flying.

Blind flying is being conducted by picking a specified point to which to fly. The compass course is first worked out and the blind pilot then endeavors to fly to this point and back to the field. He cuts the gun when he believes himself to be over the designated point. The check pilot there checks this point. Then the return trip is made, and when the blind pilot thinks he is at the field he comes out from under the hood. It would be amusing to photograph the look of consternation that passes over the blind pilot's face when he searches in vain for the field. Usually a ship that heads north returns from the east or the west. However, after a little more time at it, we'll all be able to come right on home.

A course of instruction in pistol marksmanship is being conducted at the present time. We hope to qualify every man in the squadron at least as a marksman.

The regular monthly sociable of the Officers' Club was held on the West Beach at Galveston. We had a few visitors from the Third Attack Group, and they seemed to enjoy the festivities. Three of the young ladies went swimming, and the rest watched them. It takes the girls to show the adventurous spirit. Lt. Borden arrived while the young ladies were swimming, and when they came out of the water they set upon him en masse and spoiled the Beau Brummel appearance he affected. He's still picking sand out of his teeth. The other features of the party are just a hazy recollection of things seen and done.

The enlisted men sponsored a hangar dance, which was well attended and thoroughly enjoyed.

Boston Airport, Boston, Mass., May 15th.

The Reserves are now feeling better. In April they were allotted three hours of flying time per man. Flying the latest O-1G ships certainly requires this amount of time for real proficiency, and Captain Glenn Salisbury of the Air Corps is proving to be a real taskmaster in his role of instructor to the Reservists. Tight formations are regular things to be seen now. "Some difference from the old days," one officer was heard to remark. "I can recall when a 'tight' formation meant the leading ship over Cambridge, with No. 2 and No. 3 over Charlestown and Back Bay, respectively." Exaggeration, true, but we are proud of our present formation work.

At an Air Show at the Boston Airport on Saturday, April 30th, the Reserves, led by Captain Glenn C. Salisbury, their instructor, put on a wonderful formation flight in a stiff wind. Their planes were flown in such a tight formation that they appeared joined. Comment by the spectators was aroused by the demonstration. The ships were manned by Captain Salisbury, with Major Robert F. Raymond (DSC), Capt. Frank C. Crowley with Capt. C.J. A'Hearn and Lieut. R. Hixson with Lieut. W. Newhall.

The contract for a barracks building at Upolu Point has been awarded, and that field will be greatly improved thereby. This field is at the northernmost corner of the Island of Hawaii.

Selfridge Field, Mt. Clemens, Mich., May 17th:

Selfridge Field was host to 75 delegates of the Michigan State Association, Convention of Plumbing and Heating Dealers. The 40th annual State Convention of this Association was being held in Mt. Clemens at this time. The visitors were conducted about the post and viewed part of the flying of the 1st Pursuit Group which on that afternoon was engaged in a Group training problem involving tactical Group maneuvers.

Major M.S. Murray, accompanied by Warrant Officer Charles Whiston, conducted an annual inspection of the post and records. Major Murray was honored by an aerial review conducted by the 1st Pursuit Group, led by Major Gerald E. Brower, Group Commander. The results of this inspection will be beneficial to the activities of the post in the correction of matters of administration, supply, etc., and their coordination with higher authority.

Representatives of several news reel companies arrived here early in April with aerial cameras, ground cameras, sound recording apparatus and other paraphernalia, to take pictures of the spring training of the Group. The combination of spring weather and a full complement of airplanes resulted in increased Group training and formations, and news reel companies were interested in filming the various maneuvers. During the presence of the movie men there was much activity, both in the air and on the ground. The Group, operating with 4 squadrons of 18 planes each, led by the Group Commander's echelon of 3 staff planes, maneuvered in Group formation for the benefit of the aerial cameramen, who also "shot" individual squadrons performing squadron maneuvers, formations, landings and take-offs. Phases of tactical maneuvers were demonstrated and filmed, including aerial attacks and combat, squadron diving attacks in formation and by individual planes. Parts of the pictures taken here, released by the news reel companies, should prove of great interest to the layman in pictorially presenting the activities of this Group in its normal training and operation.

The issue of the Holly, Mich. "Herald" of March 31st says: "A group of 30 planes from Selfridge Field visited the Holly vicinity last Thursday, and for a long time circled over the town in various formations. Thanks for the exhibition come again when you want to see a good town." It is pleasant to learn that others besides moving picture industries are interested in the training of the Group.

CASTLE

17th Pursuit Squadron: Lieut. J.S. Griffith, Operations Officer of the doughty 17th, recently made the squadron casualty list when, in endeavoring to sock the gutta-percha spheroid in a handball game, he attained such a high velocity that he couldn't check himself before colliding with the side wall. Although the safety factor of his undercarriage bracing, of the order of 12, is designed t withstand the dynamic loads incurred in any and all maneuvers likely to be undertaken by a highly maneuverable pursuit pilot, it proved unequal to the strain. He tried to continue in commission for a couple of days, but finally had to give himself up to the medicos who, upon investigation, found a bone broken in his foot. He expects to be out of commission no more than two weeks.

The 17th chortled with fiendish glee (but also knocked vigorously on wood) when the 94th, our neighbor squadron on the hangar line, sent up to ask us for our spare P-6A's. We sent them some and hoped to gosh we wouldn't need them back. The 94th is getting tough on airplanes and expends them at the authorized lock-washer rate. If and when the 94th asks us for more planes, we will send them our two squadron wheelbarrows, since that is the only extra transportation we have.

The 17th had the first night flying session of the season on May 2nd, and thus provided another sign of spring. Three planes at a time took to the starry heavens and made many practice landings with the aid of the flood lights. As the planes flew over the post theatre they provided some interesting incidental sound effects which added to rather than detracted from the enjoyment of the movie. At least, so it seemed to your correspondent who happened to be in the audience.

27th Pursuit Squadron: Installation of radios in our tin-bellied P-12E's has been a diverting and often irritating pastime for the past month with the result that it now is almost impossible for a justly reluctant pilot to get into one of the afflicted ships and, once there, to find the few instruments necessary for operation of only the engine and flying controls. Operation of the radio itself is a possibility so remote that the idea of an attempt seldom occurs to the well-caged pilot.

Lieut. Bryant Boatner was successful in an assignment to bring from the Berliner-Joyce factory in Maryland a P-16, and is very glad the two-seater Pursuit type is a problem not assigned to the 27th Squadron.

Lieut. Charles Schott ignored an opportunity to distinguish his squadron when he drew himself a forced landing due to a broken oil line. For the last month pilots of other squadrons here have been jumping out of airplanes with considerable regularity, say once a week, and in an admirably off-hand manner, or at least nosing up a few times between acts, while the 27th has been plugging along with no publicity at all. Schott did the uninteresting thing of selecting a good field and landing it right side up.

Lieut. Roger M. Ramey, in a bold but successful attempt to get into this newsletter, recently became the owner of a pop-eyed and unfortunate female Boston Toy Bulldog and now announces he is expecting several additions to his little family.

Resumption of night flying and the official opening of the golf season were the principal events of the month of April with the usual group problems and squadron flights occupying most of the time.

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Lieuts. Roger M. Ramey, C.E. LeMay, George F. McGuire and Raymond P. Todd, detailed to ferry four of 18 P-12's to Langley, spent a more or less interesting three days at Uniontown, Pa., waiting for decent weather over the mountains to the east. After they did get away, water in his gasoline forced Lt. Todd to set down in a soggy field a few miles beyond the first ridge. After he had rolled nearly to a stop, his plane nosed over with only minor damage - pilot unhurt.

In the course of various squadron training flights, the 27th visited Kalamazoo and Battle Creek, Mich., and Columbus and Dayton, Ohio, and encountered considerable variety in both airports and climate.

57th Service Squadron: With the new machine shop and aero repair building awaiting only the concrete implacements for the new machinery, the 57th is picking up all loose ends preparatory to a quick move to their new plant. The new blacksmith shop should be in operation by the time this reaches print.

A new Pilgrim Transport was added to the 57th's polygot collection of airplanes and already has been initiated into the intensive type of service which has been the lot of the C-4 and the two C-14 transports of the organization.

94th Pursuit Squadron: For some time the number of pilots in the 94th was rather limited, but with the coming of Spring things begin to look better. On May 1st, Lts. Sansbury and Lowry were transferred back to the 94th and Lieuts. Mosher and Jacobs received two months' active duty with their old squadron.

36th Pursuit Squadron: For nearly a week representatives of the leading photographic news agencies were at the field and daily made thousands of feet of film depicting the activities of the Air Corps. The 36th took part in most of these exhibitions before the camera. Inspections, tactical flights and exhibitions all played a part in the work, and the photographers left Selfridge with filmed records of practically every activity of interest engaged in at the field.

Lieut. and Mrs. Norris B. Harbold said good bye to their many friends at the field and set out for several weeks' leave prior to going to Washington. Lieut. Harbold is to be assigned to duty with the new coast defense unit to operate out of Bolling Field.

"Trust in God, but not safety belts," said one Lt. George F. Schlatter, promising 17th stunt pilot, as he reached for the bottom of the seat of his P-6E during one of his slow rolls. His hand encountered some unfamiliar gadget but he was undaunted. Something to grasp is something to insure remaining in his seat. The ship gave a lurch forward as if freed from some bond, but it was short-lived. The gas pressure was down. A very red-eared pilot reported the loss, in flight, of one belly tank.

The 17th Pursuit, under Capt. R.G. Hoyt, has been practicing a nine-ship flight formation similar to the type used by Attack units. This formation, with the inside element crossing over and the outside element passing under the leading element in turns, has proved to be quite maneuverable and serves its purpose of concentration of fire on those types of offensive missions where it is deemed necessary.

5th Composite Group, Luke Field, T.H., May 9th.

Flying training for the month consisted of formation, night and cros-country flying, aerial bombing, communications radio, aerial gunnery, camera obscura, aerial navigation and reconnaissance, instrument flying, performance flights, and cooperation with other branches of the service.

The Sikorsky plane from this station performed an inter-island flight to the Islands of Molokai, Maui and Hawaii, transporting Mr. A.D. Pugh, representative of the National Aeronautic Association, who is gathering data on the general flying conditions and airports on the Islands.

2nd Lieuts. Ezekiel W. Napier and Otis A. Miller (Reserve) were transferred to Wheeler Field.

A recent arrival aboard the USAT ST. MIHIEL was 2nd Lt. Joseph W. Baylor, who was assigned to the Hawaiian Air Depot.

On April 9th a large crowd of Luke Field rooters turned out to witness the closely contested annual track and field meet between all squadrons and to watch the 65th Service Squadron capture first place in the 440-yd. run, the 220-yd. hurdle, the one-mile relay and the javelin, emerging victorious and nosing out the 23rd Bombardment Squadron, 44 to 42. Sgt. Tufts, who won the 440-yd. dash in 57-1/5 seconds, coached the team to victory through hard and stremuous training. He and his track team brought great credit to their squadron through their admirable work and by winning the greatly coveted track trophy, which is a large silver cup in memorial to Major Sheldon H. Wheeler. First Sgt. Calvert and other noncommissioned officers of the Squadron gave a turkey dinner at the Post Exchang for the entire team. This recognition was, of course, highly regarded by all of the Squadron contenders. The 50th Obs. Sqdn. made a good showing, Lieut. F.R. Dent, Captain of the track team, winning the 880-yd. relay. Pvt. B. Hess finishe third in the 220-yd. dash and Pvt. O.K. Singleton third in the 2-mile run. The 23rd tracksters, under the able direction of Lieuts. "Larry" Pugh and Francis Williams, athletic coaches, ran up a surprising number of points throughout the meet, but were finally downed by the 65th. Lieut. Pugh was second in discus; Private Williams won both the mile and half mile; Private Beemer, the 2-mile; Private Baddour, 100-yd. dash; Private Searcy, 800 yds.; Private Marsh, shot put Sgt. Vickery, discus; Private Smith, second in mile. Privates Allender and Moss were the high scoring individuals of the 4th Observation Squadron.

The Sector Track and Field Meet was held April 23rd. Much to the sorrow of the writer, we were unable to continue our long string of victories and had to be content with second place, first honors going to Fort Kamehameha.

50th Observation Squadron: Among the many missions with other branches of the service the past month, those in cooperation with the Field and Coast Artillery predominating. Aerial gunnery is being carried on at the Waimanalo Gunnery Range, and it is expected to complete all training in both fixed and flexible guns during May.

The Day Room is nearing completion and the enlisted men will soon have a fine place to meet and talk things over. New offices are nearing completion for the Operations and Engineersing Officers. April 29th was Organization Day, and all Squadron members spent the day at Kailua and had a good time.

Master Sgt. Bernard Wallace, transferred to this Squadron, assumed the duties of Hangar Chief. Sgt. Mize, who came from Randolph Field, was transferred to the 65th, and Sgt. George Chalmers was transferred to this Squadron.

Lieut. W.E. Karnes is about the busiest officer at Luke Field. After taking over all of Lt. Napier's duties, prior to the reassignment of Squadron duties, he will be Squadron Adjutant, Supply Officer, Mess Officer, Communication Officer and Athletic Officer. Lts. E.W. Napier and H.B. Lathrop,Jr., received official commendation from the Wing Commander for their work during the Grand Joint Army and Navy Maneuvers.

72nd Bombardment Squadron: Lieut. J.M. Thompson left for Fort Crockett, April 14th. "Tommie" is no doubt singing "Texas, here I come," being a native son of that grand old State. The Squadron wishes him well at his new station.

This Squadron has been flying an average of two night missions a week during the past month for the Coast Artillery in connection with searchlight training. Winter flying clothing is necessary, most missions being from 5,000 to 12,000 feet.

Tech. Sgt. King, of March Field, Calif., is a new arrival, replacing Tech. Sgt. Schaefer, who departed sometime ago for Randolph Field. First Sgt. Hill, Staff Sgts. Silva and House extended their foreign service tours to May, 1933.

Lieut. Edgar R. Todd, who left for Langley Field, will be missed by all. The "Secret Six" found that the one and only - if the society editors are to be believed - "dashing young bachelor, Lieut. Edgar R. Todd, of Luke Field," started dual instructions April 30th. All agreed that he showed rare judgment in getting hitched here among friends, who will no doubt see that he gets the right start without the usual stunts young Air Corps officers have to live thru on some posts. Oh, yeah!

4th Observation Squadron: During the month, numerous cooperative experimental long range missions were performed with the Harbor Defenses of Pearl Harbor. The Douglas Dolphin, temporarily assigned this squadron, is being used for this work. A simulated Artillery adjustment for the 11th Field Artillery was performed on April 25th.

On the evening of April 13th, an "Aloha" turkey dinner was held in honor of 1st Sgt. J. Montgomery, who left for Mitchel Field on April 14th. At the same time, this dinner was a welcome to our new First Sergeant G. Sproesser.

18th Pursuit Group, Wheeler Field, T.H.

Last month the tactical work of the Group consisted principally of Pursuit vs Attack - with all possible variations and embellishments. Camera guns were used to a limited extent and results were beneficial to all personnel participating. Also, radio received more than its normal share of attention. Lt.Dice, our recently acquired Communications Officer, demonstrated his uncanny ability in wresting sound from space to our eminent satisfaction. Lieut. Ridenour, Air Corps representative from the mainland, finished his thorough engineering inspection at this station. Needless to say, aside from the corrections he made, we are glad of this opportunity to have many of our problems straightened out.

The Group was disappointed at the news that the two Pursuit Squadrons scheduled to be added to this Group in June, under the 5-Year Program, will not be organized until after July 1, 1933. Although new hangars are being rapidly erected, this does not relieve what might have been a very crowded condition for a time.

6th Pursuit Squadron: Gunnery started April 26th. A tentative plan was drawn up for all Squadrons by the Group Operations Officer, which permits each Squadron to fire daily until Nov. 1st, when we complete record firing. We recently participated in a Wing Review and critique at Luke Field.

19th Pursuit Squadron: To our regret, Tech. Sgt. Ballard B. Small returned to the mainland with his family, April 14th, having completed his tour of duty.

26th Attack Squadron: During the past month we worked in cooperation with the Pursuit Squadrons, acting as targets for Pursuit attacks. Among the most enthusiastic of our rear gunners are Major Murphy and Capt. Etheridge, who with aid of Camera Guns, were able to bring back proof of their marksmanship.

Another marksman worthy of mention is Dan Cupid, for this Squadron lost another bachelor when Lieut. John E. Nuhn was married April 14th to Miss Laura Switzer. The Squadron wishes them much happiness.

Six members of the Squadron completed the course of airdrome defense under direction of Lieut. McCoy, firing on the 1,000 inch range. In addition, all members of the Squadron completed one hour's instruction in use and care of gas masks.

Lieut. McCoy left for the mainland April 14th on leave. Lieut. Graham is acting as Squadron Supply Officer in his absence.

75th Service Squadron: Lieut. and Mrs. Wm. O. Eareckson are the proud recipients of a baby girl, born April 15th at the Station Hospital, Schofield Barracks -- Lieut. C.H. Earnest, lately from Luke Field, and assigned as Squadron Adjutant, was attached to the 6th Pursuit for flying -- Lieut. Eareckson, relieved as Squadron Adjutant, capably assumed his new duties as Assistant to the Station Engineering Officer, Lieut. Tourtellot.

Hawaiian Air Depot, Luke Field, T.H.: During the period March 26th to Apr. 25th, 3 P-12B abd 2 P-12C airplanes were completely overhauled. A third Douglas Y1C-21 was received, assembled and placed in service. Minor repairs were made on 2 O-19B airplanes. The Douglas Y1C-21 being used by the Coast Artillery in experimental range finding work was in the Depot three different times. The necessity for grounding these planes at the end of every 25 hours, for replacement of engine parts, and the number of hours flown for the Coast Artillery, make this Douglas a frequent visitor at the Depot.

The Engine Repair Section overhauled 9 SR-1340D engines and repaired two R-975E engines during the past month -- The Machine Shop completed 60 jobs on Work Orders and 241 on Instruction Slips.

Wright Field, Dayton, Ohio, May 16th.

We do not remember what sort of day April 15th showed itself to be, but files would no doubt prove it to have been mild and sunny with a tingle leading mortals to restlessness and a desire for activity. A goodly volume of "clearing" took place at Wright Field. Major Kepner took off for Detroit, picking up Capt. Howard, who had flown there previously, for the return flight. Captains F.D. Hackett flew to Detroit, as did A.W. Vanaman, A.J. Lyon to Philadelphia, Lieuts. F.D. Klein to Buffalo; E.K. Warburton to Beloit, Wis.; J.D. Corkille to Montgomery; H.P. Rush to Selfridge Field; Raymond Morrison to Detroit; G.V. Holloman to Chicago; D.W. Watkins to Bolling Field; J.T. Morris and F.M.Hopkins to Chanute Field; K.B. Wolfe and Capt. A.M. Drake to Chanute; W.N. Amis and Major H.H. Fisher to Atlanta; L.P. Holcomb to Scott Field and Capt. Clements McMullen to Trenton, N.J. On the same day Major Hugh Knerr ferried to the field a B-6A from Langley Field and Lt. A.R. Crawford a PT-12 from Buffalo.

Lieut. P.H. Kemmer flew to Langley Field April 19th to investigate the structural failure of the P-12D plane which occurred a few days previously.

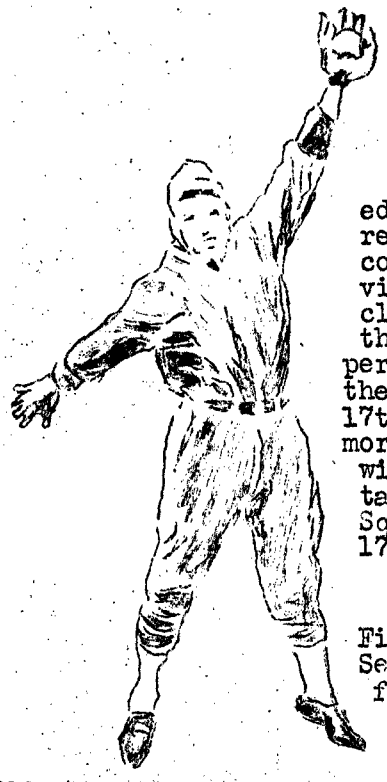
Lieut. E.M. Powers and R.L. Schumaker took off April 21st for San Antonio and Fort Crockett to investigate magneto failures reported -- Lt.-Commander G.R. Henderson and Lt. R.E. Farnsworth, US Navy, arrived April 21st for a few days' conference with the Field Service Section -- Major F.H. Coleman left April 24th for Picatinny Arsenal to confer with the Commanding Officer thereof -- Captain R.E. Hardy, Ordnance Dept., Washington, D.C., member of the Silk Commodity Committee, arrived May 3rd for a conference with the Industrial War Plans Section - Lieut. K.B. Wolfe went to Fort Riley, Kans., May 2nd to ferry an O-25 plane to Wright Field -- Thirty-eight students of the aeronautical course of Purdue University, under the direction of G.W. Haskins, Professor of Aeronautics, visited Wright Field on April 24th -- Lieut. J.E. Parker flew to Washington on April 29th with Representatives B.Q. Harlan and A.L. Somers as passengers, -- Major Hugh Knerr took off on May 16th for Selfridge Field, Bolling and Maxwell Fields, and Fort Bragg, N.C., for conferences regarding service matters at the various stations -- Captain R.C. Moffat left for Dundalk, Md., May 13th to ferry a new YO-27 to Wright Field from the plant of the General Aviation Corporation -- Maj. E.L. Hoffman left the field May 9th for leave of absence which has been spent fishing -- J.B. Johnson, Chief of the Materials Branch, attended a meeting of the Metals Committee in Washington -- Major J.W. Jones of the Office Chief of the Air Corps, stopped at Wright Field April 19th on his way from Washington to Chicago. Capt. Hugh Elmendorf and Lieut. Newton Longfellow also dropped down from Washington, the former enroute to Cincinnati. Lieut. R.C. McDonald, Brooks Field, was a visitor, and Capts. W.D. Wheeler and George Kenny stopped over on their way from Columbus to Langley Field - Capt. R.C. Moffat flew to Selfridge with Lt. Wood, Air Reserve. He ferried back a PT-12 from that station. Lieut. J.E. Parker ferried an XA-8 to Buffalo on May 4th. -- Lieut. C.D. McAllister wit Captain Bruce Hill flew to Bowman Field for the Air Corps-Anti Aircraft maneuvers -- Lieut. C.S. Thorpe and R. Ferguson, Armament Engineer, flew to Kelly Field, Fort Crockett, Pensacola and Montgomery, for conference with commanding officers of those stations regarding aircraft armament.

Lieut. K.B. Wolfe took off on April 18th for a flight to Buffalo, Hartford, Newark, N.J., and Baltimore, Md., visiting manufacturers' plants in each place in connection with inspection matters.

General Oscar Westover and Lieut.-Col. H.B. Clagett flew in from Washington on May 3rd, the General remaining for several days' visit as the guest of the Chief of the Materiel Division, General Pratt.

Brig. General H.C. Pratt, Majors R.M. Jones, H.A. Strauss, Hugh Knerr and Capt. A.W. Vanaman attended the meeting of the Procurement Planning Board in Washington, returning to Wright Field April 27th.

Lieut. F.W. Warburton, Air Reserve, brother of Lieut. E.K. Warburton, of the Engineering School, reported for two weeks' active duty and was assigned to the Industrial War Plans Section.



The truest harbinger of spring at Selfridge Field is the sight of Pvt. Scheib, the Athletic Officer's hard-working assistant, hard at it on the ball diamond rolling the infield, levelling off the pitcher's box, weeding the base lines and in general getting the battlefield ready for the hot battlers. Scheib has the diamond pretty well in shape now, and already the squadron ball players have gotten organized and are having regular practice sessions. Your correspondent interviewed the various squadron baseball coaches and was given the usual confident predictions of victory by each one of them. Every single coach firmly claimed that his squadron would carry off the pennant at the end of the inter-squadron baseball series. If past performances count, Lieut. Ryan, coach of the 17th, has the best chance of having his prediction come true. The 17th still has Private Dusing pitching for them, and many more of the sterling players of last year's pennant-winning team. But the scores of the games will tell the tale, and the teams of the 36th, 27th, 94th and 57th Squadrons will certainly not concede the victory to the 17th in advance.

At the close of the third week's play in the Brooks Field Inter-Squadron Baseball League, we find the 62nd Service Squadron holding down the top berth, enjoying a full game's lead over the 58th Service Squadron. The 12th, 22nd and 88th Observation Squadrons are holding down third, fourth and fifth places, respectively.

The 58th leads in club batting with an average of .322; the 62nd in club fielding with .926. Jones, of the 62nd, leads the pitchers with four victories and one loss, also in strikeouts with 52. He is no novice with the flail either, having an average of .529 in 17 times at the bat, Other players having high batting averages, with ten or more times at bat, are Blevins, Bell and Frazier of the 58th; D. Wood, Broiles and Blann of the 62nd; and Peterson, Hess of the 88th.

In the field of baseball, the Duncan Field Airmen have been the terror of the City Amateur Leagues in past years, and recent developments seem to indicate that they have not lost any of the old pepper, under the able direction of Chas. H. Leipart. In the Sunday Morning League, they won their first game on April 17th, score 9 to 0 - a game marked by a home run and dandy fielding work by Roy Dixon, shortstop, although all the members of the team may be said to be equally good. They also took the second game on April 24th, score 10 to 4, same being played under the handicap of extremely rainy and muddy conditions.

The 1932 baseball season for Mather Field ended, with the 80th Service Squadron winning the post championship, being credited with nine victories to one defeat. The 77th Pursuit Squadron won second place, and the 55th Pursuit Squadron third. The season was a success, the games being fairly well attended and the players themselves having an enjoyable time. A Post team has been organized from the best material at the field and quite a few outside games have been played. The team will operate independently of any league, but will play other teams in different leagues. Besides these games, the team plans to journey to March and Crissy Fields to play other Army teams. The team has had several opportunities to join leagues in Sacramento, but due to the uncertainty of our stay here it was not deemed advisable.

The 17th Pursuit Sqdn. baseball team, with last year's championship as an inspiration, has been practicing religiously, when not hindered by the frequent spring rains, for the approaching baseball tournament among the Selfridge Field squadrons.

The Inter-Squadron baseball series at Luke Field, T.H., came to a close on April 22nd, with the 4th Observation Sqdn. taking first honors. The series was unusually close, with only a difference of two games between first and last plac The Post baseball team is coming along in fine shape, under the able hands of Coach Lieut. Zimmerman. Even though we have only three or four of last year's players, we have lots of new material and should be well up in the running at th end of the season.

The 18th Pursuit Group baseball team has been showing up well under the direction of Lieut. Stribling, coach, and Corp. McDonough, manager. To date, all practice games have been won, including games with the Marines, 11th Field Artillery and the 21st Infantry. This should give an idea of the team's strength. Sgt. Winninger, with a good reputation as a pitcher, recently arrived from Fort Crockett, and the team has great hopes for him in particular. League games have just started, and next month we hope to be able to report a string of victories.

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SERIAL NO. 318. LIST OF NEW MATERIAL ADDED TO INFORMATION DIVISION FILES
May 3d to May 27th Incl.

Available for loan to Air Corps Organizations only upon request to the Air Corps Library, Munitions Building, Washington, D. C.

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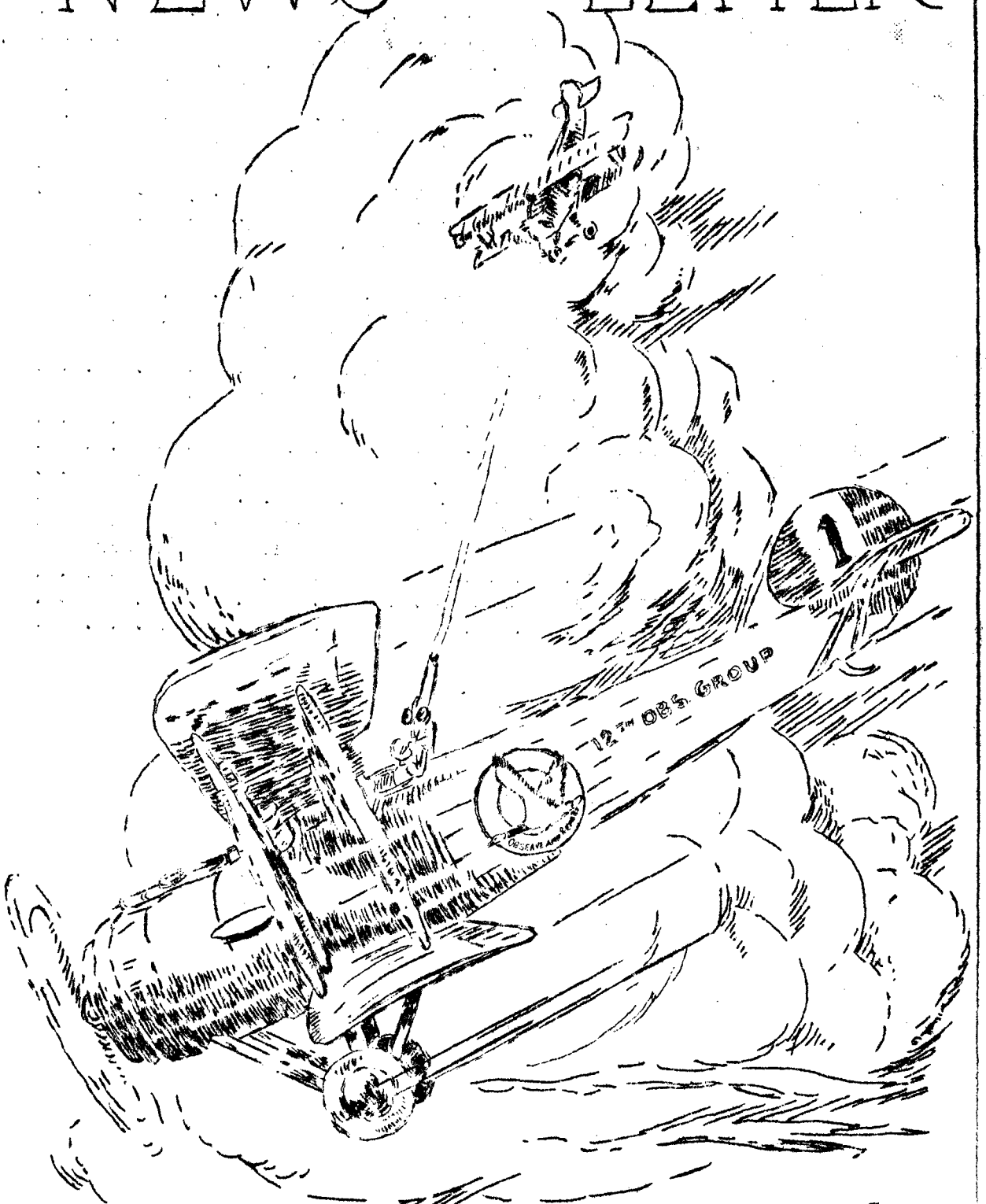
AIR CORPS NEWS LETTER



H.S. COLLINS
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BROOKS FIELD

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WAR DEPARTMENT
WASHINGTON, D. C.

VOL. XVI JUNE 22, 1932 NO. 22

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VOL. XVI AIR CORPS NEWS NO. 7

Information Division
Air Corps

June 22, 1932.

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

Publishers are authorized to reprint material appearing in this publication.

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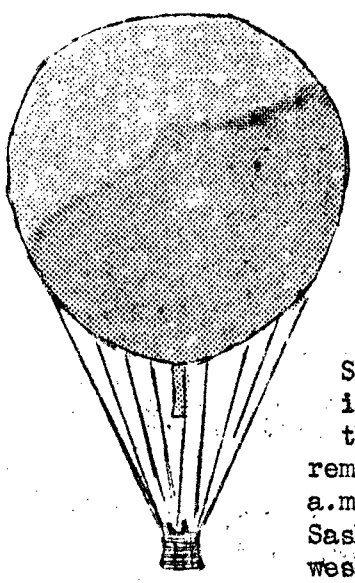
AIR CORPS TEAM WINS NATIONAL ELIMINATION BALLOON RACE



The victory of 1st Lieut. Wilfred J. Paul (pilot) and Master Sergeant John Bishop (aide), who piloted Army Balloon No. 2 in the National Elimination Balloon Race, which started from Omaha, Nebraska, on May 30th last, marks the fifth time in the history of this annual free balloon classic for the Litchfield Trophy that an Army entry carried off first honors.

The Air Corps team of Captain William J. Flood (pilot) and 1st Lieut. Haynie McCormick, aide, piloting Army Balloon No. 1, finished in third place, landing at Sherwood, N.D., a distance of 605 miles from the starting point. Lieut. Paul and Sgt. Bishop, the latter, by the way, being a Lieutenant in the Air Corps Reserve, remained aloft 26 hours and 46 minutes, landing at 1:00 a.m., June 1st, at a point 13 miles north of Hatton, Saskatchewan, Canada, approximately 901 miles north and west of Omaha.

Second place went to the Goodyear Tire and Rubber Co. entry of Roland Blair, pilot, and Frank Trotter aide, who finished their long aerial jaunt near Tyvan, Saskatchewan, Canada, a distance of 700 miles from Omaha.

The history of this annual free balloon race, dating back to the year 1909, is marked thus far by 22 annual contests. There was no race in 1917 and 1918, due to the World War. The distinction of covering the longest distance thus far in the National Elimination Balloon Race belongs to Mr. Ward T. Van Orman. In the race which started from San Antonio, Texas, April 23, 1924, he traversed a distance of 1072 miles before landing. Van Orman also holds another record, that of winning the competition for four consecutive years - 1924 to 1927, inclusive. Three-time winners are Messrs. H.E. Honeywell and R.H. Upson. Lieut. T.W.G. Settle, U.S. Navy, achieved two victories.

Winners of the National Balloon Races are listed below, as follows:

1909 Indianapolis, Ind., June 5th. Won by John Barry, landing at Ft. Payne, Ala. Distance 377.92 miles. Contestants 6.

1910 Indianapolis, Ind., Sept. 17th. Won by Alan R. Hawley (pilot), Augustus Post, (aide) landing at Warrenton, Va. Distance 453 miles. Duration, 44 hrs. 25 minutes, 30 seconds.

1911 Kansas City, Mo., July 10th. Won by Lieut. Frank P. Lahm (pilot), Lieut. J. F. Hart (aide), landing at LaPaz, Ind. Distance 480 miles. Duration, 22 hrs., 26 minutes. Contestants, 7.

1912 Kansas City, Mo., July 27th. Won by H.E. Honeywell (pilot), R.Donaldson (aide), landing at Manassas, Va. Distance, 914 miles. Duration, 34 hrs. Contestants, 7.

1913 Kansas City, Mo., July 4th. Won by R.H. Upson (pilot), R.A.D. Preston (aide), landing at West Branch, Mich. Distance, 685 miles. Contestants, 5.

1914 St. Louis, Mo., July 11th. Won by R.A.D. Preston, landing at Mt. Pleasant, Ky. Distance 301.82 miles. Contestants, 9.

1915 Wichita, Kansas, October 7th. Won by William Assman, landing at Prescott, Arkansas. Distance, 363 miles. Contestants, 4.

1916 Muskogee, Okla., October 7th. Won by H.E. Honeywell, landing at Cascade, Iowa. Distance, 520 miles. Contestants, 6.

1919 St. Louis, Mo., October. Won by R.H. Upson (pilot), Ward T. VanOrman (aide), landing at Stanbridge, Quebec, Canada. Distance, 1021 miles. Duration, 26 hrs. 45 minutes. Contestants, 9.

1920 Birmingham, Ala., September 25th. Won by H.E. Honeywell, (pilot), Dr. Jerome Kingsberry (aide), landing at Chatham, Ontario. Distance, 700 miles. Contestants, 12.

V-6289, A.C.

1921 Birmingham, Ala., May 23rd. Won by R.H. Upson (pilot), C.G. Andrus (aide), landing at Stuart, Va. Distance, 425 miles. Contestants, 9.

1922 Milwaukee, Wis., May 31st. Won by Major Oscar Westover, Air Corps, (pilot), Lieut. Carlton Bond, Air Corps (aide), landing at St. Jerome, Canada. Distance, 866.5 miles. Contestants, 12.

1923 Indianapolis, Ind., July 4th. Won by Lieut. R.S. Olmstead, Air Corps (pilot), Lieut. John W. Shoptaw, Air Corps (aide), landing at Marilla, N.Y. Distance, 449.5 miles. Contestants, 13.

1924 San Antonio, Texas, April 23rd. Won by Ward T. Van Orman (pilot), C.K. Wollam (aide), landing at Rochester, Minn., distance 1072 miles. Contestants, 7.

1925 St. Joseph, Mo., May 1st. Won by Ward T. Van Orman (pilot), C.K.Wollam (aide), landing at Reform, Ala. Distance, 585 miles. Contestants, 5.

1926 Little Rock, Ark., April 29th. Won by Ward T. Van Orman (pilot), W.W. Morton (aide), landing at Petersburg, Va. Distance 848 miles. Contestants, [illegible].

1927 Akron, Ohio, May 30th. Won by Ward T. Van Orman (pilot), W.W. Morton (aide), landing at Hancock, Maine. Distance, 718 miles. Contestants, 15.

1928 Pittsburgh, Pa., May 30th. Won by Captain W. E. Kepner, Air Corps, (pilot), Lieut. Wm. O. Eareckson, Air Corps (aide), landing at Weems, Va. Distance 261½ miles. Contestants, 14.

1929 Pittsburgh, Pa., May 4th. Won by Lieut. T.G.W. Settle, USN (pilot), Ensign Wilfred Bushnell, USN (aide), landing at Canavoy, Savage Harbor, Prince Edward Island. Distance, 952 miles.

1930 Houston, Texas, July 4th. Won by Roland J. Blair (pilot), Frank A. Trotter (aide), landing at Greensburg, Ky. Distance, 768 miles. Contestants, 15.

1931 Akron, Ohio, July 19th. Won by Lieut. Thomas G.W. Settle, USN (pilot), Lieut. Wilfred Bushnell, USN (aide), landing at Marilla, N.Y. Distance, 215 miles.

Captain Flood, relating the story of his balloon flight, stated that they took off from Omaha at 7:00 p.m., during a pretty stiff wind storm; that due to the heavy wind the grommets on the basket gave way and the balloon more or less broke away.

"We got away with considerable ballast, about 32 bags," he said, "and just as soon as we managed to get the balloon in equilibrium we checked our ground speed and figured we were making a speed of approximately 59 miles an hour at an altitude of about 2,000 feet. We oscillated up and down the entire evening and, due to the darkness and the approaching storms, we lost sight of the ground. As a matter of fact, we saw the ground but once after that until we landed the next day.

At about 11:00 p.m., the balloon struck some object, and upon glancing at the altimeter it was noticed that it registered a thousand feet. We concluded that the altimeter was not functioning correctly and that what we hit was probably one of those tall grain elevators lying along the western railroad tracks, because we only hit once and had we been in some hills we would probably have bumped several times. From this point we continued our flight at an altitude of between 3,000 and 4,000 feet until daybreak, which was at about three o'clock. We then caught a glimpse of the ground and checked our direction north. We had pretty fair ground speed. All during the night we traveled from one storm into another, these storms producing a considerable amount of electrical disturbances. At 4:00 o'clock, we decided to go higher, as we had planned to fly the race at a low altitude the first night and gain altitude the next day in order to take advantage of the prevailing westerly winds.

Upon reaching 15,000 feet, we checked our balloon and it oscillated between 13,000 and 17,000 feet until about 11:45 a.m., when storm areas started building up which caused the contraction of our gas and started us on a rapid descent. At this time we had five bags of ballast left, plus some other disposable ballast, and we endeavored to check the descent of the balloon, but our efforts were in vain and our rate of descent increased rather than diminished. We were losing altitude at the rate of approximately a thousand feet a minute, and when we reached the 7,000-ft. level we were in the midst of a heavy rain storm with the clouds reaching down to within about 200 feet of the ground. Our balloon hit the ground with terrific force, and on the first bounce we immediately endeavored to get rid of all the remaining disposable ballast. A fierce gale was blowing on the ground which carried us directly into a high tension line on the outskirts of Sherwood, North Dakota. The impact of the balloon broke the high tension line and threw us against some small trees, thus breaking our fall. Just prior to hitting the high tension line, we ripped the

balloon.

Aside from the severe jolt and the shaking up we received, neither Lieut. McCormick nor myself was injured, and we consider this balloon flight one of the most exciting within our memory."

In connection with the victory of Army Balloon No. 2 in the Balloon Race, the News Letter Correspondent from Scott Field submits the following:

"Master Sergeant Joseph H. Bishop, aide to Lieutenant Wilfred J. Paul in the Army balloon, unofficial winner of the 1932 National Balloon Race held last week, returned to Scott Field Saturday and again is on duty with the Ninth Airship Company. According to estimates given today, the Army bag was winner by approximately 200 miles over the Goodyear entry, but the official decision has not yet been released by the American Aeronautical Association which has jurisdiction over the race.

Taking time from his duties this morning, Sergeant Bishop told of some of the experiences of the trip. A complete log was kept of the trip and all technical details are given, but Bishop's interview today was confined to the most important highlights.

'Our bag was inflated during the late afternoon of May 30th,' Bishop said, 'while a gusty wind estimated at from 20 to 40 miles an hour was blowing. It required 200 men to hold the balloon in position but the work was completed without mishap and we were ready for our flight at 7:30 o'clock that night.

Leaving Omaha, the starting point of the race, we rode in front of a low pressure storm, but surrounded by rain and an electrical display. Early in the night we were drawn into the storm. The riding was smooth at an altitude of between 1200 and 2000 feet, in spite of the constant rain, and we found we were being carried in a general north and west direction by the prevailing wind.

Later in the night we tried to get out of the rain, and by dropping ballast, rose to a level of 12,000 feet but found there we were still under the clouds. During that time we passed through two distinct snow storms.

The following morning was free from electrical storms but the clouds still were heavy and during much of the day we were above one layer of clouds and below another layer of thin clouds. About 4 o'clock that afternoon, we let enough gas out of the bag to get within 300 feet of the ground to check our position and there found we were over Bengough, Saskatchewan, Canada.

Just about that time there was a rift in the clouds and the direct sun rays warmed the gas in the bag and sent us up to 6,000 feet height against our will. We wanted to stay nearer the ground in order to keep a check on our position. Resorting to the valve a second time, we were able to get back near the ground and maintained that level until we crossed Crane Lake, where the radiation from the water had the same effect as the sun's rays and again we took a sky jump.

By the time we descended again we found the wind had changed and that we were then being carried in an easterly direction. Rules of the race provide for the shortest air distance, measured on a great circle course, between the starting and stopping point, regardless of the miles traveled. Up to that time we had been going north and west, so a change to the east would have had the effect of shortening our distance from Omaha. We could not catch an air current going the way we wanted to go so we agreed to land as the only means of saving our mileage. The landing was made successfully at one o'clock Wednesday morning.'

When the landing was made, Lieut. Paul and Sergeant Bishop still had 200 pounds of ballast, enough to have enabled them to have flown 10 to 12 hours longer if they could have located favorable winds."

Lieut. Wilfred J. Paul, originally scheduled to act as aide to Lieut. R.R. Gillespie, and who took the role of pilot upon the withdrawal of the latter due to injuries received enroute to Omaha, submitted the following official report on the flight of Army Balloon No. 2:

" * * 2. Prior to time of take-off, the various positions were drawn. Captain Flood drew Post No. 4 and Lieut. Paul, No. 5.* The race was scheduled to take the air at 5:00 p.m., but due to adverse weather conditions the start was delayed until about 6:30 p.m. Several of the civilian entrants had difficulty with envelope leaks and waived their position of take-off. At the actual time of departure, Captain Flood took off second and Lieut. Paul third.

* Six balloons were entered in the race.

Much difficulty was encountered in securing an accurate weigh-off, as the balloons wavered back and forth in a 25-mile wind. Serious difficulty was avoided due to skillful maneuvering of Major W.E. Kepner, who has National and International prizes to his credit.

3. U.S. Army Balloon No. 2 took off at approximately 7:00 p.m., 30 May, 1932. The static condition of the balloon was not accurately known, with the result that we drifted along the ground at an altitude of about 50 feet. Upon the discharge of ballast, we rose to an altitude of approximately 2,000 feet. At this time the cloud formations were thick cumulous, with a base at about 3,000 feet. This altitude was maintained until darkness set in. At about ten o'clock we noticed directly to the north of us and in our path several electrical disturbances. We rose to an altitude of 3,000 feet and received a pronounced cooling effect, due to the moisture of the clouds. We then descended and at midnight distinct thunderbolts were heard and we felt ourselves being drawn closer to the lightning displays. The flashes of lightning gave the clouds a silvery brilliance; the path of lightning was not only between the clouds and the ground, but also between two separate clouds. Early the following morning we estimated this disturbance at a distance of about one-half mile. We settled to an altitude of approximately 500 feet and skirted this dangerous condition. Up to this time we had been drifting due north, but upon taking a compass bearing we found our direction of drift had changed to northwest and that the electrical disturbance had subsided, which was a great relief, indeed.

As the sun rose the second morning, the balloon ascended to about 7,000 feet, finally drifting us between two layers of clouds; the one above having the aspect of a cumulo-nimbus formation. At about 9:00 o'clock the second morning it began to rain and it was necessary to dispose of several hundred pounds of ballast in order to counteract the moisture absorbed by the envelope. We carried on under such conditions for the better part of the day. The balloon rode smoothly and there was no indication of further electrical fireworks, much to our satisfaction.

In the early afternoon of the second day the clouds below began to dissipate and we could occasionally see the ground. We took a compass bearing and found we were still drifting in a northwesterly direction. The monotony of the trip began to tell on us - it reminded one of drifting over the barren snows of the Arctic region. Bishop and I attempted to eat a little food at this time, but the night before had rather unnerved us and our appetites had failed.

We finally ascended to our maximum altitude of about 10,000 feet. After staying at this height for several hours, we became drowsy and it was necessary to use some of our oxygen. It is interesting to note that at this altitude our eyelids became heavy and that this condition was counteracted by inhaling a small quantity of oxygen. Here we were drawn into a large thunder head in which snow began to fall. The weight of the snow on the envelope caused us to descend; at an altitude of about 7,000 feet the snow dissipated to rain and upon further descent the rain condensed and we were again in clear weather.

The clouds at this point became broken and scattered and we had our first vision of direct sunshine. We noticed below us a grain elevator and attempted to locate our position from it. We were unable to read the sign on the elevator, however, even with the aid of powerful binoculars. At this time our position had again changed and we were drifting in a due westerly direction.

The direct rays of the sun super-heated our gas at this point sufficiently to bring us again to an altitude of about 8,000 feet. We rode at this altitude for the next three hours. The cooling condition of the evening caused our gas to contract and we again descended to an altitude of about 500 feet. We finally passed a small town, and upon inquiry from the inhabitants found we were in Saskatchewan, Canada. The name of the town was given us, but we were unable to locate it on the map.

In our westerly course we traversed a highway. Several automobiles rode beneath us, and upon inquiry we found ourselves in Gull Lake, Saskatchewan, Canada. The clouds were still broken and scattered and varied from the cumulous to the cirrus type. Just before night overtook us, we again discovered a storm area in our path and looked forward uneasily to a repetition of the preceding night. We remained at a rather low altitude in case of further lightning disturbances. At about midnight of the second night we again ran into a rain storm. At this point we took a bearing and found that our course had changed to a northerly direction. The rain continued to fall in torrents; we

approached the ground, took a final bearing and noted that our course had changed to a northeasterly direction. We discussed this change and agreed that we were retracing our course, much to our disappointment, and decided to land.

4. Due to the blackness of the night and the rainy condition we were unable to locate the ground in landing. The barometer had dropped, which affected our altimeter. At zero on our altimeter we found we were still in the air and at minus 150 feet on our altimeter. We hit the ground and ripped the envelope, thereby releasing our hydrogen, or lifting element. The landing occurred at 1:00 a.m., June 1, 1932.

5. We were rather disappointed in being forced to land due to this change of wind direction, as we had 300 pounds of ballast left and also two oxygen tanks, which we could have disposed of in an emergency. We were unable to tell exactly where we were; we could see no signs of life in the near vicinity, so we decided to improvise a shelter. We had been in the air about 30 hours and had had no sleep during that time, nor any sleep for 12 hours prior to departure. We were very fatigued and were soon sound asleep, regardless of our soaked condition and of the downpour about us.

At sunup we awoke in a dazed and chilled condition. We found we had landed in prairie country and located with great satisfaction a homestead about a mile and a half away. The homestead belonged to Mr. Willing, who lived with his wife and grown son. A hearty breakfast was prepared for us, which we had no difficulty in devouring. We then proceeded to pack our equipment with the aid of the two ranchmen. This task was rather difficult, due to the muddy condition of the soil and also due to the soaked condition of the envelope and equipment. We inquired as to the nearest rail point and found that it was but three miles away. However, upon further inquiry, we found that the train schedule was a bit irregular; two trains made the spur trip each month; the next train was due in a week from the coming Saturday. We then decided to make the trip to the main line, a distance of abour 14 miles, to Hatton, Saskatchewan. We loaded the equipment on a prairie wagon drawn by two bronchos and finally, after three hours, arrived in the town mentioned above. It was during this journey that we really realized the importance of springs and shock absorbers.

Upon arrival at Hatton, which had been greatly boosted to us, we found there were neither hotel nor eating accommodations. We were especially interested in a good night's rest. Upon making the arrangements to ship our equipment back to the United States, one of the natives was kind enough to take us to the nearest hotel, which was a further distance of about 30 miles. We finally arrived at the town of Maple Creek. This town far surpassed in beauty and hospitality anything we had ever encountered. We here met the Canadian Customs official, who did everything in his power to assist us. We then made contact with the U.S. Consul at Regina, Saskatchewan, and arranged for the shipment of our equipment and our re-entry into the United States. We finally arranged to leave Maple Creek midnight on Thursday, 2 June, 1932, but were again disappointed, as this train had been delayed 15 hours due to the washout of a bridge farther west.

Later, upon our arrival in Winnipeg, we inquired of the Canadian Airways their schedule and rates. Much to our surprise, the manager offered us the courtesy of the airline and, incidentally, a pass to their terminal point. The attitude of the Canadian officials and civilians was indeed gratifying; they went out of their way to offer us the utmost in courtesy and hospitality.

6. The most exciting part of the air trip was the first night, which was indeed long and uncertain. At the end of about 20 hours it became very monotonous. Were it not for Bishop's excellent sense of humor we might have felt inclined to set the balloon down. Finally, upon landing, we were unaware that we had won the race. We felt that we had done well; at least, we had done our best, which in itself is satisfying.

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Featuring the programs of Station KFXM, San Bernardino, Calif., is the broadcast on alternate Tuesday evenings by the First Bombardment Wing Band from March Field, Calif. On each program, an officer of the field delivers a fifteen-minute address on an Air Corps subject. The speaker for May 17th was Major J.T. McNarney, Commanding Officer of the 7th Bombardment Group, his subject being "Mission and General Organization of the Air Corps." On May 31st, Lieut.-Colonel Henry H. Arnold, Commanding Officer of March Field, spoke on "Development of Aviation and Procurement of Aircraft."

MAPPING SURVEY OF LOUISIANA COMPLETED

WITH the return of Lieut. Herman F. Woolard, Air Corps, to Scott Field after a three months' tour of duty in Louisiana, another chapter was written in the progressive mapping project by the United States Geological Survey of the Department of the Interior. This one was written with the active cooperation of the Army, inasmuch as various photo sections of the Air Corps were used to make the preliminary mapping surveys on which the subsequent work of the U.S.G.S. depended.

The combination of Air Corps and Geological Survey work brings results which make rapid and accurate work possible, the aerial mapping being surprisingly accurate as to railroads, land lines, rivers and roads. The work of Lt. Woolard was done with the help of maps, some of which were of 1850 vintage. Other maps he used actually failed to give the location of towns, or had them placed ten to fifteen miles off their true location.

The area covered by the 5th Photo Section totaled over 9,000 square miles. Cloudy weather limited Lieut. Woolard to only 15 flying days, during which he mapped some 600 square miles daily. There were a total of 3,000 exposures made, with the surprisingly few "retakes" of only three exposures, these being caused by shutter failures.

Lieut. Woolard based his mapping operations at three points. The first was in the vicinity of New Orleans, where he completed 2,200 square miles on March 20th. The second base was at Patterson, La., where the required 3,800 square miles were completed on May 3rd. The area covered from this base, which extends from the South Central part of the State along the Gulf coast to the Texas line, is a flat, marshy country known as the "Weeping Prairie." It is accessible in many parts by boat or horse only, since roads are not hard enough to support wagons or automobiles. The sparse population of this area are the "Cajuns" - Acadians - who speak a French dialect. The third base was at Shreveport, where 2,000 square miles were completed on May 17th. An area of about 1,000 square miles at Alexandria was covered from the third base.

All negatives from the three bases were shipped by express to Scott Field for development and printing, and prints sent to the U.S. Geological Survey in Washington.

Lieut. Woolard had the assistance of Master Sergeant Wilbur R. Rhodes and Corporal Paul M. Langlands at his bases. He used the Special Photographic Fairchild F1A plane, and took all pictures with the Fairchild T2-A, 4 lens camera. In making his exposures, he kept within the tolerance limit of 1% in altitude, 1% in tilt and $\frac{1}{4}$ of 1% in direction.

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CHANGES IN AIR CORPS STATIONS

The following changes in Air Corps units will be made during the month of June, 1932:

The 36th Pursuit Squadron will be moved from Selfridge Field, Mich., to Langley Field, Va., not later than June 15th, a total of 5 officers and 100 enlisted men.

The 58th Service Sqdn. will be moved from Brooks Field, Texas, to Langley Field, not later than June 15th, a total of 3 officers and 130 enlisted men.

The 8th Pursuit Group will be completed during the month of June at Langley Field, Va., to include:

Headquarters (now active at Langley Field)
33rd Pursuit Squadron (now inactive)
35th Pursuit Squadron (now inactive)
36th Pursuit Squadron (from Selfridge Field)
58th Service Squadron (from Brooks Field)

The 1st Bombardment Brigade Hqrs. and the 28th Communications Section (both now inactive), will be organized at Langley Field during June.

The 3rd Attack Wing Headquarters will be made active at Fort Crockett, Texas, on June 15th.

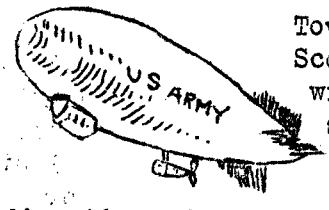
Eleven officers and 88 enlisted men will be moved from March Field, Calif. to Rockwell Field, Calif., not later than June 25th.

The 19th Bombardment Group Hqrs., 30th and 32nd Bombardment Squadrons will be made active at Rockwell Field, Calif., not later than June 25th.

The above changes are in accordance with the Air Corps 5-Year Program.

V-6289, A. C.

NEW DIRIGIBLE FOR SCOTT FIELD



Towns and cities within several hundred miles radius of Scott Field, Belleville, Ill., will shortly be greeted with a sister ship of the dirigible TC-6, now a familiar sight in the skies. The new craft, a similar type of "blimp" to be known as TC 10-253, was erected by the Engineering Department of Scott Field Air Depot, under the direction of Captain Roger S. McCullough, and should undergo its maiden flight during the first week in June. It will be used principally for experimental and test purposes, particularly in connection with perfection of instruments and improvement of methods of operation of this type of ship.

The new ship has a capacity of 210,000 cubic feet of helium, with a useful load of 3,750 pounds. Its maximum speed is 65 miles per hour and cruising speed 55 miles per hour. At the latter speed it will be capable of sustained flight of 33 hours without refueling. Its rate of climb is 1400 feet per minute, and its "ballonet" ceiling is 8,000 feet. The normal crew of this ship will be two pilots, one radio operator and one mechanic.

The TC-10 has an overall height of 58 feet, is 196 feet long, and carries a car which is 40 feet in length. It is powered by two Wright J5B engines with two-bladed propellers. The bag was manufactured by the Air Industries, Inc., at Hammondsport, N.Y., and the car by the Air Corps at Wright Field.

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RETIREMENT OF MASTER SERGEANT MELONEY

Master Sergeant Charles S. Meloney, Post Sergeant Major, Kelly Field, Tex., was placed on the retired list May 25th, and sent to his home in Pennsylvania. Master Sergeant Meloney's service dates from January 14, 1904, in Troop "D," 6th Cavalry, and he has since served with the Ordnance Department, the 5th Cavalry, the 3rd Attack Group, 43rd School Squadron, 24th School Wing Headquarters, Air Corps, and the Headquarters, Air Corps Advanced Flying School, the last organization to which he belonged. He was a noncommissioned officer since 1905. All of his nine discharges carry an "Excellent" character and bring out the fact that he was held in high esteem by all of his superiors. His loyalty and attention to duty throughout his service, together with his excellent record are commendable and are an inspiration and example to all.

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LONG TRIP BY LIEUT.-COLONEL ARNOLD

Lieut.-Colonel Henry H. Arnold, Air Corps, Commanding Officer of March Field, Riverside, Calif., recently completed a trip involving more than 5,000 miles by air and rail within the space of ten days. He departed from March Field on May 15th for the Boeing plant at Seattle, Washington, for the purpose of securing and ferrying a P-12F airplane to Wright Field, Dayton, Ohio. He departed from the Boeing plant May 17th and arrived at March Field the following day. On the 20th he flew to Rockwell Field, where a final check of the airplane was made, and from that point proceeded to Dayton, where he made delivery of the airplane to the Materiel Division. He returned to March Field in another P-12F.

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INSPECTION TRIP OF COMMUNICATIONS OFFICERS

During the period May 31st to June 8th, several officers of the present Communications Class, accompanied by members of the Staff of the Communications Department of the Air Corps Technical School, Chanute Field, Rantoul, Ill., under the command of Captain A.W. Marriner, Director of Communications, were on an inspection visit to plants and laboratories of manufacturers of radio and electrical equipment. The places visited were Wright Field, Ohio; Schenectady and Mitchel Field, N.Y.; Boonton, N.J., and Bolling Field, D.C. The faculty members, students and instructors participating in the trip were Captain A.W. Marriner, 1st Lieut. M.N. Stewart, 2nd Lieuts. R.L. Schoenlein, L.D. Fator, A.W. Shepherd, D.C. Doubleday, R.I. Dugan, R.E. Holmes, L.C. Westley, D.B.White, Technical Sergeant A.L. Revert and Mr. C.W. Richard, Chief Instructor.

V-6289, A.C.

FIELD MANEUVERS OF THE 91st OBSERVATION SQUADRON

Field maneuvers of the 91st Observation Squadron, Air Corps, were held at Camp Rodeo, Salinas, Calif., from May 5 to May 19th, 1932, inclusive. On the morning of May 5th, the main body truck convoy left Crissy Field promptly at 6:00 a.m., and started the long trek toward Salinas. Eleven trucks, several passenger cars and one motorcycle made up the convoy which was led by Lieut. A.L. Smith. The truck convoy made good time despite the fact that minor troubles necessitated several brief stops. However, after ten and one-half hours, the convoy rolled into camp at the Salinas Rodeo grounds where it was met by Lieut. Paul C. Wilkins, who had left with an advance convoy one week earlier, and now had all in readiness for the arrival of the main body. Tents were all pitched in neat rows and hot chow awaited the men.

The balance of the personnel fortunate enough to escape riding in the truck convoy either drove down in passenger cars or flew in the four O-25C airplanes which, at the time, were the only ships available for the maneuvers, save for the C-14 Transport and the F-1 Photo ship which were also at hand ready to do battle at the call of the General.

Camp Rodeo was very well suited to the needs of the Squadron, being located only two or three hundred yards from the Salinas Airport which served as the airdrome for the Squadron throughout the maneuvers. The officers' tents were pitched on the north end of the area adjacent to the stadium, while the south end housed the enlisted men. Midway between the two, the mess hall was built. The squadron barber opened his tent flap and prepared for two weeks' business, and an improvised Post Exchange was set up and operated by the Salinas Chapter of the American Legion. Camp Rodeo was all set for the war.

The airdrome was next put in readiness, the entire east end of the field was available for use by the Squadron and was organized as follows: The ships were lined up on the south side of the field, while on the north side the radio station was set up, the operations tent pegged down, the Commanding Officer's headquarters established, and the various other departments, such as engineering, supply, etc., were placed in readiness. Because of the lack of airplanes, the Squadron was greatly handicapped, and it would have been next to impossible to carry out attack missions had it not been for four Pursuit airplanes from March Field, led by Lieut. P.K. Morrill who, with his flight, joined the Squadron on May 8th and stayed with it for several days.

The commissioned personnel of the Camp consisted of Major M.F. Davis, Commanding; Major I.B. March, Flight Surgeon; Captain J.E. Upston, Operations Officer; 1st Lieut. P.C. Wilkins, Supply Officer; 2nd Lieuts. A.L. Smith, Communications Officer; R.B. Robbins, Intelligence Officer; G.G. Northrup, Photographic Officer; J.W. Towler, Engineering Officer; William Ball, Adjutant, and R.W. Merrick, Transportation Officer.

Pilots and observers exclusive of the above list were 2nd Lieuts. J.K. Poole, A.F. Wilkinson, Laddie Miller, Wistar Rosenburgh, J.J. Davis, P.B.Foote, and D.H. Pierce. In addition to the officers regularly assigned to the Squadron, we were fortunate in having Captain W.R. Maris, 6th Coast Artillery; 1st Lieut. D.P. Frissell, 30th Infantry, and four Pursuit pilots from March Field, namely, Lieuts. P.K. Morrill, M.F. Stalder, Anthony Curcio and James McClesky, attached for maneuvers.

On the afternoon of May 8th, a meeting was held at the Heating Plant on Gigling Reservation, at which time General McCleave outlined to the officers of the Air Corps, Infantry, Cavalry and Field Artillery, the plan and scope of the contemplated exercises. The officers of the Squadron had made flights in the morning over the reservation for the purpose of familiarizing themselves with the terrain and locating prominent land features for use later in the exercises.

On Monday, May 9th, the organization became a part of the First Instruction Group and participated in the group maneuvers. Four airplanes were assigned to the Red Forces, and four airplanes were assigned to the Blue Forces. Each force had two observation planes and two Pursuit planes for use in Attack missions. The Blue Force consisted of the 30th Infantry, with one battalion of the 76th Field Artillery attached. With the 11th Cavalry being the Red Force, the exercise was "Attack in a Meeting Engagement," illustrating the principles of the "Service of Security." Observation and Attack planes maintained constant contact with their respective forces, flying a total of 14 hours and 50 minutes during the day.

The flying missions the first day of the exercises consisted of Infantry

liaison and contact, photography and reconnaissance. In addition to several attack missions, messages were dropped from Observation airplanes and messages picked up at the command posts by the observers. In all, the first day's operations were very successful and served to acquaint the pilots and observers with the various things expected of them in their cooperative work.

The exercise on the morning of Tuesday, May 10th, was "Deployed and Position Defense," with the Blue Forces organizing an area for defense from the Red attacking forces. The aerial observation was somewhat handicapped because of low fog, but at 9:00 a.m., the ships took to the air and from that time on, throughout the day, operations were uninterrupted.

On Wednesday, May 11th, the problem was "Pursuit and Rear Guard Action." Because of the difficulty encountered by the ground troops in recognizing their friendly airplanes, it was necessary to have but one ship operating at a time. Thus, a Blue observation ship would work with its troops for a period of twenty minutes and then withdraw across the Salinas River and out of the war zone, allowing the Red airplane to work for a twenty-minute period. This system undoubtedly was the only solution of the problem, and was probably a great help to the ground forces, but it was a disadvantage to the pilot and observer who found it necessary to check in and out of their ground command post every 20 minutes, thus leaving too small a time for actual observation work. However, a ship, after withdrawing from the war zone, could communicate by radio telegraph and radio telephone with the command post or the home airdrome for instructions and thus be ready to observe as soon as the twenty-minute period arrived.

Each day the Fairchild Photo ship would come over the battle area to photograph the troops on the ground. It also carried umpires over the area on these photo reconnaissance flights. At the close of operations on May 12th, the command post of the Blue forces was moved to the Pumping Station on Gigling Reservation as the Blue forces were retreating rapidly but in an orderly manner. The Red forces were close behind and pursuing the retreating force.

As there were no exercises the following day other than night operations to be held at Gigling, the Squadron had a breathing spell. Necessary weekly inspections were accomplished and the airplanes again placed in readiness for flight. The balance of the day was spent in formation flights, radio interplane communications and blind flying. The following day, May 13th, one Observation airplane was sent to Gigling Reservation to observe artillery fire. Three other Observation planes were sent to the artillery range to fly a loose formation and witness the firing from aloft.

On May 14th, the Camp was visited by Brigadier-General Robert McCleave, Commanding General of the Sixth Brigade. Flying missions were carried on as usual and consisted of local flights, blind flying, interplane radio telephone communication and photography.

Major-General Malin Craig, Commanding General of the 9th Corps Area, inspected Camp Rodeo and the 91st Airdrome on May 16th, and witnessed the usual flying missions performed on that day. The four Pursuit airplanes which had aided the Squadron during the exercises departed for their home station, March Field. Blind flying and formation flights were participated in by the officers of the 91st Observation Squadron.

The following day, May 17th, the Squadron worked individually with the 30th Infantry and the 76th Field Artillery. One airplane was dispatched to carry on a liaison mission with the Infantry while one ship adjusted fire for the 76th Field Artillery. In addition to the above missions, an attack mission was carried out against the Cavalry. Photography and blind flying were also engaged in on that date. The missions of May 18th were practically a duplication of those on the preceding day. Infantry contact and liaison, artillery adjustment, together with photography, blind flying and formation training constituted the operations of the day. Following the close of flying operations, the airdrome was closed and tents and equipment were packed in preparation for the return trip to Crissy Field.

Early on the morning of May 19th, the Camp was dismantled and packed on the trucks preparatory for the departure for Crissy Field. By 7:00 a.m., the trucks were loaded and the convoy left Salinas, arriving at Crissy Field at 4:00 p.m. The airplanes departed from Salinas airport at 9:45 a.m., and arrived at Crissy Field one hour later. Two officers and ten men were left at Camp Rodeo as a clean-up detail. Equipment drawn from Presidio of Monterey was returned and the camp closed for another year. The rear echelon arrived at Crissy Field on May 20th.

The two weeks' field exercises at Salinas were of great value to all concerned. Officers of the Squadron had an unusual opportunity to work with the ground troops and to acquaint themselves with the problems of aerial observation in actual combat. All sections functioned exceptionally well and many valuable bits of experience were gained by all members of the Squadron. The 15th Photo Section showed great skill and efficiency in the speed and perfection of the work they turned out. Most important of all was the fact that after flying a total of 188 hours and 25 minutes, and successfully completing many types of Observation and Attack missions, there were no accidents to mar the records.

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TACTICAL INSPECTION OF BROOKS FIELD

The Corps Area Commander, Major-General Edwin B. Winans, conducted the first tactical inspection of Brooks Field, Texas, since it was placed under the jurisdiction of the 8th Corps Area. General Winans was accompanied by Major McLain and Captain Fortier of G-3 Division.

The inspection was begun with an aerial review in which every plane of the field participated, led by Major H.H. Young, Executive Officer. Following the review, a reconnaissance problem, the general situation of which had been handed the Squadron Commanders the previous day, occupied the program. This called for from the Squadron the reconnaissance of a certain area, with a limited time being placed upon the time available to cover the area. Troops of the Second Division were operating somewhere in the area to be covered by the reconnaissance, and operations were divided into three distinct phases, the first, from 8:30 to 9:30, consisting of one mission; the second from 9:30 to 10:30, consisting of movement through the assembly area, and the third, from 10:30 until 11:30, constituting the occupation of a defensive position. Each of the three Observation Squadrons received an independent mission during the period of one of these phases, and the accomplishment of the mission called for immediate radio communication on the discovery of troops, of the location, movements, etc., with aerial photographs of troop movement or concentration.

Radio communication was maintained by each Squadron with its own radio station, negative reports being made each fifteen minutes and positive reports immediately upon securing of information. The problem presented an actual situation that required of the pilot and observer team a practical demonstration of their ability in observation work.

Upon completion of these missions, detailed observation reports were made out and turned in to the Inspector. Following this phase of the inspection, the various Squadrons were called upon to demonstrate simulated artillery shoots, with puff targets, picking up and dropping messages, and a bombing demonstration.

At noon, a critique was held on the result of the handling of the various missions, and in the afternoon there was conducted an inspection of all flying equipment and of the entire post, including quarters, troops and training facilities, school equipment, supplies, maintenance and administration.

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36th SQUADRON TO GO TO LANGLEY FIELD, VA

In a few weeks Selfridge Field will seem an entirely different place. Not physically different, but different in atmosphere, caused by a large turnover in personnel which will soon take place here. The spirit and character of a community depends on the people in it, so with a whole squadron leaving permanently, and many officers going to other posts or being transferred here, Selfridge will be a new place.

The 36th Pursuit Squadron is being transferred to Langley Field. One hundred enlisted men go with the organization, and the following five officers: 1st Lt. Hodgson, 2nd Lts. Wilson, Hegy, Eckert and Mason. We regret to lose the 36th to another post, but know that at Langley it will add to its laurels and continue its reputation of being a "good outfit." One specific loss to Selfridge Field occasioned by the departure of the 36th is bewailed especially by the Post Athletic Officer. Athletics at Selfridge have always had the sterling support of the 36th, and the Post teams always have many from the 36th doing good work for the athletic reputation of the field. This is especially true of the baseball and football teams. Other changes in personnel include the transfer of 1st Lt. Paul W. Wolf and 2nd Lt. George F. Smith to Wright Field, where they will be students in the Air Corps Engineering School. A very important change will be the departure of Major Brower, Commanding Officer of the 1st Pursuit Group, with Major Gilkeson coming to take his place.

V-6289, A.C.

SOLO "BLIND" LANDING ACCOMPLISHED

SUPPLEMENTING the article in the last issue of the News Letter on Lieut. Hegenberger's "Blind" solo flight, the Materiel Division Correspondent sheds further light on this notable accomplishment in an article just received by the Information Division, and same is quoted below, as follows:

"Monday, May 9th, proved for aviation a day of unique accomplishment, marking the first instance in history of a pilot alone in a plane accomplishing a take-off, flight, and landing completely "blind" - that is, by instrument alone, and in a hooded cockpit, with all sight of the earth and sky shut off. The pilot was Captain Albert F. Hegenberger; the plane was a standard service type known as the BT-2C, and the instruments used were the culmination of a series of developments carried on by the Materiel Division over a period of the past several years. With the cockpit completely covered on this occasion, Captain Hegenberger took off, flew away from the airdrome for ten miles, reaching an altitude of 2,000 feet, circled on a return course, found and came into the airdrome and made a perfect landing in the center of the flying field.

In 1929, it will be remembered, a similar demonstration was made by Lt. James Doolittle but with a safety pilot in the front cockpit, as the result of a series of experiments carried on under the auspices of the Guggenheim Foundation. The Guggenheim Foundation Report states "Although the results of these tests showed it is possible to land by instrument alone, the procedure is still in a highly experimental stage and it remains for some interested agency to continue the tests to a point where the process is practical."

The Materiel Division took up the project once more at this point, working always with a view to obtaining practical equipment. This "blind" solo flight is the result. Low cost and standard equipment are the outstanding advantages of this accomplishment.

A pilot approaching a strange airdrome under conditions of fog or storm when still at a distance gets in touch with the airdrome radio station to learn the barometric correction for the landing field, air traffic conditions, the direction of the wind, and the location of the two radio stations outside the field. This "conversation" is carried on over the regular radio sets installed in the airplane. His radio compass leads him to the more remote of the radio stations by indications on a dial situated on the instrument board of his airplane. When he comes immediately above the radio station the dial indicates his position. Through various signals from the portable stations and the boundary markers he is able to orient himself continually. Gradually as he approached the field he has been cutting altitude. He has crossed the remote radio station at approximately 800 feet. At the nearer station his altitude has been reduced to approximately 400 feet. As he crosses the field boundary he cuts his altitude further, throttling his motor to 1,000 r.p.m. and approaching the ground at a decreasing angle of flight. With the aid of the instruments in the cockpit, a landing is easily made into the wind. At all times he is thoroughly aware of the attitude of his plane with respect to the ground. A proper gliding angle is easily maintained and the type of landing is equal to a large percentage of those made in the normal manner with all of the pilot's faculties functioning.

Hundreds of tests have been flown in working out and establishing this new system. Only more recently, however, has the hooded cockpit been used. An observer has been carried in the rear cockpit in all tests with the hooded cockpit until May 9th. This observer was not a pilot but was carried as a safety measure to prevent possible collision with other flying planes. Collision preventive equipment is already planned and will form part of the completed blind navigation system.

The research and ingenuity of several engineers of the Materiel Division, as well as many hours of flying tests, have gone into this new development, but so simple and reliable in operation, so inexpensive in material has it proved that it promises to solve in a thoroughly practical way one of the greatest handicaps aviation has been called upon to face.

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HIGH LIGHTS ON FOG NAVIGATION DEVELOPMENTS BY THE MATERIEL DIVISION

The need for navigation instruments to enable Army pilots to fly in any kind of weather was realized by the Materiel Division as early as 1918. The

activities were intensified in 1918, when Lieut. Hegenberger took charge of the newly organized Instrument Unit at McCook Field. The first instrument suggested for the purpose of flying in clouds or banks of fog was the combination of bank indicator with a turn indicator, suggested by Major Schroeder in 1918. Lt. Hegenberger requested the Pioneer Instrument Co. to build such an instrument in accordance with the specifications of the Materiel Division engineers. Our records show that the gyro turn indicator was developed in 1918 by the Science Department at Langley Field.

The earth inductor compass was developed by the Materiel Division and famous flights were made in fog, clouds or above clouds using this instrument as early as 1923. In one test, Lieut. Hegenberger and Mr. Bradley Jones flew in a DH plane from McCook Field to Boston. From Ohio to the Hudson River, for a stretch of 400 miles, the flight was made without sight of earth.

In April, 1924, a non-stop flight was made from McCook Field to Albany, 600 miles, by instruments alone. All the maps were sealed and verified at the terminal station. None of the occupants were familiar with the country beyond Columbus.

In June, 1923, Lieut. Hegenberger and Mr. Bradley Jones made a round trip from McCook Field to San Francisco, Calif., testing satisfactorily the first model of the artificial horizon. During the flight, they encountered very severe storms over the Wasatch Mountains.

The aural radio beacon was fully developed by the Materiel Division and has been in use since 1924. In 1925, the engineers of the Materiel Division equipped the first air mail plane with radio to be used in connection with the beacon station at the Air Mail Experimental Station at Monmouth, Illinois.

In 1927, research work was initiated for the development of other radio aids for fog navigation and fog landings, as: electric altimeters to show true altitude above the landing surface, electric cables to mark the boundary of the landing field, etc.

In 1928, the Guggenheim Foundation organized at Mitchel Field, N.Y., a series of experiments in order to test not only the possibilities of blind flying but also of blind landing. The Materiel Division loaned to the Foundation Lieut. Doolittle and a wealth of advice as to the kind of instruments and radio aids to be used in these tests. The type of airplane and the use of oleo landing gear were suggested also.

In September, 1929, Lieut. Doolittle gave a demonstration of blind landing, proving that the problem could be solved if a powerful agency coordinated the efforts and the progress made in development of instruments and radio aids.

In February, 1930, the Foundation ceased and all the equipment was transferred to the Materiel Division which intensified the development. Research was initiated in order to perfect new types of boundary markers, radio compasses and radio beacons. The effort culminated in the splendid demonstration given by Captain A.F. Hegenberger on May 9, 1932, when he took off in a service airplane with the cockpit covered and landed at Patterson Field without a safety pilot. This demonstration is a step further in the development of the art and shows that with better instruments and radio aids the efficiency of the aircraft can be greatly improved.

Two of the important facts discovered by the Materiel Division in the development and test of fog navigation equipment are:

a. Fog navigation with good instruments and radio aids requires very little training.

b. Fog landing in the present stage of development requires at least 10 hours' practice over the system utilized.

The next step in the Materiel Division's development program is to simplify the system so that very little training will be necessary for the average pilot to familiarize himself with the manipulation of controls during the blind landing.

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Second Lieut. Minton W. Kaye and Staff Sgt. John D. Meeks, both of the 23rd Photo Section, March Field, Calif., recently completed a week of hard work in eastern California. Cooperating with the Forestry Service, a mosaic map of 1,000 square miles, covering the area between Needles and Blythe, was made, the purpose being to record the present topographical conditions of that area in order that changes may be noted after the completion of the Hoover Dam Project. It was necessary for them to fly at an altitude of 19,000 feet during the mission. Three months of laboratory work will be necessary to complete the map.

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ALBROOK FIELD OCCUPIED BY TROOPS

ALBROOK Field, Panama Canal Zone, with the actual occupation by troops, has emerged from its construction status and taken a place on the list of active Army Air Corps posts. It was formally and officially taken over by the Air Corps on May 13th. The 44th Observation Squadron, commanded by Major E.A. Lohman, having been transferred from France Field, was moved to the new station by planes and the U.S.A.T. CHATEAU THIERRY. Albrook Field, formerly known as the Balboa Fill Landing Field, was named in honor of 1st Lieut. Frank P. Albrook, Air Corps, who died September 17, 1924, from injuries received in an airplane accident on August 12, 1924, at Chanute Field, Ill. He served from April, 1920, to April, 1924, with the 63rd Service Squadron at France Field, and was then transferred to Wilbur Wright Field, where he was stationed at the time of his fatal accident.

The Albrook Reservation consists of approximately 1,000 acres, of which 275 acres are devoted to the actual flying field. The flying field is 7,000 feet in length and 4,000 feet in width and is reputed to be one of the finest and largest under military jurisdiction.

The initial construction work began in April, 1929, when the hydraulic fill was started. This phase of the work covered a period of a year, ending in April, 1930. The dry fill was started at this time and is still being carried on in some sections of the Reservation. The entire construction project has been carried out under the supervision of 1st Lieut. Barney L. Meeden, QMC, who has devoted his complete attention to the assignment since his arrival in the Canal Zone in August, 1930. There are five hangars still under construction. Three of the hangars are on the line while the other two will be used for the shops, Air Corps Supply and assembly and repair.

The barracks and quarters, under construction since December, 1930, were completed in April, 1932, at a cost of approximately $2,000,000. The quarters area consists of 4 permanent field officers' quarters, 32 company officers' quarters, a bachelor officers' quarters, which has 16 two-room apartments, and 31 sets of two-family noncommissioned officers' quarters. The barracks area contains four permanent barracks. Two of the barracks have a capacity of 200 men while the other two have a capacity of 110 men. The next construction bids, which will be let in the near future, will provide for a Dispensary, Fire and Guard House, Motor Transport Garage, Headquarters and Operations Building, Noncommissioned Officers' Club, Officers' Mess, Gymnasium, Swimming Pool, and a building which will house the Post Exchange, Theatre and Enlisted Men's Club.

All of the buildings on the reservation are of cement construction with tile roofs. Within the barracks and quarters area are 1½ miles of paved streets, 3 miles of sidewalks, 2 miles of sewer lines, 1¼ miles of water lines which carry water from two 1,500,000-gallon reservoirs, 1½ miles of electric duct lines, 1¼ miles of telephone duct lines, three-quarters of a mile of storm drains, 2¼ miles of service roads, 15 fire plugs, and 42 street lights. The gasoline storage situation is taken care of by a battery of underground tanks that have a total capacity of 100,000 gallons.

Post and Squadron duties have been allocated to the commissioned personnel as follows:

Major E.A. Lohman, Commanding.

Captain J.K. McDuffie, Executive, Summary Court, Surveying, Finance Officer, Post Auditor, Squadron Adjutant.

1st Lieut. C.E. O'Connor, Post Exchange, Transportation Officer.

1st Lieut. J.G. Pratt, Operations, Intelligence, Information Officer.

1st Lieut. E.W. Barnes, Engineering, A.C. Supply, Ordnance, Parachute Officer

2nd Lieut. A.J. Lehman, Aircraft Inspector, Fire Marshall, Police and Prison Officer.

2nd Lieut. T.L. Bryan, Post Adjutant, Personnel Adjutant, Press Relations, Recruiting Officer.

2nd Lieut. E.M. Day, Mess Officer, O.C. Bachelors' Mess.

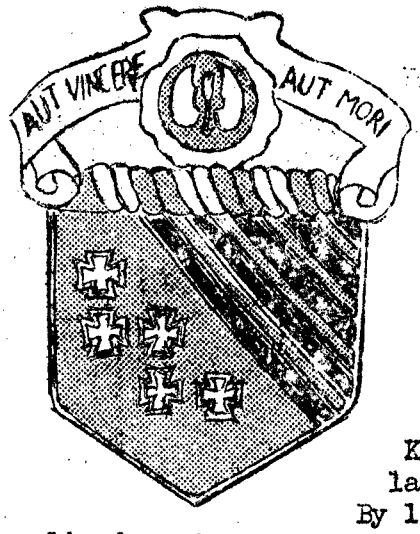
2nd Lieut. N.E. Ausman, Engineering Supply, Chemical Warfare, Library Officer.

2nd Lieut. S.V. Stephenson, Quartermaster, Post Utilities Officer.

2nd Lieut. E.H. Mitchell, Supply, Communications, A. & R., Air Corps News Officer.

2nd Lieut. J.H. Rothrock, Post Signal Officer, Assistant Quartermaster.

AERIAL WAR AT BATTLE CREEK



On Wednesday, May 18th, the 1st Pursuit Group flew to Battle Creek, Mich., and took part in a combined aviation tactical problem with the 15th Observation Squadron of Scott Field. The problem had been arranged to coincide with the command post exercises taking place at Camp Custer. The Group, under the command of Captain Ross G. Hoyt, took off from Selfridge Field at 11:00 a.m. Four Squadrons, including the 17th, 27th, 36th and 94th formed the elements of the big formation of over 70 planes. After taking off, the Group went into route column, and headed straight for Kellogg Field at Battle Creek, where they were to land before flying the problem.

By 12:30 all planes had gotten into Kellogg Field and were lined up in symmetrical array. The squadrons landed by flights, as the field was too small to get a whole squadron down at the same time, especially as the wind was in the short direction of the field. It was close work for the last couple of flights, as the ships already on the ground took up so much room. The last two flights sneaked in over the trees and dropped down very short.

While the junior officers rested, answered the questions of the large crowd of civilians, and protected their airplanes from being carried away as souvenirs, the squadron commanders gathered together to receive the orders from Captain Hoyt, who had worked out the problem in cooperation with the staff officers at Camp Custer. Orders having been given to the commanders and passed on to the flight leaders and element leaders, all squadrons started their ships preparatory to taking off. First went the 15th Observation, and in rapid succession the Pursuit squadrons followed. The first part of the problem was a rendezvous between Pursuit and Observation. The rendezvous was effected east of Battle Creek, and then the combined forces moved west over Custer, the Pursuit flying high over the Observation as protection.

Having completed this part of the problem, the formation broke up and the Pursuit formed a new formation for carrying out the second phase. Flying lower and in more open array, they passed directly east of Camp Custer, theoretically dropping hundreds of fragmentation bombs on a concentration of troops beneath. As the pilots flew overhead, they could see the staff officers on a hill in Camp Custer watching their maneuvering. The second phase of the problem completed, the squadrons reformed and headed straight for Selfridge Field. No more maneuvering could be done. The planes were running short of gasoline and had to return promptly to their base.

All who participated in or witnessed the problem considered the flight a great success. No untoward incident marred the occasion, and the weather was nearly perfect from the point of view of both airmen and groundlings, though the weather man could be criticized for allowing too many air pockets in the upper atmosphere.

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MATHER FIELD AIRMEN COMPLETE GUNNERY TRAINING

The 1932 Gunnery Season for Mather Field, Calif., is now over. Starting with ground gunnery and bombing in March, it lasted until aerial gunnery was completed during the month of May at Honey Lake. The aerial gunnery camp was established by the 55th Pursuit Squadron, which organization, after using it two weeks, turned it over to the 77th Pursuit Squadron. This squadron had the job of breaking camp and bringing the supplies back at the completion of their two weeks. "It is with pride," says the News Letter Correspondent, "that we point to the average score of 1011.9 points for the forty officers who fired the course. This average we believe to be one that is enviable and one to be a record for an entire Group."

"Many comments have been made about the weather at the camp, but we all agree that if reveille had been at a later hour the cold would have not been so intense. Breaking the ice to secure water to shave with was not relished by most of the officers, consequently most of them returned looking like walking advertisements of a certain brand of cough drops."

V-6289, A.C.

THE AIRPLANE WHICH WENT TO COLLEGE

EVEN airplanes are seeking higher education - and higher education is seeking airplanes! A beautiful orange and blue Douglas airplane, the choice possession of the Army Air Corps, has just completed its five months' course on the Heights of N.Y.U. It left the campus with an excellent scholastic record and a host of friends; even prominent members of the faculty freely predicted that it would undoubtedly attain a high position in its chosen sphere of activity.

And now the Heights campus has an "airport" - not the last word in efficiency, to be sure, but an airport just the same. One day, some months ago, our Air Corps officer, Lieut. Samuel Mills, who is in charge of the Air Corps Unit here, decided that an airplane - an up-to-date airplane - should have a place of honor on our campus. Jumping into an airplane, he hopped down to Washington and visited with his general - a visit not without results. Upon his return he secured from Dean Bliss of the College of Engineering, an aviation enthusiast, the use of the West basement in the Nichols Chemistry Building for a "hangar." An interested welcome by the Chemical Engineering Department encouraged matters. Then the Lieutenant mobilized his twelve trusty Air Corps officers of the Senior class, consisting of Dennis Crooke, Joseph Gillin, Hugh Hammond, Howard Hick, John Hunt, James Keefe, Leo Kelly, Chester Kuczynski, Jack Lepre, Gunnar Nelson, John Post and Henry Updegrove.

They all were enthusiastic, and the project was soon under way. A plane which had been used for about 500 hours of flying from Bolling Field, Washington, D.C., was considered qualified and was selected to be sent to college. Now the campus itself seemed too small, so Van Courtlandt Park, two miles distant, was selected as the N.Y.U. field part of the Airport. With Col. S.A. Campbell's blessing and the permission of Park Commissioner Dolan, the Lieutenant flew the Douglas, now known as "Thirty One Dash Sixteen," from Washington and "set her down" among the goal posts of Van Courtlandt, fortunately none the worse for its trip.

The Air Corps Unit now took charge, and in a circle of many interested Bronx neighbors, measured up the airplane and carefully disassembled its structure. A short towing operation deposited it on the back campus. Here, the 450 h.p. Pratt & Whitney Wasp Engine and the landing chassis were removed by usual field or emergency methods. To actually enter the hangar presented a problem comparable to that of a rich man going to Heaven. However, eventually the 2000-pound fuselage was barely moved through an east window, raised above the chemical laboratory tables, turned, and moved the length of the building into the "hangar." A primary training airplane was already there and also a relic of War days: an SE-5 airplane, the last, as the students say, "with whiskers on it." In addition to many hours of rigging and assembly and disassembly by the Air Corps men, one evening engineering class of thirty-two students, and the A.E.-66 class of forty-eight students of the Guggenheim school have received instruction from Lieutenant Mills on this up-to-date machine. The hangar equipment was prepared by the Air Corps men, but made available to others as a little contribution to the general cause.

On Monday, March 14, one section of the Air Corps Seniors, during a snow squall, installed the engine. The following day, the season's coldest and the coldest March 15 on record, the class mobilized, re-established a base in Van Courtlandt Park, and assembled, rigged, and inspected "Thirty One Dash Sixteen." A place for everything and everything in its place seemed to be the Lieutenant's idea. How well the students carried this out may be imagined from a paragraph from the report of his delivery of the airplane to Middletown, Pa.: " * * after assembly and inspection by my Air Corps Unit men, I felt satisfied with the machine. The engine was started with little difficulty and the plane 'taken off' without incident. It climbed out of the Park beautifully and made the flight to Mitchel Field for gasoline and oil and thence to Middletown, Pa., where it was delivered to the Army. The engine, due to valve adjustment and other work, was much smoother and showed thirty additional r.p.m's. Its flying qualities and balance were most satisfactory."

It was the first time that an up-to-date airplane had been available to the aeronautical students on the Heights and possibly one of the first instances where any University students have used their instructional equipment in actual flight.

Now the moral of this little story is this - if you provide up-to-date

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equipment and simulate, in so far as possible, real conditions under which such equipment will be used, the average college man will be interested, serious, conscientious and painstaking. The instructor does not even need to be a good fellow. He simply needs to give his men lessons straight from the shoulder which will clinch their theoretical pursuits and aid them in the future to enjoy work and earn an honest living.

The liaison between theory and practice, the interest manifested by the students, and the real fun Lieutenant Mills appeared to have during the last five months, certainly justified the War Department in sending "Thirty One Dash Sixteen" to college.

-from NEW YORK UNIVERSITY "ALUMNUS."

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FIRST PURSUIT GROUP FLIES TO INDIANAPOLIS, IND.

The 1st Pursuit Group flew an avigation problem on May 30th, taking off early in the morning and, flying a tactical formation, heading for Indianapolis. The Group training program includes long distance flights of this organization in order to give the squadrons practice in map reading and landing by squadrons in strange fields.

Schoen Field, a United States Air Reserve field, was the airport destination at Indianapolis, and all planes arrived there safely except one, which had minor motor trouble and landed for repairs. On landing, Major Brower, Commanding Officer of the Group, was greeted by a representative of Colonel Rickenbacker, President of the Indianapolis Speedway Corporation.

Pilots and mechanics returned early the next day to Selfridge Field, after spending the night in Indianapolis. From a military training viewpoint, Group Operations considered the mission well accomplished.

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PURSUITERS PARTICIPATE IN COMMAND POST EXERCISES

Several officers and enlisted men of Selfridge Field participated in the Command Post Exercises conducted at Camp Custer, Mich., from May 14th to 28th, by Major General Frank Parker, Commanding General of the Sixth Corps Area. When it was definitely determined that Air Corps maneuvers and combined training for Air Corps units had been cancelled for the remainder of the fiscal year, General Parker decided to include an Air Force in the exercises and asked Major Brett, Commanding Officer of Selfridge Field, to organize the headquarters and staff of the 1st Air Division.

In this exercise it was assumed, the Blue and Reds being at war, that the Blue Sixth Army was a member of a group of Blue Armies which were defending a general line extending from the Great Lakes south, and the Sixth Army had for its sector the area near Camp Custer. The 1st Air Division had been attached by GHQ to the Sixth Blue Army.

The first week of the exercise was spent in attending lectures by General Parker and his staff and in organizing the headquarters and staff of the Air Division. In this organization, Major George H. Brett commanded the 1st Air Division; Major Gerald E. Brower acted as Chief of Staff; Lt. Paul W. Wolf acted as G-3; Lt. Thayer S. Olds as G-2; Capt. Ross G. Hoyt served with headquarters at first and was then placed on duty in the Directors' headquarters as an Assistant Air Director in charge of the problem; Lt. James O. Guthrie, Air Res., served as air officer for the 1st Cavalry Division.

During the second week of the exercise, actual hostilities were assumed , and lasted until Friday at noon. During the course of operations, much valuable experience was gained by the officers participating in the writing and transmission of orders, the handling of messages, the operations of the staff sections and the compilation and rendition of reports. The actual results of the assumed conflict will not be known for some time but the Air Corps officers on duty during the exercise took advantage of the opportunity afforded them by Gen. Parker in gaining invaluable information and experience in the duties of command and staff.

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The News Letter expresses its appreciation to Private H.T. Collins, Hqrs. 12th Observation Group, Brooks Field, Texas, for the very attractive cover design which he recently submitted and which features this issue. News Letter readers who are handy with pen or pencil are cordially invited to submit cover designs for future issues.

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GRADUATIONS FROM THE ADVANCED FLYING SCHOOL

The Air Corps Advanced Flying School, Kelly Field, Texas, will graduate a class of 94 students on June 29th. The class consists of 91 flying cadets and 3 student officers, namely, Captain Eberhard F. Baier, German Army, 2nd Lieuts. William T. Hefley, Jr., Corps of Engineers, and Russell A. Wilson, Signal Corps, U.S. Army. Exercises will begin at 8:00 a.m., with an aerial review, all graduates participating. The graduating exercises will be held in the Post Theatre at 10:00 a.m., with Major-General Benjamin D. Foulois, Chief of the Air Corps, delivering the commencement address. Diplomas will be presented by Brigadier-General Charles H. Danforth, Commanding the Air Corps Training Center.

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FIELD EXERCISES FOR BOMBARDMENT SQUADRON IN THE PHILIPPINES

The 28th Bombardment Squadron, with 9 planes and 45 officers and men, recently operated from a pasture near Iba, Zambales, as a base for a period of four days. Iba is approximately 100 miles from Nichols Field. All camping equipment, rations, fuel and oil were transported by air. Not an element of ground transportation between Nichols Field and Iba was used during the entire operation. One Carabao cart was hired from a native for transportation on the improvised airdrome.

During the operation in the field, 53 hours and 30 minutes of flying time was used. The operation conclusively proved that a Bombardment squadron can maintain itself in the field with 100% satisfaction.

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GERMAN GIRL FLYER ENTERTAINED AT FRANCE FIELD

When Amelia Earhart Putnam changed the route of her projected flight to Europe to the northern one instead of via Panama and South America, her first plan, France Field, Panama Canal Zone, lost the patronage of the only celebrity in sight. However, like a ray of sunshine in the slough of despond, in pops a little German girl unexpectedly on a steamer from China. She was Fraulein Elly Beinhorn, and she announced her intention of making a flight through South America to Rio, in continuation of her adventures throughout the world. Her plane was the Klemm light low-wing monoplane, popular in Germany. It is powered with a 110 h.p. Argos engine, and cruises at about 90 miles per hour, with a radius of 750 miles.

Through the courtesy of the Commanding Officer, Major Brereton, who with Mrs. Brereton entertained Fraulein Beinhorn as their house guest, the plane was erected at France Field. The Fraulein was most attractive and had several of the bachelors really extending themselves to see that the time should not hang heavy on her hands. After the plane was tested to her satisfaction, she bade "auf weidersehn" to France Field and departed for Paitilla Airport in Panama City, per point of departure and customs inspection. On June 3rd she left Panama with all good wishes and landed at Cali the same day. Dispatches from South America announced her arrival at Lima, Peru, on June 7th.

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Loud is the praise which is cheerfully being given the 1st Observation Squadron, Mitchel Field, N.Y., for the excellent record made during the annual bombing and gunnery exercises at Aberdeen, Md. Seventeen officers received "Expert" ratings, and the odd man made "Sharpshooter." Of the attached officer personnel, four out of five of them were "Experts" and the fifth made "Sharpshooter" by a goodly margin.

Alluding no doubt to the item in the last issue of the News Letter to the effect that the 94th Pursuit Squadron, Selfridge Field, Mich., had laid out its insignia of the Indian head in colored stones on a sloping bank of ground in rear of the hangars, the Correspondent of the 17th Pursuit Squadron at that field says: "The 17th, too, can brag of a squadron marker in the small earthen area in front of the hangar, but being greater lovers of natural beauty have created our marker from small flowering plants. We not only take issue with the 94th as to the priority but invite comparison on any basis."

FREE WHEELING PROPELLERS

At intervals during the past fifteen years interest has been shown in free rotational propellers, that is to say, propellers that may be driven by the engine but which may not drive the engine. The major reason for this recurrent interest has been the searching for ways and means of reducing the drag of a dead propulsive unit in order that the gliding range of single-engined craft and the flying range of multi-engined craft with such a unit might be increased.

The second reason for the interest is based on a rather poorly grounded knowledge of dynamics, a contention that if a free rotational propeller were being used and some failure occurred in the engine, such as to a rod or a piston, less subsequent damage would occur to the engine since it could not be driven by a "wind-milling" propeller.

The last mentioned advantage claimed for the free rotational propeller is one of degree only. While it may be freely admitted that a conventional engine-propeller unit will turn over more times before stopping in the event of the switches being cut than would an engine equipped with a free rotational propeller under identical circumstances, it must be remembered that enough energy is stored in the rotating parts of the engine alone to do a thorough job of self-destruction. When one adds the amount of energy contributed by the uninjured cylinders which in most cases will continue to fire, it is obvious that sufficient damage may be done to the engine even neglecting that which would be contributed by the propeller.

The matter of reduction of drag by the use of a free rotational propeller has a slightly better case. There is little doubt that a propeller that is free to turn has less drag than one that is fixed to the crankshaft of a dead engine. The actual amount of difference, however, has not been definitely established and, in the opinion of a large number of engineers, it is doubtful if the gain would more than offset the additional weight of the free rotational clutch. In addition, the adoption of such a device would eliminate the beneficial fly-wheel effect of the conventional propeller. Any internal combustion engine can be made to run more smoothly and to idle at lower speeds with a flywheel than without one. As a matter of record, engineers at Wright Field investigating the problem of free rotational propellers found that the satisfactory idling speeds of engines without propellers was from 180 to 270 per cent higher than the same engines with propellers.

Considering only the facts given above, it is indicated that the free rotational propeller has little merit after the disadvantages have been charged off. To complete the argument it may be stated that the rather doubtful drag characteristics of the free rotational propeller are much inferior to the drag characteristics of a feathered controllable pitch propeller and that the latter with its obviously greater advantages is progressing to an advanced stage of refinement in the hands of Wright Field engineers.

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REST CAMP FOR MARCH FIELD PERSONNEL

Work at the site of the new Rest Camp at Big Bear Lake in the San Bernardino Mountains has progressed slowly due to the inability of army truck to maneuver the snow-covered roads leading to the camp. However, two trucks trains of 14 trucks each recently made trips to the camp, bearing lumber and other material for the construction of the one permanent building at the camp, the mess hall. The command will sleep in tents with wooden flooring. The construction work at the camp is under the direction of Captain Claude Duncan, Commanding Officer of the 64th Service Squadron, March Field, Calif.

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Maintenance cross-country flights were just completed by the Attack, Observation, Bombardment and Pursuit Sections of the Advanced Flying School. On June 9th, Lt.-Col. Clagett, the Commandant, accompanied the Pursuit Section on their flight from Kelly Field to Dallas, Muskogee, Fort Sill, Midland, Lubbock, El Paso, and return to Kelly Field.

Recently an enlisted man was being examined at the March Field Hospital. During the examination, the Medical officer asked: "Do you see spots (Spatz) before your eyes?" Greatly agitated, the enlisted man replied: "Great heavens, can't I get away from his face anywhere?"

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WAR DEPARTMENT ORDERS AFFECTING AIR CORPS OFFICERS

CHANGES OF STATION: To the Philippines: 1st Lieuts. Albert F. Glenn and Joseph C.A. Denniston, from Randolph Field; Wm. E. Baker, Kelly Field; Levi L. Beery, Wright Field; 2nd Lt. Lawrence H. Douthit from Chanute Field.

To Chanute Field, Ill.: 2nd Lt. Dyke F. Meyer from U.S.M.A., West Point, N.Y.; 1st Lts. James S. Stowell, Robert W. Harper from Philippines.

To Crissy Field, Calif.: 1st Lt. James T. Cumberpatch from University of California, Berkeley, Calif.

To Kelly Field, Texas: 1st Lt. Walter C. White from Philippines; 1st Lt. John S. Griffith from Selfridge Field.

To Randolph Field, Texas: 1st Lt. John R. Hawkins, from Philippines; 1st Lt. Raymond E. Culbertson, 2nd Lts. Carl R. Feldmann, Norman B. Olsen, Louis A. Vaupre from Selfridge Field; 1st Lt. George A. Whatley, 2nd Lt. Marshall S. Roth from Mather Field; 2nd Lts. Robert D. Dwyer, George F. Kehoe from Mitchel Field; 2nd Lts. Talma W. Imlay, Truman H. Landon, Robert K. Taylor from Fort Crockett; 2nd Lt. Thomas R. Lynch from Langley Field; 2nd Lts. Elder Patteson, Rockwell Field; Donald B. Smith, March Field, Leland S. Stranathan, Bolling Fld.

To Langley Field, Va.: 1st Lt. Uzal G. Ent from Phulippines; 2nd Lt. Russell A. Wilson, from Advanced Flying School, Kelly Field.

To Brooks Field, Texas: 2nd Lt. William T. Hefley, Jr., from Advanced Flying School, Kelly Field.

To Harrisburg, Pa.: Capt. Bernard J. Tooher, March Field, as Technical Supervisor in Middletown Air Depot Supply Control Area.

To Fort Riley, Kansas: 1st Lt. N.R. Laughinghouse, Chanute Field, for duty with Flight D, 16th Observation Squadron.

To Fort Sill, Okla.: 1st Lt. Paul C. Wilkins, Crissy Field, for duty with Flight E, 16th Observation Squadron.

To Fort Leavenworth, Kansas: 2nd Lt. Eugene H. Rice from Brooks Field, for duty with Air Corps Detachment.

To Governors Island, N.Y.: Col. Theodore A. Baldwin from duty with 77th Div. Organized Reserves, N.Y. City, as Commandant, Atlantic Branch, U.S. Disciplinary Barracks.

To Los Angeles, Calif.: Captain Ira C. Eaker, Bolling Field, to University of Southern California, for duty as student.

To Army Industrial College, Washington D.C.: Captain Arthur W. Brock, from Office Chief of the Air Corps, for duty as student, 1932-1933 course.

To Maxwell Field, Ala.: 1st Lt. Julian B. Haddon, Office Chief of Air Corps, for duty as student.

To Office of the Chief of Air Corps, Washington, D.C.: 1st Lt. Harry A. Halverson from Randolph Field.

To Rockwell Field, Calif.: Captain Horace N. Heisen from Mather Field.

To Wright Field, Ohio: Capt. Vernon L. Burge from Philippines.

To Fort Crockett, Texas: Capt. Joseph H. Davidson from Philippines.

RELIEVED FROM DETAIL TO AIR CORPS: 2nd Lt. William A. Hampton to 14th Coast Artillery, Fort Worden, Wash.; 2nd Lt. Donald R. Patterson to Infantry, 2nd Div., Fort Sam Houston, Texas.

DETAILED TO AIR CORPS: 2nd Lt. Robert G. Turner, Infantry, and to Randolph Field, Texas, for flying training commencing July 1st.

PROMOTIONS: To Lieut.-Colonel: Major Alfred H. Hobley, rank June 1, 1932; To Captain: 1st Lieuts. Edgar E. Glenn, rank April 26th; John W. Monahan, Ernest E. Harmon, Cortlandt S. Johnson, Charles C. Chauncey, Walter E. Richards, Robert E. Selff, rank May 1, 1932; Homer B. Chandler, May 14th; Carl W. Pyle, May 23d; John M. McCulloch, Richard K. LeBrou, Charles W. Sullivan, rank June 1, 1932; To 1st Lieutenant: 2nd Lts. Narcisse L. Cote, April 26th; George H. Sparhawk, John F. Guillett, Dixon M. Allison, Joel G. O'Neal, Alva L. Harvey, May 1; James W. Andrew, Charles A. Ross, George J. Eppright, Frank D. Klein, rank June 1, 1932.

1st Lieut. Frederick M. Hopkins, Jr., has been assigned as Assistant Commandant of the Air Corps Engineering School, Wright Field, Ohio, July 1, 1932, vice Captain Grandison Gardner, relieved.

Captain Guy H. Gale, who graduated from the Air Corps Tactical School, Maxwell Field, Ala., this month, was assigned to duty at Indianapolis, Ind., as Instructor of the 38th Division Aviation, Indiana National Guard.

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COLLISION ACCIDENT HAS A HAPPY ENDING

DURING a training flight of the 94th Pursuit Squadron near Selfridge Field, on June 2nd, two planes came together and were so damaged that they became uncontrollable. Once again the parachute proved itself the boon to military aviators that it is, for both pilots extricated themselves from their perilous predicament by "bailing out," and floating to earth suspended under their big silk aerial life savers.

Soon after the happy pilots came to earth (literally and figuratively), your Selfridge Field Correspondent nabbed them and extracted an exclusive statement from each. Here is the statement of 2nd Lieut. H.M. McCoy, Air Corps, who was leading an element and collided with one of his wingmen: "While making a 180° turn in tactical (open) formation, to the left away from the echelon, my left wing man, Lt. Muffat, and I collided when about half way thru the turn. I was leading the third and last element of a nine-ship flight. Immediately upon feeling the crash, I saw my right top wing tip fold back and the ship, a Curtiss P-6E, went into a tight right spin at about 4,000 feet. The lower right wing tore off as I unhooked the safety belt. I remember kicking myself clear of the cockpit and being immediately struck by some part of the ship, probably the tail section. I found myself falling headfirst and got a glimpse of the ship spinning away a short distance to my right. I reached for and pulled the ripcord and was immediately jerked upright as the chute opened just above a thin broken layer of clouds at about 1,500 feet. I pushed the ring up on my wrist and wound the ripcord around it. Just under the clouds, I saw Lt. Muffat land. The chute started oscillating and I stopped it by pulling on the shrouds. A ten-mile surface wind drifted me across an orchard into a plowed field. I landed quite hard and fell forward as three men caught my chute and spilled it. I was a bit stunned but suffered no injuries."

And 2nd Lt. Joseph A. Muffat, Air Reserve, experienced and felt as follows: "On Thursday, June 2, at about 8:15 a.m., my ship, A P-6E and another of the same type flown by Lt. McCoy, collided at an altitude of 4,000 feet, while executing a 180° turn in an open formation. I was flying position No. 3 and Lt. McCoy was leading this element. The turn was to the left. The impact of the collision caused a gash in my chin about three inches long and another in my nose about an inch long. The lower left wing was torn off and the ship went into a steep dive and was turning to the left. My second attempt to leave the ship was successful, and over I went at an altitude of about 1,000 feet. At this time the ship was diving around 250 m.p.h. As I pulled the rip cord I heard an awful crash like thunder and felt a tremendous jerk, and I maintain it's a rather pleasant sensation - considering. I landed in a field with cattle in it and they started toward me. My face was covered with blood and as I looked at those cattle, I thought there might be a bull in the herd. That story about the bull seeing red came to me, and I was over a fence pronto. When I got over to the ship which was in the ground about ten feet, the small crowd shot some questions at me, such as: 'Did you count three?' 'Is the ship insured,' etc. One farmer who didn't know I came down in a parachute looked at me and looked at the wrecked ship and said: 'Well, son, you look pretty good coming out of that wreck; your clothes aint torn or nothin'."

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ASSIGNMENT OF GRADUATES OF AIR CORPS TACTICAL SCHOOL

Air Corps officers graduating from the Air Corps Tactical School, Maxwell Field, Montgomery, Ala., in June, 1932, have been assigned to stations for duty, as follows:

To Command and General Staff School, FortLeavenworth, Kansas: Majors H.S. Burwell, Oliver P. Echols, Delos C. Emmons, Captains Elmer E. Adler, Lawrence P. Hickey; To Office Chief of the Air Corps, Washington, D.C.: Captains Theodore J. Koenig, Charles M. Cummings; To Brooks Field, Texas: Captain Robert Kauch, 1st Lieut. Arthur I. Ennis; To Langley Field, Va.: Captains William O. Butler, Walter H. Reid, 1st Lt. Alfred E. Waller; To Maxwell Field, Ala.: Major Frank M. Kennedy, 1st Lt. Edwin R. McReynolds; To Tactical School as Instructors: Capts. Harold L. George and Emil C. Kiel; To Randolph Field, Texas: 1st Lieut. Howard A. Craig; To Rockwell Field, Calif.: 1st Lts. Caleb V. Haynes and Morton H. McKinnon; To Mitchel Field, N.Y.: Major Carlyle H. Wash, Captain E.W. Raley; To Selfridge Field, Mich.: Major Adlai H. Gilkeson; To Wright Field, Ohio: Captain Victor H. Strahm; To Crissy Field, Calif.: Major Donald P. Muse; To the Philippines: Major Douglas B. Netherwood; To Office of the Assistant Secretary of War, Washington, D.C.: Major Wm. H. Crom.

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NOTICE TO PILOTS: The following instructions have been issued by the Chief of the Air Corps:

Army aircraft, both heavier-than-air and lighter-than-air, will refrain from flying over the following sites for the period July 15th to Sept. 1, 1932: Olympic Village, Los Angeles, Calif.; Olympic Stadium, Swimming Stadium, Fencing Stadium, Art Museum Stadium, Exposition Park, Los Angeles; Olympic Auditorium, 18th St. and Grand Ave., Los Angeles, Calif.; Riviera Country Club, Santa Monica, Calif.; University of California at Los Angeles, Westwood, Calif.; Rose Bowl, Pasadena, Calif., and Rowing Course, Recreation Park, Long Beach, Calif.

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NOTES FROM AIR CORPS FIELDS AND STATIONS

Material on this and subsequent pages are not for publication.

March Field, Riverside, Calif., May 31st.

Major Carl Spatz, Commanding Officer, 1st Bombardment Wing, and Captain Frank O'D. Hunter, Commanding Officer, 17th Pursuit Group, both left this station via air on May 14th and 15th, respectively, for Dayton, Ohio, where they took part in a conference of the Pursuit Board at Wright Field. After the meeting at that place, Major Spatz proceeded to Buffalo, N.Y., to inspect mockups of Pursuit planes, thence to Langley Field, Va., where he delivered his P-12C Pursuit plane. Captain Hunter flew his Boeing XP-936 low wing Pursuit plane from Wright Field to Buffalo on the same mission as Major Spatz. From that point he flew to Washington, D.C., for a conference with the Chief of the Air Corps on Air Corps matters, leaving his XP-936 at Bolling Field. He then proceeded in an O-38 to Langley Field to pick up Major Spatz and returned to Bolling Field. From that point they both returned to March Field in the O-38.

Nine Bombardment planes of the 11th Bombardment Squadron, under command of 1st Lieut. Charles H. Howard, departed this station on May 20th on an interesting trip to Yosemite National Park. The trip north from March Field to the Park was by way of Death Valley and Mount Whitney. Landing was made at Merced about mid day of the 20th, and from this gateway to the Yosemite the party embarked in automobiles for the journey into the reservation. They returned to March Field May 22nd, having flown over the lowest spot in the United States, 276 feet below sea level, and Mount Whitney, the highest point, and one of the wonders of the world.

War Department orders are taking three of March Field's officers to other fields. The list includes Captain Earle G. Harper, Post Signal Officer, and at various times since coming here in 1927, Commanding Officer of the 47th School Squadron, 70th Service Squadron, and 31st Bombardment Squadron. He leaves on the July transport for Chanute Field. On this transport, with Mitchel Field as his destination, will be Captain Leo F. Post, who was until recently Commanding Officer of the 70th Service Squadron as well as Post Athletic Officer, and incidentally the spirit behind the big league baseball park in which the present 8-team Intersquadron Baseball League stages its games. Second Lieut. James A. Ropin, 11th Bombardment Squadron and Adjutant of that organization since 1929, left on the USAT REPUBLIC on May 25th for the Philippine Department. It is with regret that the personnel of the field bids each of these officers good-bye, and they carry the best wishes of the entire command.

Kelly Field, San Antonio, Texas, June 1st.

Lieut.-Col. Frank M. Andrews, Office of the Chief of the Air Corps, was recently on detached service here undergoing instruction in blind flying. Col. and Mrs. Andrews motored to San Antonio and their many friends at Kelly Field and San Antonio enjoyed their visit.

Capt. Harry Weddington, in charge of the Reserves in the North Texas District, was on detached service at Kelly Field for the past week taking a course in blind flying. At the same time, Captain Giggin and Lieut. Mattern, Reserve Officers from Capt. Weddington's district, paid Kelly Field a visit to gather information which would be of assistance on their proposed round-the-world flight scheduled to start in June.

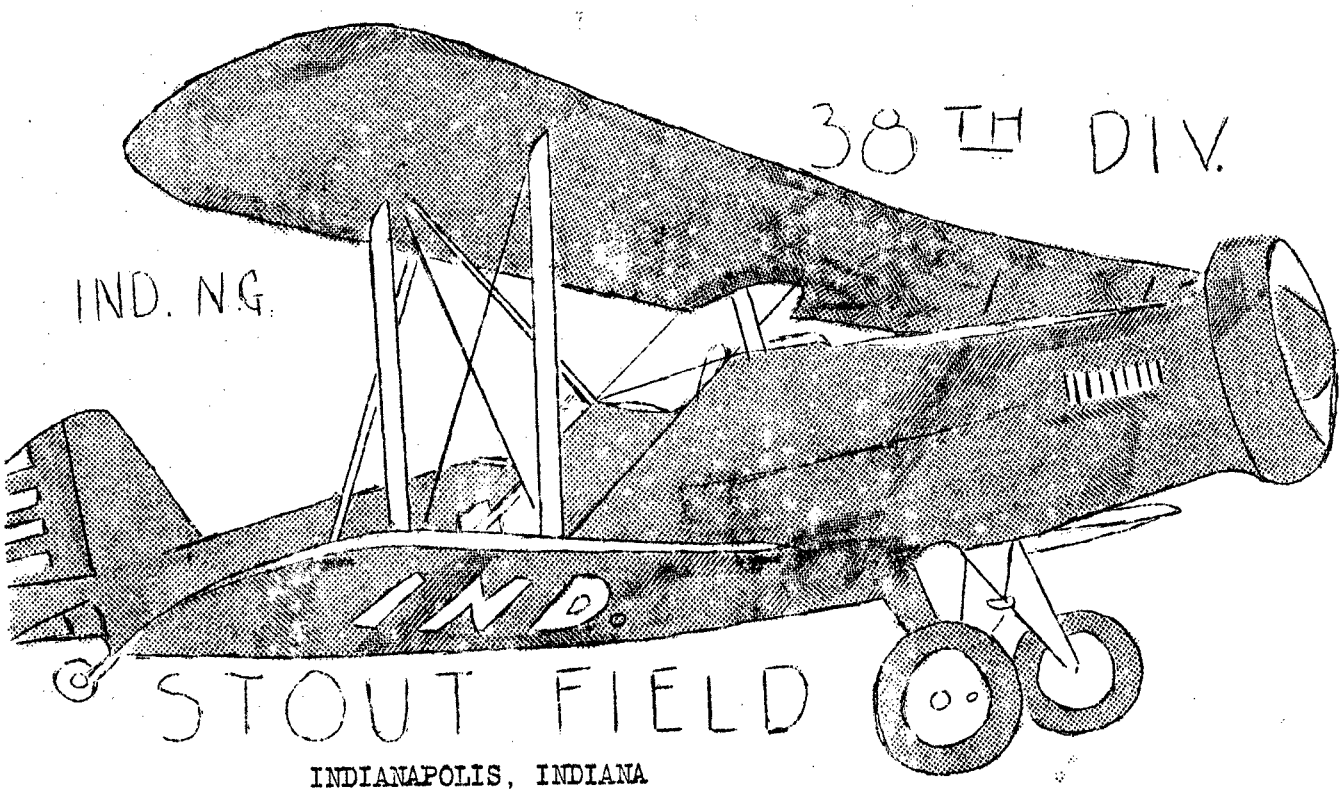
Lt. George H. Beverley departed May 31st on 3 months' leave, one month to be spent at his home in North Texas, and two months in Mexico City. At the expiration of his leave he will report to the Air Corps Tactical School at Maxwell Field, Ala. Lieut. Beverley has been an instructor at the Advanced Flying School for a number of years and he will be missed by his host of friends as well as the many polo enthusiasts in this vicinity who have watched this hard riding aviator wield his mallet in numerous polo tournaments.

The Commanding General of the 1st Cavalry Division, Ft. Bliss, Texas, requested the Air Corps to loan that Division one airplane radio set for use in maintaining communication between the Division Commander and the rear echelon of the Division while on the march during maneuvers at that station. The request received the approval of the Chief of the Air Corps, and the Communications Section, Kelly Field, commanded by Capt. Perry Wainer, removed a BC-157 set from a plane, packed and dispatched it by truck to Fort Bliss the same day. Air Corps personnel will be very much interested in the results of this experiment, which will be reported upon at the completion of the maneuvers.

Major H.H.C. Richards, Executive Officer of the Advanced Flying School, has been instructing the officers, their wives and children on the post in equitation during the past month. At the present time the advanced class and the beginners' class meet three afternoons a week, with a total of forty students receiving instruction. On Decoration Day, Major and Mrs. Richards entertained the riding class with a picnic on the bombing range. A most enjoyable time was had by all.

Technical Sergeant John Caywood, 41st School Squadron, returned to duty from the Base Hospital at Fort Sam Houston, after a month's illness.

Staff Sgt. Rubert E. Ferguson and Pvt. Harlin Shepard are absent from the 41st School Squadron on furloughs.



INDIANAPOLIS, INDIANA

The Squadron congratulated Master Sergeant John C. Hansen, who at an impressive ceremony on last drill night was presented with the Purple Heart Decoration recently authorized by the War Department. The presentation was made by Major R.F. Taylor, Commanding Officer of the Squadron. Captain A.M. Guidera read the citation relative to the award of decoration. Sergeant Hansen has several other service badges earned during his long service of over thirty years.

We are glad to welcome Captain Guidera back to the Squadron after his illness at Walter Reed Hospital, but likewise we are sorry that he is leaving for a leave of absence, at the expiration of which he will join his new station, Langley Field, Va. We have enjoyed Captain Guidera's stay with the Squadron very much.

Captain Guy H. Gale, Air Corps, who had just completed a course of instruction at the Tactical School, Maxwell Field, was assigned to us as Instructor, relieving Captain Guidera.

The ex-Service men of the Squadron last month organized an Aviation Post of the American Legion. The Post is known as AVIATION POST NO. 171, and organized with 31 charter members. Major Taylor was elected Commander, with Sergeant Hansen as Adjutant.

The Squadron will move to Fort Knox, Ky., for summer training on August 7, next.

We shall be pleased to welcome any of our Air Corps friends who can find time to visit us at camp during the period August 7th to 21st.

We are happy to announce that 2nd Lieut. Sidney A. Stout has been promoted to 1st Lieutenant this week.

Boston Airport, Mass., June 10th.

Captains Glenn Salisbury and Joseph Wilson are having the Reserves flying from check maps. Flying to various parts of the New York - Boston airways, the pilots take turns checking for corrections and changes. Among the missions accomplished May 14th were Major Bartlett Beaman, checking near Westerly, R.I.; Lt. "Mike" Harlow, Providence R.I. area; Capt. Charles Clark, Medway and Dedham area; Lt. Newhall, Clinton; Lt. Horace White, Southbridge, Mass. These flights, along with the intense training on close formations, are making the Reserve training more interesting every day.

Reserve officers from Bolling Field paid a visit to the Boston Reserve officers on May 14th. The three O-38 planes arrived at 6:35 p.m., and the C-19 Transport arrived at 6:50 p.m. After putting their ships under cover, the Bolling Field group was whisked to the YMCA at Boston, and thence to the Old France Restaurant where, in the atmospheric surroundings of an olf French village scene, a banquet was enjoyed.

Sunday morning they were taken by auto to historical sites and, after a pleasant stay in this city, left for Washington via Albany, Poughkeepsie, Mitchel Field and Newark. Among those who were our guests were Captains H. Wait, Wm. S. Kenyon, Otis F. Tabler, L. McCarty, Lieuts. Howard Behr, B. H. Merchant, William Enyart, J. McFarland and Noble Schilt.

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Mather Field, Calif., June 15th:

One of the several incidents occurring during our stay at Honey Lake was the washing out of one of our C-14's. Lieut. Kelly, returning with a load of men and supplies from Mather Field, was the pilot in this particular transport. Due either to the high altitude of the field or the heavy load, one wing dropped and the pilot was unable to bring it up before it dug into the ground. The plane swung around, ripping off the landing gear and breaking off the right wing tip. No one was injured, although the plane had to be salvaged.

Flying training is in full swing in preparation for our trip through the Northwest. The 55th Pursuit Squadron is training in various formations and the 77th Pursuit is spending its time in perfecting various tactical maneuvers in order to show the populace of Medford, Portland, Vancouver, Wenatchee and Spokane the various tactics of a Pursuit unit in war time. All in all, we believe the Group will make a creditable showing and a name for itself, and that all pilots will thoroughly enjoy the trip. Another trip is planned later which will take in a portion of Nevada and the Southern part of California. The same type of maneuvers are planned for this trip as on the trip North, and the Group will be gone from the home field several days.

77th Pursuit Squadron: "Springtime in the Rockies" may sound very well in song, but "Maytime in the Sierras" isn't so hot (both literally and figuratively). Honey Lake wouldn't be so bad were it not for early reveille, the bears that bothered Heinie Deerwester, and the invisible black dog and two visible deer that haunted Lieut. Hopkins. The Acting First Sergeant bore marked resemblance to a Boer farmer, but defied all the laws of nature by mating a red beard with dark brown hair and a gray moustasche.

Sgt. Kosub is beginning to believe that a little knowledge is a dangerous thing - a painful wisdom tooth threatens to jeopardize his trip north with the 20th Pursuit Group. Another case where ignorance would be bliss.

"Are you listenin' Dear?" is the new cry when radio planes fly over certain homes. I reckon the only solution is to equip only bachelors' planes with radio. Imagine the consternation of the poor wife who is told (via radio) "If you hear me, go in the house and tune in on 1000 Kilocycles". Just another "If you don't get this letter, let me know" case.

55th Pursuit Squadron: The 55th Pursuit Squadron finished its aerial gunnery season this month with a rather enviable record of an average score for tow targets of 167.3. This gave the Squadron an average of 1068.6 for all phases of gunnery and bombing. Even more enviable is the Squadron record of not having killed a single deer (with apologies to our contemporaries).

The Squadron is now busily engaged in practicing show formations in preparation for a trip to Oregon and Washington. Lieut. Roth is industriously whipping a nine-ship formation into shape for what we all hope materializes into the "Crack" show outfit of the Air Corps. Here's hoping.

The fishing season opened with all of the Squadron anglers trying for the same fish. It was great fun for the fish(?) until Lieut. Ellison got tired of fishing and jumped in and tried to step on it. The fishermen returned empty handed, with the exception of Capt. Gallagher, who unintentionally brought back an especially choice collection of wood ticks.

80th Service Squadron: During the gunnery season at Honey Lake the 80th Service Squadron lost one of the C-14 transports to the depot at Rockwell Field. Lieut. Kelly, 77th Squadron, had the misfortune to break the landing gear and damage the wing while landing at Honey Lake. It was necessary to send the plane to Rockwell, and Lieut. Deerwester, the Post Engineering Officer, was assigned the task of moving it 17 miles to the railroad. With the aid of a large logging truck and a few house movers' jacks, the job was successfully completed.

San Antonio Air Depot, Duncan Field, Texas, May 31st:

Lieut.-Col. Frank M. Andrews, Executive, Office of the Chief of the Air Corps, while on a recent visit to Kelly Field, dropped in at this Depot for a pleasant informal call.

Lieut. C.E. Thomas, Jr., our Depot Supply Officer, has been sick at the Station Hospital, Fort Sam Houston, Texas, since May 17th, having undergone a minor operation (tonsillectomy, etc.). However, he is getting along nicely now, and expects to be back in his usual good shape shortly.

Maj. John V. Weaver, Air Reserve, business man of San Antonio and an active

aviation enthusiast visited the Depot May 25th, escorting a party of sight-seers, consisting of Mr. Nishan Toor, sculptor, of New York City and Paris; Mr. John Dittmar, a prominent citizen of San Antonio and Mr. Davis of the Artists' Inn of this city.

Lieut. Lucas V. Beau, Jr., Air Corps Instructor with the Colorado National Guard, Denver, ferried a BT-1 plane to the Depot for overhaul. Lieut. I.W. Ott of Brooks Field, also ferried here for overhaul an O-2H of the Colorado National Guard.

Capt. Warner B. Gates, our Adjutant, returned May 30th from the Gulf Coast where he has been enjoying a short leave of absence.

In the Federal Tenpin League, it was a grand finish for the first bowling league of the Federal employees in this vicinity. The Post Office team was declared champion, with the Duncan Field Quartermaster team winning second place in a roll-off from the Duncan Field Mechanics. The Duncan Field Engineers, Division Post Utilities (Fort Sam Houston) and Headquarters Eighth Corps Area teams tied for fourth place. The Veterans Bureau, San Antonio Arsenal, Duncan Field Flyers, and Normoyle Quartermaster Depot teams finished in order. A new league was reorganized with eight entries - Post Office, Duncan Field Quartermaster, Duncan Field Mechanics, Duncan Field Engineers, Division Post Mechanics (Fort Sam Houston), Headquarters Eighth Corps Area, San Antonio Arsenal, and Division Post Quartermaster (Fort Sam Houston) teams, the new schedule starting May 31st.

Brooks Field, Texas, June 1st:

Major Frank D. Lackland, Commanding the 12th Observation Group, with his Adjutant, 1st Lieut. Winfield S. Hamlin, made a flying trip on May 11th to Port Lavaca, the Group Gunnery camp, where the 88th Observation Squadron is completing its gunnery.

While the Major inspected camp, Lieut. Hamlin made a survey of fishing conditions. With the assistance of Mr.Sgts. Walter M. Blakey, Lewis B. Flynn, and Staff Sgt. Opal E. Henderson, seven red fish were made ready for transportation back to Brooks Field, the largest of which weighed eight pounds, and for a total weight of 35 pounds. A bushel of oysters were also gathered to use as a chaser.

Major Lackland reports that his arm got tired answering salutes, until he discovered the men were not saluting, but were slapping mosquitoes.

Scoring was being handicapped due to difficulty in distinguishing between hits and mosquito bites on the targets.

The prize fish story related by Capt. Jack Scott, Flight Surgeon, and vouched for by Capt. C.E. Giffin, Commanding Officer of the 88th, is that while sitting on the shore evenings, the fish jump out into their laps. Believe it or not.

War Department orders were received appointing Sgt. Andy Byron, 22nd Observation Squadron, Brooks Field to the July, 1932, Air Corps Primary Flying Class at Randolph Field. Sgt. Byron will train in grade. This soldier, 29 yrs. of age, first enlisted May 23, 1919, and served the major part of his first enlistment in France at Bourges and Paris, and in Germany with the American Army of Occupation. He now has completed twelve years service, and his exceptional record instigated the waiving of Regulations that limit the training of non-commissioned officers to the first three grades. Sgt. Byron already holds a commission as 2nd Lieutenant in the Q.M.C. Reserve. He will be the last enlisted man to receive training in grade in the Air Corps Primary Flying School.

Staff Sgt. Lloyd W. Thacker, 22nd Observation Squadron, also will enter the July class at Randolph Field, to train in grade, his application having been approved some months ago.

Brooks Field, and particularly the Squadron these ambitious men represent, are rooting strongly for their successful completion of the flying course.

Capt. Virgil Hine, and 2nd Lieuts. Truman H. Landon, Mills S. Savage, Thomas L. Thurlow, Daniel W. Jenkins, Air Corps, and 2nd Lieuts. Walter G. Edwards, Luther J. Fairbanks, Earl F. McIntyre, Theron A. Wilbanks and Don W. Smith, Air Reserve, Fort Crockett, Texas, with 11 enlisted mechanics, arrived at Brooks Field May 14th, to participate in maneuvers with the Second Division at Fort Sam Houston. They brought ten A-3B attack airplanes, equipped not only for normal attack missions, but for laying smoke screens. Brooks Field was delighted to offer hospitality, the officers being quartered at the Officers' Club, and

the enlisted men attached to Squadrons on the Post. Capt. Hine was busily renewing acquaintances, and noting changes at the Field where he formerly was Adjutant.

War Department orders were received assigning Major Henry J.F. Miller to Brooks Field, effective on or about July 1st. At present Major Miller is on duty with the General Staff School at Ft. Leavenworth, Kansas.

Major H.H. Young, Brooks Field Executive Officer, is conducting a class on the vital subject of Interior Guard Duty, with the entire commissioned personnel of the Post, as well as the non-commissioned officers of the first three grades attending.

The 22nd Observation Squadron, commanded by 1st Lieut. A.S. Heffley, recently participated in night flying training.

The second monthly Field and Track Meet was held at Brooks Field May 28th. The 58th Service Squadron, commanded by Capt. C.H. Welch, are leading in Track and Field honors, due to their exceptionally excellent showing in the first Field Day held recently. All five organizations stationed here are very enthusiastic over the idea of having monthly field days and are devoting much of their spare time putting in some hard practice.

Lieuts. Mell M. Stephenson, Jr., William Beverley, Jr., Mack O. Travis,Jr., Howard C. Stelling, Reuben L. Spickelmier and Lewis J. Conners, Air Reserve, were stationed at Fort Bliss, Texas, for three weeks where they cooperated with the First Cavalry Division ground troops.

The 88th Observation Squadron, commanded by Capt. C.E. Giffin, A.C., held preliminary and record bombing practice at Brooks Field during the week of May 23 - May 30th.

Second Lieuts. Samuel O. Redetzke, Carl R. Storrie and Larry N. Tindal, graduates of the Air Corps Technical School, were ordered to Brooks Field for duty.

Major H.H. Young, Brooks Field Executive Officer, was unanimously elected President of the Officers' Club, vice Capt. Louis R. Knight, who was ordered to the School of Technology at Boston, Mass., for duty.

Lieut. J. H. Hicks, Commanding 1st Photo Section, was on duty with General Headquarters, Second Division, as Photographic Officer, during the maneuvering period.

Lieut. Edwin W. Rawlings who recently completed a tour of foreign service in the Hawaiian Department, reported to Brooks Field and was assigned to the 12th Observation Squadron for duty.

Fort Crockett, Texas, June 10th:

An annual training and tactical inspection of the Third Attack Group was conducted June 1st by Major-General Edwin B. Winans, 8th Corps Area Commander, and Staff. After their inspection of the line, hangars and administrative work, an aerial review was flown for them.

Lt.-Col. Horace M. Hickam, arrived here June 1st for a two-days' visit, while flying a P-12 on an extended cross-country flight from Bolling Field.

Major Davenport Johnson whom Col Hickam will succeed as Commanding Officer of this Group, the latter part of June, will become a member of the General Staff of the War Department at Washington.

According to press release from Washington, the Third Attack Group will not move to Barksdale Field, Shreveport, La., this fiscal year, as earlier reports had planned, but will remain at Galveston for an undetermined period.

Capt. Roy W. Bradley, Chaplain, reported to this station for duty and is holding his services in the service club building.

Field Maneuvers were held at Camp Hulen, Palacios, Texas, from May 7th to 16th. Officers and enlisted men enjoyed the outing the maneuvers offered, despite the fact that they were continuously the victims of beetles and insects of every description.

Lieut. Nathan F. Twining reported for duty with the Group, June 4th. He was formerly with the 26th Attack Squadron, Hawaii.

Lieut. John H. Davies, reported here for duty from Luke Field.

Chanute Field, Rantoul, Ill., June 7th:

The Summer Schedule was placed in effect at the field and the Technical School, starting June 6th. Summer hours are from 7:00 A.M. to 1:00 P.M., with a short mid-forenoon recess period.

The Hoopeston Chamber of Commerce held its weekly meeting at the Officers' Mess, Chanute Field, on June 2nd. The Commandant and 14 officers of his staff attended. The speakers of the day were enthusiastic in their references to the opportunity to become acquainted with the Air Corps Technical School, its equipment, methods and personnel. After luncheon the party was joined by ladies and proceeded to the flying line, where group photographs were taken. The early afternoon was spent witnessing flying operations, followed by an inspection visit through the departments of the school with members of the school staff as escorts.

Second Lieut. Fred O. Tally, seriously injured in a recent automobile accident caused by crashing into a concrete culvert when he was blinded by a spotlight, is recovering. Soon after the accident he was transferred to the Station Hospital at Fort Sheridan, Ill., where for several days his condition was not only critical but his recovery doubtful. Lieut. Tally was on duty as student in the Maintenance Engineering Course.

The officers and ladies of the field entertained at the monthly club dance on May 28th, approximately eighty couples attending. The fifth of a series of "Dancing Dinners" of the season 1931-1932 was held by the Officers' Mess on the evening of May 19th. About sixty guests attended in couples and in dinner parties.

The Chamber of Commerce of Hoopeston, Ill., on May 24th, entertained Lieut. Col. James A. Mars, Commanding Officer and Commandant, and several officers of his staff at luncheon at Hoopeston, some thirty miles northeast of Rantoul. Those attending with Col. Mars were Major Lloyd W. Ballantyne, M.C.; Capts. Walter Bender, Samuel C. Skemp, S.M. Connell and Fred S. Borum, A.C. and Simon Jacobson, Q.M.C.; 1st Lieuts. W.C. Farnum, N.R.Laughinghouse, Herbert W. Anderson, A.C., and F. Herbert Hoehlman, Chaplain. Col. Mars was guest speaker and stressed the value of coordination and cooperation between civilian organizations and the military establishments, in matters of mutual interest.

44th Observation Squadron, Albrook Field, Canal Zone:

With the arrival of the Squadron at Albrook Field, on the Pacific side, a new phase of Air Corps activities was inaugurated. Airplanes were discarded for wheelbarrows and thickness gauges and Crescent wrenches were replaced with picks and shovels. In other words, the outfit went to work, from seven in the morning until four in the afternoon faced with all the problems to be found in the opening of a new field. Although the afternoon "siesta" seems to be an old Spanish custom and one usually practiced in the tropics, the tremendous amount of work remaining to be accomplished necessitates a full eight-hour program of fatigue.

The entire personnel, both commissioned and enlisted, is busy leveling ground preparatory to grass planting. While this sounds easy when relegated to typed words, an example may be found in the fact that in one quarters area alone, 200 loads of dirt were removed and approximately 200 loads remain to be disposed of. Then, too, the unsodded area presents a distinct problem with the rainy season coming on. The Quarters area is situated on a hill and following one heavy rain last month fully a thousand yards of dirt were washed away and must be replaced.

The work is progressing steadily, but the organization is hampered considerably due to the lack of adequate equipment. All trucks are being loaded by the old pick and shovel method, whereas a mechanical shovel would not only speed up the work but would release a number of men for other types of labor.

Although the work remaining to be done seems unlimited, the burden was materially lightened through the constant cooperation of 1st Lieut. Barney L. Meeden, Q.M.C., in charge of construction. A great deal of work allocated to soldier labor was accomplished by spare labor put on the job by Lieut. Meeden. Some relief is seen in the promise of Major General Preston Brown, Department Commander, to move another Squadron here some time during the coming month.

Eight planes were assigned to the Squadron, but only three were brought to this side, the remaining five having been loaned to the Seventh Observation Squadron at France Field. Tactical training was virtually abandoned, and what training will be carried out, including flying time for enlisted men, will be done in the three O-19C's now at Albrook Field and one transport to be loaned by France Field.

The Squadron is occupying one of the smaller barracks, but there is ample space in each squadroom, which is a pleasant change after the crowded conditions

prevalent at France Field. Another innovation greatly appreciated by the enlisted personnel is the presence of hot water for use in showers. This is a distinct feature as there are no other barracks on the Isthmus with hot and cold showers. Another outstanding item is the installation of an ice machine in each kitchen.

A temporary Post Exchange, with 1st Lieut. C.E. O'Connor as Post Exchange Officer, is now functioning in one of the unoccupied barracks and will remain there until the construction of an E. & R. building.

Mitchel Field, Long Island, N. Y., June 2nd:

Aberdeen's excellent nine-hole golf course furnished the First Observation Squadron with exercise and entertainment during their sojourn in the swamplands of Maryland. Paul Waterman, lately of the Attack Group and points south, took first place in a handicap golf tournament held by the Squadron Officers.

Lieuts. Mulligan, DeMarco and Jacques spent ten days at Fort Hoyle, Md., from May 16th to the 26th, adjusting fire and towing targets for the Artillery units stationed there.

Lieut. McLeod carried out a successful liaison mission with ground troops in the vicinity of Langley Field, May 17th to 20th.

The 61st Service Squadron received and is using a new crane, designed for removing engines from airplanes as well as installing them therein. It is a portable affair, mounted on a Caterpillar "10" Tractor. With it, engines can be changed in any type of ship at a great saving in time and labor.

The Fokker, piloted by Lieut. Herbie Orr, left Mitchel May 28th for its regular trip to Chanute Field, carrying students to the Technical School.

The sudden increase in broken hearts throughout the land might readily be explained by the desertion from the ranks of the bachelors of another of our enterprising young officers. Lieut. J.K. Gerhart took unto himself a bride, Miss Helen O'Brien, on the evening of May 20th, at Christ's Episcopal Church, Chicago. The couple are now in Canada on their honeymoon.

It must be in the air. "In spring a young man's fancy etc.,etc.,etc." Whatever the cause, another bachelor was not to be outdone by Brother Gerhart. Our good friend Dave Laubach is soon to take the fatal step. Miss Jean Hatcher of New York, is the unfortunate young lady. They will honeymoon in Maryland.

The Fifth Observation Squadron left Mitchel on June 2nd, flying in a 12-ship formation, and headed for Aberdeen for gunnery. They promise to surpass the record made by the First. That, however, remains to be seen.

Every day is moving day at Mitchel, or so it would seem. Slowly, but surely, singly and in pairs, the new officers' quarters are being turned over by the contractors. Interior decorators, landscape artist, etc., are in evidence on all sides. Truly, in time this station will be a spot of beauty.

Selfridge Field, Mt. Clemens, Mich., June 10th:

17th Pursuit Squadron: The Squadron welcomes the transfer of Lieuts. Slaght, Harvin, Pursley, Brown and Pitman from the 36th. The vacancies from various causes which have occurred, and the termination of active duty of several Reserve Officers which will occur on July 1st, made these pilots doubly welcome.

Not so long ago the 17th was reported as chortling gleefully when the four P-6A's were transferred to the 94th to fill their fast thinning ranks. The above mentioned airplanes are now back in their old places in our hangar.

27th Pursuit Squadron: One day not long ago the pilots and mechanics of the 27th sat back with a sigh of relief and for the first time in weeks ceased lunching off their finger nails. The reason for this sudden change in diet was an apparently final decision that the squadron would not be required to exchange its admirable P-12E's for the somewhat temperamental P-16's of the 36th Pursuit Squadron, due to be transferred to Langley Field in a few days.

However, to prevent things from being too pleasant and to keep the 27th gripsters in good form, it was announced that five pilots of the 36th had achieved the distinction of transfer to the 27th, so now Lieuts. Thayer Olds, Mark Bradley, M.D. Blaine, E.B. Franklin and J.D. Lee are among the select of Selfridge. They are adapting themselves to proper Pursuit training in satisfactory fashion.

Bradley made a rather interesting attempt to save his old 36th insignia, a

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weird head with drooling jowls, sewn to his flying jacket, but was convinced after he felt the full weight of the 27th argument.

Lieut. Francis Griswold, as usual with the advent of warm weather, is emulating any very ancient mariner and occasionally is seen several yards out in the lake in a water-logged and barnacle-ridden old tub that is being nudged spasmodically through the water by an asthmatic outboard corn-popper. A stiff four-mile wind last week held Admiral Griswold off shore for forty minutes.

However, Lieut. George F. Smith, also of the 27th but soon due to be relegated to the Engineering School at Wright Field, is the only proper sailor on the post, being post marine officer, and as such keeps the rather considerable Selfridge flotilla in questionable trim to rescue any planes that might be forced down in the lake. The chief difficulty is that the Smith navy can't brave the waves because the post amphibian planes, maintained to succor both land planes out of their element and our elementary navy, are not permitted to make water landings due to the doubtful ability of the navy to rescue them in turn.

On June 24th the entire 1st Pursuit Group will take off from Selfridge Field and head west for Chicago, for the purpose of taking part in the great military maneuvers in celebration of the George Washington Bi-Centennial, under the command of Major General Frank Parker, Commanding General of the Sixth Corps Area.

Under the direction of Major G.E. Brower, Commanding Officer of the Group, all squadrons in the Group are undergoing strenuous preparation for this trip. Every effort is being made to put in commission all available planes, so that full eighteen-ship squadrons can train for and take part in the maneuvers. Many formations are flown every day to perfect the efficiency of the squadrons in their tactical and drill formations. The ground crews are kept busy servicing and keeping the ships in trim for their long hours of work. But the labor and care involved is bearing fruit, for all squadrons are showing excellent flying, and should make a good impression on the military and civilian population of Chicago.

Scott Field, Belleville, Ill., June 1st:

The Signal Corps loft at Scott Field recently entered five of its birds in the show held by the Springfield Pigeon Club at Springfield, Ill., on May 29th, and succeeding in placing all five in first and second classes, although sixty birds of the homing pigeon class were entered. The Scott Field birds won firsts in the class for dark check cocks and for birds of unclassified colors. They also took second places in red and blue bird classes.

40th Division Aviation, Calif. National Guard, Los Angeles, Calif., June 4th:

Federal Inspection of this unit was made May 15th by Capt. E.B.Bayley, A.C., unit instructor. Col. Ned Orr, 40th Div. Signal Officer, was a guest of the squadron at luncheon.

In the afternoon a joint problem was carried on between this squadron, the Army Air Corps Reserve of Long Beach, Calif., and the Naval Reserve Aviation of the same station. The problem took place at sea, off the coast between Fort MacArthur, San Pedro, and Oceanside, Calif. It involved the time element, interception and radio communication, and light Bombardment, Observation and Pursuit tactics. After the completion of the problem, all ships landed at Long Beach, where a critique was held.

The same afternoon one of our radio-equipped planes, piloted by Lieut. J.V. Wallen, with Staff Sgt. A. Windberg as operator, flew several miles off shore and welcomed to California, and in behalf of the 40th Division, Calif. N.G., via radio, Major-General G.E. Leach, Chief of the Militia Bureau, who was aboard the transport REPUBLIC some 100 miles at sea, coming from New York to San Francisco, via the Canal. The General appeared to be impressed and pleased as he received the message and sent his reply from the radio room of his ship.

On May 22d, the 115th Observation Squadron was formally inspected by Major-General George E. Leach, Chief of the Militia Bureau, accompanied by Brig.-Gen. Seth E. Howard, The Adjutant General of the State of California; Brig.-Gen. Walter P. Story, Commanding the 80th Brigade, 40th Division, Calif. N.G., and Lieut.-Col. John N. Jeffers, Air Officer, 40th Division Staff. The party thoroughly inspected the troops, flying equipment and all sections. Gen. Leach directed the movements of a plane via two-way radio voice from the ground, and witnessed the tactical operations for the morning, which consisted of a 3-plane artillery adjustment via radio; a 5-plane review formation, 2 planes on aerial gunnery and 1 plane on instrument (Blind) flying. The inspecting group, together with Mrs. Leach and Mrs. Howard, remained as luncheon guests.

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Patterson Field, Fairfield, Ohio, June 3rd.

Fifty-three officers from the Tactical School Staff and student body at Maxwell Field, Ala., visited here May 18th on an inspection tour. An informal hop and buffet supper was given in their honor at the Officers' Club. The occasion was well attended and a good time was had by all.

During April, 19 airplanes were given major overhauls and 18 minor overhauls, while 40 engines were given major overhauls and 24 minor overhauls.

Captain Woody and Lieut. Welsh, Bowman Field, ferried planes to this station for minor repair on May 24th. Lieuts. Horton, Kase, McGregor, Moon and Watson from Maxwell Field, Ala., ferried planes here for major overhaul.

Lieut. Timberlake ferried an O-19B to Pope Field, N.C., May 17th, and Lt. Zeigler a P-12C to Maxwell Field, Ala., on May 26th.

Cross-country flights were made by officers at this station, as follows: Lieut. Irvine to Ft. Wayne, Ind., May 21st; and to Selfridge Field, May 23rd; Capt. Flickinger to Stout Field, May 24th; Lieut. Goodrich with Capt. Howard to Stout Field, May 30th; Lieut. McPike to Bowman Field, Ky., May 25th.

The following officers ferried Air Corps supplies to other stations during the past two weeks: To Chanute Field - Major Sneed, May 16th; Lieut. McPike, May 19th; Lieut. Irvine, May 25th; Lieut. Timberlake, May 28th; To Lunken Airport, Lieut. Ziegler, May 19th; To Bowman Field, Lieut. Asp, May 20th; to Selfridge Field, Lieut. Williamson, May 24th; Capt. Lewis, May 26th.

Cross-country visitors at this station, from May 16th to 31st, were as follows: From Lunken Airport, Lieut. Hart, Capt. Colgan, Lieut. Vigel, Lieut. Trostel, Major Kelly, Capt. Hetch; from Chanute Field, Captains Connel, Skemp, Lieut. White with Lieut. Morrison; from Sky Harbor, Tenn.: Lieut. Catron with Lieut. Potter, and Lieut. Sloan with Major Fox; from Selfridge Field, Captain Whitehead, Lieuts. French, Swain and Bradley; from Bowman Field, Ky., Lieut. Welsh with Lieut. Moran, Lieut. Welsh with Lieut. Keim; from Columbus, Ohio, Lieut. Rogers with Lieut. Zimmerman; Lieut. McConnell with Captain Hawkins; from Detroit, Lieut. Nicol; from Fort Leavenworth, Kansas, Captain Day; from Cleveland, Captain Gill; from Schoen Field, Ind., Lieut. Genare; from Mitchel Field, N.Y.: Lieut. Orr with six enlisted men; from Scott Field, Ill.: Lieut. Clark with eight enlisted men; from Maxwell Field, Major Echols and Lieut. Cummings.

Fort Sill, Oklahoma, May 26th.

As the Field Artillery School enters the home stretch of the academic year, Flight "E" has found itself busily engaged in reconnaissance, surveillance, and adjustment work for the various General Field Exercises. This tactical work is particularly valuable to Air Corps pilots and observers, as service conditions are closely adhered to, both in the tactical handling of the problems and the personnel and materiel employed. The Flight cooperated in seven Field Exercises, actually firing 17 artillery adjustments. Thirty reconnaissance flights were made with Field Artillery students as observers.

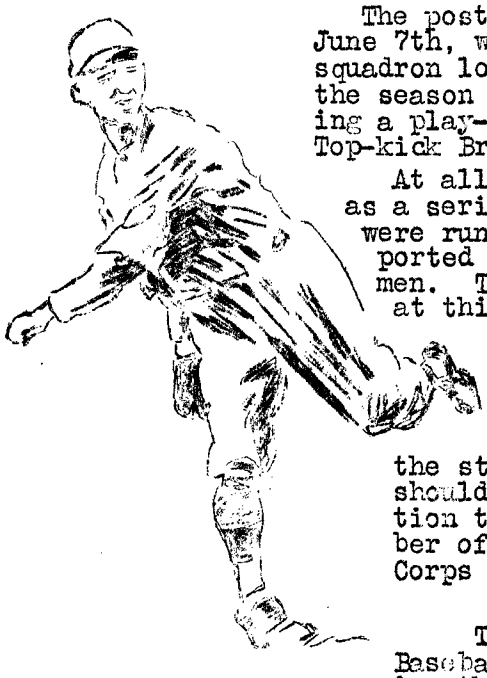
Preliminary conferences were already held and orders issued for the five-day maneuver which winds up the school year. Air Corps activity in connection with this "War" will be greater this year than ever before. An interesting and instructive period is anticipated.

The following pilots visited this station on cross-country trips during May: Major Hanley, Lieuts. F.J. Lauer, F. Wolfe, L.D. Weddington, M.K. Lewis, F.R. Upthegrove and S.R. Brentnall, Randolph Field; Lieuts. H.S. Haughton, J.A. Barnes, B.G. Holloway, D.M. Kesler and H.E. Rice, Brooks Field; Lieut. L.V. Beau and Lague, N.G. of Lowry Field; Capts. Sheldon and Gilchrist, Lieuts. Camblin, Lohr and Freeborn, Hatbox Field; Lieut.-Col. H.H. Arnold, March Field; Capt. O.H. Quinn, Fort Leavenworth.

Lieut.-Col. H.M. Hickam, A.C. (General Staff) visited here May 18th and departed for Denver, Colorado, May 20th.

Lieut. D.J. Ellinger, flying a C-14, arrived from San Antonio Air Depot on May 23rd with approximately 700 pounds of freight and departed the same day for the depot with 1,000 pounds of freight.

The following cross-country trips were made by pilots of this command: To Denver, Colo.: 2nd Lt. Claire Stroh with Capt. R.E. O'Neill, April 29th; 2d Lieut. D.T. Mitchell with Lieut. F. Wolfe, May 2nd, ferrying personnel; To Duncan Field, Texas: Capt. Frank H. Pritchard with Staff Sgt. Tomes, May 2nd, to attend Engineering and Supply Conference; 1st Lieut. Wm. L. Ritchie with 1st Lt. J.P. Kirkendall, ferrying aircraft, May 10th; 2nd Lieut. Claire Stroh with Tech. Sgt. Herb, ferrying supplies; To Oklahoma City, 1st Lieut. Wm. L. Ritchie with 2nd Lieut. F. Goodall, ferrying personnel; To Hatbox Field, Capt. Frank H. Pritchard with Pvt. Wickham, for photographic training, May 20th; To Mineral Wells, Texas: Capt. Frank H. Pritchard with 1st Lt. Roger Wicks, F.A., May 10th, for communications training; To Wichita, Kansas: Capt. Frank H. Pritchard with Staff Sgt. Dugay, May 6th, for navigation training.



The post baseball league at Fort Crockett, Texas, ended June 7th, with the 90th Squadron champions of the inter-squadron loop. The Dice-men of the 90th Squadron shortened the season by winning both first and second halves, eliminating a play-off. Throughout the entire season the boys under Top-kick Braxton demonstrated wonderful ball playing ability.

At all times the 13th Squadron, Champions of 1931, stood as a serious threat to the Dice-men for the post flag, and were runners-up in both halves. These boys were well supported at each game by their fellow officers and enlisted men. This was the first season for First Sergeant Harmon at this post, and with home runs and plenty of hits for extra bases, this Top-kick made himself very popular and added much strength to the Ghost outfit line-up.

Lieut. Truman H. Landon, Post Athletic Officer, will personally manage a post team, consisting of the star players of the four squadrons. This team should have strength to let, and will be strong opposition to any post or minor league baseball team. A number of games have been arranged with other nearby Air Corps posts and city teams of Galveston.

The first game of the Scott Field Intercampany Baseball League was played May 17th, the teams representing the 9th Airship Company and the 24th Airship Service Company being the contestants. The 9th Company won by the score of 3 to 2 in a game featured by excellent pitching and costly errors. The game was won in the ninth on Booth's single, his steal and a single by Bahorich. Kuntz pitched the entire game for the 9th, granting six hits and striking out 10. Phillips, for the 24th, allowed 4 hits and struck out 8.

The other two teams in the Intercompany League are the 15th Observation Squadron and the Staff. The teams are scheduled to play 3 games with each other. The 15th Observation team, broken up by the absence of most of its members on field duty at Camp Custer, Mich., and Camp Oscoda, Mich., will not take part in the League until after their return, about July 1st.

Thus far the 9th Airship won two games and lost one; the Staff won one and lost one, and the 24th Airship Service Company won one and lost two.

Just recently the Great American Life Insurance team in the Commercial League, San Antonio, issued a sweeping challenge to any team in San Antonio for a game, and the San Antonio Air Depot club in the Sunday Morning League took them on Saturday afternoon, May 28th, on their home grounds and put the Insurance boys down 10 to 1. With the bases clogged in the fourth, Howard Fikes (SAAD) socked one to deep right, sending three runs over and putting the game on ice. Three sparkling double plays by the Depot team featured the game. The S.A.A.D. team is leading the Morning League with a clean slate.

The 62nd Service Squadron baseball team copped first honors in the Inter-Squadron baseball competition at Brooks Field, Texas. The fight for first honors was rather one-sided, due to the fact that the 12th, 22nd and 88th Observation Squadrons were on maneuvers, and were handicapped as far as practices were concerned. The 58th Service Squadron is runner-up. A second half was started on June 3rd, and Lieut. A.L. Bump, Jr., Post Athletic Officer, announced that a Post Team will be organized in the near future for the purpose of playing Kelly Field, Randolph Field and Fort Crockett baseball teams.

With threatening clouds overhead and noise of thunder in the distance, the baseball teams of the 17th and 27th Pursuit Squadrons went at each other in the opener of the Selfridge Field baseball season, May 25th. The 17th was favored to win the game, but just to prove that this season will follow no set procedure and will have many surprises in store for the fans, the 27th upset the dope by roundly trouncing the 17th by the lop-sided score of 14 to 4.

The ill temper of the Weather Man upset the schedule somewhat. He poured rain on Selfridge Field all the following week. The second game, June 5th, was a good battle between the 36th Pursuit and 57th Service Squadrons. Captain Whitehead's warriors (the 36th) ended up on the long end of a 7-3 score, a result largely due to "Red" Everett's air-tight pitching. The game did not count in the Post League standings because the 36th is packing up baggage and moving soon to Langley Field, which is to be their new permanent station. But the 36th wanted to play a game before leaving to prove, as Captain Whitehead said, that it was a good thing for the other teams that the 36th couldn't compete for the trophy this year.

Four teams will battle it out for the trophy, the 17th, 27th, 57th and 94th Squadrons. Each team will play two games with the other three teams, and the Squadron League games will end before July 10th, when the first squadron goes to Oscoda for gunnery. In July, a Post Team will be organized to play other army teams and local clubs. The fans have a full season to which to look forward.

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436th Pursuit Squadron, Reserve, Richards Field, Kansas City, Mo. June 14.

As Shakespeare never said, versatility is not without virtue, even in this era of specialization, particularly of the flying units of the U.S. Army Air Corps. The Air Corps Reserve has had its little difficulties in this specializing process, due to the character of its equipment, but the 430th Pursuit Squadron displayed the opposite virtue of versatility on the occasion of the visit of Ruth Nichols, women's altitude champion, to Kansas City.

In providing an escort into the city, Captain Wm. B. Wright took advantage of a favorable concentration of equipment and had Pursuit (P-1C), Attack (O-1E) and Bombardment (B-5A) airplanes in the air at the same time, all piloted by members attached to the 430th Pursuit Squadron, Reserve, of Richards Field. As has been remarked, a stray virtue is still a virtue nevertheless, and favorable concentration of equipment is a big help also.

Pilots participating were 2nd Lt. E.P. Curry in the Curtiss Hawk; Capt. Wm. B. Wright with Lts. M.R. Pincomb and J.N. Going flew the Curtiss Falcon formation, and 2nd Lt. Morris Knight, an old Bombardier from Langley Field, flew the Keystone Bomber with 2nd Lt. A.G. Hunter as co-pilot. Second Lieut. Moon (M.H.) Mullins performed in the Primary Trainer.

The last week in May and the first two weeks in June found the 430th Pursuit Squadron, Reserve, engaged in some fine training trips, arranged by Captain Wm. B. Wright, instructor and commander of the unit. May 27th saw them off to Omaha to take an active part in the National Balloon Race and Air Races, giving performances on each day of the four-day event, using three-ship formations flying simultaneously. Maneuvers included echelons, V's, lines, stacks, inverted V's, and loops in formation. While not meaning to boast or make any comparisons, we would like to quote a paragraph from a letter received from Mr. Phil Henderson, General Manager of the Races:

"The show your men put on was very remarkable, and while we have always had the Regular Army at the National Air Races, I have never seen a better display of flying than your unit did here in Omaha. I have heard a great many favorable comments on your part of the program, and I wish you would express to all the members of your unit who were here our appreciation of their efforts."

Last week Captain Wright led a formation of three O-1E's to Delafield, Wis., to take part in the Commencement Exercises held there for the graduating class of St. Johns Military Academy. The trip was made by way of Chicago.

At the District Model Airplane Contest held in Swope Park, Kansas City, Mo., three O-1E's gave a demonstration of formation flying with the maneuvers mentioned above. A P-1C flown by a pilot of the local unit accompanied with an exhibition of aerial acrobatics.

Personnel on the Omaha trip were Captain Wm. B. Wright, A.C., and the following Reserve officers: Captains J.W. Ranson, J.W. Williams, Lts. J.N. Going, B.A. Sweeney, R.A. Moorehouse, E.P. Curry, T.S. Poquette, M.R. Pincomb and W.E. Lewis. Capt. Wright and Lts. Curry and Poquette made the trip to Delafield, Wisconsin.

Clark Field, Pampanga, P.I., May 23rd.

Captains Hornsby, Ellis, Lieuts. Hardy, Gregg and Murphy are on leave in China at the present time and will take the June Transport from there back to the States. This leaves the Squadron short five officers of the sixteen who are normally assigned. Replacements will probably be sent here from Nichols Field within the next thirty days.

Our present line-up of officers and their duties are as follows: Captain L.R. Hewitt, Commanding; Major I.F. Peak, Flight Surgeon; Lieuts. R.W. Harper, Adjutant; J.B. Burwell, Personnel Adjutant; Y.H. Taylor, Operations Officer; A.R. Springer, Engineering Officer; G.E. Henry, Utilities, Police and Prison Officer; W. Goss, Transportation and Squadron Supply Officer; T.J. DuBose, Mess Officer and Officer in Charge of Barracks Area; J.R. Hawkins, Air Corps Supply Officer; D.D. Fisher, Communications Officer.

On May 13th the Squadron called off work and celebrated Organization Day. Most of the day was devoted to golf, baseball and swimming. That night Sgt. Mitchell arranged a very nice dinner which was attended by all the officers and their families, noncommissioned officers and their families, and, of course, all the men were there early. After dinner, entertainment was furnished for some two hours by a group of cabaret entertainers imported especially for the occasion from Manila by Lieut. DuBose. It was a really good show - "Lucy" apparently being the favorite, although Buster and the Garcia Sisters were warmly applauded.

SERIAL NO. 318. LIST OF NEW MATERIAL ADDED TO INFORMATION DIVISION FILES
May 28th to June 20th Incl.

Available for loan to Air Corps Organizations only upon request to the Air Corps Library, Munitions Building, Washington, D. C.

DOCUMENTS.

A 00.31/2 Rules of Aircraft Liability in the Proposed Federal Merchant Airship Act, by John C. Cooper, Jr. n.p. July 1931. Reprinted from Air Law Review, Vol. II, No. 3.

A 10/192/#671 Twelfth Rhon Soaring Contest, 1931, by Walter Georgii. Nat.Advisory Com. for Aero. Tech.Memo. #671. Wash.N.A.C.A. May,1932. Tr. from "Z.F.M." Vol. 23, Nos. 4 & 5, Feb.29th and March 14th,1932.

A 10/192 #672 Torsional Vibration of Aircraft Engines, by Karl Lurenbaum. Nat.Advisory Com. for Aero. Tech.Memo.#672. Wash.N.A.C.A. May 1932. Tr. from "Z.F.M." Vol. 23, No.4,Feb.29,1932.

A 10,231/8 Flow of Compressible Fluid in the Neighborhood of the Throat of a Constriction in a Circular Wind Channel, by S.G.Hooker. Aero.Research Committee Report & Memo. #1429. London H.M.Stationery Office,1932.

C 70/Italy/3 Gli Aeroplani Caproni Alle Grandi Manovre dell'Armata Aero, per Carlo de Rysky. Milan, Gustavo Modiano, Jan.1932.

D 00.12/105 #292 Recording of Rapid Pressure Phomomena by Means of Semi-Resonance Curve by Kurt Schnauffer,Mat.Div. Dayton,Ohio. May 16,1932. Translation #292 from 1930 Yearbook of the D.V.L. pages 304-314 incl.

D 00.12/123 #113 Ground Loops and the Proper Use of Brakes, by Navy Dept. Bu. of Aero. Tech.Note 113, May 10,1932. Wash. Navy Dept.

D 00.12/123 #114 Service Information for Overhaul of Eclipse Starters by Navy Dept. Bu. of Aero. Tech. Note 114. Wash. Navy Dept. May 12, 1932.

D 00.12/123 #115 Air Heater Operation - Wright Aircraft Engines, by Navy Dept. Bu. of Aero. Tech. Note #115. Wash. Navy Dept. May 11,1932.

D 13.41/21 Radio Telephones and Cables, Ltd. Radio Equipment for municipal Airports. London, Haycock Press, n.d.

D 52.1/431 #161 The Avro 631 Training Airplane (British); a two-seat light biplane, by N.A.C.A.,Washington. May, 1932. Aircraft Cir. #161. From Aeroplane March 23,1932.

D 52.1/431 #162 The D.H. 83 "Fox Moth" Commercial Airplane (British); a three-passenger light cabin biplane, by N.A.C.A. Washington,May 1932. Aircraft Circ.#162. From The Aeroplane March 16,1932.

D 52.1/431 #163 The Breguet 410 and 411 Military Airplanes (French); Multiplace Sesquiplane Fighters, by Pierre Leglise. N.A.C.A. Washington May,1932 Aircraft Circ.#163. From "L'Aeronautique" No. 154, March,1932.

D 52.1/431 #164 The Stieger ST.4 Light Airplane (British); A Twin-Engine Four-seat Low-Wing Cabin Monoplane. N.A.C.A. Washington May,1932. Aircraft Circ.#164. From "Flight" Apr. 22,1932.

D 52.1/Bristol Fighter 49 Effects of Sideslip on Rolling and Yawing Moments by F.B.Bradfield & A.S.Hartshorn. Aero.Research Committee Report & Memo.#1439 London H.M.Stationery Office, 1932.

D 52.322/33 Wind-Tunnel Research Comparing Lateral Control Devices,Particularly at High Angles of Attack, by Fred E. Weick and Carl J. Wenzinger. N.A.C.A. Report #419. Washington,Gov't Printing Office,1932.

D 52.33/344 Pressure Distribution Tests on a Series of Clark Y Biplane Cellules with Special Reference to Stability, by Richard W. Noyes. N.A.C.A. Report & Memo. #417. Govt.Printing Office,Washington 1932.

D 52.7/34 Airships; Story of the Development of Lighter-than-Air Craft, and Facts about Big Airships of the Present Day, by Ruth T. Robertson. Washington Bureau 1928.

INSPECTION DIVISION NOTES

Due to contingencies beyond the control of this office it was not possible to publish Inspection Division Notes in the May 26, 1932 issue of the Air Corps News Letter. This article lists all Technical Orders and Letters, Air Corps Circulars and Air Corps Circular Letters published since the May 3, 1932 issue of this letter.

RENUMBERING OF CERTAIN AIR CORPS CIRCULARS

Numerical Index of Air Corps Circulars, O-2, dated June 1, 1932, publishes the new numbers of Circulars in Classification 15, "Blank Forms and Reports". The Circulars in this classification have been renumbered so as to conform to the number of the blank form to which they pertain. The circulars thus affected will be revised and republished under their new numbers as rapidly as possible and in the meantime all activities should immediately renumber affected circulars in this series in accordance with the above mentioned index and rearrange such circulars in their files in proper numerical order accordingly.

NEW OPERATIONS SYSTEMS

Effective July 1, 1932, a new Operations System which provides for a very substantial reduction in clerical work becomes effective. This system eliminates the maintenance of the following forms by Air Corps activities:

AC Form # 4, Training and Operations Report.
AC Form # 6, Pilot's Book (Heavier-than-Air).
AC Form # 7, Pilot's Book (Lighter-than-Air).
AC Form #11, Transcript of Flying Record.
AC FORM #95, Monthly Aircraft Report.
AC Form #96, Monthly Engine Report.

The basic form of this new system, Air Corps Form No. 3, "Monthly Aircraft Operations Report", requires merely a chronological transcription of flight data from the Aircraft Flight Report and entry of certain Engineering data. It involves the use of the new mission code symbols, and its accurate preparation will depend upon the familiarity of personnel concerned with the instructions covering the new system and forms. Necessary explanations and instructions covering the new system are now in process of distribution and should be received at the various Air Corps activities at an early date.

USE OF CLEAR GOGGLES FOR NIGHT FLYING

The following extract from a "Technical Report of the Aircraft Accident Classification Committee" is quoted for the information of all concerned:

"This accident occurred while making a night flight on February 18,1932, at 8:00 P.M. The purpose of this flight was to service test the type A-5 landing lights for Pursuit planes. The landing was made without the use of the field landing lights. In making the landing I was coming in in a normal glide. There was so much light on the right side that I didn't need the lights so I decided to look out of the left side of the ship. I was unable to see the ground until I hit. The ship did not bounce. The landing gear sheared off and the plane slid along on the fuselage. The accident may have occurred due to the dimming of the landing lights on the plane as I was the third to fly it or it may have been due to the fogging up of my goggles. The goggles had fogged before I took off but I had cleaned them and they appeared to be all right before I came in to land."

"It is the opinion of the board that the chief cause of the accident was error of judgment of distance on the part of the pilot, who had had very little experience in night flying. A contributory cause may be due to the pilot's using green colored goggles, which cut out a percentage of the illumination. Two pilots had previously flown, using the lights and had experienced no trouble in landing. Inasmuch as the lights were burning brightly after the crash occurred, it is not believed the battery was low. It is recommended that pilots using these types of landing lights use clear goggles only."

The following Technical Letters and Orders have been distributed since the May 3d,1932 issue of the Air Corps News Letter:

Technical Letters

Date & No.	Subject	Distribution
32-21 4/26/32	- Modification vertical shaft distribution base and camshaft idler shaft on V-1570 Engines. (See Letter Chief,Materiel Division 6/17/32,Subject:TL #32-21, 4/26/32	Bolling,Crissy,Mitchel,Selfridge, Wright, FAD, RAD, MAD, SAAD, Boeing,Chanute,Chapman, Langley,Lawson,Leavenworth, March,Marshall,Maxwell,Mitchel
32-29 6/7/32	- Clearance Chart Revision,Pratt & Whitney Engines.	Chanute and all Depots.
32-46 5/4/32	- Replacement of Exhaust Rocker Arms on R-1750-E and R-1820-E Engines	FAD,MAD,SAAD,RAD,HAD,Aberdeen, Bolling,Chanute,Crissy,Kelly, Langley,March,Mather,Maxwell, Selfridge,Wright & AO,Hawaiian Dept.

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Technical Letters (Cont'd)

Date & No.	Subject	Distribution
32-54 4/22/32	- Replacement of lug, landing gear rear brace (strut attachment- A-3,A3A,A3Bm O11,O1B,& O1E Airplanes.	Chanute,MAD,FAD,SAAD,RAD, and HAD, Wright.
32-59 6/8/32	- Clutch Setting on Pratt & Whitney Engines	Chanute,Wright & all Depots
32-63 6/7/32	- Modification of V-1570 Series Engines	MAD,FAD,SAAD,RAD,Chanute, and Wright.
32-73 4/14/32	- Reinforcement of Engine Ring Cowl on P-12C Airplanes	Chanute,Langley,March,Maxwell,Selfridge,HAD,Luke,MAD FAD,SAAD,RAD,Wright.
32-76 4/15/32	- General information on the maintenance and operation of P-12 Airplanes	Bolling,Chanute,France,HAD, 18th Comp.WG.Kelly,Langley, Luke,March,Mather,Maxwell, PAD,PHAD,4th Comp.Gp.Selfridge,MAD,FAD,SAAD,RAD, Wright.
32-77 5/16/32	- Clamp,Exhaust Manifold on R1750 and R1820 Engines	FAD,MAD,RAD,SAAD,AO Hawaiian Dept.& Chanute & Wright.
32-79 5/4/32	- Oil Leakage at the nose section on R1750-E Engines	FAD,MAD,RAD & SAAD,Hawaiian Dept.& Chanute & Wright.
32-81 4/20/32	- Drilling of drainage in fuselage skin of C4A and C9 airplanes	Bolling,Chanute,Crockett, France,Langley,March,PAD, Randolph,Selfridge,MAD,FAD, SAAD,RAD & Wright.
32-83 6/13/32	- Data on landing gear oleo unit on O2H,BT1, BT2,BT2A,BT2B,BT2C,O-25A,O-25B,O-25C,O-38, O-38A & O-38B airplanes.	General
32-84 4/21/32	- Replacement of control tube,fuel cock on O1E Airplanes	Boston,Bowman,Candler,Chanute Langley,Lunken,Norton,Pittsburgh,Richards,Schoen,MAD, FAD,SAAD,RAD & Wright.
32-85 4/27/32	- Replacement of rivets,ring cowl,trunion screw yoke bracket on O-19C,D & E Airplanes	Brooks,Chanute,France,Kelly, Nichols,Pope,Post,Scott, Wright,Hawaiian Dept.4th Comp.Gp. & all depots except Hawaiian.
32-86 4/27/32	- Replacement of fastener,assembly,engine ring cowl on P-12D airplanes.	Chanute,Kelly,Langley,March Maxwell,Selfridge,MAD,FAD, SAAD,RAD,Wright.
32-87 4/27/32	- Installation of chafing strips,lower longeron on P-12B,P-12D,P-12E & F airplanes.	MAD,FAD,SAAD,RAD,PAD,PHAD,AO Hawaiian Dept.,Bolling,Chanute,France,Langley,Kelly, March,Mather,Maxwell,Nichols, Selfridge,Wright.
32-88 4/29/32	- Spark plugs for Wright V-1570 engines	MAD,FAD,SAAD,RAD,Aberdeen, Boeing,Bolling,Chanute,Crissy Hensley,Langley,Lawson,Leavenworth,March,Marshall,Maxwell, Mitchel,Selfridge,6th CA, Wright.
32-89 4/29/32	- Correction to Air Corps Specification for Stromberg Aircraft Carburetors,Dwg.S-32 J-1890.	General
32-90 4/28/32	- Inspection of Push Rod and Tappet Adjusting Screws. All Wright & Curtiss engines.	General
32-91 4/30/32	- Change on nose cowl support on P-12B,C & D Airplanes	Chanute,Hawaiian Dept.Boeing Co.Wright,and all depots except Hawaiian.
32-94 5/3/32	- Exhaust Valve for R1860 Engines	MAD,FAD,SAAD,RAD,Chanute & Wright.
32-95 5/10/32	- Modification on Crankshaft and propeller shaft ends on all Wright and Curtiss Engines	All depots except Hawaiian AO Hawaiian Dept.,Chanute and Wright.
32-96 5/12/32	- Reworking of blower bearing covers on Pratt & Whitney engines	All depots except Hawaiian, Hawaiian AO.Chanute,Wright.
32-97 5/9/32	- Change on lubrication system on YIC-24 airplanes	Chanute,Kelly,Langley,March, Selfridge,Wright,MAD,FAD & SAAD.

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Technical Letters (Cont'd)

Date & No.	Subject	Distribution
32-98 5/9/32	- Replacement of rudder cable guide blocks on O1G and O-39 airplanes	Bolling,Boston,Chanute,Mitchel,Wright,MAD,SAAD,FAD & RAD
32-99 5/16/32	- Modification of Type G-7 Bomb Racks	FAD, MAD & RAD
32-100 5/18/32	- Operation Instructions	General
32-102 6/1/32	- Installation of felt strip between gasoline tank and firewall on P-12,P-12B, P-12C,P-12D, P-12E & P-12F airplanes.	Chanute,Wright,HAD,PAD,PHAD, MAD,FAD,SAAD & RAD
32-103 5/26/32	- Preparation of engines for temporary Storage.	Chanute,Wright & all Depots.
32-104 6/1/32	- Maintenance of distributor gears in Scintilla V-AG magnetos.	General.
32-105 6/1/32	- Installation of Fairing,Tail Wheel Fork, A-3B airplanes	Chanute,Crockett,Edgewood, Wright,FAD,SAAD,RAD,MAD,AO Hawaiian Dept.
32-106 6/1/32	- Drilling of lubrication hole,aileron shackle on LB-6 and 7,B3A,B4A,B5A,B6A, YIB4 and YIB6 airplanes.	Aberdeen,Chanute,France,Kelly Langley,Leavenworth,March, Maxwell,4th Comp.Gp.Wright, AO Hawaiian Dept.& all Depots except Hawaiian.
32-107 6/2/32	- Installation of screen assembly. Part #40329 on R-1820 Engines	Bolling,Chanute,Kelly,Langley March,Maxwell,Selfridge, Wright,FAD,MAD,SAAD & RAD.
32-108 6/3/32	- Elbow,Part #177-D-5 on V-1570 Engines	Aberdeen,Boeing,Bolling,Chanute,Crissy,Langley.Lawson, Leavenworth,March,Maxwell, Marshall,Mitchel,Selfridge, 6th CA,Wright,FAD,MAD,RAD & SAAD.
32-109 6/10/32	- General information on the maintenance and operation of B/J YIP-16 airplanes	Bolling,Brooks,Chanute,Crockett,Kelly,Langley,March,Maxwell,Mitchel,Randolph,Scott, Selfridge,Wright,FAD,MAD,SAAD & RAD.
32-110 6/14/32	- Inspection of bolts,wing terminal fitting attachment on P-12B,P-12C,P-12D airplanes	Bolling,France,Langley,March, Maxwell,Mather,4th Comp.Gp., Kelly,Selfridge,Wright,FAD, AO,Hawaiian Dept.,MAD,PAD, Chanute,PHAD,RAD,SAAD.
32-111 5/28/32	- M-8 Airplane flares installed in horizonal position.	Kelly,Mather,March,Selfridge, PHAD,PAD & HAD.
32-112 6/9/32	- Change on tail skid,P-12B,P-12C and P-12D airplanes.	Chanute,Wright & all Depots.
32-113 6/10/32	- Removal of shutter control and operating linkage on O19B,O19C and O19D airplanes	Barksdale,Bragg,Brooks,Chanute,Bolling,France,Hensley, Hatbox,Kelly,Nichols,Scott, Selfridge,Sill,Wright & all depots.
32-114 6/10/32	- Change in fuselage bomb bay step support member on B3A,B4A,B6A,YIB4 and YIB6 airplanes.	Chanute,Wright & all depots.
32-115 6/10/32	- Replacement of airleads,brake control cable on O2H,BT-1,BT-2A,BT-2B,BT-2C,O-25A, O-25B,O-25C,O-38 and O-38B airplanes.	General
32-116 6/2/32	- Special instructions on 1570 engines	All activities equipped with these engines.
32-101 5/23/32	Modification of Type G-6 Bomb Racks	FAD,MAD,SAAD,RAD,PAD,PHAD, AO, HAWAIIAN DEPT.

The following Technical Orders have been distributed since the May 3d 1932 issue of the Air Corps News Letter:

Number and Date	Subject
00-0-4 5/1/32	Monthly Index of Technical Instructions for April 1932.
00-0-5 6/1/32	Monthly Index of Technical Instructions for May 1932.
01-1-42 4/27/32	Airplane Propellers - General Instruction
01-1-42A 4/18/32	List of Propellers for Service Airplanes.

Number & Date	Technical Orders (Cont'd) Subject
02-1-18 4/22/32	Service Carburetor Specifications.
10-5-1 5/13/32	Chemicals and Sensitized Materials. Containers for and storage of.
11-40-1 4/22/32	Tow Target Equipment - Type A-3 and B9A Targets and Types C-2 and C-3 Windlasses.

The following Air Corps Circulars and Air Corps Circular Letters were published and distributed since the May 3,1932,issue of the Air Corps News Letter:

AIR CORPS CIRCULARS

Number & Date		Subject
0-2	6/1/32	INDEXES - Numerical Index.
5-1	6/1/32	PUBLICATIONS,PRINTING AND BINDING - Air Corps Circulars - General Provisions.
15-0	6/1/32	BLANK FORMS AND REPORTS - Index and Requisitioning of Air Corps Blank Forms.
15-3	7/1/32	BLANK FORMS AND REPORTS - Monthly Aircraft Operations Report.
15-4	7/1/32	BLANK FORMS AND REPORTS - Training and Operations Report.
15-54	6/1/32	BLANK FORMS AND REPORTS - Unsatisfactory Report.
15-59A	4/27/32	BLANK FORMS AND REPORTS - Technical Report of the Aircraft Accident Classification Committee. (NOTE:This Circular has been renumbered and is now number 15-14A.)
15-69A	4/28/32	BLANK FORMS AND REPORTS - Monthly Activity Report. (NOTE:This circular has been renumbered and is now number 15-32A.)
15-81	6/1/32	BLANK FORMS AND REPORTS - Stores Charge.
15-82	6/1/32	BLANK FORMS AND REPORTS - Stores Credit.
15-241	6/1/32	BLANK FORMS AND REPORTS - Instruction Slip.
15-244	6/1/32	BLANK FORMS AND REPORTS - Labor Cost Record.
15-245	6/1/32	BLANK FORMS AND REPORTS - Summary of Direct Labor Charges to Accounts.
15-250	6/1/32	BLANK FORMS AND REPORTS - Time Cards.
15-262	6/16/32	BLANK FORMS AND REPORTS - Inspector's and Pilot's Final Acceptance Report.
65-22A	6/16/32	SUPPLY - Depot Overhaul of Airplanes and Engines.
65-28	5/13/32	SUPPLY - Flying Equipment Issued to Individuals.
5-6	6/1/32	BLANK FORMS AND REPORTS - Airport Bulletins.

AIR CORPS CIRCULAR LETTERS

W-2063-AC	5/16/32	Data for Annual Report.
W-2067-AC	5/23/32	Abstracts of Official Record for Civilian Employees.
W-2068-AC	5/23/32	Transfer of Surplus Civilian Personnel.
W-2069-AC	5/26/32	Ferrying Airplanes Between Stations and Depots.
W-2072-AC	6/16/32	The Revenue Act Approved June 6,1932,Effective June 21, 1932.
W-2074-AC	6/17/32	Distribution of Air Corps Circulars 5-10 and 90-2.
W-2075-AC	6/17/32	Inclosures to Monthly Activity Report.