

 AIR CORPS 
NEWS LETTER



17TH ATTACK GROUP, MARCH FIELD
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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.

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THE ANNUAL MANEUVERS IN PANAMA
By the News Letter Correspondent

THE Panama Canal Department completed its yearly maneuvers, and many phases of air operations were brought out which will be highly beneficial to future operations.

On Sunday morning, March 14th, the war was on, and all Pursuiters of the 19th Wing took off for Rio Hato to establish camp, while all the Bombers were off to Aguadulce, their camp site. Theoretically, this was the Black Force, supposedly carrier-based, but which had succeeded in making a landing in Panama and were attempting to capture the Canal.

For the next two weeks we were all to be very busy firing at all hours and conducting many types of missions. The Pursuit forces assimilated Attack, and in most cases supported Bombardment in their missions, although at various times patrol missions were flown in which Blue Observation ships were sought out and attacked with great delight. Perhaps the most interesting missions flown were the attacks made on various targets by Pursuit (Attack), which by the very nature of the terrain made them highly interesting. Immediately upon designation of a target, all alert pilots would pounce upon maps and quickly decide the best general approach, and then the fun would begin.

Scraping the jungle with its 200-foot trees, the tops of which seemed sufficiently matted to invite a landing, but which are more treacherous than a rattlesnake, keeps one sitting on the edge of the chute and wishing for more eyes than the seemingly meager two provided. The terrain, being naturally rough and abundantly provided with the jungle mentioned above, gave Attack excellent covering which many times enabled them to hit an objective entirely by surprise. Of course, flying P-12's as Attack may not obtain the best results, but it gave us all a good idea of Attack Aviation in Panama, and all true "hedge-hoppers" will get an added thrill, but not without the inevitable added risk. We are all looking forward to our promised A-17's which we may have by July.

Included among Pursuit supporting Bombardment missions was one in which the main objective was to draw searchlight batteries on themselves rather than on the Bombers above. With throttles set at the throttle stop, we started our

dive at 8,000 feet. After losing several thousand feet, one searchlight picked us up, and almost immediately lights from all angles were upon us. Diving through occasional wisps of clouds and being completely blinded by the lights, I soon swore that I was hanging by the prop, but keeping my eyes glued on the leader I felt much better when I saw his head duck into the cockpit and get on those good old instruments. Groping around, I finally succeeded in turning my cockpit light on and stole a glance at the instruments myself. All indicators were in the right position, altitude 2,000 feet, and there was a sigh of relief by yours truly. The lights throughout the zone remained on us for about 10 minutes, but the first several minutes seemed years at least.

On one early morning mission, the Bombers encountered a cloud bank and, in attempting to wiggle up through small breaks, succeeded in getting their formation scattered over a large area. Looking back, one amusing incident - not so amusing then - was the predicament in which one officer found himself. Flying along serenely on his leader's lights, he suddenly discovered, much to his amazement, that they were not lights at all but two stars. Anyone having flown formation on a black night following a series of maneuvers can easily see how this can happen. There he was over the clouds with no apparently friendly breaks through which to come down and not certain of his position. There was nothing left to do but fly a compass course in one direction for a certain length of time and then just reverse the procedure; so with the flaps down 20 degrees and engines throttled back, he finally located a break several hours later, and down he came. Taking off at 4:00 a.m., he landed at about 9:00 a.m., with a brand new experience to relate to his grandchildren in later years.

Other interesting incidents occurred during the two weeks, and probably every pilot has a story all of his own which will be related at many tables with necessary diagrams drawn on expensive tablecloths.

Flying, of course, did not occupy all our time, for we had our own private little battle with the mosquitoes. Mosquito bars seemed to be of little avail,

as scouts no doubt located small openings through which squadrons moved in to attack. Showing us all that they were entirely without fear, their main attack was directed against Lieut. Jack Price, whose bulk of 250 pounds scared them not one bit, so what chance did we poor smaller lads have? No cases of malaria were contracted by Air Corps personnel, however, which was very fortunate in view of the fact that the maneuvers on the Atlantic side had to be cancelled due to excessive cases of malaria.

Pilots and men at Rio Hato were not without recreation, as the best beach in Panama was only two miles from the camp and every spare moment was spent on the beach. A boat enabled a small amount of fishing, which gave us the opportunity to bolster our field ration with fresh corbina, the tastiest fish in Panama.

The maneuvers officially ended on Saturday, March 27th, with a Wing Review flown at France Field. At this time, Brigadier General George H. Brett conveyed the glad tidings of new airplanes for the Canal Zone in the not too distant future. The news of more B-10's and a number of A-17's, to be supplemented by P-26's the first of next year, is music to the ears of foreign duty officers, who have had to be content with Keystones and P-12's since their arrival in Panama.

Brigadier General Frank W. Rowell, Atlantic Sector Commander, also gave a short talk to all officers participating in the Review and congratulated the Air Corps for the fine work and spirit shown throughout the maneuvers. All in all, the Air Corps feels as if the maneuvers were very successful and that a long step towards adequate defense of the Canal had been accomplished. ✓

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DUST STORM OVERTAKES FLYING STUDENTS

Major John V. Hart, Air Corps, senior instructor of the Pursuit Section of the Advanced Flying School, Kelly Field, Texas, spent several anxious hours in the control tower on Wednesday night, April 7th. The forecast had been "cloudy and cooler." The twenty-one Flying Cadets in that section had been dispatched at five-minute intervals on a navigation flight. Ten had been routed: Kelly - Austin - Yoakum - Pawnee - Kelly, and the others in the reverse direction.

Shortly after dark, when Captain Wilfrid H. Hardy, Air Corps, arrived at Austin to check the students, Waco, Tex., reported a dust storm, and Braniff Airlines cancelled their flight north from Austin. This information was telephoned to Kelly Field, but all students had already been dispatched.

Orders were immediately issued over four radio stations for all students to return to Kelly Field, or the nearest

airport, on account of this dust storm. However, as only eight planes were equipped with radio, and most of them were out of radio range by that time, this message got through to only four students. The dust storm moved very rapidly, with a wind shift line moving at 40 miles per hour. All the students encountered the dust storm, and nineteen showed excellent judgment in landing at the nearest airport. Two students reached Austin just as the dust moved in there. Eight others landed at San Marcos; two were able to return to Kelly Field, while seven others encountered the dust farther south and returned to Pawnee.

Only two students lost their course. Flying Cadet R.F. Fallows nosed over by excessive use of brakes in making a flare landing near Schulenberg, Texas. Flying Cadet F.J. Black wrecked his airplane and broke his arm when hitting a tree in attempting a flare landing near Caldwell, Texas.

All the students reported in their location before 1:00 a.m., and remained overnight. Lieut. M.F. Stalder, the instructor at Pawnee, and the seven Flying Cadets who landed there, were the only ones who had to rough it. As there are no housing, transportation, or telephone facilities within ten miles of Pawnee, they were forced to spend a rather cold and uncomfortable night sitting around an open fire in a 40-mile wind. However, the whole section returned to Kelly Field the next day, having gained valuable experience. ✓

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GUNNERY TRAINING BY 8TH ATTACK SQUADRON

During the month of April, the 8th Attack Squadron, Barksdale Field, La., was hard at work completing gunnery training, and now can point with pride to its combat teams. Nine pilots of the Squadron, which is commanded by Major Lester J. Maitland, Air Corps, qualified as Expert Aerial Gunners, and each remaining pilot turned in a score which at least qualified him as an Aerial Gunner.

Last fall at the gunnery camp at Fort Crockett, Texas, all the rear seat gunners were qualified with the rating of "Expert." Thus for the first time in two years (due to revision of TR 440-40 and the movement of the 8th Attack Squadron from Fort Crockett, Texas, to Barksdale Field, La.) the squadron has trained combat teams.

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Kelly Field has received some very attractive designs to represent the field. The drawings have created a great deal of interest, and the best one will be selected by vote of the officer personnel and forwarded to Washington for approval.

CROSS-COUNTRY NAVIGATION FLIGHT BY 19TH BOMBARDMENT GROUP
By the March Field Correspondent

WITH the dawn of April 5th, fifteen Martin Bombers of the 19th Bombardment Group, under the command of Lieut. Colonel Hubert R. Harmon and squadron leaders, Majors Albert F. Hegenberger and Walter R. Peck, winged their way towards El Paso and points east on an extended cross-country navigation flight.

The first leg of the trip from March Field, the home station of the 19th Bombardment Group, to El Paso, Texas, was devoted to tactics in "fog flying." Upon advice of the Group Commander that "fog" conditions covering several hundred miles in area had been encountered, flight commanders took over and assigned base altitude, course and rendezvous points for their respective flights. Having been flying in javelin-up position until then, the Bombers now branched off right and left at an angle of 45° for one minute before taking up their new courses. All pilots took to instrument flying until informed by their navigators that the "fog area" had been cleared. All flights continued individually under the guidance of the flight navigators to El Paso. The simulated fog-blind-flying maneuver was completely successful. The Group previously had devoted considerable time to these particular maneuvers, and the results obtained justified all efforts.

After servicing at El Paso, the formation headed for San Antonio, Texas, once the home of all Air Corps pilots. On this leg, the celestial navigators of the Group started to get busy with their sextants. For experimental purposes conditions were ideal, since the air was exceedingly rough and there had been much conjecture as to the results obtainable under such flying conditions. Using three lines of position, a "fix" was obtained just prior to the arrival at San Antonio and was found to be within 15 miles of the dead reckoning position - a most gratifying outcome.

In this connection, it might be brought out that the 19th Bombardment Group makes it a habit to conduct celestial navigation on all their cross-country flights with a view to giving celestial navigators, developed by the Group School the necessary training and practice.

It will be recalled that it was the 19th Group which originally had been instructed to further development of celestial and dead reckoning navigation in the Army Air Corps. Under their care, the first school of that kind was established at Rockwell Field Air Depot. Harold Gatty, of Post and Gatty fame, was at one time instructor there for celestial navigation. Although the 19th Group no longer conducts the navigational school as a prime function, it still remains

foremost in the use of such tactics and its employment in practice.

After spending the night at Randolph Field, the formation continued the next morning for New Orleans, La., arriving exactly at the time scheduled. For 40 minutes the planes circled over the city before landing at Shushan Airport. The citizens of New Orleans evinced considerable interest in the Group flight and met the incoming ships at the field. Due to the fact that Army Day was being celebrated in the Crescent City on that date, the 15 smart-looking twin-motored Army planes became the center of attraction in the celebration.

The Committee for National Defense of the New Orleans Chamber of Commerce, who welcomed the Group, made it a point to make the overnight stopover a most enjoyable one for officers and enlisted men.

With the arrival of the Group at Barksdale Field, La., the next day, weather conditions prior to the trip to Oklahoma City, Denver and Salt Lake City were studied, since severe dust storms had been reported in the areas north and west of Shreveport. The Group Commander and the Squadron Commanders thought it best to change the route so as to avoid the prevailing bad weather conditions and to choose a route more to the south on the return trip to March Field.

Immediately after leaving Barksdale Field, the ships encountered severe icing conditions - a mixture of fog and dust in cold air. Carburetor heaters were turned on and instruments were kept under strictest surveillance by all pilots, ready for immediate action in the event that ice should form. However, San Antonio was reached without the slightest trouble or mishap.

Dust was again encountered on the leg between San Antonio and March Field, reaching an altitude of 10,000 feet. The Bombers, after landing at March Field, were actually covered with a blanket of dust, but none the worse off for the experience and performing perfectly throughout. During the five days' cross-country flight, 3,000 miles were covered.

The personnel of the flight greatly enjoyed the test, and are anticipating the coming GHQ maneuvers, when once more "the life in the raw" will be taken up.

The success of the 19th Group flight was due in large measure to the advance work performed by Major James L. Grisham and Lieut. John T. Murtha, who flew ahead to make the necessary arrangements for the Group.

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Captain Mark K. Woodward, Air Corps, is under orders to proceed to his home April 30, 1937, to await retirement.

V-7325, A.C.

LANDING FIELDS IN PANAMA
By 1st Lieut. Robert L. Scott, Jr.

STRUNG out inland and on the coast of Panama's 1,000 miles of rugged coast line there are 47 landing fields. Some of these, classed as emergency only, nevertheless are used to advantage several times during every rainy season. These fields extend from Jaque and Pito, nearest South America, to the extreme other end of the Republic, namely, Bocas del Toro and Puerto Armuelles, or from Colombia to Costa Rica.

Only Albrook and France Fields are classed as airdromes, and as detachments can be maintained at only a very limited number of stations, the emergency fields are left very much to themselves except for necessary inspections. About 38 of these fields, classed as "Emergency," extend over a route of approximately 2,000 miles. It is easily understood that in order to visit every field at least once every month, a great deal of flying is necessary. Some of these inspections are routine and only necessary in order to pay off men regularly hired to maintain these fields. Other fields, however, it is necessary to fly in with enlisted men or to leave word at nearby villages that machete men are needed to cut back the jungle and level ant hills.

One of the hardest problems encountered from Darien to Bocas del Toro is to keep our orange windsock on the mast in its proper place rather than have it used as a skirt around some dusky Indian girl. Several times socks have been put up on Saturday, and on Monday, instead of a friendly wind sock leading us in, it could be seen on some native belle leading a flock of admiring bucks around.

On some fields, mostly on the Atlantic side, the jungle will claim a field practically overnight. Fast growing jungle, helped by over 168 inches of rainfall a year, is a real proposition. It has been found that on some sites, such as Pito, Mandingo, Changuinola, and Jaque, the grass must be cut about every sixty days, and even then a ship landing in month old vegetation tries very hard to nose over.

As with the gopher on the western plains of the United States, the hard-working ant is our greatest enemy. There must be several hundred different species here, and they all have a different method of working, which amounts in the long run to different methods of worrying the Air Corps. One type of big ant will eat all the leaves from a fairly large tree in a day, commonly known as the Umbrella Ant. This type of ant is very easily followed in the jungle, as it eats any vegetation in his way and consequently leaves a wide path of destruction. Then there is the Soldier Ant

that marches in column and actually destroys everything in his path, such as camping equipment and even building material. Next is the big ant that constructs a hill of concrete-like mud, which is often from two to seven feet high. These hills are gray in color and very hard to see. Ask the pilot who has gone over on his back and then to his chagrin sees the ant hill he just didn't see when coming in to land. A small stick of dynamite and then some gasoline gets them for several months, but like a bad penny they always come back. The ideal system seems that we must interbreed the ants. If we can cross the leaf cutter with the soldier ant so that he will march in great hordes against the vegetation on the fields, then our problem is solved very cheaply. This still leaves the hill builder of the concrete-like abodes, but we'll just have to cross him with dynamite and gasoline in sufficient quantities.

Of course, we have many fields where cattle congregate and must be carefully driven off prior to landing. On some of the fields that are used frequently, the cows and horses get so accustomed to the ships that they just refuse to scare. Under these conditions, the dodging ability of the pilot is tested to the limit.

At the present time, the fields are fairly well scattered and, except for flights to the east and south, we have small worries as to forced landings. There does not, however, seem to be much possibility of ever getting fields between La Hoya (18 miles to the east) and Jaque (165 miles to the southeast). Between these two places there is just jungle, water and mountains. Projects for the near future include fields at Gamboa - half way between Albrook and France Fields - another at mafafa on the Island of Del Rey in the Perlas Group, with the possibility of a Sailfish Club at some date in the future. A very strategic field is to be constructed near the Navy Radio Station on the tip of the mala Peninsula. This will give us fields on either shore of the Panama Gulf, and one in the middle on the Perlas Islands, which will give us a very effective net of fields from which to operate if it becomes necessary to protect the Canal.

In closing, it can be said that sooner or later Emergency Landing Fields pay for themselves in Panama, not only for forced landings but to increase our limited training in navigation at this station of foreign duty, also as storage spots for fuel and as radio stations for weather and Aircraft Warning Service.

PURCHASE OF NEW EXPERIMENTAL BOEING BOMBARDMENT PLANE

AS an indication of the constant desire of the Army Air Corps to explore every potentiality of the airplane in National Defense, there is nearing completion, under Government contract, at the Boeing Airplane Company, Seattle, Washington, a giant Bombardment plane, which promises to be one of the greatest weight-carrying airplanes in the world.

This latest experimental Bombardment airplane comes as a natural successor to the YB-17 type which created such a sensation in its test, and which was popularly labeled the "Flying Fortress." The new plane embodies further developments of the YB-17, which itself ranks among the foremost Bombardment airplanes in the world. It was developed as part of the Air Corps' program in answering a long standing question: What form shall the Bombardment airplane take - a comparatively small, fast, light weight-carrying craft; a larger, maximum weight-carrying machine, or a compromise of the two?

The Air Corps now has examples of two of the three types, - the twin-engine Martin Bombers, representing the smaller, light weight-carrying craft, and the YB-17's, the compromise type. Completion of the new Bomber, representing the maximum weight-carrying machine, will afford the Air Corps the opportunity to compare all three, with a view to determining which type is most desirable from engineering, tactical, and operating standpoints.

Under cover of utmost secrecy, the project has been under way for more than two and a half years. A total of 670,000 man hours of engineering work and shop labor has gone into the construction of this new national defense weapon. The thoroughness with which the project has been carried out is indicated in one of the static tests employed to prove beyond any doubt the correctness of engineering computations. A complete wing panel was built, weighted with lead and "tested to destruction." In the static test of this wing panel the strength requirements were greatly exceeded before it finally broke down.

This latest vehicle of National Defense is a four-engined, all-metal, mid-wing type monoplane, basically similar to the YB-17, although somewhat larger because of its additional weight-carrying capacity.

The plane is powered with four Pratt & Whitney twin Wasp Sr. engines, each giving 1,000 horsepower for take-off, and is provided with the most modern of safety devices, including elaborate radio equipment, automatic pilot, de-icing installations, apparatus for fire protection, wing flaps to reduce its landing

speed, a complete heating and ventilating system, and sound-proofing throughout. In addition, it is fitted with air-operated wheel brakes similar to the YB-17 Bomber, both the landing gear and tail wheel being retractable. The first military plane ever built with living accommodations aboard, it contains sleeping quarters, spacious working quarters for personnel, lavatory, kitchenette with electric hot plate, percolator, soup heater and dry-ice box.

All of the above mentioned modern safety, navigation and comfort devices have been incorporated to increase the physical endurance of the personnel and the combat efficiency of the plane for sustained operations.

Thus the Army Air Corps, which in the past, in cooperation with commercial organizations, pioneered in projects later adopted by commercial aviation, has again made its contribution to the progress of civil aviation. This is evidenced when it is realized that, although this airplane was designed to adapt its large weight-carrying capacity to the transportation of military personnel or equipment, it naturally points the way to larger commercial transport planes.

The project of solving the large Bombardment airplane problem was first undertaken by the Army Air Corps during the period 1920-1925. At that time, realizing the necessity for this type of airplane, the Engineering Division, now the Materiel Division of the Air Corps, designed the AS-1, better known as the Barling Bomber. It was a tri-plane with a wing span of 120 feet. It was powered by six Liberty engines, had a maximum speed at sea level of 96 miles an hour, and a service ceiling of 7,275 feet. The plane established world's records of that period for altitude, duration of flight and weight-carrying.

Due, however, to certain objectionable structural features inherent in the wood construction of the period, the project was temporarily placed in abeyance. With the advent of the modern, all-metal, monoplane type of construction, and the increased horsepower of aeronautical engines, the project was again undertaken.

Although many of the details of this latest Bombardment airplane are necessarily clothed in secrecy, due to its experimental nature, it is known, as stated before, that in general appearance it will closely resemble the YB-17 all-metal, mid-wing type of semi-monocoque construction, consisting of longerons, skin stiffeners, bulk heads and smooth outside metal skin. Because of its greater weight-carrying capacity, it will have a greater wing span, and will exceed the 16-ton weight of the YB-17 by approxi-

mately three or four tons.

Its retractable landing gear and tail wheel add materially to its speed, although its maximum and operating speeds will be considerably below those of the YB-17.

It is equipped with electrically controlled multi-position, constant speed three-bladed propellers. The general arrangement of defensive armament is similar to that of the YB-17's, installed in streamlined "Blisters" and turrets.

An electric supply comparable to that used in the modern home and factory will traverse the skies in this remarkable new Air Corps Bombardment plane now undergoing final stages of construction in Seattle. In this connection, it will have the distinction of being the first aircraft in the world to carry a full 110-volt alternating current electrical system. Until now, electrical current used in airplanes has been supplied through 12-volt direct current system. The new Bomber's system compares with the old as the common 110-volt current used in cities throughout the world compares with the home-generated low voltage direct current system used by the isolated farmer. It opens a new epoch in aircraft progress.

Two auxiliary gasoline power plants drive the generator supplying this current to the electrically operated parts of the new Bomber. In addition to increased efficiency, a reason for the installation of the system was that power requirements of the Bomber, one of the greatest weight-carrying planes in the world, are so large as to make it impractical to put the electricity generating load on the plane's engine, as has been the method in the past.

There are approximately seven miles of electrical wiring in the Bomber's intricate system. The current is distributed to all electrical devices in the plane with the exception of the ignition, where the conventional magneto system is employed. Among the features included is a complete system of lights which flash as indicators, registering the functioning of various apparatus throughout the plane.

Another feature disclosed, as the new plane is being groomed for its first flight, is the provision for a five-lens aerial camera. The vast possibilities of aerial photography from Bombardment aircraft were indicated in the flight of 1934 of a squadron of Bombing planes from Washington, D.C., to Alaska, when 35,000 square miles were photographed in three days during the trip.

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Special Orders of the War Department, recently issued, announced the promotion of Captain Hugh C. Downey, Air Corps, to the temporary rank of major, Air Corps, from April 13, 1937.

ANNUAL INSPECTION OF KELLY FIELD

Colonel Roy C. Kirtland, Inspector General's Department, finished his inspection of the Air Corps Advanced Flying School, Kelly Field, Texas, on April 20th, and departed that night by train for Washington, D.C. He had been at Kelly Field since April 10th, making the required annual inspection. His comments were that the Air Corps Advanced Flying School was doing an excellent job with the obsolete facilities they had to work with.

Colonel Kirtland, one of the old-timers in the Army Air Corps, has been on duty in the Inspector General's Department, Washington, since July 18, 1936. He was the first graduate of the Army's first pilots' school in 1911 at College Park, Md. Several Army officers had learned to fly shortly before this, but they were instructed either by the Wright Brothers or by Glenn Curtiss.

Stationed at Texas City, near Galveston, Texas, in 1913, Colonel Kirtland was engaged in testing the use of the airplane for observation purposes, in cooperation with the 22nd Infantry, which was also stationed at Texas City. Colonel Arnold W. Krogstad, Commandant of the Advanced Flying School, Kelly Field, and Lieut. Colonel Roy M. Jones, now Executive Officer at Kelly Field, were serving with the 22nd Infantry at that time. Colonel Kirtland also made his first night flight at that time.

Colonel Kirtland wears the "Order of the Crown," a decoration from the Italian Government, and service ribbons for the Spanish-American War, the Philippine Insurrection, the Mexican Border and the World War.

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COMMENDATION FOR ADVANCED FLYING SCHOOL

The following commendation was received from the Chief of the Air Corps by the Commanding General of the Air Corps Training Center, Kelly Field, Texas:

"The kind and amount of publicity secured by the Air Corps Training Center at the time of the long cross-country flight immediately before graduation (February 1937) was very gratifying to the Chief of the Air Corps. The amount of publicity secured shows the effectiveness of the changed itinerary for the long cross-country flight."

The above was referred to Colonel Arnold W. Krogstad, Commandant of the Air Corps Advanced Flying School, with the following remark by Brigadier General J. E. Chaney, Commanding the Air Corps Training Center:

"The success attained in this phase of the mission is indicative of the ex-

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VARIETY IS THE SPICE OF LIFE
By the Hamilton Field Correspondent

FOR four Saturdays recently, the 7th Bombardment Group at Hamilton Field, commanded by Lieut. Colonel George E. Stratemeyer, conducted four very interesting and instructive tactical operations in order to test the efficiency of the Group as a whole.

On the first of these Saturdays, the inspection consisted of a Group assembly problem for checking the efficiency of the squadron commanders' crews in navigation. The participating organizations (9th, 11th and 31st Bombardment Squadrons) took off in the early morning, formed a javelin-up formation, and proceeded to the initial point. The location of the Group Assembly point, and the separate routes to be flown by each squadron in arriving there, had been withheld from all personnel taking part in the exercise until just before the take-off; so the Group flew for twenty minutes in formation to the initial point with all the navigators frantically working out their computations in order to rendezvous after leaving the initial point in exactly 80 minutes from the time of take-off.

Major J.G. Taylor, commanding officer of the 31st Bombardment Squadron, was leading the Group formation, and upon arrival over the initial point he dispatched the squadrons on their respective routes to the assembly point. All points were given to the squadrons in latitude and longitude just to make it tough.

Exactly 80 minutes after the take-off, Lieut. Colonel Stratemeyer, who was flying high above the assembly point, checked off the squadrons as they roared into view. The Colonel was the only officer in the air who knew the location of the assembly point before the take-off, and he had proceeded there directly to inspect the completion of the operation. The Group then assembled under the command of the Group Commander and proceeded to Hamilton Field.

On the following Saturday, the Group Commander inspected a bombing mission to destroy an "enemy" aircraft factory located at 38° 03' 18" N and 122° 23' 54" W, which coordinates located the Hamilton Field bombing target in the mudflats of San Pablo Bay. The 9th, 11th and 31st Bombardment Squadrons took off at one-minute intervals, all deadly intent on blowing the "enemy" factory to bits. Each airplane of each squadron flew an individual route to its squadron initial point, so that there was not a single navigator who did not receive practice in his art and who was not partially responsible for the correct performance of the mission. The three squadrons

finally formed over three widely separated points in northern California, and the leading navigator of each squadron directed his squadron to the Group assembly point, departing at exactly 9:00 a.m.

The Group assembly point was designated by latitude, longitude, altitude and time. There were no mistakes. Each squadron appeared like clockwork, and formed in a group column with the 9th Bombardment Squadron, commanded by Captain K.W. Walker, leading the formation and navigating. Upon arrival over the initial point, located just outside the range of the assumed anti-aircraft batteries, the Group echeloned to the right with an interval of a thousand yards between squadrons. At the same time the Group echeloned in altitude from 3,000 to 12,000 feet. Then individual airplanes were echeloned to the right and in altitude so as to allow an interval of 500 yards between each one, and permitting each bomb dropped to be aimed by each bombardier, as well as insuring against a casualty to not more than one airplane by one burst of assumed anti-aircraft.

As the Group approached the target in the attack formation, bombardiers were all busy with their sights, checking drift, opening bomb bay doors, and finally holding the cross hairs on the target in anticipation of a bullseye. The bombing speed had been designated for each airplane, and graduated down from front to rear of the formation so as to prevent any airplane from overrunning the one ahead and below, insuring against the possibility of the higher airplanes dropping bombs on the lower ones.

Because of a scarcity of bombs on the field at that time, only one bomb per airplane was dropped, but the results were such that had there actually been an aircraft factory in that position, it would be there no longer. Bombs sprinkled in and very near to the center of the target, and the anti-aircraft fire was so poorly directed that not a single airplane dropped out of the formation.

After releasing the bombs, each airplane turned sharply to the left so as to depart from the danger area over approximately the same route of attack, and thereby further confuse the anti-aircraft by increasing the targets for the batteries already in action. The Group then rallied over Pinole Point at 6,000 feet and proceeded in formation to Hamilton Field, having passed the tactical inspection to the satisfaction of the Group Commander.

On March 6th, the Group Commander thought up an even better test for his organization, and a high altitude bombing and performance mission was ordered.

The 9th, 11th and 31st Bombardment Squadrons took off at 30-minute intervals, climbed to the predetermined altitude with a full military load, including five 300-lb. bombs, and began dropping them on the target. The first two passes were made by individual airplanes, and the third pass over the target was a squadron salvo, individually, in which the remaining three bombs were released from each airplane. Everything went smoothly, except that the last squadron to bomb was forced to drop down to a lower altitude after their second pass for the last pass-over. No difficulty, however, was experienced in attaining the required altitude with a full military load, as all airplanes reached it at the proper time without mishap.

On March 13th, Lieut. Colonel Stratemeyer went into a huddle with his Operations Officer, 1st Lieut. F.L. Anderson, and emerged with an entirely new operation to test his Group. A simulated night bombing mission was the exercise, scheduled. Prior to the bombing itself, each squadron was ordered to practice airdrome technique and formation flying, which they did with skill and enthusiasm for an hour or more. Old Man Weather put a crimp in the operation, however, by fogging in the assembly point and much of the surrounding country. Squadrons were finally ordered by radio to bomb at a much lower altitude than had previously been designated, but the exercise, which consisted of the dropping of one 300-lb. bomb per airplane, using the flight method of attack, was conducted satisfactorily regardless of the low hanging clouds and mist.

The personnel of the 7th Bombardment Group are wondering what the next tactical inspection will be like. But they are sure of only one thing, and that is that whatever exercise is scheduled it will be unlike any of the others, and no one will suffer from lack of enthusiasm.

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CHEMICAL WARFARE DEMONSTRATION

The 90th Attack Squadron, Barksdale Field, Shreveport, La., dispatched six A-17 Attack airplanes to Fort Benning, Ga., on April 1st, for the purpose of participating in a Chemical Warfare Demonstration at the Infantry School for the instruction of the regular class of students.

The flight was commanded by Captain William W. Amis, Air Corps, the 90th Squadron Commander, and included the following additional pilots: 1st Lieut. Harvey P. Huglin, 2nd Lieut. James H. C. Houston, Air Corps; 2nd Lieuts. John F. Guilmartin and James C. McGehee, Air Reserve, and Flying Cadet Edward F. Cullerton. Six mechanics accompanied the flight.

Due to the lack of sufficient dye, the airplanes were loaded with one tank of

dye and one tank of smoke per airplane. The attack was made in column of elements at 3:30 p.m., the time scheduled. The target consisted of "enemy" troops, represented by the students of the Infantry School. The results of the attack were estimated at about 60 percent casualties.

The flight returned to Barksdale Field on April 2nd.

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FILIPINO GENERAL VISITS KELLY FIELD

Major General Basilio Valdes, Deputy Chief of Staff of the Philippine Army, made an unofficial inspection of the Air Corps Advanced Flying School, Kelly Field, Texas, on Monday afternoon, April 19th. He was returning from Mexico City, where he had accompanied President Queson and General Douglas MacArthur.

General Valdes was interested in all student training activities, since flying training is just being started in the Philippine Army. He was especially interested in Observation training and commented favorably on the miniature range, which is used to give students preliminary observation training on the ground. The methods used to teach instrument flying particularly attracted his attention, and he stated that they would purchase a Link Trainer for their use.

Evidencing pleasure in meeting Flying Cadet Jesus A. Villamor, who is a Filipino student in the present class at the Advanced Flying School, he was also happy to renew acquaintances with Major W.E. Richards, Captain W.G. Bryte and Lieut. A.W. Kissner whom he had known in Manila.

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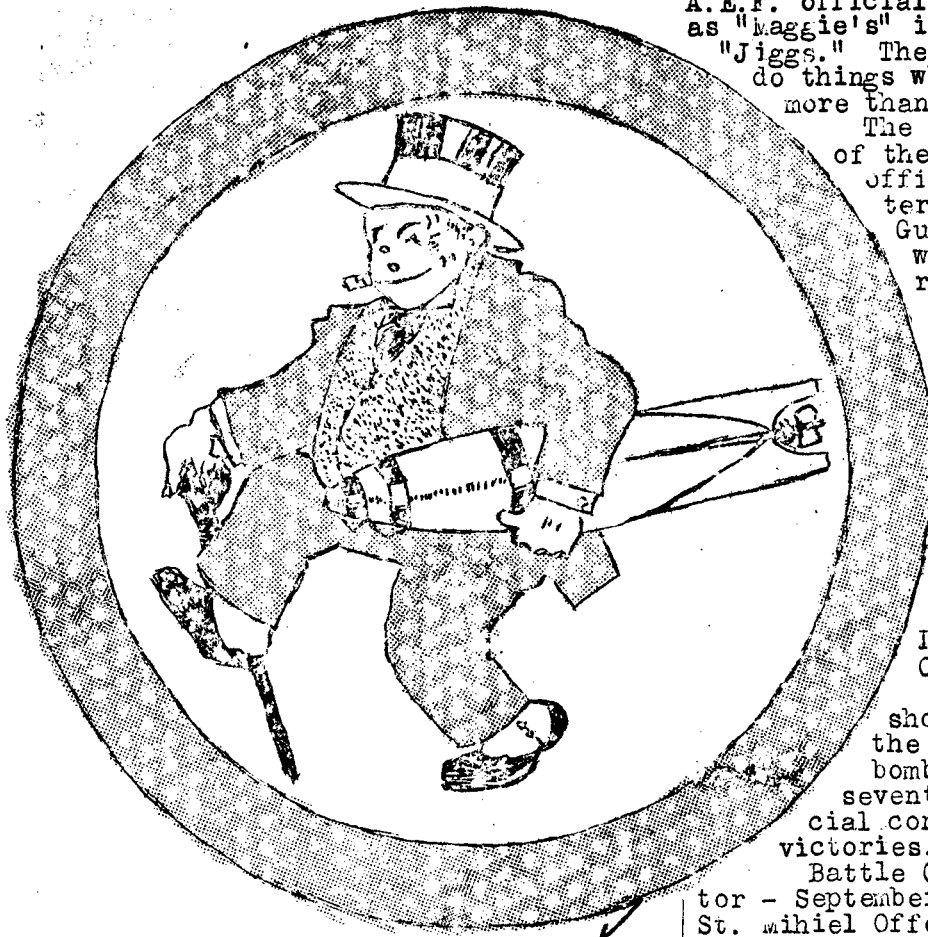
COMMENDATION FOR 8TH ATTACK SQUADRON

Pointing with pride to the excellent record attained by the 8th Attack Squadron with respect to the qualification of its pilots in aerial gunnery, the Barksdale Field Correspondent, touching on other things, states:

"Perhaps our greatest reason for pride is contained in a letter of commendation from Colonel W.H. Frank, Commanding Officer of the Cold Weather Equipment Test Group, which was stationed at Selfridge Field and Oscoda, Mich., last February. To quote Colonel Frank:

'This squadron was outstanding in its operation, showed superior morale, superior airdrome discipline, and superior flying discipline. * * * It is decided to commend him (Major Lester J. Waitland) for the high quality of his work and that of his squadron during the test and to congratulate him upon having one of the most efficient and smoothly operating squadrons that I have ever seen in the service.' We feel that each man perform-

(Continued on Page 11).



INSIGNIA OF 11TH BOMBARDMENT SQUADRON

"Mr. Jiggs" has the distinction of being the only comic character to cover himself with glory in aerial battles over the front lines during the world war, which he gained by riding the nose of the planes of the 11th Aero Squadron as their official insignia.

This was somewhat of a different role from the one known to all the people from Boston to Borneo in the comic strip by George McManus, and the reason for this beginning of a dual existence may necessitate some explanation.

To explain this new role for Jiggs, we must go back to the war time organization of the 11th Aero Squadron in July, 1917, and remember that after five months of intensive training at Scott Field, the outfit was sent overseas. Instead of being assigned to active duty, it was given another long period of intensive training over the landscape of England.

During this period, the members of the 11th became restless and anxious to see some results of the training they had been receiving for so long a time. Privates Hal Green and Laurence Larson conceived the idea of Jiggs for the Squadron insignia, and it was given favorable consideration for two reasons. In the first place, the restraining hand of the

A. E. F. officialdom was as much upon them as "Maggie's" indomitable will was upon "Jiggs." They couldn't go places and do things when the urge came any more than "Jiggs" could.

The attitude of the members of the 11th Aero Squadron is officially preserved for posterity on a "Souvenir de Guerre" showing "Jiggs" when he became the Squadron insignia. The inscription reads: "Mr. Jiggs, borne in the mud of Laulan at the start of the Argonne offensive, whose omnipresent smile seems to exemplify the indomitable spirit of the 11th Squadron despite rebuffs and disappointment in its efforts to get into the fray. Originated by Privates Hal Green and Laurence Larson, painted by Sergeant Clement Jenkins."

The unofficial records show that "Jiggs" accompanied the Squadron on thirty-two bombing raids, engaged in seventeen combats, and has official confirmation of thirteen victories.

Battle Credits: Defensive Sector - September 8/11, 1918. Lorraine. St. mihiel Offensive - September 12/16, 1918. St. mihiel.

Defensive Sector - September 17/25, 1918. Lorraine.

Meuse Argonne Offensive - September 26, November 11, 1918.

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SPRING HAS NOT YET "CAME."

Touching on the encampment of the Headquarters and Headquarters Squadron, 8th Pursuit Group, GHQ Air Force, the scribe of that organization has this to say:

"In camp at Virginia Beach, Virginia, April 13, 1937. Great shades of Boreas, but it was cold last night!!! B-r-r-r-r! Sergeant Boudreaux's 'Sibley' got to acting up, and this morning he was heard to remark that 'he knew just how a Virginia ham felt.' Very little sleep was had by anyone in camp last night, but a substantial breakfast of scrambled eggs, bacon, toast, coffee, fresh milk and grapefruit, served by mess Sergeant Biggers of the 35th Pursuit Squadron, put everyone in a good humor this morning. Of course, the warm sunshine helped, too. If the weather man will only be kind, one and all are prepared to enjoy camp life for the next two weeks."

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Effective April 30, 1937, Captain Cornelius J. Keaney, Air Corps, goes on the retired list for disability incident to the service.

B I O G R A P H I E S

LIEUT. COLONEL THOMAS J. HANLEY

Lieut. Colonel Thomas J. Hanley, Air Corps, now on duty at Mitchel Field, L. I., New York, as Commanding Officer of Base Headquarters and 2nd Air Base Squadron, was born at Coshocton, Ohio, March 29, 1893. He attended the public schools and high schools of Coshocton, and graduated from the U. S. Military Academy on June 12, 1915. Appointed a second lieutenant and assigned to the 23rd Infantry, he served with his regiment at Texas City, Texas, from September 12 to 20, 1915; was on detached service at Jacksonville, Fla., in connection with the national rifle matches to December 3, 1915; and on duty with his regiment at Galveston, Texas, to March 10, 1916, and at El Paso, Texas, to August 7, 1916. He was then attached to the Aviation Section, Signal Corps, to undergo flying training at the Signal Corps Aviation School at San Diego, Calif. Upon the completion of his training he was, on April 8, 1917, assigned to duty with the 1st Aero Squadron at Columbus, New Mexico. A month later, he was transferred to Kelly Field, Texas, where he was on duty with the 5th and 19th Aero Squadrons to July 10, 1917, when he was transferred to Chanute Field, Rantoul, Ill., where he served as Officer in Charge of Flying to August 27, 1917, and Commanding Officer of the 38th Aero Squadron to January 2, 1918. He was Assistant Officer in Charge of Flying at Rich Field, Waco, Texas, to February 23, 1918; Commanding Officer of the 274th Aero Squadron at Tularferro Field, Texas, to March 16, 1918; Engineering Officer of the post to May 10th, and Commanding Officer from March 25th to April 9th.

Colonel Hanley's next assignment was at Carruthers Field, Fort Worth, Texas, where he was Commanding Officer from May 10 to October 21, 1918; Executive Officer to November 11, 1918, and Officer in Charge of Training to January 4, 1919. From January 8 to February 27, 1919, he took an advanced course in Pursuit flying at Rockwell Field, Calif., and then returned to Carruthers Field and was in command thereat until December 18, 1919.

Transferred to Langley Field, Va., he served as Executive Officer from January 6 to June 5, 1920; Commanding Officer of the 1st Army Observation Group to August 25, 1920, and performed the duties of Summary Court Officer and Surveying Officer in addition.

Ordered to Post Field, Fort Sill, Okla. Colonel Hanley organized a detachment of the 135th Squadron, and then proceeded with this unit to Fort Leavenworth, Kans. and was in command of it at that station

until November 6, 1920. He then proceeded to Langley Field and was assigned to duty at the Field Officers School (later the Tactical School) as Director of the Administration course and as a student as well. In May, 1921, he commanded the 2nd Provisional Bombing Group, also the 14th Squadron, serving in the latter capacity to September 18, 1921. He commanded the 1st Provisional Bombardment Wing to September 30th, was an instructor at the Field Officers School to December 16, 1921, and was then transferred to the Philippines. Assigned to station at Kindley Field, Fort Mills, P. I., he commanded the 2nd Observation Squadron from March 7 to August 7, 1922; the Provisional Administration Company to September 22, 1922, and was then transferred to Camp Nichols and commanded this post and the Air Depot thereat to May 16, 1923. From that date until the end of his tour of duty in the Philippines, he commanded the 28th Bombardment Squadron, served as Post School Officer and Post Operations Officer and at various times was in temporary command of the post.

After commanding Crissy Field, Presidio of San Francisco, Calif., and the 91st Observation Squadron from March 7th to August 3, 1924, he was transferred to Washington, D. C., for duty as a student at the Army Industrial College. From February 2, 1925, to August 22, 1928, he was on duty in the Office of the Assistant Secretary of War.

Upon completing a two-year course of instruction at the Command and General Staff School at Fort Leavenworth, Kansas, Colonel Hanley's next assignment was at Kelly Field, Texas, where he was Executive Officer of the Advanced Flying School and the 10th School Group to August 7, 1930; Assistant Commandant of this school to October 22, 1931, and at various times was in temporary command thereof. He was transferred to the Primary Flying School at Randolph Field and served as Executive Officer and Assistant Commandant to June 1, 1932.

For the next four years, Colonel Hanley was on duty as instructor at the Command and General Staff School at Fort Leavenworth, Kansas. Upon his relief from duty at Fort Leavenworth, he was assigned to his present duties at Mitchel Field.

Colonel Hanley was promoted to 1st Lieut., July 1, 1916; to Captain, May 15, 1917; to Major, May 24, 1925; and to Lieut. Colonel, December 1, 1936. He held the temporary rank of major from July 10, 1918, to March 1, 1920, and that of Lieut. Colonel from August 25, 1918, to October 17, 1918, and from June 16 to December 1, 1936. He is on the General Staff Corps eligible list.

LIEUT. COLONEL ADLAI H. GILKESON

Lieut. Colonel Adlai H. Gilkeson, Air Corps, now on duty at Langley Field, Va., as Commanding Officer of the 8th Pursuit Group, GHQ Air Force, was born at Lansdale, Pa., January 25, 1893. He attended public schools and high school at Sellersville, Pa., and after graduating from the U. S. Military Academy, West Point, N. Y., June 12, 1915, was appointed a second lieutenant and assigned to the 11th Infantry, with which he served at Douglas, Arizona, September 12, 1915, to September 10, 1916.

Attached to the Aviation Section, Signal Corps, Colonel Gilkeson, after completing his flying training at the Signal Corps Aviation School, San Diego, Calif., was assigned on May 19, 1917, to the 1st Aero Squadron at Columbus, New Mexico. He received the rating of Junior Military Aviator June 20, 1917. From July 7 to September 24, 1917, he was Commandant of the School of Military Aeronautics, Princeton University, and from September 28, 1917, to January 3, 1918, he was on duty at Chanute Field, Rantoul, Ill. After serving as Engineer Officer at Rich Field, Waco, Texas, to April 5, 1918, and as Officer in Charge of Flying at Wilbur Wright Field, Fairfield, Ohio, to August 17, 1918, he returned to Chanute Field and was stationed there until January 16, 1919.

Transferred to Aberdeen Proving Ground, Md., Colonel Gilkeson commanded the 217th Aero Squadron there to April 3, 1919. He was on duty at Hazelhurst Field, Mineola, L. I., New York, to October 1, 1919; with the 60th Infantry at Camp Gordon, Ga., to August 25, 1920; Executive Officer at Carlstrom Field, Arcadia, Fla., to July 1, 1921; and, prior to sailing for duty in the Philippines, served a little over a month at Crissy Field, Calif.

After completing a two-year tour of duty in the Philippines as commanding officer of Clark Field and the 3rd Pursuit Squadron, he was assigned to duty as Professor of Military Science and Tactics at the Massachusetts Institute of Technology, Cambridge, Mass. Upon his relief from duty at the M. I. T., Colonel Gilkeson was a student at the Chemical Warfare School, Edgewood Arsenal, Md., September 14 to November 21, 1925, and thereafter, until June 8, 1928, he remained on duty at this station as Air Corps Liaison Officer.

From June 27, 1928, to July 2, 1929, he was a student at the Air Corps Engineering School at Wright Field, Dayton, Ohio. Thereafter, until September 1, 1931, he was Chief of the Equipment Branch of the Air Corps Materiel Division, Wright Field. Following his graduation from the one-year course at the Air Corps Tactical School, Maxwell Field, Ala., June 10, 1932, Colonel Gilkeson

was assigned to duty with the 1st Pursuit Group at Selfridge Field, Mich., as Executive Officer and Officer in Charge of Flying. While assigned to this station, he was on duty with the Civilian Conservation Corps for 13 months.

From November 22, 1934, to March 3, 1935, Colonel Gilkeson was on duty at Fort Sam Houston, Texas, with the Organized Reserves, 8th Corps Area. Since March 6, 1935, he has been on duty with the GHQ Air Force at Langley Field, Va.

Colonel Gilkeson, during February, 1936, commanded the provisional group which was engaged in conducting cold weather tests of clothing and equipment in the New England area.

Colonel Gilkeson can probably lay claim to making the lowest emergency parachute jump on record. On October 5, 1927, when he was stationed at Edgewood Arsenal, Md., he was testing a Pursuit plane to determine the glide necessary to attain a speed of 200 miles an hour. When 50 feet from the ground, a loud crash, followed by a severe jolt which jerked the plane about 45 degrees to the right, was noted. A cloud of gas, oil and water enveloped the ship as it shot up in the air to about 150 feet, rolled to the right and then started down. At 100 feet Colonel Gilkeson left the ship by parachute when the plane rolled completely over, its inverted position aiding him to a very great extent in leaving it and saving seconds which were precious. The opening of the parachute was followed almost immediately by his landing on the ground, and he had no time to realize any other sensations other than that the ground was coming up too fast and that he was too close to the falling plane.

Colonel Gilkeson was promoted to 1st Lieutenant on July 1, 1916; to Captain, May 15, 1917; to Major, July 18, 1925; and to Lieut. Colonel, December 24, 1936.

He held the temporary rank of Major from August 15, 1918, to February 25, 1920, and that of Lieut. Colonel, from March 2, 1935, to December 24, 1936. His total flying time exceeds 4,000 hours.

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Commendation for 8th Attack Squadron
(Continued from Page 8)

ed his duties well and that such a commendation goes far towards raising morale by recognition of the effort put forth."

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The 37th Attack Squadron, GHQ Air Force, Langley Field, Va., recently received and installed the new chemical tanks for its A-17 Attack planes. During the middle of April, according to plans previously made, the Squadron was scheduled to demonstrate its efficiency with chemicals and fixed guns before the Chemical Warfare Classes at Edgewood Arsenal, Md.

A new type of cockpit that certainly should please all Air Corps pilots is being evolved. At present, this new arrangement exists on paper only, but soon a mock-up will be built and placed in the Operations Office at Bolling Field, where all resident and visiting pilots will be invited to take a try at it and to jot down their comments for further use of the designers.

Its principal feature is the new padded seat, built on the general lines of the old seat, but with a back several inches higher and a seat considerably longer, which will certainly be less trying to the pilot's legs and back. Parts of both the back and seat cushions, corresponding in size and shape to the size and shape of the back and seat pack parachutes, are removable. The seat slides backward and forward on an 8-inch track, and can be locked in any one of sixteen different positions (the pin holes being only $\frac{1}{2}$ inch apart), thus permitting the pilot to choose the most comfortable distance from both stick and rudder. The up and down adjustment of the old seat is retained, and the back remains tilted at $13\frac{1}{2}$ degrees but, by means of a lever on the left side, the seat itself may be tilted upward two inches when desired. A new type of safety belt, the shoulder type, is being tested on this seat. Its principal advantage is that, normally, it may be worn loosely enough to give the pilot free forward movement, but, if a crash is imminent, it may be instantly tightened to hold the pilot securely against the cushioned back.

Entrance to this new cockpit will be possible from either side through doors operating in the same manner as the doors of an automobile. For emergency exit with a parachute, it will be possible to release the hinge pins, thus allowing the door to fall and give the pilot a maximum freedom of exit. Besides, as a final safety measure, if for some reason these pins should jam, a means is provided for opening an exit above the pilot.

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Commendation for Advanced Flying School
(Continued from Page 6).

cellent planning, supervision, and execution of this flight by all concerned. This flight was the Student Maintenance Navigation Flight for the student class at the Air Corps Advanced Flying School which graduated on February 17, 1937. The itinerary of the flight included stops at five universities, namely, the University of Alabama, Alabama Polytechnic Institute, Georgia School of Technology, University of Georgia, and the Louisiana State University. Students of these schools evinced considerable interest in aviation.

The peaceful charm of early evening at Barksdale Field, Shreveport, La., has been considerably disturbed during recent weeks. The Third Attack Group has been completing its training schedule. Household watering lawns and others communing with nature on various parts of the reservation have been startled by element after element passing low across the flying field and firing into the range to the east, returning later to drop parachute bombs and spray lime-water along the same route. Blazing parachute flares, the staccato crack of machine gun fire, and the sudden appearance of white lime water spray and parachute bombs in the wake of attacking elements have provided something of a spectacle.

Not so apparent is the careful planning and training necessary to allow two separate squadrons to operate against one target at night. The difficulty of handling an airplane and three weapons in low altitude formation in the dark, and the eyestrain involved in trying to locate a target from a low altitude in the black distance early enough to maneuver a squadron into the exact time and angle of approach may well be appreciated. While it was not feasible to score the machine gun firing, it was possible to measure the disposition of the bombs and spray. A surprising degree of accuracy was achieved with these weapons.

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AERIAL PHOTOGRAPHS OF CONCHOS DAM

Pursuant to War Department orders, 1st Lieut. Charles F. Densford and Staff Sergeant Herman L. Chestnutt, of the 22nd Photo Section, Kelly Field, San Antonio, Texas, took off by air on April 15th for the purpose of obtaining aerial photographs of construction progress on the Conchos Dam project in New Mexico. Lieut. Densford's orders required him to contact the District Engineer, U.S. Engineer Office, Conchas Dam, in regard to details and arrangements for taking the photographs.

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In recognition of his research and experimental work in blind landing systems, Private Edward M. Sorenson, of the Headquarters and Headquarters Squadron, 20th Pursuit Group, Barksdale Field, La., was transferred to the Air Corps Material Division, Wright Field, Dayton, Ohio, to continue his work on the subject.

The two systems as devised by Private Sorenson have held up extremely well in the basic analysis, and it is expected that he will build experimental models of his apparatus and conduct tests at Wright Field. Details of his systems are not ready for publication at the present writing.

V-7325, A.C.

AERIAL GUNNERY BY THE 20TH PURSUIT GROUP
By the News Letter Correspondent

The 20th Pursuit Group, Barksdale Field, La., engaged in high altitude aerial gunnery practice at Fort Crockett, Galveston, Texas, between the dates of March 24th and April 20th, 1937. A permanent camp was established on the airdrome at Fort Crockett, and operations were conducted by successive squadrons working individually.

The 77th Pursuit Squadron, under the command of Major Carlton F. Bond, Air Corps, opened the camp under most unfavorable weather conditions and was considerably handicapped at the outset of operations. "Unusual" spring weather, including fog, rain and extreme cold, forced the grounding of all planes for the most part of the first week. Considerable damage was dealt the camp on the first night after its establishment by a severe wind and rain storm. The cold which followed made Sibley heaters a welcome addition to all tents.

Operations in night gunnery were carried on with the assistance of an A-17 airplane acting as target and the Coast Artillery anti-aircraft playing searchlights upon it. Flying at night was done from the Galveston Municipal Airport because of the small size and inadequate lighting facilities at the Fort Crockett Airdrome.

The 77th Squadron was followed in order by the 55th and 79th Pursuit Squadrons, with Captain M.R. Nelson and Major Frank O'D. Hunter, respectively, in command.

An innovation into the schedule was supplied by the 55th Squadron, which fired .50 caliber guns at the towed sleeve. This was the first .50 caliber aerial gunnery to be attempted in the 20th Pursuit Group. For the accomplishment of this mission, the usual 600-foot tow rope was lengthened to 1,000 feet, and the firing was done from a distance of 500 feet. Tragedy overtook the 55th Squadron encampment when, on April 7th, Lieut. A.E. Livingston, Air Reserve, dived into the Gulf of Mexico from 6,000 feet and was killed. He was towing a target at the time of the accident.

The 79th Squadron entered the camp on April 13th and, upon completion of their firing, closed the camp and returned to Barksdale Field on April 20th.

Thirty caliber firing was carried on at altitudes of 5,000, 10,000 and 15,000 feet both by individual airplanes and elements. Stress was laid on simulating actual combat conditions rather than upon attempting to make high scores throughout the training schedule. A decided difference was noted in handling of the ships and in firing at high altitudes when compared with the normal firing down at 5,000 feet.

During the night operations, guns were not loaded, and attacks were made upon

an A-17 airplane instead of upon the towed sleeve. The Coast Artillery played powerful searchlights on the target while attacks were made by elements, care being taken to keep the attacking ships out of the glare of the lights to prevent involuntary blindness. All squadrons participated in .30 caliber firing and in night gunnery operations, and the 55th Squadron fired, in addition, a number of missions with .50 caliber. A modified form of standard tow rack was used throughout, thus enabling the tow rope to be doubled on take-off and increasing the efficiency of tow ship operation from a small field.

A modified rack was designed and reworked by the 55th Squadron armament section, under direct command of 2nd Lieut. William Eades, Air Reserve. The rack has since been flown to Wright Field by Lieut. Eades and demonstrated before the Equipment Branch of the Materiel Division, after which tests it was given an O.K. for use.

All racks in the 20th Pursuit Group are at present modified to allow for the new manner of take-off. The basic principle of the system is in having the catches on the rack itself changed to hold the target release. By doing this, the tow ship can be taken off with the rope doubled, cutting the length down to 300 feet and making for a quicker, safer take-off. After the ship is in the air, the first pull on the release handle drops both trailing end of tow rope and the first target. Thereafter, additional targets are released as needed in the prescribed manner. In all tests and in operations of the modified rack, the functioning has been almost 100% perfect.

Tests were also run in the 55th Squadron, using a 1500-foot tow rope in preparation for .50 caliber firing, but this proved unsatisfactory. Better results may be obtained with a type of tow ship other than the F-26A or when some form of reel for the tow rope is devised.

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Special orders of the War Department, recently issued, assign the following-named Air Corps officers to duty at the stations indicated upon the completion of their present tour of service in the Hawaiian Department, viz:

Lieut. Colonel John C. McDonnell to Barksdale Field, La.

First Lieuts. Donald D. Arnold and Kingston E. Tibbetts to Mitchel Field, N.Y.

First Lieut. James E. Briggs to Selfridge Field, Mich.

First Lieut. Robert E.L. Pirtle to Hamilton Field, Calif.

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Contribution of material for the News Letter from Wheeler and Mitchel Fields is solicited.

RETIREMENTS

April 30, 1937, marked the date of the termination of the active military service of two Army Air Corps pilots, Captains Cornelius J. Kenney and Mark R. Woodward, who were placed on the retired list for disability incident to the service.

Captain Kenney was born on November 12, 1897, at Brookline, Mass. He graduated in 1916 from the Mechanic Art High School of Boston, Mass. Enlisting on October 23, 1917, as a Private, 1st Class, Aviation Section, Signal Reserve Corps, he was called to active duty at the School of Military Aeronautics, Massachusetts Institute of Technology, Cambridge, Mass., on December 1, 1917. On January 7, 1918, he was transferred to the School of Military Aeronautics, Princeton University, from which he graduated February 23, 1918, and was then sent to Camp Dick, Dallas, Texas, for duty with a squadron. On March 13, 1918, he was transferred to Taliaferro Field, Hicks, Texas, for flying training, which he completed April 25, 1918. He was commissioned a 2nd Lieutenant, Aviation Section, Signal Reserve Corps, June 5, 1918, and assigned to active duty. On June 11th, he returned to Camp Dick for further flying training and instruction in aerial gunnery, and on July 25th he was transferred to Payne Field, West Point, Miss., for flying duty, embracing acrobatics, cross-country flying and formation flying.

On October 1, 1918, Captain Kenney was ordered to the Aviation Concentration Depot at Garden City, Long Island, N. Y., in preparation for overseas service, but with the Armistice being signed before he sailed, he was transferred on December 13, 1918, to Rockwell Field, San Diego, Calif., where he completed a course in aerial gunnery and Pursuit flying.

Transferred to Kelly Field, Texas, on July 22, 1919, he served at that station until February 17, 1922, in the capacities of Engineer Officer, 12th Aero Squadron, for 13 months, and then with the 96th Bombardment Squadron as Radio and Armament Officer, Adjutant, and Post Utilities Officer. From February 24, 1922, to April 22, 1922, he was stationed at Mitchel Field, L. I., New York, as Adjutant, 7th Air Park. He was then transferred to the Panama Canal Department, serving on the Isthmus for a period of three years in the capacities of Adjutant, 25th Bombardment Squadron, for 13 months; Assistant Post Communications Officer, 2 months; Engineer Officer, 24th Pursuit Squadron, 5 months, and Supply Officer, two years.

On May 1, 1925, Captain Kenney reported for duty at Post Field, Fort Sill, Okla., where he served as Supply Officer

of the 44th Observation Squadron for five months; Engineer Officer for two years, and Operations Officer for Air Service troops for a similar period.

From June 21, 1927, to July 24, 1929, he served at March Field, Riverside, Calif., as Commanding Officer of the 24th Observation Squadron.

In July, 1929, Captain Kenney was assigned to duty in New York City as Executive Officer, non-Divisional Units, Second Corps Area, a position he occupied, with subsequent changes of station to Governors Island, N. Y., and Mitchel Field, N. Y., to August 30, 1933, when he was transferred to the Air Corps Tactical School, Maxwell Field, Ala., for duty as student. Following his graduation in June, 1934, he was assigned to Selfridge Field, Mich., where he served as Supply Officer, 1st Pursuit Group Headquarters, and later as Commanding Officer of the 57th Service Squadron.

Captain Kenney was commissioned in the Air Service, Regular Army, as a second lieutenant, on July 1, 1920, and was promoted to 1st Lieutenant the same date, and to Captain, February 1, 1933. From April 20, 1935, to January 22, 1936, and from August 26, 1936, until recently, he held the temporary rank of major.

Captain Mark R. Woodward, Air Corps, who since June, 1935, served as Commandant of Cadets and Director of Ground Training at the Advanced Flying School, Kelly Field, Texas, was born January 10, 1895, at Rosehill, Va. After graduating in 1914 from San Angelo, Texas, high school, he attended the University of Virginia for two years.

Enlisting as a Private, 1st Class, Aviation Section, Signal Enlisted Reserve Corps, in June, 1917, he received his ground school training at the Ohio State University and his flying training at Ellington Field, Houston, Texas. Passing the required tests for the rating of Reserve Military Aviator, he was, on April 20, 1918, commissioned a 2nd Lieutenant, Aviation Section, Signal Reserve Corps, and assigned to active duty at Ellington Field.

Following brief periods of service at Camp Dick and Love Field, both at Dallas, Texas, Captain Woodward was transferred, on June 1, 1918, to Payne Field, West Point, Miss., where he served as Personnel Adjutant, in addition to other duties, until February, 1919. For the next five months he was stationed at the Primary Flying School, Carlstrom Field, Arcadia, Fla., performing among various other duties those of Assistant Engineering Officer.

From June, 1919, to March, 1920, Captain Woodward was stationed at Mitchel

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By the news Letter Correspondent

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Thirty caliber firing was carried on at altitudes of 5,000, 10,000 and 15,000 feet both by individual airplanes and elements. Stress was laid on simulating actual combat conditions rather than upon attempting to make high scores throughout the training schedule. A decided difference was noted in handling of the ships and in firing at high altitudes when compared with the normal firing down at 5,000 feet.

During the night operations, guns were not loaded, and attacks were made upon

an A-17 airplane instead of upon the towed sleeve. The Coast Artillery played powerful searchlights on the target while attacks were made by elements, care being taken to keep the attacking ships out of the glare of the lights to prevent involuntary blindness. All squadrons participated in .30 caliber firing and in night gunnery operations, and the 55th Squadron fired, in addition, a number of missions with .50 caliber. A modified form of standard tow rack was used throughout, thus enabling the tow rope to be doubled on take-off and increasing the efficiency of tow ship operation from a small field.

A modified rack was designed and reworked by the 55th Squadron armament section, under direct command of 2nd Lieut. William Eades, Air Reserve. The rack has since been flown to Wright Field by Lieut. Eades and demonstrated before the Equipment Branch of the materiel Division, after which tests it was given an O.K. for use.

All racks in the 20th Pursuit Group are at present modified to allow for the new manner of take-off. The basic principle of the system is in having the catches on the rack itself changed to hold the target release. By doing this, the tow ship can be taken off with the rope doubled, cutting the length down to 300 feet and making for a quicker, safer take-off. After the ship is in the air, the first pull on the release handle drops both trailing end of tow rope and the first target. Thereafter, additional targets are released as needed in the prescribed manner. In all tests and in operations of the modified rack, the functioning has been almost 100% perfect.

Tests were also run in the 55th Squadron, using a 1500-foot tow rope in preparation for .50 caliber firing, but this proved unsatisfactory. Better results may be obtained with a type of tow ship other than the P-26A or when some form of reel for the tow rope is devised.

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Special orders of the War Department, recently issued, assign the following-named Air Corps officers to duty at the stations indicated upon the completion of their present tour of service in the Hawaiian Department, viz:

Lieut. Colonel John C. McDonnell to Barksdale Field, La.

First Lieuts. Donald D. Arnold and Kingston E. Tibbetts to Mitchel Field, N.Y.

First Lieut. James E. Briggs to Selfridge Field, Mich.

First Lieut. Robert E. L. Pirtle to Hamilton Field, Calif.

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Contribution of material for the News Letter from Wheeler and Mitchel Fields is solicited.

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RETIREMENTS

April 30, 1937, marked the date of the termination of the active military service of two Army Air Corps pilots, Captains Cornelius J. Kenney and Mark R. Woodward, who were placed on the retired list for disability incident to the service.

Captain Kenney was born on November 12, 1897, at Brookline, Mass. He graduated in 1916 from the Mechanic Art High School of Boston, Mass. Enlisting on October 23, 1917, as a Private, 1st Class, Aviation Section, Signal Reserve Corps, he was called to active duty at the School of Military Aeronautics, Massachusetts Institute of Technology, Cambridge, Mass., on December 1, 1917. On January 7, 1918, he was transferred to the School of Military Aeronautics, Princeton University, from which he graduated February 23, 1918, and was then sent to Camp Dick, Dallas, Texas, for duty with a squadron. On March 13, 1918, he was transferred to Taliaferro Field, Hicks, Texas, for flying training, which he completed April 25, 1918. He was commissioned a 2nd Lieutenant, Aviation Section, Signal Reserve Corps, June 5, 1918, and assigned to active duty. On June 11th, he returned to Camp Dick for further flying training and instruction in aerial gunnery, and on July 25th he was transferred to Payne Field, West Point, Miss., for flying duty, embracing acrobatics, cross-country flying and formation flying.

On October 1, 1918, Captain Kenney was ordered to the Aviation Concentration Depot at Garden City, Long Island, N.Y., in preparation for overseas service, but with the Armistice being signed before he sailed, he was transferred on December 13, 1918, to Rockwell Field, San Diego, Calif., where he completed a course in aerial gunnery and Pursuit flying.

Transferred to Kelly Field, Texas, on July 22, 1919, he served at that station until February 17, 1922, in the capacities of Engineer Officer, 12th Aero Squadron, for 13 months, and then with the 96th Bombardment Squadron as Radio and Armament Officer, Adjutant, and Post Utilities Officer. From February 24, 1922, to April 22, 1922, he was stationed at Mitchel Field, L.I., New York, as Adjutant, 7th Air Park. He was then transferred to the Panama Canal Department, serving on the Isthmus for a period of three years in the capacities of Adjutant, 25th Bombardment Squadron, for 13 months; Assistant Post Communications Officer, 2 months; Engineer Officer, 24th Pursuit Squadron, 5 months, and Supply Officer, two years.

On May 1, 1925, Captain Kenney reported for duty at Post Field, Fort Sill, Okla., where he served as Supply Officer

of the 44th Observation Squadron for five months; Engineer Officer for two years, and Operations Officer for Air Service troops for a similar period.

From June 21, 1927, to July 24, 1929, he served at March Field, Riverside, Calif., as Commanding Officer of the 24th Observation Squadron.

In July, 1929, Captain Kenney was assigned to duty in New York City as Executive Officer, Non-Divisional Units, Second Corps Area, a position he occupied, with subsequent changes of station to Governors Island, N.Y., and Mitchel Field, N.Y., to August 30, 1933, when he was transferred to the Air Corps Tactical School, Maxwell Field, Ala., for duty as student. Following his graduation in June, 1934, he was assigned to Selfridge Field, Mich., where he served as Supply Officer, 1st Pursuit Group Headquarters, and later as Commanding Officer of the 57th Service Squadron.

Captain Kenney was commissioned in the Air Service, Regular Army, as a second lieutenant, on July 1, 1920, and was promoted to 1st Lieutenant the same date, and to Captain, February 1, 1933. From April 20, 1935, to January 22, 1936, and from August 26, 1936, until recently, he held the temporary rank of major.

Captain Mark R. Woodward, Air Corps, who since June, 1935, served as Commandant of Cadets and Director of Ground Training at the Advanced Flying School, Kelly Field, Texas, was born January 10, 1895, at Rosehill, Va. After graduating in 1914 from San Angelo, Texas, high school, he attended the University of Virginia for two years.

Enlisting as a Private, 1st Class, Aviation Section, Signal Enlisted Reserve Corps, in June, 1917, he received his ground school training at the Ohio State University and his flying training at Ellington Field, Houston, Texas. Passing the required tests for the rating of Reserve Military Aviator, he was, on April 20, 1918, commissioned a 2nd Lieutenant, Aviation Section, Signal Reserve Corps, and assigned to active duty at Ellington Field.

Following brief periods of service at Camp Dick and Love Field, both at Dallas, Texas, Captain Woodward was transferred, on June 1, 1918, to Payne Field, West Point, Miss., where he served as Personnel Adjutant, in addition to other duties, until February, 1919. For the next five months he was stationed at the Primary Flying School, Carlstrom Field, Arcadia, Fla., performing among various other duties those of Assistant Engineering Officer.

From June, 1919, to March, 1920, Captain Woodward was stationed at Mitchel

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Field, L.I., New York, where he served as Personnel Adjutant of the post, also as Adjutant of the 15th Aero Squadron.

At Mather Field, Sacramento, Calif., to which Captain Woodward was assigned in March, 1920, he performed various duties at different times, including those of Adjutant of the 9th Aero Squadron, Personnel Adjutant of the post, Commanding Officer of the 28th Bombardment Squadron and Commanding Officer of the Air Service Supply Detachment. He participated as pilot in Forest Fire Patrol operations. From August, 1922, he served on a two-year tour of duty in the Philippines, being stationed at Clark Field in the capacity of adjutant. For three years thereafter, until June, 1927, he was on duty as Assistant Professor of Military Science and Tactics at the Massachusetts Institute of Technology, Cambridge, Mass.

Captain Woodward's next station assignment was at Aberdeen Proving Ground, Md., where he performed various duties, including those of Adjutant of the 49th Bombardment Squadron; Operations Officer, Engineering Officer and Acting Air Officer of the 3rd Corps Area.

Transferred in March, 1932, to Langley Field, Va., he served at this post in such capacities as Commanding Officer of the 2nd Bombardment Group Headquarters; Adjutant, 2nd Bombardment Group; and staff duties at post headquarters until his transfer to Kelly Field, Texas.

Captain Woodward was commissioned in the Air Service, Regular Army, on July 1, 1920. He was promoted to 1st Lieutenant on the same date, and to Captain, March 1, 1932. He held the temporary rank of Major from July 18, 1935, to January 25, 1937. He will make his home at Bergs Mill, Texas.

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ARMY DAY AT HAMILTON FIELD

During the first week in April, the 7th Bombardment Group, Hamilton Field, Calif., participated in quite a number of flights. Cooperating with civilian authorities, flights were made over San Francisco, Oakland, and several cities in the Bay Area. On April 6th, the Air Base was thrown open to the public in an "Open House" celebration and featuring exhibitions of formation flying, gunnery and bombing missions. On the ground were exhibits showing the great number of activities so necessary in maintaining a fighting unit.

The photographic laboratory of the 88th Reconnaissance Squadron set up a most attractive display and proved to be the center of attraction. A Martin B-10B was on display with all or most of its flying equipment. Ships of many types were much in evidence, one of which was the new Douglas B-18. This ship was the object of much discussion

by the men of this Air Base, late reports indicating that this base will maintain several of these ships in the near future.

The celebration ended with quite the most thrilling events of the day. Parachute jumps featuring 1st Lieut. Carl A. Brandt, 2nd Lieut. James A. Philpott, Privates, 1st Class, Sam Goldbaum, Charley H. Chan and James R. Wright, made a grand finale to a perfect day.

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BOMBARDIER'S KIT ✓

Experience in the 9th Bombardment Squadron has demonstrated the necessity of a bombardier's kit in order to facilitate the bombardier's problem by providing an orderly and efficient means of handling the numerous charts, the record sheets, and other equipment used in bombing.

A design was prepared by Lieut. J.E. Shuck, of the 9th Bombardment Squadron, Hamilton Field, Calif., and calls for a rectangular kit made of olive drab cotton duck material, approximately 10" x 15" x 1-3/4". On the front side of the kit there is a pocket with an elastic sized to hold the altitude correction computer, a pocket to hold the tachometer, a pocket for two pencils, and a pocket for a small thumb tack board. The rear side of the kit has two celluloid windows with pocket backing made to hold bombing data charts.

The inside of the kit is divided into two sections, one to hold the plotting board and the other for spare plotting sheets. A flap, with a snap fastener, folds over the top of the kit closing the opening at the top. A carrying strap is provided with a snap on one side so as to provide a means of hanging the kit in the airplane.

The need for such a kit was recognized, and the design prepared by the 9th Squadron was so satisfactory that the Commanding Officer of the 7th Bombardment Group ordered sufficient kits to equip all squadrons of that Group.

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The 33rd Pursuit Squadron, Langley Field, Va., is keeping busy these trying days of 2nd Wing Field Exercises. "Interception missions, aerial and ground gunnery, cadet training and training of rear seat gunners leaves us very little time off," says the news Letter Correspondent, who adds: "The four cadets of the 33rd Squadron have been assigned as assistants to the various squadron jobs. The new pilots just finishing the Flying School are always eager and willing to cooperate and perform any job given them."

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Upon the completion of his tour of duty in the Hawaiian Department, Lieut. Col. Hume Peabody, Air Corps, is ordered to Maxwell Field, Ala., for duty as a member of the Air Corps Board.

WASHINGTON OFFICE NOTES

Lieut. Colonel Robert L. Walsh returned April 17th from Boston and Mitchel Field, where he conferred with commanding officers on Reserve matters.

Lieut. Colonel Gerald E. Brower returned April 15th from New York, where he attended a meeting of the National Safety Council.

Major A.W. Marriner returned April 13th from Fort Monmouth, N.J., where he delivered a talk to the students of the Signal School.

Colonel Rush B. Lincoln and Major Wm. B. Souza departed on April 27th on leaves of absence.

Colonel Chalmers G. Hall, Chief of the Supply Division, returned April 24th from a cross-country trip to Buffalo, N.Y.

Officers from other stations who reported to the Chief's Office for temporary duty were: Major Austin W. Martenstein, from Maxwell Field, on April 20th, and 1st Lieut. Hollingsworth F. Gregory, from Fort Sill, Okla., on April 23rd.

Colonel Frank D. Lackland, Chief of the Field Service Section, Materiel Division, Wright Field, Ohio, visited the office April 21st while on leave of absence.

Colonel Wm. C. McChord, Chief of the Training and Operations Division, left for Mitchel Field on April 22nd for a conference.

Majors Malcolm C. Grow and Lowell H. Smith returned from extended inspection trips.

Majors Arthur E. Easterbrook, Alfred W. Marriner and James A. Mollison left April 21st on an inspection trip.

Major Karl S. Axtater departed April 23rd on leave of absence.

Major Morton H. McKinnon left April 27th for temporary duty at Dayton, Ohio.

Captain James B. Jordan, Supply Division, returned April 15th from Chicago, where he visited the Procurement Planning Office.

First Lieut. George W. Hansen, Maxwell Field, Ala., visited the OCAC on April 22nd while on leave of absence.

Captain Pardoe Martin, in charge of Reserve activities at the Municipal Airport, Long Beach, Calif., and who not so long ago was on duty in the Personnel Division, OCAC, dropped in during the course of an extended navigation flight from the West Coast to confer on Reserve matters and to shake hands with old friends. He was accompanied by Captain Miller B. Towman, Air Reserve.

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WAR DEPARTMENT ORDERS

CHANGES OF STATION: To Langley Field, Va.: 1st Lieuts. John A. Feagin and John A. Samford from Panama Canal Department - 1st Lieut. Frank H. Robinson, upon completion present course of instruction, Air Corps Technical School, Chanute Field, Ill. (Previous orders amended) - Captain James M. Fitzmaurice from Kelly Field - Captains

Barr H. Alkire, Carl B. McDaniel, 1st Lieut. Ivan M. Palmer, from Randolph Field, Texas - Major William C. Goldsborough (Captain), previous orders amended in his case - 1st Lieut. William H. McArthur, from Panama - 1st Lieut. Thomas L. Thurlow, from Wright Field.

To Selfridge Field, Mich.: Lieut. Colonel Laurence F. Stone (Major). Previous orders in his case amended. - Major Louis N. Eller (Captain) from Kelly Field.

To Office Chief of the Air Corps, Washington, D.C.: Major Ira C. Baker, upon completion of present course of instruction at the Command and General Staff School, Fort Leavenworth, Kansas - Captain David G. Lingle, upon completion of present course of instruction at Air Corps Tactical School, Maxwell Field, Ala.

To Panama Canal Department: 1st Lieut. Edward H. Underhill and 2nd Lieut. William T. Hudnell, Jr., upon completion of present course of instruction at Air Corps Technical School, Chanute Field, Ill. - 1st Lieut. Morris J. Lee, from A.C. Technical School. - 1st Lieut. Robert K. Taylor, from A.C. Technical School.

To March Field, Calif.: Major Grandison Gardner (Captain) from duty as instructor at A.C. Tactical School, Maxwell Field, Ala.

To the Philippine Department: Major Earle J. Carpenter (Captain) from Mitchel Field.

To Mitchel Field, N.Y.: Major Robert H. Finley, from Moffett Field, Calif.

To Randolph Field, Texas: 1st Lieut. Charles A. Clark, Jr., from Philippines.

To Hawaiian Department: 2nd Lieut. Wm. F. Fratchey, upon completion present course of instruction A.C. Technical School, Chanute Field, Ill.

To Wright Field, Dayton, O.: 1st Lieuts. Charles K. Moore and Edwin S. Parrin, students, upon completion of their present course of instruction, former at California Institute of Technology, Pasadena, and the latter at the University of Michigan.

The following-named Air Corps officers, upon completion of their present course of instruction at the Air Corps Tactical School, Maxwell Field, Ala., are assigned to stations as follows: Major Robert V. Ignico (Captain) to Mitchel Field; 1st Lieut. George McCoy, Jr., to Selfridge Field; Major William W. Welsh (Captain) to Maxwell Field; Major Frank D. Hackett (Captain) and 1st Lieut. Russell A. Wilson to March Field, Calif., and Captain David M. Schlatter to Fort Knox, Ky., for duty with the 12th Observation Squadron.

Upon the completion of their present course of instruction at the Air Corps Engineering School, Wright Field, Ohio, the following-named Air Corps officers are assigned to the Materiel Division for duty: Captains Raymond E. Culbertson, John G. Moore, 1st Lieuts. Eugene H. Beebe, Howard G. Bunker, Louis E. Massie and Herbert H. Tellman.

Major Harvey W. Prosser (Captain), Air Corps, now stationed in the Philippines, has been detailed with the Department of Commerce for one year in the Philippines in connection with the work of promoting civil aviation.

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SCIENCE AND NATIONAL AIR DEFENSE

Address by General Oscar Westover, Chief of the Air Corps,
Before Greater New York Chapter of the National Aeronautic Association
Radio City, New York, April 23, 1937

WILLIAM Stanley Jevons, eminent English logician, once stated "Science teaches us to know, and an art to do, and all the more perfect sciences lead to the creation of corresponding useful arts." Thus has science entered into the development of the airplane as a weapon in National Defense, ^{until} through the exhaustive research of our engineers the tools have been provided for the practice of the art of Air Defense. As rapid and amazing as this development has been, the life of the aeronautical scientist has not been what might be called a "bed of roses." Apropos of the trials and tribulations of the designers of military aircraft, also the rapidity with which aircraft design has changed, I will quote a poem by one of them entitled "An Engineer's Nightmare."

Home from his toil, an engineer
Sank wearily to bed;
The plans of wings and landing gears
Were buzzing through his head.

Then there appeared before his eyes
A dreadful apparition
Much like the ancient mariner
In very poor condition.

Who laid upon the bed a tome
Of 40 thousand pages.
"Specifications" it was marked,
And showed the wear of ages.

He frowned a military frown,
His eyes began to glisten,
And pointing with his horny hand
He throatily croaked, "Listen!"

Design for us, O-Engineer,
An airplane that is hot;
A two-place Fighter's what we want,
The best that can be got.

Of course, you should be quite prepared,
Like any good go-getter,
To change it quickly to a bomber
If we decide that's better.

Now don't forget - it must be fast,
Three hundred's not enough;
But it must land at 20 miles
As light as downy fluff.

Remember, too, it must be dived
Or "Dove" - or is it "diven?"
No matter - it must go like Hell
Nor land the crew in Hivven.

A clean design, for speed's sweet sake,
That's a necessity.
The wings, of course, must fold, but please
Not unexpectedly.

The wings need flaps, the cowl does, too,
The ailerons must droop;
And seaplane floats would be right nice
For landing in the soup.

Since no one knows if this design
Will base on beach or boat,
Arrange to have the wheels retract
Into the seaplane float.

Put in some gas, enough to fly
From Hindoostan to here;
A crew of two - a radioo
And add Floatation gear.

A battery of ten-inch guns -
No wait - that's Battleships.
Oh, well, you'd better put them in;
We'll leave them out on trips.

The radio will be - let's see -
This one - no that one - wait,
Leave room for both - We'll pick one out
At some much later date.

That's all - except of course for bombs
And Cameras and Mappin',
Torpedoes, too, and smoke-screen tanks -
No telling what may happen.

Let's see - The last one was how strong?
Now multiply by three.
One never knows, does one, when one
Will strain it mightily.

Now hark ye well, 'tis writ in blood
That you'll be in a kittle
If you should deviate from specs
One single jot or tittle.

Each part must be well ancdized,
Ten coats of paint you'll give it;
And bonding wire must connect
Each bolt and nut and rivet.

So there you are - Now go ahead
And dash off this design.
Ten weeks we'll give you - not enough?
We'll compromise on nine.

Because, you see, 'Twill take us years
To carefully peruse it
And fully satisfy ourselves
We simply cannot use it.

With few exceptions, every science enters either directly or indirectly into the fabrication or employment of this modern vehicle of defense and, in order that there may be continued improvement in the safety, efficiency, range, speed and capacity of aircraft, our national aviation policy should provide for the comprehensive planning and execution of long range programs of fundamental scientific research.

There are those who believe that science, by aiding in the development of such implements of war as the airplane, is promoting war. Such might be true in the case of an aggressor nation, but in this country which, simultaneously with its inception, adopted the policy of defense only, the more perfect our weapons are for defense the less apt we will be required to

use them; so that science instead of promoting war actually holds the key to the ultimate solution of the problem of peace. It requires a long range view to believe that statement, for as we look around the world today we find many peoples, who by their enormous rearmament programs with especial emphasis on the airplane, indicate that they believe war is probable if not inevitable, and with the rapid extension of science and agencies of destruction, the possible extent, risk and result of such a war will probably be vastly greater than any ever experienced before. But those nations are aggressors which we are not, so who can say, under the condition of strained international relations existing today, that the efforts of our scientists should not be devoted to perfecting our instruments of defense to the point of impregnability and thus keep us out of such a war.

The next war, if and when it comes, will not be between armies but between peoples. Victory may not necessarily go to the strong but to the ingenious - the successful scientist. The decisive factor, due to the efforts of our scientists, may not be any one of those existing today but something as unexpected as were horses to the Aztecs or muskets to the Indians.

The same qualities which have made us successful in industry and commerce will give us the advantage in defense against an aggressor. Our resourcefulness may be even more effective than our resources. The result of any conflict in which we are forced to participate may depend more upon engineer and inventor than upon strategist or soldier. That Germany was able to hold out so long against encircling armies was due less to Hindenburg than to Haber, who discovered how to extract nitrogen for explosives from the air that drifted across No Man's Land.

So that we can rightly say that the development of our modern aircraft and its use in National Defense demands that the blood of the aviator be mingled with the grey matter of the scientist and the sweat of the brow of the man in the factories, mills, mines and fields of the nation.

With that thought in mind, we have adopted a national policy of fostering scientific experimentation in the aeronautical field in every possible way.

As stated before, practically all of the sciences enter into the fabrication and employment of the airplane in National Defense.

The Chemist and Metallurgist have made possible the materials without which our present day all-metal monoplanes would be impossible.

The aeronautical engineers have, by their designs, molded this material into perfectly streamlined craft that travel through the air at speeds not even dreamed of a few brief years ago.

Mechanical engineering genius, working hand in hand with the aeronautical engineer, has developed power plants, retractable landing gears, automatic controllable pitch propellers, the automatic pilot, de-icers, landing flaps, and innumerable instruments, gyroscopic and others, all of which not only add to the speeds obtainable but also make it possible for the pilot to vanquish that arch enemy of the aviator - weather. And this brings us to the meteorologist

who, through his scientific research, has proven one of our humorists wrong when he said "Everybody talks about the weather but nobody does anything about it."

The uncertainty of the weather has in the past, probably more than any other one thing, caused more casualties and interfered with the scheduled operation of aircraft both military and commercial. Through years of study and research, the meteorologist has evolved what is known as the Air Mass Analysis Method of predicting weather. This has placed the forecasting of weather practically in the category with exact sciences.

With the advent of long range military and commercial aircraft, with their ability to traverse oceans as well as continents, the necessity for celestial navigation became apparent. Here astronomy, one of the oldest forms of science, enters the picture. Interwoven in the warp and woof of all these is the most exact science - mathematics.

The science of radio has now become an absolutely essential part of the operation and navigation of the airplane. The radio beacon and compass have given the airplane the characteristics of the homing pigeon. Radio is absolutely essential in the control of air traffic at all of our large air terminals.

Medical science, with all of its ramifications, enters very materially into the operation of aircraft. The selection of the necessarily physically perfect pilot personnel and the maintenance of this condition as well as the research to determine the effects of flying upon the physical and nervous condition of personnel is a function of aviation medicine.

The progress of aviation in the United States during the past twenty years, and more especially in recent years, is the envy of other progressive nations. American airplanes, engines and accessories are being sold in nearly all of the nations that use aircraft. More regularly scheduled passenger transport service is provided in the United States than in all the rest of the world combined, and more passengers are flown on American airlines than on all other airlines put together.

In the development of airplanes for Army and Navy purposes, excellent results have been achieved. Our military and naval airplanes designed to meet our service needs are not excelled. In general it may be said that the performance, efficiency, and safety of American airplanes - military, civil and commercial - are not merely abreast of foreign developments but in many cases are definitely superior. American leadership in aeronautical development is recognized abroad. This is evidenced by the purchase of American products sold in competition with foreign products, and also by the editorial comment of aeronautical authorities in leading European nations. "Imitation is the highest form of flattery." American developments have been and are being imitated abroad by many nations, including the Major European powers. Mr. C.G. Grey, editor of an English aeronautical magazine, when asked to comment on the last Paris Aviation Show, stated in effect - "I didn't know the Douglas airplane had so many illegitimate children."

When we consider the increasingly vital relationship of aircraft to National Defense, it becomes a matter of supreme concern to the Government of the United States that American aircraft excel that of any other nation. Recent feverish activities of European powers in increasing their air forces has been accompanied by great expansion of their scientific research facilities. This factor threatens seriously our present leadership and indicates the wisdom of continuing even more liberally than in the past the support of organized scientific research in aeronautics.

There are two principal agencies or groups of scientists in the United States engaged in original aeronautical research or in applying to aeronautics the product of the scientific research of the vast group of scientists in the industrial and commercial field. One of these is the National Advisory Committee for Aeronautics; the other is the Air Corps Materiel Division.

By an Act, approved March 3, 1915, the Congress of the United States established the National Advisory Committee for Aeronautics and charged it with the duty of supervising, directing and conducting scientific research and experimentation in aeronautics. The vision and wisdom of Congress in enacting that legislation and establishing the National Advisory Committee for Aeronautics as an independent scientific agency of the Government and giving it the functions, form of organization and freedom of action which it did, together with the continuous and far-sighted support of succeeding Congresses, has made possible the preeminent position of the United States in world aeronautics today. It did something for aeronautics, for the United States, and for the advancement of civilization which reflects credit on the Congress and gives us all cause to take pride.

Among the outstanding accomplishments of the human race is man's conquest of the air. It was in 1903 that the Wright Brothers made the first successful flight of an airplane at Kitty Hawk, N.C. Five years later, in 1908, the United States Government purchased its first airplane for the use of the Army and began the training of officers for military flying. During the years immediately preceding the World War, the Government and a meager aircraft industry had made important progress, but the Government, practically the only customer, had purchased less than 100 airplanes.

In the meantime, leading European nations, sensing more acutely the potentialities of aircraft in warfare, had made greater progress, and had begun laying the foundations for the new science of aeronautics; while America, the birthplace of aviation, was in the arms of Morpheus. The World War gave an impetus to the development of aeronautics, and within a few months after the war started, Congress, under the administration of our great war President, Woodrow Wilson, acted with commendable vision in recognizing that aeronautics was a new science about which the world knew but little and Americans less. Congress saw the need for providing a foundation for the advancement of this new science through an organization especially created to direct and conduct fundamental scien-

tific research to develop the possibilities of aircraft, both for military and commercial purposes. Thus was the National Advisory Committee for Aeronautics brought into being. This organization, located at Washington and Langley Field, Va., has been provided with the finest aeronautical research laboratories in the world. It has developed new and unique research equipment and methods which enables its scientific staff to learn some amazing facts about the controlling effects of natural laws governing the flight of aircraft. For example, they can in a single flight, with an airplane especially equipped for flight research, accurately, automatically, and continuously record, from the moment the airplane begins to roll along the ground preparatory to take-off, until it lands, everything that happens, including: The force with which it strikes the ground on each bump as it rolls along in the take-off; the length of run and ground speed in the take-off; the position of the controls; the energy exerted by the pilot in the movement of the controls; the airspeed; the flight path of the airplane, including maneuvers such as the loop, barrel roll, the Immelman turn, the vertical dive, etc.; the engine revolutions per minute; the distribution of the load over the lifting surfaces, and the rapidity and extent of the increase of the load as the airplane goes through violent maneuvers; the accelerations on landing; and the length of run before coming to a stop. All this information is necessary to provide accurate design and safety factors for both military and commercial airplanes.

Let me attempt to illustrate what knowledge of the distribution of the load, for instance, means. Suppose a given airplane weighs 3,000 pounds and has 300 square feet of wing area or lifting surface. The average load would be 10 pounds per square foot, but even in steady flight the load is not evenly distributed. The front edge of the wing carries a great deal more of the load than does the trailing edge, and when the airplane is sharply pulled up from a dive, for instance, the load may build up to eight or ten or even twelve times the weight of the airplane, that is to say, that airplane structure in the act of pulling out of a dive may have to support not 3,000 pounds in the air, but eight or ten or twelve times 3,000 pounds. It is of great importance therefore to know what portions of the wings have to carry this great increase in load and how rapidly the load builds up, in order that the airplane structure may be designed to sustain the shock and carry the load with safety.

An airplane equipped for such research in flight is virtually a flying laboratory, but supporting it is a ground organization and a laboratory staff, and back of that is the membership of the Committee and of its technical sub-committees. The physical equipment of the ground organization comprises a number of wind tunnels, large and small, including the variable-density tunnel, for testing models in compressed air; the propeller research tunnel, for research on full size propellers; the full-scale tunnel - the largest in the world - for research on full size airplanes; the vertical wind tunnel, for

studying and measuring the spinning characteristics of airplanes; the refrigerated wind tunnel for investigating the problem of ice formation in flight; the free-spinning wind tunnel for observing under controlled conditions the free spinning characteristics of airplane models in an ascending column of air; and a high-velocity jet-type tunnel for studying the design of propeller tips. In addition to the wind tunnels, there are an instrument laboratory, an engine research laboratory, a flight research laboratory, and a hydrodynamic laboratory. The latter, known as the N.A.C.A. tank, is a seaplane towing channel in which models of seaplane floats and of flying-boat hulls are investigated at water speeds up to the take-off speed of seaplanes.

The Committee's laboratories are known as the Langley Memorial Aeronautical Laboratory and, as stated, are located at Langley Field, Va., on land set aside for the Committee's use by the War Department. The problems comprising the research programs are approved by the main Committee upon request of the War, Navy, or Commerce Departments, upon recommendation of one of its technical subcommittees, or upon its own initiative. The main Committee is composed of fifteen members appointed by the President and serving as such without compensation. They comprise two representatives each of the War and Navy Departments, from the offices in charge of military and naval aeronautics; one representative each of the Smithsonian Institution, the U.S. Weather Bureau and the National Bureau of Standards; together with eight additional persons (including a representative of the Bureau of Air Commerce, Department of Commerce, who are "acquainted with the needs of aeronautical science, either civil or military, or skilled in aeronautical engineering or its allied sciences."

The law provides that the National Advisory Committee for Aeronautics shall "supervise and direct the scientific study of the problems of flight, with a view to their practical solution * * * and also "direct and conduct research and experiment in aeronautics." Briefly, the general functions of this Committee may be stated as follows:

1. Coordinate the research needs of aviation, civil and military.
2. Prevent duplication in the field of aeronautical research.
3. Conduct under unified control of Committee in one central Government laboratory fundamental aeronautical research, including:
 - (a) Confidential research for the Army and Navy on which they rely for supremacy of American military aviation.
 - (b) Fundamental research to increase safety and economy of operation of aircraft, military and civil.
4. Advise War, Navy, and Commerce Departments and the aviation industry as to the latest research information.
5. Consider merits of aeronautical inventions submitted by the public to any agency of the government.
6. On request of the President, the Congress, or any executive department to advise upon any special problem in aeronautics which may be re-

ferred to it.

Through the personal contact of the heads of the War, Navy and Commerce air organizations serving as members of the National Advisory Committee, and of their chief technical subordinates serving as members of the technical subcommittees, there is effective coordination of the research needs of aviation, resulting in the preparation of research programs that eliminate duplication of effort. A major portion of the research program originates with requests for assistance from the Army and Navy. As a result of the representative character of this organization every desired cooperation is cheerfully given by the War, Navy and Commerce Departments. Usually the results of research are published promptly by the Committee and are made available to all concerned, but on request of either the Army or Navy in specific cases some of the most valuable discoveries of the Committee are kept confidential, at least until they first find application in new design of American aircraft.

The Army Air Corps and Bureau of Aeronautics, as well as the Bureau of Air Commerce and the aircraft industry, rely upon the National Advisory Committee for Aeronautics for the conduct of the fundamental scientific research that is necessary to enable them to keep at least abreast of European developments. The research results are usually applicable alike to military and to civil aviation. The work of the National Advisory Committee for Aeronautics has been so general and valuable that it is impossible today to design a modern efficient airplane without using the results of the Committee's researchers. The work of this organization is not only of great current value, but in time of war will become a vital factor. There is no way to measure the value of superior performance of aircraft in warfare, for aerial supremacy is quite likely ultimately to be decisive of a war; nor even in time of peace can a money estimate be placed on the savings in life and property due to improved safety in the operation of both military and civil aircraft.

The value in dollars and cents of improved efficiency in aircraft resulting from the research of the National Advisory Committee for Aeronautics can, however, be fairly estimated. The National Advisory Committee for Aeronautics is one governmental agency giving a splendid return to the taxpayers for the appropriations it receives, and in economic value is making possible annual savings in military and naval aviation alone in excess of its appropriations.

The remarkable record of improvement in the performance, efficiency, and safety of American aircraft during the past twenty years is largely the result of the continuous prosecution of organized fundamental research by the National Advisory Committee for Aeronautics. In this the scientific talent of America has been marshaled in a sustained effort to have the United States in the forefront of progressive nations in the development of aeronautics.

The factors most largely responsible for the great success of the National Advisory Committee for Aeronautics is its status as an inde-

pendent Government establishment. In my opinion, it deserves the appreciation of this country for its concentration on the function assigned to it by law and for the great credit it has brought to the United States and to American aviation by its outstanding contributions to aeronautical progress, made possible by the truly patriotic and unselfish devotion to duty and service without compensation of its eminent membership. The membership includes not only the responsible governmental officials concerned with the technical improvement in aircraft, but also such outstanding aeronautical authorities as Orville Wright and others, all serving under the able chairmanship of that inspiring leader in aeronautical science, Dr. Joseph S. Ames.

The Air Corps Materiel Division, located at Wright Field, Dayton, Ohio, for purposes of experimental development, has the Aircraft Branch, Power Plant Branch, Materials Branch, Equipment Branch, and last but not least, insofar as the military airplane is concerned, is the Armament Branch.

The Aircraft Branch is divided into six major laboratories.

The Structures Development and Test Laboratory is charged with stress analysis of all aircraft submitted to the Air Corps, testing the structural strength of those purchased, and developing, through test and research, new methods of assembling aircraft structures. To this group the world owes the all-metal monocoque airplane, and through its efforts there is now being constructed the first sub-stratosphere airplane, complete, with supercharged cabin.

The Special Research and Test Laboratory is charged with the preparation of airplane design studies from which military characteristics are established, the preparation of specifications covering the airplane proper, the evaluation of the airplane proper submitted on competition to the Air Corps, and the correction of unsatisfactory design features after the airplane is in service.

This laboratory is constantly investigating new and novel designs and design details and developing standards wherever they apply. One of its primary functions is the development of projects of extremely experimental nature which are usually of secret status.

The Propeller Research and Test Laboratory passes upon the design, and conducts exhaustive tests to determine the characteristics of each type of propeller accepted by the Air Corps. In addition, it is continuously engaged in research and development of new types. The field of its endeavors has been greatly increased by the introduction of controllable and constant speed propellers and by the rapid rise in engine horsepower. This Laboratory conducts all the propeller tests for the Navy and Department of Commerce and is the prime source of propeller engineering data in the United States. It is at present engaged in the development of opposite rotating propellers on a single shaft, a project made necessary by the introduction of great horsepower in airplanes of short span.

The Aerodynamic Research and Test Laboratory is engaged in developing methods of calculating performance, predicting performance by means of the wind tunnels, and actually measuring the

performance of an airplane in flight.

This laboratory has made many contributions to the theory of aerodynamics and to the technique of wind tunnel operation. Its latest development is the photographic method of measuring performance in landing and take-off. At present it is engaged in developing methods for measuring static thrust, ground friction, and net accelerating forces of actual airplanes as well as a method for measuring torque and thrust of an engine-propeller combination in actual flight. The Laboratory has contributed much to the establishment of criteria for aerodynamic shapes, such as control surfaces, fairings, fillets, and the like, and for this purpose operates two wind tunnels of 265 m.p.h. and 500 m.p.h. velocity, respectively.

The Accessory Design and Test Laboratory is charged with the development and test of wheels, brakes, tires and tubes, landing gear complete with retracting mechanism, skis, floats, hulls, and allied parts of the airplane. Wheels and brakes are constantly being tested in order to produce correct drum and brake lining combinations; and oleo legs and retracting mechanisms are tested for each type of airplane. This Laboratory is at present engaged in perfecting hydraulic and pneumatic mechanisms for use on aircraft, a new type to replace the streamlined type now in service, and a radically different type of landing gear designed for instrument landings and take-offs, otherwise known as the tricycle gear.

The Lighter-than-Air Unit is engaged in the development of Air Corps balloons and balloon accessories, and in the correction of design faults which develop in service. This unit is largely responsible for the TC-13 and is now projecting plans for the development of future Air Corps types.

The chief function of the Power Plant Branch is to keep the propeller turning. Without any lengthy discussion, we all know that when the propeller stops everything else stops. Years ago, in the days of iron men and wooden ships and poor engines, forced landings were frequent and, thanks to slow airplanes, a cow pasture usually sufficed. Today most cow pastures are not quite large enough for our high performance airplanes, especially if loaded. A proportionate increase in engine reliability now lessens the possibility of that awakening clatter, that sputter, that puff of smoke, that splatter of oil, followed by that awful silence as you start gliding down to a forced landing, or a jump if old terra firma under you does not look so good.

The Power Plant Branch has contributed its share to the development and research of modern engines and accessory gadgets. Its chief concern is to give to the service the best, the most reliable engine at the earliest possible date. It works in conjunction with the various manufacturers who produce the finished product for test. The test consists of running the engine at various speeds and power loadings with controlled temperatures and pressures, simulating standard sea level conditions and the various conditions at altitudes.

In the Power Plant Branch they must prove themselves capable of routine, day-to-day, con-

tinued military service. Does number so-and-so cylinder cool properly? Does such and such a bearing get sufficient oil? Are the clearances on such and such a part too large or too small? Why did the case crack after so many hours on the test stand? Why the excessive vibration at such and such an r.p.m.? And so on for hundreds of other minor troubles found in type tests of engines. It is best to find out all these troubles on the test stand rather than over the Alleghenies with ceiling zero.

The Power Plant Branch activities during the past fiscal year have been concentrated on increasing the power output of engines in service, development of new types of engines, improved fuels to permit greater power output and lower fuel consumption, an extension of supercharging to higher powers and altitudes, and the designing of an oil dilution system for cold weather starting. Considerable progress has been made in the development of engine accessories, such as vacuum pumps, long reach spark plugs, magnetos and shielding, engine-driven gear boxes for accessory drives, hydraulic fuel pump drives, fuel pressure regulators, automatic oil temperature control valves, automatic supercharger regulators, automatic mixture controls, fuel injectors and controls, and hydraulic engine controls, all for the benefit of those who fly. The general trend in engine improvement is to take as much responsibility as possible from the pilot's already crowded mind, by replacing the great mass of control handles and gadgets by fool-proof automatic controls, out of sight and, we hope, out of mind.

The Materials Branch combines the functions of a service organization and an experimental laboratory. In the former capacity, it does a large amount of testing in connection with the Procurement Program of the Air Corps and acts as a control laboratory by preparing specifications and developing and maintaining standards for the testing and inspection of material and processes at the contractors' plants. Experimental development may be divided into two categories, one which determines the applicability for aircraft construction of materials submitted by the Industry to the Materiel Division, and the other which requires the development of a new process or material in which the industry may not be interested on account of its limited application.

A wide variety of products is covered. Not only are the materials for the construction of airplanes, engines and accessories constantly being improved, but there are hundreds of items used in connection with maintenance for which specifications must be prepared since no other Government agency is interested.

The probability that airplanes will fly at high altitudes has brought up many questions in connection with materials for this service. The properties must not change at the lower temperatures. Complete properties of all the structural material under static, impact, and vibration are being obtained in a room refrigerated to -50° F. The windows must withstand an internal pressure and it became necessary to obtain the physical properties of glass and glass substitutes. New resinous materials with the transparency of glass, but considerably stronger offer

a solution to this problem.

In the field of materials, competition is very keen and new materials are constantly replacing the older ones. Each new material brings up fresh problems in connection with fabrication, protection from corrosion, as well as a study of its fundamental properties in tension, twisting and fatigue. To carry out this work requires laboratory equipment of high accuracy and a wide range of adaptability. The laboratory at Wright Field has facilities for determining the presence of the most minute amount of an element in a material by means of its spectrum, or can test to destruction full-size parts for airplanes which may carry a load of 600,000 pounds.

The Equipment Branch of the Engineering Section consists of six Laboratories, viz: Instrument and Navigation, Electrical, Parachute and Clothing, Aerial Photographic, Miscellaneous Equipment, Physiological Research.

There are approximately 500 items of ground and air equipment for which this Branch is responsible - research, development, and standardization.

The Instrument and Navigation Laboratory. A Douglas C-33 airplane for the conduct of experimental flight tests in connection with the various projects under development has recently been assigned to this laboratory. This airplane has been utilized in testing such devices as improved gyro octants, drift sights and signals, automatic pilots, and navigation computers of various types.

Among the interesting projects now under development is a tachometer that records engine running time. In addition to the pointer which indicates engine r.p.m., two small dials are provided, one to indicate accumulated engine time up to 500 hours, the other to indicate "trip" time. Only the latter counter can be reset from the face of the instrument.

A synchronous control for multi-engine installations has shown promise of early accomplishment. An experimental model of this device has been operating on bench tests and automatically synchronizes speeds much better than can be accomplished by manual control.

Instrument test equipment of a portable nature is nearing completion and it is anticipated the service activities will be supplied with this essential equipment in the near future.

Aircraft and ground lighting equipment are keeping pace with the requirements of advanced aircraft and the needs of the latest landing field installations. New equipment under development includes portable-by-air lighting equipment for landing fields.

Electrical development has been characterized by exploration into the field of alternating current for aircraft application. An experimental installation has been made during the present fiscal year.

Present parachute development is concerned with high-speed opening parachutes for use in the faster airplanes.

Aerial photography. A self-contained photographic laboratory automobile trailer unit has been developed having one room completely equipped for printing and one for film processing and print finishing. The Unit houses its

own ventilating system, water supply, electric power plant, chemical and material supply, together with all photographic accessories necessary to produce complete mosaics wholly within the Unit.

One of the most interesting projects of the Physiological Research Laboratory is an investigation of the effect of centrifugal force on pilots. The equipment for this research consists of a long rotating arm with a seat bolted to its outer end. Powered by a large electric motor, this arm is rotated at speeds up to 80 r.p.m., at which speed a force of twenty times the pull of gravity is developed. Members of the laboratory are acting as experimental subjects up to 8 "G's" and anesthetized experimental animals for the higher forces which may produce permanent or fatal injuries.

The Armament Branch is responsible for the development of all items of armament equipment necessary to the complete complement employed in military aircraft, with the exception of those furnished by other Supply Branches of the Army, in which cases the Armament Branch is responsible for the provision of correct installation and proper functioning.

Also located at the Materiel Division is the Aircraft Radio Laboratory. Recently the work of this laboratory has been concentrated on the development and application of radio in the Air Navigation field. Radio compasses and direction finders have been improved - a light weight direction finder or homing device has been developed for Pursuit airplanes. Tests of a loop wound around the engine cowl have given great promise. New instrument landing equipment has been developed and improved.

A radio range marker for indicating the position of radio range stations provides a more positive indication than the cone of silence and will operate the present type of marker beacon receptor.

Several interesting problems, such as the control of the direction of flight by means of a radio compass and an automatic pilot, and the automatic selection of frequency settings on the radio compass by the action of the marker beacon receptor have reached laboratory solutions, and with slight modifications in the present laboratory designs, should be ready for procurement shortly, if needed.

The foregoing developments indicate that it will be but a short time until all airplanes will be equipped with efficient and satisfactory radio equipment for all purposes.

Other interesting problems too numerous to mention here, including ultra high-frequency work, are being carried on or will be set up in the development program for the next few years.

So long as the development of aviation continues from year to year, the military and naval policies and programs of our national security and defense are necessarily subject to change, as they are largely dependent upon the probable use of aviation in future wars. So long as other nations are seriously engaged in the development of aviation, America must at least keep abreast of the progress of aviation abroad and never permit itself to fall behind.

It is only through the strong and healthy

support of our agencies for scientific research and experimental development that the preeminent position of the United States in aeronautics can be maintained.

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HAWAIIAN STUDENTS VISIT LUKE FIELD

The 5th Composite Group, Luke Field, T.H., was again honored on April 9th by a visit of local R.O.T.C. students.

Fourteen cadet officers from Punahou School, accompanied by their instructor, Captain H.W. Barrick, Infantry, were met upon arrival at Luke Field and taken to the 23rd Bombardment Squadron hangar, where the different types of Bombardment airplanes were explained in detail, including a brief lecture on machine guns, bombs, bomb racks and radio equipment. The comments of Captain Barrick, Professor of Military Science and Tactics at Punahou School, will serve to illustrate the benefits of such visits: "The visit to Luke Field made by the R.O.T.C. students from Punahou last Friday was a great success from their point of view.

They learned much and came away enthusiastic over flying. They were impressed by the thoroughness of the overhauling and inspections in the depot. The cost of airplanes, motors, etc., surprised them. It was extremely enlightening.

This, I feel, is valuable education for them and of benefit to the government; just now this cannot be determined definitely. However, in just a few short years some of these youngsters will be community leaders here and elsewhere. Their sympathy for the Army is established and the benefits they will bring to it eventually will be ample payment for the kindness shown them now.

We appreciate your kindness in permitting the visit. We wish to thank you, Major Melville, and the other officers for their kindnesses, courtesies and efforts in making it a pleasurable and profitable visit."

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DISTINGUISHED FLYING CROSS AWARDED LANGLEY MEN

For their part in the rescue of seven Civilian Conservation Corps enrollees stranded on an ice flow in Cape Cod Bay last year, two officers and two noncommissioned officers of Langley Field, Va., were given citations for "extraordinary achievement" and presented Distinguished Flying Crosses during impressive ceremonies at the Langley Field Air Base on April 27th.

The recipients were Major Barney M. Giles, of the 20th Bombardment Squadron; 2nd Lieut. James H. Patrick, Jr., Air Reserve; Staff Sergeant Donald E. Hamilton and Corporal Frank B. Connor, both of the 96th Bombardment Squadron.

These four men on February 9, 1936, took off at night under dangerous flying conditions to aid seven C.C.C. enrollees stranded on an ice floe in Cape Cod Bay. They located the men, dropped a message to them, and were credited with being chiefly responsible for saving their lives. Major General Frank M. Andrews made the formal presentations during a formal review represented by officers, flying cadets and enlisted men of all GHQ Air Force units at Langley.

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NOTES FROM AIR CORPS FIELDS

Langley Field, Va., April 19th.

33rd Pursuit Squadron: Upon recommendation of the Squadron Commander, the following appointments were made in the Squadron: Staff Sgt. Joseph A. Quinn to 1st Sergeant; Sergeant Anthony P. Tomko to Staff Sergeant; Corporal Maurice L. Dyer to Sergeant, and Private, 1st Class Charles F. Moore is now Corporal Moore and also the proud father of an eight-pound baby boy.

Our old Top Kicker, 1st Sgt. James S. Grisham, was promoted to Master Sergeant on April 1st, and a few days later transferred to Base Hq. and 1st Air Base Squadron. The best wishes of the entire Squadron go with "Wack". He was always one of the boys.

The entire squadron feels proud to see its men go up in grade, as well as smoke their cigars.

35th Pursuit Squadron: The 35th moved into the field at Virginia Beach, Va., on the morning of the 12th for a period of two weeks to participate in the field exercises of the 2nd Wing, GHQ Air Force.

As we look back at the previous camps we have been a member of here at the beach, we begin to appreciate the hot sun and warm air, and we sure would like to have some now. Outside of the cold nights and early mornings, the camp as a whole to date is very comfortable and successful. The functioning of the camp has been very satisfactory and smooth. Everyone goes about his business like he knows how, and that is the most important cog in a large machine such as this.

We have with us this time an officer who in the previous year was a guest on sick leave, and it so happens that this officer returned from detached service just about three weeks prior to our move into the field and is in for some heckling from his fellow officers.

Our three newly assigned flying cadets are getting a taste of Army life in the field, and the training at this early stage of their tactical duty will be very educational to them for future use.

36th Pursuit Squadron: After spending the first night in the Eighth Pursuit Group Camp near Virginia's famed summer resort, Virginia Beach, this writer is doubly thankful that he did not attend the Cold Weather tests earlier in the year at Camp Skeel. It is unanimously agreed by pilots and men alike that the present type of winter flying equipment is inadequate in warmth as pajamas and that six to one instead of four to one should be the ration of blankets to sleepers when serving in the field in the fair State of Virginia.

Our Squadron has six officers, four cadets and 45 enlisted men in camp, and is operating 6 PB-2A's and two P-6E's. So far it has been a pleasant experience for all concerned, and especially for the two junior officers, and the cadets who are doing their first training in the field.

37th Attack Squadron: Corporal Marshall, NCO in charge of the Squadron Radio Department, reports that a new field radio SCR-189A, has been received and tested by the Communications Sec-

tion which is enthusiastic over its performance.

Lieut. Allen and Mr. Richards, of the Communications Staff at Chanute Field, were recent visitors with the Squadron.

Kelly Field, Texas, April 21st.

The following enlisted men are awaiting orders assigning them to duty at foreign stations: For the Canal Zone - Staff Sergeants Harold M. McCabe, William Mace, Jose S. Hraback, James K. Howser, Sergeant Burton L. Chase and 1st Sgt. Lyn B. Carr. One of the field's outstanding athletes, Staff Sgt. Adam J. Vielock, will go to Hawaii. For the Philippines: Master Sergeant Robert P. Jones, Staff Sergeants Henry J. Schmidt, Charles Joynor, Hugh B. Pittman and Sergeant Elton A. Tomlinson.

Colonel Follett Bradley, of Langley Field, stopped at this station on April 17th to visit his son, who is a Flying Cadet. Col. Bradley was on an inspection tour of military intelligence activities in the GHQ Air Force.

Colonel Henry B. Clagett, former Commander of Kelly Field and now stationed at Selfridge Field, was a recent visitor.

The Boerne White Sox beat the Kelly Field nine, 17 to 0, in a practice game at Boerne. The "Gas House Gang," under the management of Lieut. R.J. Browne, beat the Hondo team twice - 5 to 3 and 11 to 4, and lost once, 5 to 4. On April 18th they played a double-header with the San Antonio Air Depot, losing the first game, 13 to 12, but capturing the second, 5 to 1.

Major Joseph L. Boyd, Dental Corps, who has been transferred to Fort Knox, Ky., will leave Kelly Field about July 5th. Major Eugene A. Smith, D.C., now stationed at Fort Knox, will be transferred to Kelly Field.

Captain Ehrling L. Berquist, M.C., who has been on duty at Kelly Field since May, 1933, will leave here April 20th on a leave of absence before sailing for a tour of foreign duty in the Panama Canal Zone.

Captain George H. Steel, our excellent Post Exchange Officer, has been relieved from duty at Kelly Field and assigned to Chanute Field.

Lieut. and Mrs. Laurence B. Kelley have recently joined. Lieut. Kelley has been assigned to the 12th Air Base Squadron, which is commanded by Major George M. Palmer, A.C.

Luke Field, T.H., April 19th.

5th Composite Group: The 50th Observation Squadron lost two officers when the USAF ST. MIHIEL sailed March 19th. First Lieut. Charles H. Born, Squadron Commander, goes to West Point, and 1st Lieut. Emery S. Wetzel to Mitchel Field. The ST. MIHIEL also carried seven enlisted men from this Squadron who were bound for various points on the mainland.

Second Lieut. Robert M. Stillman, a newly arrived officer, was assigned to the 50th Squadron.

The 4th Observation Squadron has been laboring under the handicap of but six available pilots for nearly a month; consequently, we

all have been bending throttles frequently.

First Lieut. Jack W. Wood terminated his tour of foreign service and left for March Field. His loss will be keenly felt in the 4th Squadron.

The 72nd Bombardment Squadron Engineering Officer, 2nd Lieut. Cady R. Bullock, is under orders to return to the mainland in June for station at March Field. Second Lieut. Robert M. Stillman is being transferred to the 50th Observation Squadron, this station. First Lieut. M.L. Harding, a new arrival at this station, was attached to this organization for flying.

Without the aid of mirrors or even a bowling alley on which to practice, the Luke Field bowlers carried away seven out of nine gold medals in the Schofield competition which took place during March. The team, composed of H. Meure, T. Wood (Capt.), R. Neander, W. Gerton, M. Corgan and J. Swendowski, took first place from a strong field, including all of the teams in the Islands, with a score of 2919 pins. Five gold medals, plus a cash prize of \$25.00, were awarded to the men with the educated thumb and middle finger as a result of this victory. Capt. Wood and Swendowski (pronounced Swendowski or Swendowski, with or without the accent) worked into the prize money with a score of 459 for first high single game in the doubles. Gerton and Meure stuck close to the leaders, copping third place in the single game of the doubles tournament. To top off the bill-of-fare, Bill Gerton rolled into third place in All-Events for a bronze medal plus some cash on the line. The above team has been in and around the first place all season in the strong All-Service League at Schofield, and solidly entrenched themselves in the top spot in the Junior League, Honolulu, composed of six civilian and two service teams.

Hawaiian Air Depot, Luke Field, T.H., April 14.

With the arrival of the LUDINGTON on March 29th, this Depot received one of its largest single shipments of supplies to date. One of the "smaller" single items was a mere 10-ton lathe which offered no little resistance to movement. It was only by the continual stoking of an ancient G.I. tractor with a super grade "Pop Eye" spinach that said immovable object was transferred from the Luke Field dock to the Depot.

It appears from current rumors and actual orders that the Reds and Blues are at it again. Those brave Reds - they are always decisively beaten, but apparently are capable of great recuperative powers and always come back for more, all this to the great resentment of the Blues and to this Depot in particular, for General "A" did not forget that small item of supply and has consequently gotten us deeply involved in the present maneuvers. Our only hope is that either the Blues strike quickly and decisively, thus vanquishing our enemies, or that they in turn capture us at once and lead us away into eternal captivity.

Immediately after the mishap on Luke Field early on the morning of March 20th, which at least temporarily terminated Amelia Earhart's globe-girdling flight, the Hawaiian Air Depot was given complete charge of her damaged "Electra." The wrecked airplane was promptly

removed from the flying field and stored in the Depot's final assembly hangar pending further instructions.

After a five-day delay, replete with telephone calls and radics from far and near, authority was finally received to actually prepare the airplane for shipment back to the mainland. This problem, though not new to the Depot, was not exactly an every day occurrence, especially when one considers that it was privately owned and of a type and model entirely strange to all who worked on it. When, at 10:00 a.m. on the morning of March 25th, the word "Go" was given, everything was in readiness, although not a hand had been turned towards completing the expected project.

Four separate and distinct steps had to be taken: Disassembly, treatment, crating and finally the movement to and loading of the shipment on to a commercial barge, at which point Depot responsibility ceased. Due to expert advance planning, coupled with the untiring cooperation of every employee concerned, many of whom stayed on the job fourteen consecutive hours, the work was completed by 3:00 p.m. the following day, March 26th. Thus, in less than thirty hours, a difficult and comprehensive mission had been satisfactorily completed without a serious hitch, and it is sincerely believed that the employees of this Depot have a just right to be proud of their accomplishment.

San Antonio Air Depot, Duncan Field, Texas.

Brigadier General Frederick L. Martin, Commander of the Third Wing, GHQ Air Force, Barksdale Field, La., was a cross-country visitor at this Depot on April 8th, conferring with the Depot Commander.

Colonel J.O. Mauborgne, Signal Corps, in charge of the Aircraft Radio Laboratory at the Air Corps Materiel Division, Wright Field, O., and Major C.M. Cummings, A.C., of the Office of the Chief of the Materiel Division, visited this Depot April 7-9 on a liaison tour by air in a Ford Radio experimental plane of various Air Corps stations.

Colonel Henry B. Clagett, Commanding Officer of Selfridge Field, Mich., paid the Depot a visit April 7-9 in a C-33 Transport, with Lieuts. Branch, Quick, Nichols and Hatcher as passengers, these latter four officers to ferry back four P-26A planes to Selfridge Field.

Major Hugh A. Bivins, of the Office of the Chief of the Materiel Division, Wright Field, with Mr. Frank Short, of that Division, arrived at the Depot by air on April 19th to confer on engineering matters.

Captain R.J. Minty, of the Rockwell Air Depot, Coronado, Calif., was a visitor here April 15-16, returning to Rockwell on an inter-depot transport service trip from Wright Field.

Captain R.R. Brown, Air Corps Instructor with the Colorado National Guard, Denver, came in April 15th with an O-19E for overhaul, returning on the 17th with another O-19E for that organization.

Lieut. Colonel Morris Berman, Executive Officer of the Depot, and Senior Clerk Harry F. Williams of Depot Headquarters, left April 17, by air, for Wright Field, Ohio, for several

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days' conference with the personnel of the Air Corps Materiel Division on civilian personnel matters.

Lieut. Max H. Warren, Assistant Engineering Officer of the Depot, made a round trip flight to the Fairfield and Middletown Air Depots and return, April 7-11, on an interdepot transport service trip, studying the method of handling interdepot freight by transport squadrons.

Aircraft Engine Inspector Strauss Grisham, of the Depot Engineering Department, left April 17 for Wright Field for about nine days' temporary duty, attending a class in magnaflux instruction at the Materiel Division.

During March, 1937, the Engineering Department of this Depot overhauled 21 airplanes and 49 engines and repaired a total of 29 planes and 27 engines.

Barksdale Field, La., April 21st.

8th Attack Squadron: Losses of personnel during April include 1st Lieuts. R.F. Tate and F.L. Vidal, who were ordered to the Panama Canal Department; 1st Lieut. H.N. Burkhalter, to Hawaii; 2nd Lieuts. Boatner R. Carney and John A. Way, Air Reserve, to Hamilton Field, Calif., and Flying Cadet Michael Coffield to March Field, Calif.

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OBITUARIES

First Lieut. John K. Poole, Air Corps, died in his quarters at Randolph Field, Texas, late Saturday, April 17th. A native of the District of Columbia, where he was born December 2, 1906, Lieut. Poole graduated from the U.S. Military Academy in the class of 1929. Detailed to the Air Corps for flying training, he graduated from the Primary Flying School, Brooks Field, Texas, June 27, 1930, and from the Advanced Flying School, Kelly Field, Texas, October 11, 1930. He specialized in Observation Aviation, and was rated "Airplane Pilot" and "Airplane Observer," effective on the date of his graduation. Assigned to duty at Crissy Field, Presidio of San Francisco, Calif., Lieut. Poole served at that station until January, 1932, when he was transferred to the Hawaiian Department for duty at Luke Field. Upon the completion of his tour of duty in Hawaii, he was ordered to Randolph Field, Texas, where he served until the date of his death.

Funeral services were held at Arlington Cemetery on April 23rd, the following Air Corps officers serving as honorary pallbearers: Majors Norman D. Brophy, Edward W. Raley, William B. Souza, Captains James B. Jordan, Evers Abbey and Luther S. Smith.

Lieut. Poole was the son of Major Francis M. Poole, Medical Corps, Retired, who was at one time Commandant of the School of Aviation Medicine.

The body of the late Lieut. Arthur Erwin Livingston, who was drowned near Galveston, Texas, when his plane dived into the Gulf of Mexico, on April 7th, last, while towing a target during aerial gunnery practice at Fort Crockett, Texas, was found on the Galveston beach on Saturday, April 17th, and forwarded

to Russellville, Ark., for burial. Lieuts. H. B. Young, Air Reserve, accompanied the remains of the deceased officer to his last resting place.

The body of Lieut. Herbert E. Kneiriem, Air Reserve, who was killed January 4th last with Sergeant Hartley Roberts, when their plane crashed in San Francisco Bay, was discovered on the afternoon of April 20th washed up on the beach near Vallejo by Captain John W. Lewis, Commandant of the Mare Island Navy Yard.

Lieut. Kneiriem, with Sergeant Roberts as observer, was flying a Martin Bomber when it plunged into the San Pablo mud flats near Sears Point, nine miles north of Hamilton Field, Calif. It was believed that the pilot, in circling the field preparatory to landing, apparently became confused by the blinding rain and the change in pressure area, and then headed west only to fall into the bay.

Captain Fred A. Ingalls, Air Corps, died on April 21st at the Letterman General Hospital, San Francisco, Calif. Captain Ingalls was born in Missouri, July 16, 1898. He was inducted into the military service October 8, 1918, and was assigned to Company I, Student Army Training Corps, Washington University, St. Louis, Mo. He was honorably discharged on Dec. 16, 1918. Enlisting at Scott Field, Ill., March 31, 1919, he served at that station and later at Fort Omaha, Neb., until April 9, 1920. In July, 1920, he entered the U.S. Military Academy and, following his graduation therefrom four years later, he was commissioned a 2nd Lieutenant in the Air Service. After a short period of service at the San Antonio Air Depot as Supply Officer, he was transferred to Scott Field, Ill., where he was stationed for a period of 8 years, performing at various times such duties as Depot Supply Officer, Engineering Officer, 24th Airship Company, Engineering Officer, 8th Airship Company, Secretary of the Balloon and Airship School and Group Supply Officer of the 21st Airship Group. He also attended the Balloon and Airship School at Scott Field, graduating on June 15, 1928, and receiving the rating of "Airship Pilot."

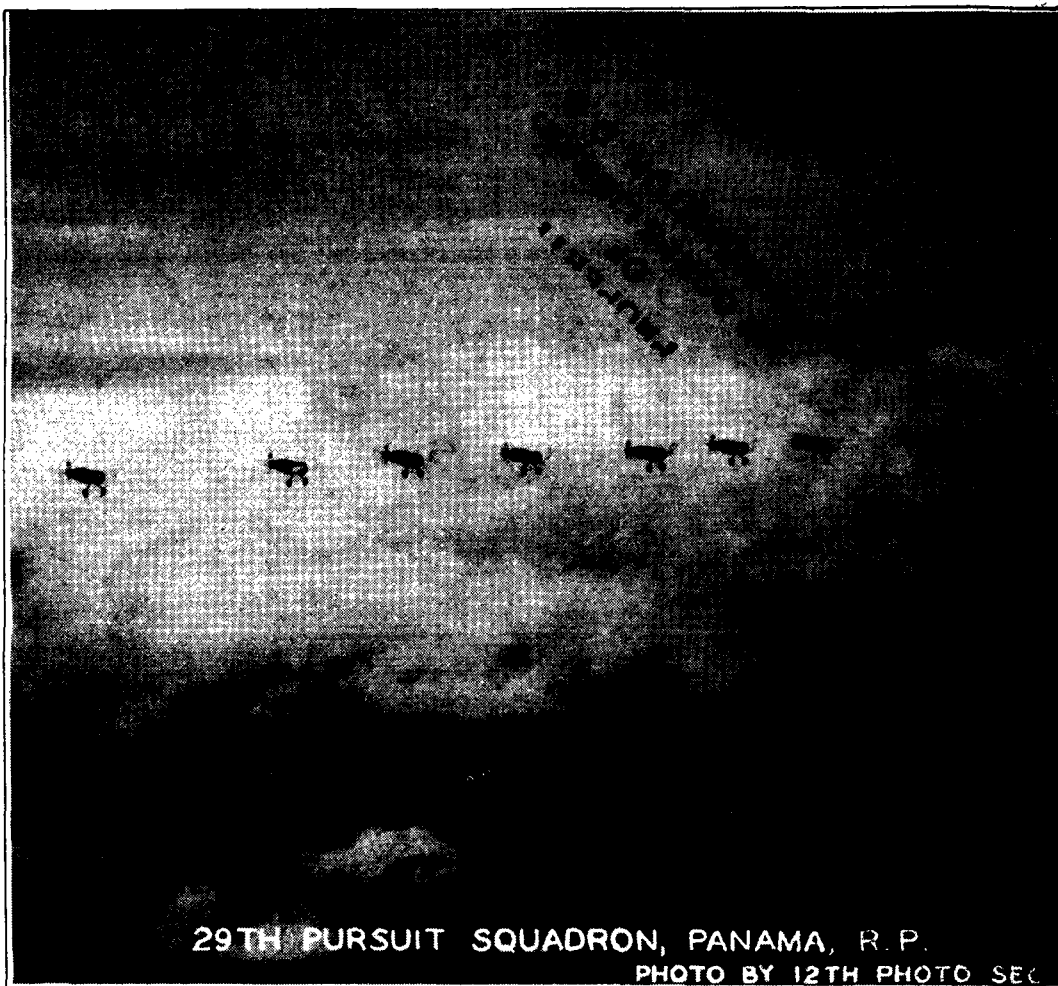
Transferred to Luke Field, T.H., January 5, 1932, Captain Ingalls was assigned to duty with the 5th Composite Group. Ill health necessitated his relief from duty in Hawaii early in 1933, and he was assigned to duty at Crissy Field, Calif. Qualifying for the rating of Airplane Observer, he was so rated as of April 27, 1933.

In December, 1935, he was transferred to Moffett Field, Calif., for duty with the 19th Airship Squadron, GHQ Air Force.

Captain Ingalls had been suffering from a tumor, right arm, and following his return from Hawaii had been under observation and treatment. He appeared to be recovering his health as the result of radium treatments administered to him, only to suffer a relapse and succumb to this malady.

The deep sympathy of the Air Corps is extended to the bereaved families of the officers and enlisted men above mentioned.

★ AIR CORPS ★
NEWS LETTER



29TH PURSUIT SQUADRON, PANAMA, R. P.
 PHOTO BY 12TH PHOTO SEC

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 WAR DEPARTMENT
 WASHINGTON

MAY 15, 1937

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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.

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PRESENTATION OF AVIATION AWARDS ✓

UNDER dull gray skies on Saturday morning, May 8, 1937, the annual presentation of two of the Air Corps' highest awards was made to the most deserving personnel. In an impressive ceremony, General Malin Craig, Chief of Staff of the Army and Acting Secretary of War, presented the Mackay Trophy and the Cheney Award, while about four hundred of Bolling Field's troops looked on. The Army Band played incidental music and marches for the troops, who were lined up in front of ten airplanes during the ceremony.

The Mackay Trophy, presented each year for the most meritorious flight, was received by six officers and three enlisted men of the Air Corps, namely, Captain Richard E. Nugent, 1st Lieut. Joseph A. Miller, Edwin G. Simenson, 2nd Lieut. Burton W. Armstrong, 2nd Lieut. William P. Ragsdale, Jr., and Herbert Morgan, Jr., (Air Reserve), Technical Sergeant Gilbert W. Olson, Staff Sergeant Howard M. Miller and Corporal Frank B. Connor, Air Mechanic, 2nd Class. All of these men who share in the possession of this Trophy flew from Langley Field to Bolling Field, although the skies were threatening rain, and arrived in B-10 Bombers just a few minutes before the presentation.

The Cheney Award, donated by relatives of the late Lieut. William H. Cheney, Air Service, who was killed in an airplane crash at Foggia, Italy, in 1918, is presented annually for an outstanding act of valor, or of extreme fortitude or self-sacrifice in a humanitarian interest, not necessarily of a military nature, but which shall have been performed in connection with aircraft. Those eligible to receive the award are officers of the Air Corps and Air Reserve and enlisted men of the Air Corps and Air Reserve and, in the event of a posthumous award, the widow or next of kin. This Award was shared by Major Frederick D. Lynch and Staff Sergeant Joseph L. Murray, of Post Field, Fort Sill, Okla., for their daring rescue of the crew of a burning balloon near Fort Sill, Oklahoma, in July, 1936.

The donors of the Cheney Award, 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, jointly set aside a trust fund of

\$15,000, the interest accruing therefrom to be used to make the award. In addition, a bronze plaque is struck off yearly, the name of the recipient or recipients engraved thereon, and the memento is presented together with an engraved certificate describing the act of valor performed, and either a sum of money or a suitable gift, as designated by the Cheney Award Board. Although the income from the trust fund exceeds \$500 per annum, the balance is placed in a sinking fund for possible use in the event more than a single individual is recommended for the award, as is the case in the present award.

The Mackay Trophy was tendered in 1912 by Mr. Clarence H. Mackay to the Aero Club of America for award to the officer or officers of the Army making the most meritorious flight of the year. The National Aeronautic Association, successor to the Aero Club of America, is the present custodian of this Trophy.

Associated with the Mackay Trophy are most of the noteworthy flights performed by the Air Corps, among which may be mentioned the first non-stop flight across the American continent, the flight around the world and the flight around South America. Since 1912, the Mackay Trophy has been awarded annually by the War Department for meritorious flights, with the exception of the year 1917. In addition to having his name engraved on the Trophy, Capt. Nugent receives a beautiful gold medal from the donor, on the obverse side of which is an engraving bearing his name and the designation of the flight achievement.

What was considered by the Mackay Trophy Award Board as the most meritorious flight by Air Corps personnel during the calendar year 1936 was one which took place on August 13, 1936, during the Second Army Maneuvers.

Captain Richard E. Nugent, commanding a flight of three B-10B Bombardment airplanes participating in these maneuvers, took off from Langley Field, Va., in the face of adverse weather conditions and led his flight to Allegan, Michigan, slightly over 600 miles distant, and made a simulated attack on anti-aircraft installations at 10:00 p.m. Within a short time, dense haze and solid overcast were encountered, followed by thunder storms and heavy fog. The lead ship V-7343, A.C.

flew by instruments for more than 500 miles. In one area of the dense fog, the pilots of the wing ships, although in tight formation, were unable to see the navigation lights of the lead ship. They were then ordered to fly individually on a prescribed compass course and to reassemble in formation at a designated point on the line of flight. Each pilot brought his airplane to the appointed place, but the haze was so dense that even the landing lights of the airplanes were invisible beyond a few hundred yards, and the assembly was effected only after circling for fifteen minutes in imminent danger of collision. Captain Nugent then led his flight toward the objective, and on his order the Bombers glided out of the clouds over the target and delivered the attack at 9:58 p.m. The flight then proceeded through heavy rain storms to Selfridge Field, Mich.

Major Lynch and Sergeant Murray, recipients of the Cheney Award, were in a free balloon which took off from Fort Sill, Oklahoma, at 9:40 a.m., July 10, 1936. Major Lynch was a passenger in the balloon, which was piloted by Sergeant Murray. Master Sergeant Ralph J. Rumpel was assistant pilot and Staff Sergeant Douglas M. Tucker was the fourth occupant of the balloon. The aeronauts had been in the air about three hours and 35 minutes and were traveling north, rapidly approaching the South Canadian River. Sergeant Murray decided not to cross the river, there being very few bridges and the truck following them would have difficulty in finding them. He was preparing to land on a clear space he had observed from a high altitude, and, after indicating his intentions to the men in the truck, he explained to his passengers and aide what he planned to do. The country at this particular place is very rough, and most of the hills are covered with scrub timber.

As they were flying over a valley between two hills, the balloon started to descend rapidly. Sergeant Murray immediately dropped all the ballast he thought he could afford and believed sufficient to raise the balloon over the next hill. He had used much ballast during the course of the flight in attempting to maintain the altitude decided upon before starting the flight. As the balloon approached the top of this hill, it again descended and hit the ground very hard. More ballast was released, and the balloon was raised enough to clear the trees, and it started traveling north along the ridge of the hill. The ballast was nearly gone by this time and what was left was barely sufficient to make a landing.

The balloon was oscillating badly at this time, but no one was alarmed and Sergeant Murray felt confident he could

make a safe landing in a small clearing immediately ahead. Approaching this clearing, he started to valve the gas, and the balloon with basket oscillating, descended slowly toward the ground. Immediately before hitting the ground, the basket seemed to stick in the underbrush.

Warning all members of the flight to remain in the basket, the pilot, with another member of the flight, pulled the ripcord to release gas from the balloon. There was an explosion at that time and the basket turned over. It was only a matter of seconds before the entire area was a mass of flames. Major Lynch was thrown clear of the basket by the explosion. Sergeant Murray was caught in the rigging by his parachute.

Major Lynch, with utter disregard for his own safety and despite the fact that he was suffering from burns, bruises and shock, returned to the balloon basket, plunged into the wreckage, where the heat from the burning balloon and hydrogen gas was most intense, and dragged Sergeant Murray from the burning basket. Then they both ran to Sergeant Tucker, who was rolling on the ground and whose clothing and chute were on fire. They attempted to put out the fire and cut his clothes from him.

By this time several natives arrived on the scene. One of them suggested throwing dirt on Sergeant Tucker, which was done. Then Sergeant Murray lost consciousness and was placed under a nearby tree. One of the natives assisted Major Lynch in finishing the job of cutting the clothing from Sergeant Tucker. He then issued instructions to get Sergeant Rumpel out of the fire if that was possible. When the latter was removed from the ruins of the balloon he was dead. Both Sergeants Murray and Tucker were severely burned, and were taken to a hospital at Anadarko, Oklahoma. Sergeant Tucker subsequently died as the result of his injuries.

Informed by the Secretary of War of the decision of the Mackay Trophy Award Board with respect to the winners of this Trophy for 1936, the donor, Mr. Clarence H. Mackay, stated in reply:

" * * * The flight of Captain Nugent's ships over a distance of 600 miles in adverse weather that made it necessary to navigate by instrument almost the whole distance, and their landing at their destination within two minutes of the prearranged time was a remarkable performance, most deserving of the Trophy award for 1936. The progress of aviation in the last twenty years has been truly amazing. * * * "

Colonel Walter R. Weaver, Commanding Officer of Langley Field, who initiated the recommendation for the award of the Mackay Trophy to the men above mentioned, stated:

"It is believed that for expert instrument flying and navigation, and the will to overcome obstacles and hit the objective, this flight was outstanding."

DATE SET FOR ADVANCED FLYING SCHOOL GRADUATING CLASS

It is expected that the present class at the Air Corps Advanced Flying School, Kelly Field, Texas, will be graduated on June 9th. This will be the first class since February, 1934, that will be commissioned in the Air Corps Reserve and ordered to active duty. Since 1934, the Flying Cadets have been detailed to duty with tactical units under their cadet status. At the present time there are 52 Flying Cadets in training with the current class. After their graduation they will remain at the Training Center until June 30th, at which time they will be discharged. They will then be appointed on that date as second lieutenants in the Air Reserve and ordered to active duty on July 1, 1937, as Airplane Pilots. The cadets graduating from the Observation Section of the Advanced Flying School will receive the additional rating of Airplane Observer.

To the extent that appropriations are available, they will serve three years' continuous active duty as Reserve offi-

cers. They will then either be returned to inactive duty status or continued on active duty, with their consent, for an additional two years. Such Air Corps Reserve officers who have completed three years of continuous active duty and who are otherwise qualified and are recommended for the extension of two years' further duty, will be promoted to the rank of 1st Lieutenant, Air Reserve. While on active duty as Reserve Officers, they have the privileges, pay and allowances of a Regular Army officer of the same rank in the Air Corps. At the conclusion of three years' continuous active duty as a Reserve officer, these Air Corps Reserves are entitled to a lump sum of \$500., which shall be in addition to any pay and allowances which they may otherwise be entitled to, and which will be paid them only when they are returned to inactive duty status. This additional service will prove invaluable to those Reserve officers who contemplate taking the competitive examination held from time to time for appointment in the Regular Army as second lieutenant.

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THE MANEUVERS AT ROCKY MOUNT, N.C.

The Second Bombardment Group was stationed at Rocky Mount, N.C., for the 1937 Second Wing Field Exercises. For two weeks prior to the move to Rocky Mount on Monday, April 12th, extensive preparations were being made. Field kits were dusted off and jammed full of supplies. Trucks were loaded, so that, bright and early on the morning of the 12th the long snake-like truck train squirmed on its 150-mile trek to the new base. The planes were also loaded and made a round trip in the morning. At 1:30 p.m., the Group left Langley Field as a unit and landed at Rocky Mount at 2:30 p.m. The convoy arrived at about the same time, and the rest of the afternoon was spent in getting tents set up and beds made before dark.

A small crew from the 1st Air Base preceded the main contingent by two days and had contracted for the construction of a kitchen, water lines and power for lights. During the first night in the new camp, without any heating equipment set up, the temperature dropped to an all time low as far as the Group personnel were concerned. Remarks were heard around the camp the next morning that flying clothes made pretty fair pajamas. It warmed up the next day, however and continued to remain so.

The encampment comprised Headquarters, Operations, Engineering, Radio and Metro tents on the auxiliary airdrome, and the camp proper among the trees in Battle

Battle Park, about one-half mile from the airport. The war was on - orders from the Wing being received via teletype, radio and the daily mail plane. The Second Group was ready!

For two weeks prior to April 12th, the personnel of the 49th Bombardment Squadron were busily engaged with preparations for the two weeks of field exercises at Rocky Mount, N.C. First Lieut. C.E. LeMay was Squadron and Flight Commander. The airplane commanders of the Squadron's four B-10B's were Lieut. LeMay, 2nd Lieuts. J.L. Templeton, C.J. Cochran and K.H. Gibson. Each plane was fully equipped as a combat unit and manned by a pilot, bomber-gunner, radio operator-gunner and a navigator-gunner. They operated as one squadron of the 2nd Bombardment Group, commanded by Lieut. Colonel Robert Olds, during these exercises.

The 96th Bombardment Squadron, with 9 officers and 62 men, moved to Rocky Mount, N.C., on April 12th. Camp was established and everything made ready for the two weeks of field maneuvers. Preparations were completed that afternoon.

"Rocky Mount hospitality is the true, unexcelled, typical Southern welcome," reports the News Letter Correspondent, and he adds: "Parties have been held and are on schedule; the golf course is

open to Air Corps personnel; a big league baseball game was enjoyed by all Air Corps fans, and many other acts of courtesy have been shown by the 'Rocky Mountaineers.' We are all looking forward to our second week in camp."

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INTERNATIONAL GAS MODEL ASSOCIATION

The Commanding Officer of the Air Corps Advanced Flying School, Kelly Field, Texas, witnessed a demonstration of exhibition flights of gas model airplanes at the field on Sunday, May 2nd. The demonstration was held so as to afford Colonel Krogstad first-hand knowledge as to the nature of the exhibition the Association would like to hold at Kelly Field on June 6th. If Colonel Krogstad gives his approval to the request of the Association, the State Meet will be held at Kelly Field on that date, at which time it is expected that 30 or 35 miniature airplanes will be entered in the contest. On May 2nd, ten models were flown. One flew to 500 feet altitude and circled the field for ten minutes. Approximately 200 people witnessed the flights.

Private W. M. Hewgley, 12th Air Base Squadron, Kelly Field, built an 8-foot model, the officers of Kelly Field donating the purchase price of the motor.

Mr. Robert Sedwick, son of Dr. W.A. Sedwick, of San Antonio, is President of the local club.

Captain Clyde K. Rich, Assistant Engineering Officer of the 12th Air Base Squadron, and Staff Sergeant J.N. Llewellyn, of that Squadron, supervised the meet on May 2nd which was held in front of the "Visiting Pilots' Hangar."

Another meet was scheduled for May 9th.

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VISITING SHIPS AT ROCKWELL AIR DEPOT

During the month of April, there were 100 visiting ships at the Rockwell Air Depot, Coronado, Calif. Most of the ships were from March and Hamilton Fields, Calif., as the A-17's and B-10's are having checks made before the big war games which were scheduled to be in full swing on May 1st.

Other airplanes came from the Middletown Air Depot, Penna.; Fairfield Air Depot, Ohio; San Antonio Air Depot, Texas; Wright Field, Ohio; Salt Lake City, Utah; Washington, D.C.; Fort Lewish, Wash.; Long Beach and Griffith Park, Calif.

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Staff Sergeants of the Air Corps who were recently promoted to the grade of Technical Sergeant were Walter H. Campbell, Chanute Field, Ill., on April 19, 1937, and Thomas F. Toohy, of Hamilton Field, Calif., on May 1, 1937.

FIELD EXERCISES IN THE PHILIPPINES

Air Corps organization stationed in the Philippines recently participated in field exercises for a period of two weeks, and which proved very successful. The Third Pursuit Squadron of Clark Field, P.I., together with the Fourth Composite Group Headquarters of Nichols Field, were based at Del Carmen on the fine field maintained by the Pampanga Sugar Mills. The 2nd Observation and the 28th Bombardment Squadrons, of Nichols Field, were based at Sugar Centrales on Luzon. All concerned were very enthusiastic over the success of the various problems and missions flown.

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AN ECHO FROM THE VIRGINIA BEACH CAMP

"We have always conceded that there is no branch of endeavor in which the 36th does not have at least one representative who excels," says the News Letter Correspondent of that Pursuit outfit which makes its home at Langley Field, "but it took the alertness of Lieut. Glenn Thompson, during the recent Wing Field Exercises, to discover that hidden away in our midst is the greatest of all Sibley Tent Stove arrangers. Soliciting the aid of this talented soldier, Lieut. Thompson soon had his stove arranged to perfection. As the cold, damp night air settled down, the Lieutenant and his tent mate lit and banked the fire and settled down to a little reading while the masterpiece permeated the tent with warmth. But apparently they belittled the ability of our master stove arranger, for so efficiently did the arrangement function that soon it was engulfing the whole camp with heat, as the poles, tent walls, clothes and other paraphernalia went up in flames, while Lieut. Thompson's clothes budget went down into the red. He and the other tent occupant admitted that at their expense there had been a hot time in the old camp site, and were ushered to their new tent, sans stove, sans clothes and sans humor.

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TEXAS STUDENTS VISIT SAN ANTONIO DEPOT

A group of about forty advanced students of the School of Business Administration, University of Texas, Austin, in charge of Dr. Chester F. Lay, Professor of Accounting and Management, on a visit to the large business establishments in San Antonio for a first-hand study of business methods, made a tour through the San Antonio Air Depot on May 3rd and evinced great interest in observing business methods as applied to the conduct of operations of the Depot.

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STUDENT MAINTENANCE NAVIGATION FLIGHT

As the last student maintenance navigation flight of the graduating class of the Air Corps Advanced Flying School, Kelly Field (which visited various universities throughout Alabama, Georgia and Louisiana) was a success, the same idea is being continued with the present class. Major R.D. Knapp, Director of Flying, and Captain R.E. Holmes have just returned from a survey flight through Oklahoma, Kansas, Missouri and Arkansas, on which tentative arrangements were made.

The plan for which authority has been requested is as follows:

Major R.D. Knapp to be in command of the flight.

Other personnel to consist of 16 flying instructors, 11 student officers, 52 flying cadets and 20 enlisted mechanics.

The flight plans to leave Kelly Field on Monday, May 17th, with itinerary as follows:

1st day: All airplanes to Oklahoma City, Oklahoma, and visit the University of Oklahoma at Norman, Oklahoma, which is nearby.

2nd day: The attack airplanes to Lawrence, Kansas, to visit the University of Kansas.

The Bombardment and Observation type airplanes to Stillwater, Oklahoma, to visit Oklahoma A. & M. College.

The Pursuit type airplanes to Columbia, Missouri, to visit the University of Missouri.

3rd Day: All airplanes to Fayetteville, Arkansas, to visit the University of Arkansas. The Bombardment and Observation airplanes to stop en route for a visit and lunch at the Oklahoma Military Academy, Claremore, Oklahoma. These airplanes will land at Will Rogers Airport at Claremore, which was named in his honor - as Claremore, Oklahoma, was his birthplace.

4th Day: All airplanes return to Kelly Field.

The students in the Attack Section are the only ones scheduled to fly Keystone Bombers, as there are only sufficient A-12's for half of the Section. The Observation and Pursuit Sections expect to have sufficient of their type of planes in commission to accommodate all their students.

Major Knapp and Capt. Holmes reported a warm reception on their survey flight, so everyone is anxious to make this flight.

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TARLETON COLLEGE STUDENTS GUESTS AT KELLY FIELD

The Air Corps Advanced Flying School, Kelly Field, Texas, played host to the band and drill company of the John Tarleton Agricultural College, of Tarleton Station, Texas, during their stay in San Antonio for the Fiesta. The students arrived at Kelly Field on Wednesday, April 21st, by bus from Tarleton, and were in charge of Major James D. Bender, Infantry, who is Professor of Military Science and Tactics at the College. The drill company was the Honorary Drill Company of Tarleton College, a "crack" drill unit of the ROTC. They came to San Antonio to take part in the competition of school military organizations. There were 78 cadets, and they staged an exhibition drill for the post personnel of Kelly Field and their friends on Thursday morning in front of Post Operations Office. The members of the Tarleton Band gave a concert at the same time, playing for an hour for the impromptu audience. There were 56 members of the band, not to mention the sponsor, who was dressed in the colors of the college - white dress and long purple cape.

Major James D. Bender, Professor of Military Science and Tactics at the John Tarleton Agricultural College, on April 29th, wrote the following letter to Colonel Arnold N. Krogstad, Commanding

Officer of Kelly Field, Texas:

"Please allow me to express the thanks of the John Tarleton Cadet Corps, as well as myself, for the splendid hospitality which was accorded this Corps during our stay at your Post.

The Cadets themselves request that their thanks be not only extended to you, and through you, to the officer personnel, but to the enlisted personnel as well. They are unanimous in their comments, 'That they have never been treated so splendidly before in their lives.'

They have nothing but the highest praise for both the officer and enlisted personnel of your Post, and are greatly enthused over the possibilities of becoming Flying Cadets."

John Tarleton College was endowed in 1899 by John Tarleton, an early pioneer of West Texas. Although the eccentric old gentleman never attended school a day in his life, it was his ambition to establish a college where poor boys and girls could obtain a higher education. As a result of this life-long ambition, he spent his entire life living with only the barest of necessities of life, in order that he might save his money. In 1918, the State of Texas made John Tarleton College a State institution, with a junior college rating, under the supervision of the Board of Directors (Continued on Page 6.)

LAWMAKERS VISIT LANGLEY FIELD ✓
By Lieut. Beirne Lay, Jr., Air Res.

Vice President John N. Garner and Mrs. Garner, along with 32 senators and 74 representatives and their wives, and other government officials, were in a visiting delegation here at Langley Field, Va., on Saturday, April 24th.

In the party were Senators Truman, Byrd, Bilbo, Bailey, Walsh, Schwartz, Davis, Green, McKellar, McCarron, Bone, Bridges, Johnson of California, Pepper, Smith, Thomas, Robinson, Lundeen, Lee, Caraway, Austin, Hitchcock, Russell, Andrews, McGill, Durry, Burke, Hayden, Thomas of Utah, and Representatives McMillan, Umstead, Thomason, Harter, Short, Arends, Drewery, Kniffen, Millard, Church, Collins, Hamilton, Bland, Welch, Kennedy, Crosby, Culkin, Ramspeck, Thom, Warren, Colden, Tarver, Johnson, Crowe, O'Leary, Sirovich, Snell, Scoot, Brook, Rutherford, O'Connell, Bates, Anderson, Boland, Daly, Carter, Dirkson, Clason, Schaefer, Harrington, J.G. Dorsey, May, Greenwood, Plumbly, Fitzpatrick, Merritt, Mott, Flanagan, Rabaut, Peterson, Sefer, Dockweiler, Power, Oliver, Scrugham, Mahon, Shannon, Houston, J.J. Smith, Sutphin, Hill, Woodrum, O'Neill, Burch, Costello and Boehne, and Delegate King.

The party left Washington Friday night, April 23rd, and arrived at Old Point Comfort Saturday morning, and was greeted by Brigadier General John W. Gulick, commanding the Third Coast Artillery District, who provided a guard of honor.

After visiting Fort Monroe, they were escorted to Langley Field, where upon their arrival they found planes already in formation on the field for the start of maneuvers that were to give the members of the party a first-hand view of some of Uncle Sam's most modern fighting craft in action.

The first maneuver staged for the visitors presented 18 PB-2 Pursuit planes of the 27th Pursuit Squadron, Selfridge Field, and 8th Pursuit Group of Langley Field, in command of Lieut. Colonel A.H. Gilkeson. Machine gun firing with tracer bullets at ground targets, for long and short range, resulted in a number of "good hits," the target catching fire. The use of tracer bullets, which could be seen in the air, gave the crowd one of its biggest thrills. Later the same planes participated in a "rat race."

Nine planes of the 9th Bombardment Group of Mitchel Field, N.Y., in command of Major Samuel Connell, dropped nine 100-lb. bombs. A like number of planes from the 2nd Bombardment Group of Langley Field, under the command of Lieut. Col. Robert Olds, performed a similar exercise, flying in 3-ship flights.

Eighteen bombs were released simultaneously from a B-17 (Flying Fortress) plane. The marksmanship was impressive, in spite of the necessity of bombing below a bumpy 1,600-foot ceiling.

What was described by Langley Field officers as an "excellent" smoke screen was laid within a range of about 50 yards of the spectators along the entire length of the hangar line by seven A-17 planes of the 37th Attack Squadron in command of Captain Ned Schramm.

A visit to the Wind Tunnel of the National Advisory Committee for Aeronautics concluded the Langley Field inspection and preceded a luncheon at the Officers' Club.

Vice President Garner had very little to say, but seemed to enjoy the visit. The other members of the delegation seemed well pleased in the reception, also the exercises.

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LOTS OF ACTIVITY IN 33RD PURSUIT SQDN. ✓

The 33rd Pursuit Squadron is a pretty busy outfit these days. It participated in two maneuvers in one month. On April 23rd, it returned to Langley Field, Va., from Virginia Beach, where it was encamped for a period of twelve days and participated in the 2nd Wing Concentration. Immediately on its return, all personnel set to work feverishly getting six PB-2A airplanes in readiness for the trip to the West Coast, where they were scheduled to be attached to the 27th Pursuit Squadron, GHQ Air Force, at Muroc Lake, Calif., until approximately May 31st. The following personnel were designated to participate in the West Coast Maneuvers: 1st Lieut. J.A. Bulger, 2nd Lieuts. R.C. Weller, J.D. Lee, W.R. Robertson, Jr., Flying Cadet J.L. Bledsoe, Staff Sergeants H. Turner, A. Bailey, G.S. Saltzgeber, J.H. McCraw, H.J. Beck, Privates, 1st Cl. H.J. Nycum, A.B. Scott and Private R.S. Deel.

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The John Tarleton College
(Continued from Page 5)

of Texas A. & M. College. Since that time the College has continued to grow until at present it has an enrollment of 1154 students and is the sixth largest State institution in Texas. It is co-educational and offers a varied curriculum, including Home Economics, Engineering, Agriculture, Business Administration, Music, and Social Sciences. Tarleton College has long been distinguished for its "crack" ROTC unit and its military band. It has the reputation of being the most economical college in the State of Texas.

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During the month of March, 1937, the two C-27's and one C-33 at the Rockwell Air Depot, Coronado, Calif., flew 118:50 hours, during the course of which they covered a total of 13,829 miles and carried 119,137 pounds of freight on scheduled trips.

THE SELECTION AND TRAINING OF FLYING CADETS

In presenting the above subject, it might be well first to outline briefly the designation, composition and object of the Government agencies established and operated to serve this purpose.

The Army Air Corps has in the vicinity of San Antonio a military establishment officially designated as the Air Corps Training Center, which consists of:

(a) Headquarters, the Air Corps Training Center, located at Randolph Field, Texas.

(b) The Air Corps Primary Flying School located at Randolph Field.

(c) The Air Corps Advanced Flying School located at Kelly Field.

(d) The School of Aviation Medicine located at Randolph Field.

The School of Aviation Medicine, although a part of the Training Center, is not involved in the training of Air Corps personnel, but is operated for the purpose of giving to the Regular, Reserve and National Guard medical officers specialized training in aviation medicine to qualify them as flight surgeons, also to conduct research and investigation with a view of improving the selection and conservation of flying personnel. No further reference will be made to the School of Aviation Medicine in this discussion since, as has been stated, it is not involved in the training of Air Corps personnel.

The objects of the Air Corps Training Center are to instruct and train students who are assigned by competent authority, as airplane pilots to a degree of proficiency which will qualify them to perform military maneuvers with tactical organizations of the Air Corps and which will give them a foundation such as will enable them to qualify for duties of a junior officer of the Air Corps; also to qualify students taking the observation pilot course as Airplane Observers.

Upon graduation from the Air Corps Training Center, the student is awarded his diploma, his wings and, beginning with the class graduating in June, 1937, his commission as a 2nd Lieutenant, Air Corps Reserve. Recent legislation authorizes the President to call to active duty, with their consent, for periods of not more than five years, such number of Army Air Corps Reserve officers as he may deem necessary, not to exceed 1350, and that upon the termination of such a period of active duty of not less than three years in duration, such Air Corps Reserve officers shall be paid a lump sum of \$500.00, which sum shall be additional to any pay and allowances which they may otherwise be entitled to receive. During his period of active duty, the Reserve officer receives the same

pay and allowances as the regular officer of the same grade.

In the last two years approximately 100 Air Corps Reserve officers, all graduates of the Air Corps Training Center, were commissioned as 2nd Lieutenants in the Regular service, and in the future opportunities will be offered for a limited number of Reserve officers to obtain Regular commissions.

Since it is the object of the Training Center to train and qualify not only an airplane pilot, but also an Air Corps officer with the required high standard of education, professional ability, character, sound physique and excellent health, it is well to remember the final product in discussing the selection of our students.

The students at the Air Corps Training Center are composed of student officers and Flying Cadets. Student officers are selected from recent graduates of the U.S. Military Academy and from junior officers of other branches of the service who have voluntarily requested assignment for flying training and who have passed the prescribed physical examination for flying. Their flying and ground school training is the same as the Flying Cadet. However, since the student officer has already received his military training, only a limited amount of military instruction is given him.

Candidates for appointment as Flying Cadets must be unmarried, male citizens of the United States, between the ages of 20 and 26 years inclusive, who have completed at least two years' work in an accredited college or university or who can pass an examination covering such work, of excellent character and of sound physique and in excellent health.

Any person fulfilling the general requirements stated above may apply for appointment as a Flying Cadet to The Adjutant General of the Army, Washington, D.C., in a manner and on forms provided by The Adjutant General's Office, or any Air Corps station.

Cadet Examining Boards, composed of two or three Air Corps officers and a flight surgeon, are provided at various locations under U.S. jurisdiction, and approved applications are forwarded to these boards who notify the candidates as to time and place of their examination. It is the responsibility of these cadet examining boards to determine the candidate's mental, moral and physical qualifications for appointment as a Flying Cadet. If the candidate has furnished documentary evidence from an accredited college or university of at least two years' work, he is exempted from the written mental examination. If he cannot furnish this evidence, he is required to take a written mental exam-

ination covering in scope the equivalent of two years' college work, which examination covers U.S. History; General History; English Grammar and Composition; Geography; Arithmetic; Algebra; Geometry, Plane and Solid; Trigonometry and Elementary Physics. Candidates furnishing evidence for exemption can be examined any time convenient to the Cadet Examining Board. Those required to take the written mental examination can only be examined three times a year; on the second Tuesday in April, August and December.

In order to determine if the candidate is of sound physique and in excellent health, a physical examination is given. The physical standard of flying training is higher than that required for appointment to the Military Academy or enlistment in the Army, and the examination tests are somewhat different, particular attention being given to those faculties and functions which are of particular importance in flying. Visual acuity must be normal in each eye without the aid of glasses. Particular attention is paid to ocular muscle imbalance. Normal color vision is required. Hearing must be normal, and there must be no obstruction in the nasal passage. Equilibrium must be normal, and there must be no tendency toward nervous or emotional instability. The psychological make-up is carefully determined.

Documentary evidence, consisting of three letters signed by persons of recognized standing in their community as to the candidate's character, is also examined in the final determination of the candidate's qualifications for appointment.

Upon the completion of their examination, the Cadet Examining Boards forward the report with their recommendation to the Chief of the Air Corps, in whose office the qualified candidates are listed and arranged in priority groups and the candidate notified of his success or failure to qualify.

Shortly before the beginning of training of each new class, a predetermined number, depending upon the size of the class, are notified to report to the nearest Army Recruiting Officer to enlist as a Flying Cadet and to report to Randolph Field on a specified date to begin training.

The Flying Cadet receives \$75.00 a month pay, also food, shelter, uniforms, clothing and other equipment. Government transportation from his recruiting station to Randolph Field is also furnished him, also his return transportation upon his discharge from the service.

The Air Corps Training Center is commanded by a Brigadier General as an Assistant Chief of the Air Corps, who is responsible for the instruction, training, and employment of all elements of

his command. He is responsible for the coordination of instruction of all the schools within the Air Corps Training Center, for the proper execution of the instruction, policies and training prescribed by the War Department affecting the Training Center; he determines the priority of production and distribution of such Air Corps Training Center equipment as may be produced or distributed by the San Antonio Air Depot.

The Air Corps Primary Flying School, located at Randolph Field, has for its object the instruction and training of students, who are assigned by competent authority, in the fundamental principles of piloting airplanes and in the technical subjects intimately connected therewith, to a degree of proficiency which will enable them to pursue satisfactorily the course of training prescribed for the Advanced Flying School.

The training at the Primary Flying School is divided into three main departments:

- (a) Department of Flying.
- (b) Department of Ground Instruction, and
- (c) Military Department.

The Department of Flying is divided into two stages, the Primary Stage, covering a period of four months' instruction and approximately 70 hours of flying, using what we call the Primary Training airplane, and the Basic Stage, covering a period of four months and approximately 118 hours of flying, using what we call the Basic Training airplane, which is a larger and more advanced type. The Primary and Basic stages, each commanded by a stage commander, are divided into flights, commanded by flight commanders, who have in their flight six or eight flying instructors, and each instructor in turn has from four to six students.

During Primary Stage training, the student learns the fundamental and elementary operations and maneuvers of the airplane, such as effect of controls, straight and level flying, gentle and medium turns, climbs and climbing turns, glides and gliding turns, maneuvering an airplane according to a predetermined course or pattern, taxiing, take-offs, landings, spins, spirals, simulated forced landings, accuracy work and acrobatics. During his Basic Stage training, the student is first given transition to the Basic Training type, reviews all of his Primary Stage work with the new type plane, and is then given training in formation flying, strange field landings, instrument or blind flying under the hood, night flying, day and night navigation and radio beam flying.

It is our experience that the normal student with sufficient natural aptitude or inherent flying ability will solo safely with eight or ten hours of dual

instruction. His solo work is then carried on with a certain amount of dual instruction as he advances to each new and advanced phase or maneuver.

The Ground School or Academic Department gives instruction in theoretical and practical subjects immediately applicable to the students' flying and military work, as follows:

THEORY OF FLIGHT: Instruction in the fundamental principles of aerodynamics and the performance of aircraft.

AIRPLANES: The theory of simple trusses and the application to the airplane for a qualitative analysis of the stresses involved in the main structural members of the airplane. The materials used in airplane construction. Laboratory work on airplanes to include rigging of wings and control surfaces; the repair of fabric and minor structural members; routine maintenance and minor field repair.

AIRPLANE ENGINES: The theory of internal combustion engines. Laboratory work on available service type engines, to include ignition and carburetion systems, valve timing, trouble shooting, routine maintenance, and minor field repair. Instruction in the principles and use of engine instruments.

BUZZER PRACTICE: Instruction in the radio code, and the authorized procedure signs, practice in receiving and transmitting.

PERSONAL EQUIPMENT OF THE PILOT: The use and care of the parachute and other items of flying clothing.

GROUND GUNNERY: Instruction in the nomenclature, care and operation of the Browning Aircraft Machine Guns, synchronizers, sights and gun mounts.

MAPS: The theory of map construction. Instruction in the use of maps in Aerial Navigation and tactical missions.

METEOROLOGY: Instruction in the meteorological elements and their influence on weather forecasting. The influence of the weather on the operation of aircraft. The sources of weather data available to the military pilot.

AIR NAVIGATION: The theory of air pilotage and dead reckoning; radius of action and interception problems; the principles and use of navigational instruments.

FEDERAL AID TO AIR NAVIGATION: Instruction in the regulations, both military and civil, pertaining to the operation of aircraft in flight. Description and instruction in the use of the various aids to navigation available along the Federal Airways system. Practical application of such aids and use of instruments and radio when flying the airways by means of visual contact when blind.

Also MILITARY LAW AND MANUAL OF COURTS-MARTIAL, which pertain to his military training, the elementary principles of criminal law with particular reference to the crimes and offenses denounced by

the punitive Articles of War. The elementary principles of the jurisdiction and procedure of courts-martial and the rules of evidence applied by them.

This gives the student approximately 320 hours of Ground School or Academic training accomplished by means of study, lectures, recitation, demonstrations and examinations.

The military department, under a Regular Air Corps officer as Commandant of Cadets, which gives to the Flying Cadet the fundamental training and experience to enable him to qualify for duties of a junior officer of the Air Corps, is organized and operated similar to that of our best military colleges, with the U.S. Military Academy at West Point as our guide. The Flying Cadets are organized into the Flying Cadet Battalion. The upper classmen or its officers and the cadets perform such additional duties as Officer of the Day, noncommissioned officer in Charge of Quarters, and other military duties. Infantry drill and ceremonies, such as parades, reviews and guard mount; interior guard duty and military courtesies and customs of the service are given throughout his training at Randolph Field.

Three classes are trained by the Training Center each year, a new class entering the Primary Flying School at Randolph Field during the months of March, July and October. At the end of eight months' training at the Primary Flying School, the class goes to the Advanced Flying School at Kelly Field for a further advanced stage training of four months.

The object of the Air Corps Advanced Flying School at Kelly Field is to instruct and train students with a view to qualification as Airplane Pilots for duty with a tactical unit of Pursuit, Attack or Observation Aviation, and to qualify students taking the Observation pilot course as Airplane Observers.

The four months' course at the Advanced Flying School totals approximately 135 hours of flying. This instruction includes:

FLYING: Transition to Attack, Bombardment, Pursuit and Observation types of service airplanes, and specialized flying training in Attack, Pursuit or Observation Aviation. The instruction in Instrument Flying under the hood includes approximately ten hours' practice in the use of the Department of Commerce radio aids to navigation. Such instruction in instrument flying other than under the hood (cloud flying) is given up to a maximum of five hours, as is consistent with the equipment available, necessary safety precautions, and instructions from the Bureau of Air Commerce; Night Flying (Local); Day Navigation Flying; Night Navigation Flying.

The Ground School or Academic instruction includes:

INFANTRY MISSIONS: to include instruction in the various types of missions, communications methods and procedure in cooperation with ground troops, and all work required of divisional aviation.

COOPERATION WITH ARTILLERY: To include instruction in the description of artillery materiel, artillery terms and definitions, methods of artillery fire, Air Corps communication methods and procedure of cooperation with Artillery; communications, blackboard, miniature range, puff target and actual Field Artillery firing problem.

OBSERVATION AVIATION: To include instruction in the history, object, organization, training, operation, various types of reconnaissance, radio, photographic missions, tactical employment, communication methods, and cooperation with other branches of the Service.

PURSUIT AVIATION: To include instruction in the history of development, the Pursuit airplane, factors influencing combat, the Pursuit pilot, individual tactics, the Pursuit flight, flight formation, flight tactics, the Pursuit squadron, squadron tactics, the Pursuit group, group tactics, the wing, principles of employment and administration of units.

SIGNAL COMMUNICATIONS: To include instruction in the operation of airplane radio telegraph and radio telephone communication procedure, and use of radio beacons in navigation.

RECONNAISSANCE: To include instruction in the different types of missions, orders affecting same, types of reconnaissance, reports and cooperation with ground troops.

BOMBS AND EXPLOSIVES: To include instruction in the nomenclature and handling of all explosives and bombs used by the Air Corps.

BOMB RACKS: To include instruction in the operation, handling and maintenance of bomb racks used by the Air Corps.

BOMB SIGHTS: To include instruction in the operation, handling and maintenance of bomb sights used by the Air Corps.

AERIAL PHOTOGRAPHY: To include instruction in the types and uses of aerial photography, aerial cameras, their accessories and methods of operation and installation.

COMBAT ORDERS: To include instruction in the interpretation and composition of field orders, squadron orders and flight orders.

MILITARY ORGANIZATION: To include a general discussion of the military organization of the Army with special emphasis on the organization of the Air Corps units.

SQUADRON DUTIES OF JUNIOR OFFICERS: To include instruction in the duties and responsibilities of junior officers in a squadron, with special emphasis on the

duties of the squadron adjutant, engineer, supply and mess officer; the purpose, preparation and rendition of efficiency report, AGO Form 67.

CODE PRACTICE: To develop all students to send and receive 18 words a minute in the Air Fire-Control Code, the Air-Ground Liaison Code and the Radio Service Code.

WAR PLANNING PRINCIPLES: To include the principles, objectives and general methods prescribed for industrial mobilization.

ENGINE AND EQUIPMENT LECTURES: Lectures on the latest development in engines and equipment are given by a representative of the Materiel Division.

GHQ LECTURES: Lectures on the organization of and problems confronting the GHQ Air Force.

TRAP SHOOTING: Each student to fire approximately 200 rounds.

The Flying Cadets at the Advanced Flying School continue their military organization, training and experience.

The Flying Cadet is also provided with athletic, recreational and social facilities and activities. His social and professional status at the Training Center is similar to that of a West Point Cadet or an Annapolis Midshipman.

The opportunities for a Flying Cadet to continue his military career have already been set forth. In the event he does not receive a commission in the Regular service, upon the termination of his tour of active duty as an Air Corps Reserve officer he again returns to civilian life and his civilian profession, retaining his Reserve commission.

With his excellent education, training and experience, commercial aviation also offers many opportunities for him to make aviation a career. We are proud of the fine reputation and record of our graduates in commercial aviation.

It has been authoritatively stated that no similar institution in the world turns out a better flying military man than our Air Corps Training Center, and we take a great deal of satisfaction and pride in believing that, whether or not all our graduates continue to make aviation their career, we have helped build and develop finer American citizens.

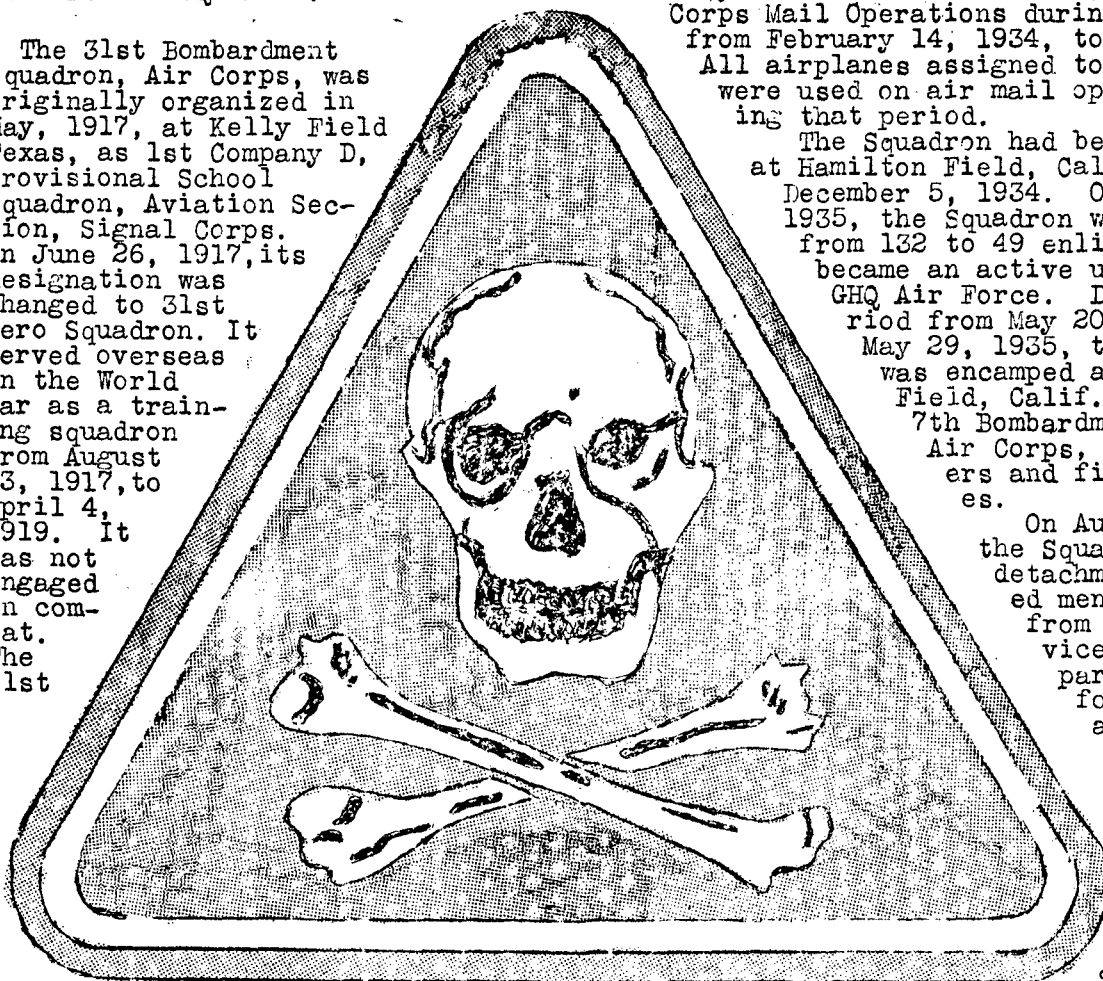
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At 5:25 a.m., April 29th, the C-33 Transport plane No. 36-78, of the Rockwell Air Depot, Coronado, Calif., rose in the early morning sky, pointed its nose towards El Paso, Texas, enroute to Selfridge Field, Mich., to ferry personnel to Muroc Lake, Calif., to participate in the big GHQ Air Force war games taking place there during the month of May.

Master Sergeant Boyd R. Ertwine, pilot; Pvt. 1st Cl. Lloyd L. Sailor, co-pilot, and Sgt. R.A. Ross, crew Chief, were the crew on this mission.

HISTORY OF THE 31ST BOMBARDMENT SQUADRON.

The 31st Bombardment Squadron, Air Corps, was originally organized in May, 1917, at Kelly Field Texas, as 1st Company D, Provisional School Squadron, Aviation Section, Signal Corps. On June 26, 1917, its designation was changed to 31st Aero Squadron. It served overseas in the World War as a training squadron from August 23, 1917, to April 4, 1919. It was not engaged in combat. The 31st



Aero Squadron was demobilized at Mitchel Field, Long Island, New York, on April 4, 1919. In April, 1923, the 31st Aero Squadron was reconstituted on the inactive list of the Regular Army as the 31st Bombardment Squadron.

On April 1, 1931, the Squadron was reconstituted on the active list of the regular Army at March Field, Calif., under the command of Captain Earle G. Harper, Air Corps, with an enlisted strength of 132 men. On June 30th of that year, the Squadron was relieved from assignment to the 19th Bombardment Group and was assigned to the 7th Bombardment Group, Air Corps.

The Squadron was stationed at March Field, Calif., until December 4, 1934, on which date it was transferred with the 7th Bombardment Group to its present station, Hamilton Field, Calif. During the period from its reorganization on April 1, 1931, to its transfer from March Field, the organization took part in various maneuvers with the 7th Bombardment Group. In 1933, this Squadron had an unusually large number of officers and enlisted men detailed to C.C.C. duty in the various C.C.C. camps in Southern California. The Squadron had eight offi-

cers and 32 enlisted men detailed to duty with the Western Zone, Army Air Corps Mail Operations during the period from February 14, 1934, to May 15, 1934. All airplanes assigned to the Squadron were used on air mail operations during that period.

The Squadron had been stationed at Hamilton Field, Calif., since December 5, 1934. On March 20, 1935, the Squadron was changed from 132 to 49 enlisted men and became an active unit of the GHQ Air Force. During the period from May 20, 1935, to May 29, 1935, the Squadron was encamped at Mather Field, Calif., with the 7th Bombardment Group, Air Corps, for maneuvers and field exercises.

On August 18, 1935, the Squadron, with a detachment of enlisted men attached from the 70th Service Squadron, departed for Medford, Oregon, and engaged in maneuvers at that place until August 24, 1935.

During the period from October 14 to October 29, 1935, the Squadron was

encamped at Mather Field for annual bombing practice. On November 4, 1935, the organization departed with the 7th Bombardment Group for Merced, Calif., and was engaged in the 1st Wing, GHQ Air Force maneuvers until November 18, 1935. During the period from November 29 to December 19, 1935, this organization took part in the GHQ Air Force exercises in Florida.

In March, 1936, the Squadron participated in the 1st Wing, GHQ Air Force, maneuvers at Muroc Dry Lake, Calif., and was stationed at that place from March 9th to 19th. On May 3, 1936, the Squadron was stationed at Mather Field until the 29th of that month for its annual bombing practice. During the period from August 2nd to 9th, 1936, the Squadron was stationed at Boise, Idaho, for field exercises. On October 27, 1936, the Squadron moved with the 7th Bombardment Group to Fort Lewis, Wash., for joint Army and Navy Exercises in the vicinity of Puget Sound. The organization returned to its home station on November 8, 1936.

On September 1, 1936, the enlisted strength of the Squadron was increased to 97 enlisted men, who were gained by

transfer from the 69th and 70th Service Squadrons which were placed on the inactive list of the Army.

The Squadron was stationed at Fresno, Calif., for bombing maneuvers during the period from December 2, 1936, to December 8, 1936.

The 31st Bombardment Squadron has been commanded by the following-named Air Corps officers.

April 1, 1931, to January 1, 1932,
Captain Earle G. Harper.

January 1, 1932, to January 6, 1933,
Captain Harold W. Beaton.

January 6, 1933, to January 6, 1934,
1st Lieut. Ralph A. Snavely.

January 6, 1934, to November 16, 1936,
Major Harold D. Smith.

November 16, 1936, to present date,
Major James G. Taylor.

On September 10, 1934, The Adjutant General of the Army approved the Squadron insignia, which is described as follows:

"On a black triangle, one point up, bordered white, a skull and cross bones proper."

The skull and crossbones insignia was originally placed on the ships of the 31st Aero Squadron at Issoudun, France, in 1918. It is not definitely known what daring aviator of those days first painted this insignia on his airplane. The insignia was used in various forms until Major Harold D. Smith started to trace the squadron insignia and suggested the present insignia, which now has the approval of the War Department. ✓

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MAJOR HOUSE TO COMMAND 1ST PURSUIT GROUP

Major Edwin J. House, Air Corps, is to assume a responsibility which for a good many years has fallen upon the shoulders of Lieut. Colonel Ralph Royce, namely, that of commanding the 1st Pursuit Group at Selfridge Field, Mt. Clemens, Mich. Major House has been named by the War Department to command this most famous unit of the Air Corps upon the departure of Colonel Royce for his new station in the Philippine Islands.

The 1st Pursuit Group forms a part of the General Headquarters Air Force which is conducting extensive maneuvers and war games on the West Coast throughout the month of May. The Group left Selfridge Field on May 2nd to wing its way to the West Coast.

The 1st Pursuit Group is without dispute the most famous of American air units. The three Pursuit squadrons comprising it, the 94th, 27th and 17th, all fought in France during the World War and numbered among their members a majority of the American "Aces," including Edward Rickenbacker, Raoul Lufbery, Frank Luke, Wilbur W. White, Reed G. Landis, Douglas Campbell, Lloyd A. Hamilton, Reed

M. Chambers, Jerry C. Vasconcells, Paul Baer, Frank O'D. Hunter and Hamilton Coolidge. Nearly two hundred German planes were brought down by this Group while serving on the Belgian and French fronts in 1918. The command of this unit has always been considered one of the prize plums of the Air Corps, and is a tremendous compliment to the abilities and accomplishments of Major House.

Major House graduated from West Point on August 30, 1917. As a cadet he played on the Army football and baseball teams and was captain of the hockey team. He was awarded the Army Athletic Council Sabre.

Following his graduation from the U.S. Military Academy, Major House was commissioned a second lieutenant and assigned to the 48th Infantry. He was promoted to 1st Lieutenant on the same date that he was originally commissioned, namely, August 30, 1917. After serving with his regiment at Newport News, Va., from October 6, 1917, to February 15, 1918, during the course of which he commanded a company from December 6, 1917, he was detailed to the Signal Corps, and served as Executive Officer, Storage and Traffic Department, Office of the Chief Signal Officer, Washington, D.C., from March 15 to June 21, 1918, when he was transferred to the Bureau of Aircraft Production with the same duties.

Transferred to the Department of Military Aeronautics, July 22, 1918, with station at Langley Field, Va., he was on duty thereat as Tactical Officer at the School for Aerial Observers, also Assistant Executive, Engineer Officer and Post Adjutant. He began his flying training at Langley Field in July, 1918, and was rated an Airplane Pilot two days after the Armistice was signed. Upon his graduation from the Tactical School at Langley Field in 1922, he was transferred to the Hawaiian Department, where he served as Group Operations Officer of the 5th Composite Group. In 1925, upon the completion of his tour of duty in Hawaii, he was sent to the Air Corps Tactical School for duty as Adjutant and Instructor. Upon the completion of this tour of duty, Major House was sent to Mitchel Field, where he commanded the 5th Observation Squadron for one year. He was then detailed to the Plans Division, Office of the Chief of the Air Corps, Washington, D.C., where he remained for four years.

From Washington, Major House was sent to Selfridge Field, where he has commanded the 94th Pursuit Squadron, and for the past year has served as Group Operations Officer and Group Executive.

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First Student Aviator: "Quick, what do I do now, instructor?"

Second ditto: "Hell's bells, aren't you the instructor?"

MANY FISH DINNERS AS AFTERMATH OF BOLLING FIELD FLOOD

The truth of that old saying that it is an ill wind that bloweth no man good was borne out during the recent flood at Bolling Field, D.C. The News Letter Correspondent states that a large number of fish became stranded in the puddles left in the low parts of the field when the water receded and, as a result, W.P.A. workers and negroes living in the vicinity of the post had no trouble getting the fish with clubs and pitchforks and carrying them off in full burlap sacks and even wheelbarrows. It is stated that some of the fish weighed as much as twenty pounds. The flood in March, 1936, and others before that time had the same interesting sequel.

Before the new anti-flood sea wall at Bolling Field could be completed around the Naval Air Station hangars, the spring freshet waters from the hills of Maryland and Virginia and the tide in the Potomac River combined to flood the flying field and hangars and force the Army to evacuate personnel and equipment.

Early on the morning of Tuesday, April 27, 1937, the Potomac began to rise above its banks and creep slowly across the field to the hangars, but receded with the ebb tide. The Meteorological Office issued advance warning, and all hands stood by to carry out the flood plan drawn up from previous experience.

The airplanes were taxied to the higher ground of the new Bolling Field and staked out along the new runways. All equipment that would possibly get wet was stored in the warehouses and gymnasium at the new field, and several of the officers' quarters on the field were evacuated. Other equipment that was not moved was raised high enough to remain above the water level. With each tide the water came up higher and reached its crest on the morning of April 28th. Although the high water mark was twenty inches lower than that of last year, the whole field was covered with an average of thirty inches of water and looked like a lake.

Two departments, the Post Radio Station and the Weather Office located on the second floor of the Operations building, continued to function throughout the flood, the personnel on duty going to work by boat. The new control tower seemed out of its element and took on the aspect of a lighthouse.

While the flood was at its highest, General Westover, Chief of the Air Corps, returned from a cross-country navigation flight and landed on the new field, where operations were continued. Before proceeding to his office, he made a tour of inspection of the flooded field with the Commanding Officer of the post by boat.

The next day the water had gone down enough to allow the hangars and other buildings to be cleaned, although the

runways were still covered with water. On Friday and Saturday, all equipment was moved back and nearly all signs of the flood were removed and the field was back in normal operation by the first of the following week.

This flood was the third experienced by Bolling Field since 1933 and, although the post is always prepared, the floods are an expense to the government. The personnel are hopefully anticipating the appropriation which will allow the new field to be completed and eliminate the almost annual moving from floods.

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THE "MAGIC KEY" BROADCAST

In preparation for Army Day, an opportunity was given the Army by the National Broadcasting Company to join its "Magic Key" program. The 2nd Bombardment Group, Langley Field, Va., was honored in being chosen to make the broadcast for the War Department.

Using one of the Group's three Boeing B-17, four-engined "Flying Fortresses," this broadcast was accomplished while flying over Washington, D.C., on April 4, 1937. The broadcast was coordinated from the N.B.C. studios in New York City, with Mr. John B. Kennedy, the well known N.B.C. commentator, aboard. Also aboard the big bombing plane were Mr. Hartley, in charge of programs of special events; General Gerald C. Brant, Commander of the 2nd Wing, GHQ Air Force; Lieut. Colonel Robert Olds, Commander of the 2nd Bombardment Group; Major C.V. Haynes, 49th Bombardment Squadron commander, and members of the regular combat crew of this flying fortress.

A six-minute program was broadcast, consisting of an interview between Gen. Brant and Mr. Kennedy, and a realistic demonstration of the manner in which the combat crew on a flying fortress goes into action.

Air Mail letters, telegrams and cablegrams have been received since the broadcast, all of which commented enthusiastically on the interest, composition and clarity of the broadcast.

It should be of interest to all Air Corps personnel to know that standard U.S. Army radio equipment was utilized throughout the broadcast.

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PROMOTION OF NONCOMMISSIONED OFFICERS

Two noncommissioned officers stationed at Langley Field, Va., were recently appointed to the grade of Master Sergeant, Air Corps. Technical Sergeant Dan W. Tingle received this promotion on April 19th, and First Sergeant LeRoy L. Johnson on May 1, 1937.

Biographies

LIEUT. COLONEL GEORGE E. STRATEMEYER

Lieut. Colonel George E. Stratemeyer, Air Corps, now on duty at Hamilton Field, Calif., as Commanding Officer of the 7th Bombardment Group, was born November 24, 1890, in Ohio. After graduating from the United States Military Academy, June 12, 1915, he was appointed a second lieutenant and assigned to the 7th Infantry, with which regiment he served at Galveston, Texas, September 11 to 22, 1915; at El Paso, Texas, September 25 to October 29, 1915; at Douglas, Arizona, to November 26, 1915; at Nogales, Arizona, to December 11, 1915, and at El Paso to August 29, 1916. He was then detailed to the Aviation Section, Signal Corps, and ordered to the Signal Corps Aviation School at San Diego, Calif., for flying training. Upon the completion of this training, he received the rating of Junior Military Aviator, as of May 3, 1917.

Assigned to duty as a pilot with the 1st Aero Squadron at Columbus, New Mexico, Colonel Stratemeyer served with that organization until May 14, 1917, when he was transferred to Columbus, Ohio. Here he organized and commanded the U.S. School of Military Aeronautics, Ohio State University.

In November, 1917, he was ordered to Kelly Field, Texas, where he served as test pilot from November 16 to December 16, 1917, and as Executive to the Commanding Officer of Kelly Field until January 7, 1918. He was then assigned to organize and command the Enlisted Mechanics Training Department, Kelly Field, later the Air Service Mechanics School. He was in charge of this school during the remainder of the time it was located at Kelly Field, and in February, 1921, when it was moved to Chanute Field, Rantoul, Ill., later to become one of the departments of the Air Corps Technical School, Colonel Stratemeyer was transferred to that station to assume command of the field and to continue in his capacity as commandant of the school.

From March 30, 1919, to May 12, 1919, Colonel Stratemeyer was Commanding Officer of the Victory Loan Flying Circus, Mid West Flight No. 2.

Ordered to duty in the Hawaiian Department, where he served from October 16, 1921, to July 12, 1924, he was in command of the 10th Air Park at Luke Field to December 12, 1921; Commanding Officer of the Hawaiian Divisional Air Service at Schofield Barracks to April 5, 1922; Commanding Officer of Air Park No. 10,

to May 19, 1922; Commanding Officer of Luke Field and the 5th Composite Group to January 15, 1923; Hawaiian Department Air Service Officer to September 3, 1923; Assistant Air Officer, Hawaiian Department, to July 12, 1924.

For the next five years, Colonel Stratemeyer was on duty at the United States Military Academy, West Point, N.Y., as Assistant Instructor in Tactics, in addition to performing various other duties.

After completing the one-year course at the Air Corps Tactical School, then at Langley Field, Va., graduating in July, 1930, he pursued the two-year course of instruction at the Command and General Staff School at Fort Leavenworth, Kansas, graduating on June 30, 1932. Immediately thereafter, he was assigned to duty as Instructor at the Command and General Staff School, and he served in that capacity until July 1, 1936, when he was transferred to his present command at Hamilton Field.

LIEUT. COLONEL JUNIUS H. HOUGHTON

Lieut. Colonel Junius H. Houghton, Air Corps, at present on duty as Commanding Officer of the Fairfield Air Depot, Patterson Field, Ohio, is a native of Titusville, Pa., where he was born on August 21, 1892.

Following his graduation from the U.S. Military Academy, June 13, 1916, he was commissioned a second lieutenant and assigned to the 19th Infantry. During his graduation leave he was on voluntary duty as an instructor at the Plattsburg Training Camp, New York, July 3 to August 8, 1916. He served with his regiment at Fort Sam Houston, Texas, from September 15, 1916, to February 21, 1917, and at Mercedes, Texas, with the 16th Cavalry, to which he was transferred January 13, 1917, from February 23 to August 15, 1917. He was promoted to 1st Lieutenant, Infantry, July 1, 1916, and to Captain, Cavalry, July 30, 1917.

Detailed to the Aviation Section, Signal Corps, Colonel Houghton was ordered to undergo flying training at the Signal Corps Aviation School at Rockwell Field, San Diego, Calif. He completed the course of instruction in December, 1917, and received the rating of Junior Military Aviator as of the 13th of that month.

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MANY FISH DINNERS AS AFTERMATH OF BOLLING FIELD FLOOD

The truth of that old saying that it is an ill wind that bloweth no man good was borne out during the recent flood at Bolling Field, D.C. The News Letter Correspondent states that a large number of fish became stranded in the puddles left in the low parts of the field when the water receded and, as a result, W.P.A. workers and negroes living in the vicinity of the post had no trouble getting the fish with clubs and pitchforks and carrying them off in full burlap sacks and even wheelbarrows. It is stated that some of the fish weighed as much as twenty pounds. The flood in March, 1936, and others before that time had the same interesting sequel.

Before the new anti-flood sea wall at Bolling Field could be completed around the Naval Air Station hangars, the spring freshet waters from the hills of Maryland and Virginia and the tide in the Potomac River combined to flood the flying field and hangars and force the Army to evacuate personnel and equipment.

Early on the morning of Tuesday, April 27, 1937, the Potomac began to rise above its banks and creep slowly across the field to the hangars, but receded with the ebb tide. The Meteorological Office issued advance warning, and all hands stood by to carry out the flood plan drawn up from previous experience.

The airplanes were taxied to the higher ground of the new Bolling Field and staked out along the new runways. All equipment that would possibly get wet was stored in the warehouses and gymnasium at the new field, and several of the officers' quarters on the field were evacuated. Other equipment that was not moved was raised high enough to remain above the water level. With each tide the water came up higher and reached its crest on the morning of April 28th. Although the high water mark was twenty inches lower than that of last year, the whole field was covered with an average of thirty inches of water and looked like a lake.

Two departments, the Post Radio Station and the Weather Office located on the second floor of the Operations building, continued to function throughout the flood, the personnel on duty going to work by boat. The new control tower seemed out of its element and took on the aspect of a lighthouse.

While the flood was at its highest, General Westover, Chief of the Air Corps, returned from a cross-country navigation flight and landed on the new field, where operations were continued. Before proceeding to his office, he made a tour of inspection of the flooded field with the Commanding Officer of the post by boat.

The next day the water had gone down enough to allow the hangars and other buildings to be cleaned, although the

runways were still covered with water. On Friday and Saturday, all equipment was moved back and nearly all signs of the flood were removed and the field was back in normal operation by the first of the following week.

This flood was the third experienced by Bolling Field since 1933 and, although the post is always prepared, the floods are an expense to the government. The personnel are hopefully anticipating the appropriation which will allow the new field to be completed and eliminate the almost annual moving from floods.

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THE "MAGIC KEY" BROADCAST

In preparation for Army Day, an opportunity was given the Army by the National Broadcasting Company to join its "Magic Key" program. The 2nd Bombardment Group, Langley Field, Va., was honored in being chosen to make the broadcast for the War Department.

Using one of the Group's three Boeing B-17, four-engined "Flying Fortresses," this broadcast was accomplished while flying over Washington, D.C., on April 4, 1937. The broadcast was coordinated from the N.B.C. studios in New York City, with Mr. John B. Kennedy, the well known N.B.C. commentator, aboard. Also aboard the big bombing plane were Mr. Hartley, in charge of programs of special events; General Gerald C. Brant, Commander of the 2nd Wing, GHQ Air Force; Lieut. Colonel Robert Olds, Commander of the 2nd Bombardment Group; Major C.V. Haynes, 49th Bombardment Squadron commander, and members of the regular combat crew of this flying fortress.

A six-minute program was broadcast, consisting of an interview between Gen. Brant and Mr. Kennedy, and a realistic demonstration of the manner in which the combat crew on a flying fortress goes into action.

Air Mail letters, telegrams and cablegrams have been received since the broadcast, all of which commented enthusiastically on the interest, composition and clarity of the broadcast.

It should be of interest to all Air Corps personnel to know that standard U.S. Army radio equipment was utilized throughout the broadcast.

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PROMOTION OF NONCOMMISSIONED OFFICERS

Two noncommissioned officers stationed at Langley Field, Va., were recently appointed to the grade of Master Sergeant, Air Corps. Technical Sergeant Dan W. Tingle received this promotion on April 19th, and First Sergeant LeRoy L. Johnson on May 1, 1937.

Biographies

LIEUT. COLONEL GEORGE E. STRATEMEYER

Lieut. Colonel George E. Stratemeyer, Air Corps, now on duty at Hamilton Field, Calif., as Commanding Officer of the 7th Bombardment Group, was born November 24, 1890, in Ohio. After graduating from the United States Military Academy, June 12, 1915, he was appointed a second lieutenant and assigned to the 7th Infantry, with which regiment he served at Galveston, Texas, September 11 to 22, 1915; at El Paso, Texas, September 25 to October 29, 1915; at Douglas, Arizona, to November 26, 1915; at Nogales, Arizona, to December 11, 1915, and at El Paso to August 29, 1916. He was then detailed to the Aviation Section, Signal Corps, and ordered to the Signal Corps Aviation School at San Diego, Calif., for flying training. Upon the completion of this training, he received the rating of Junior Military Aviator, as of May 3, 1917.

Assigned to duty as a pilot with the 1st Aero Squadron at Columbus, New Mexico, Colonel Stratemeyer served with that organization until May 14, 1917, when he was transferred to Columbus, Ohio. Here he organized and commanded the U.S. School of Military Aeronautics, Ohio State University.

In November, 1917, he was ordered to Kelly Field, Texas, where he served as test pilot from November 16 to December 16, 1917, and as Executive to the Commanding Officer of Kelly Field until January 7, 1918. He was then assigned to organize and command the Enlisted Mechanics Training Department, Kelly Field, later the Air Service Mechanics School. He was in charge of this school during the remainder of the time it was located at Kelly Field, and in February, 1921, when it was moved to Chanute Field, Rantoul, Ill., later to become one of the departments of the Air Corps Technical School, Colonel Stratemeyer was transferred to that station to assume command of the field and to continue in his capacity as commandant of the school.

From March 30, 1919, to May 12, 1919, Colonel Stratemeyer was Commanding Officer of the Victory Loan Flying Circus, Mid West Flight No. 2.

Ordered to duty in the Hawaiian Department, where he served from October 16, 1921, to July 12, 1924, he was in command of the 10th Air Park at Luke Field to December 12, 1921; Commanding Officer of the Hawaiian Divisional Air Service at Schofield Barracks to April 5, 1923; Commanding Officer of Air Park No. 10,

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On February 2, 1918, he was transferred to Gerstner Field, Lake Charles, La., where he took additional flying training and performed various post ad-

ministrative duties. From June to August, 1918, he performed the additional function of Officer in Charge of Flying.

Transferred on August 20, 1918, to Carlstrom Field, Arcadia, Fla., Colonel Houghton served at that field and at Dorr Field, adjacent to Carlstrom Field, as Officer in Charge of Pursuit Training and Executive Officer until July 8, 1919, when he was transferred to Selfridge Field, Mt. Clemens, Mich., where he assumed command of the 27th Pursuit Squadron. In September, 1919, he assumed command of the 1st Pursuit Group, then at Kelly Field, serving in that capacity until October 15, 1919, when he was transferred to Scott Field, Belleville, Ill.

After commanding that station until November, 1921, he was ordered to duty in the Philippines. He commanded Kindley Field and the 2nd Observation Squadron from December, 1921, to March 10, 1922; was Adjutant of that Squadron to April 30, 1922; Commanding Officer of Camp Nichols and of the 11th Air Park to September, 1922; Commanding Officer of the 28th Bombardment Squadron, Clark Field, P.I., to June, 1923; Commanding Officer of Clark Field at various periods, and Commanding Officer of Flight A, 3rd Pursuit Squadron, Clark Field, from June to October, 1923.

Upon his return to the United States following the completion of his foreign service tour, Colonel Houghton was assigned to the Rockwell Air Depot, Coronado, Calif., where he performed the duties of Chief of the Supply Division, Station Supply Officer and Depot Property Officer from December 10, 1923, to June 28, 1925. From June, 1925, to July, 1926, he was a student at the Air Corps Engineering School at McCook Field, Dayton, Ohio. Upon his graduation, he returned to the Rockwell Air Depot, where he performed various duties, such as Engineering Officer, Operations Officer, Chief Engineer Officer and temporary Commanding Officer.

Transferred to the Middletown Air Depot, Middletown, Pa., Colonel Houghton commanded this Air Corps activity from August 13, 1929, to June 15, 1933, when he was ordered to duty in the Panama Canal Department. His duties in the Canal Zone were of a varied character. At different times he served as Adjutant, Executive Officer and Commanding Officer of France Field; Commanding Officer of the Panama Air Depot, and Commanding Officer of the 19th Composite Wing, the assignment last named for a period of five months.

Following the completion of his three-year tour of duty in Panama, Colonel Houghton was assigned to his present duty as Commanding Officer of the Fair-

field Air Depot.

Colonel Houghton was promoted to Major, Air Corps, June 30, 1927, and to Lieut. Colonel (temporary) March 4, 1935.

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BRITISH AIRMAN INSPECTS AIR ACTIVITIES

Commodore R. Leckie, an officer of the British Royal Air Force, on an inspection tour of aviation activities in the United States, recently paid a visit to Chanute Field, Rantoul, Ill., where he was a guest of the Commandant of the Air Corps Technical School, Col. Junius W. Jones.

The British visitor was very much impressed with the similarity in the plans England and America were using in training their forces. He stated, however, that the system used by the two nations was somewhat different. The fact that all technical training for the U.S. Air Corps was centered at Chanute Field also impressed him.

From Chanute Field Commodore Leckie planned to go to the West Coast to visit aircraft manufacturing plants, and on his return trip to visit army posts at Fort Worth and San Antonio and the Naval Air Station at Pensacola, Fla., and to confer with U.S. Army officials in Washington before returning to England.

Commodore Leckie highly praised the hospitality and courtesy shown him during his visit in this country. He stated that North America is no strange land to him, for prior to the World War he was a resident of Canada and visited the States. This is his first visit to the United States since the war and, naturally, the many changes which have taken place since that time greatly interested him.

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ACTIVITIES OF THE 3RD TRANSPORT SQUADRON

With the limited facilities available, the 3rd Transport Squadron, San Antonio Air Depot, Duncan Field, Texas, takes pardonable pride in the amount of work it has been able to accomplish, and the efficiency with which it has performed its missions. During April, six inter-depot freight runs were made, and eleven runs within this Supply Area, carrying a total of 80,505 pounds of freight and 18 passengers, with a total of 26,635 miles. Equipment available for use was one C-33 the entire month, with one C-33 on memorandum receipt from Randolph Field for eleven days, and one C-27C. The C-27C was not available for use the first eight days because of engine change. The Depot's C-33 was loaned on April 29th for use in the GHQ Air Force Maneuvers on the West Coast the first ten days in May.

Obituaries

LIEUT. ROBERT S. FISHER ✓

The untimely death on April 24th of Second Lieutenant Robert S. Fisher, Air Corps, son of Colonel Arthur G. Fisher, Commanding Officer of Scott Field, Ill., deprived the Air Corps of a very promising young officer.

Lieut. Fisher was the victim of a rather unusual accident. He and Lieut. D. Ross Ellis, Air Reserve, were on a training flight from Randolph Field to Oklahoma City, Okla., when the accident occurred. Witnesses of the accident, which happened near Pilot Point, Texas, stated that the plane was maneuvering at a low altitude when Lieut. Fisher, pilot of the plane, who was leaning out of the cockpit, appeared to lose his balance and fall out. Apparently he pulled the ripcord of his parachute, but in his descent he struck the tail assembly of the plane and received fatal injuries. The parachute opened and slowed his fall.

Lieut. Ellis stated that he did not see Lieut. Fisher at the instant he started falling, but felt the shock of the body striking the rear assembly. Although the rudder controls were jammed, Lieut. Ellis, in a remarkable demonstration of skillful flying, piloted the airplane back to Hensley Field, Dallas, Texas, using only the ailerons.

Funeral services for Lieut. Fisher were held at the Randolph Field chapel on April 28th, with interment at the National Cemetery at Fort Sam Houston, Texas.

The deceased officer was born at Manila, P.I., July 29, 1909. After attending George Washington University, Washington, D.C., for one year, and the University of California for 2½ years, he applied for and received an appointment as a Flying Cadet in the Air Corps.

After graduating from the Primary Flying School, Brooks Field, Texas, on September 29, 1931, and from the Advanced Flying School, Kelly Field, Texas (where he specialized in Pursuit Aviation) on February 26, 1932, he was commissioned a second lieutenant in the Air Reserve, rated as an Airplane Pilot, and assigned to extended active duty in the Hawaiian Department. He served with the 19th Pursuit Squadron at Wheeler Field, performing at various times such duties as Assistant Engineering Officer, Assistant Operations Officer and Squadron Armament Officer.

Upon the completion, in December, 1933, of his tour of duty in Hawaii, he was transferred to Brooks Field, San Antonio,

Texas, for duty with the 12th Observation Group. Reverting to inactive status at the end of two years' active duty, Lieut. Fisher enlisted as a Private in the Air Corps in order to be eligible to compete in the examination for a commission in the Air Corps, Regular Army. He was promoted to 1st Lieut., Air Reserve, April 22, 1935.

Successful in his examination for a permanent appointment in the Air Corps, he was commissioned a 2nd Lieutenant on July 11, 1935, and assigned to duty at Randolph Field, Texas. Lieut. Fisher had accumulated a total of over 1300 flying hours during his brief career with the Air Corps.

The heartfelt sympathy of the Air Corps is extended to his widow, to his parents, Colonel and Mrs. Arthur G. Fisher; to his sister, Miss Mary Fisher, and to his brother, Lieut. Henry Fisher, stationed at Selfridge Field, Mich.

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Flying Cadet Paul M. Palmer, age 22, a student on the basic stage at the Primary Flying School at Randolph Field, Texas, died as the result of an airplane accident on the morning of May 4th, when his plane crashed on Krueger Field, an auxiliary landing field about six miles east of Randolph Field.

Flying Cadet Palmer, who hailed from Carlinville, Ill., attended High School in that city and Blackburn Junior College. He entered the Primary Flying School on October 12, 1936, and was transferred from the primary training stage to the basic training stage last February.

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Lieut. James Monroe Richardson, World War flyer and recipient of the Distinguished Service Cross, died on April 26th in Hahnemann Hospital, Philadelphia, Pa., after a brief illness. He had resided at Old Gulph Road, Wynnewood, since the war.

A native of Memphis, Tenn., where he was born on December 25, 1892, Lieut. Richardson attended Vanderbilt University for three years. Enlisting in the Aviation Section, Signal Enlisted Reserve Corps, June 3, 1917, he received his ground school training at the School of Military Aeronautics, University of Illinois, Urbana, and his flying training at Chandler Field, Essington, Pa.; Selfridge Field, Mich.; and Gerstner Field, Lake Charles, La. He was commissioned a second lieutenant on February 6, 1918, and assigned to active duty at

V-7343, A.C.

Gerstner Field.

Ordered to duty overseas, he arrived in France on March 9, 1918, and was sent to the 3rd Aviation Instruction Center for advanced flying training, following the completion of which he took aerial gunnery training at the Aerial Gunnery School at Cazaux, France. For a period of three weeks he was on duty as a ferry pilot, and he was then assigned to duty with the 1st Aero Squadron.

Lieut. Richardson fought at Chateau Thierry, Argonne and Belleau Wood. He was credited with the destruction of four enemy planes in aerial combat. In his last combat, on October 6, 1918, he received wounds which necessitated his confinement in a hospital until December 13, 1918. It was this combat which gained for him the award of the Distinguished Service Cross, the citation therefor being as follows:

"For extraordinary heroism in action near Grand-Pre, France, October 6, 1918.

Lieut. Richardson undertook an infantry contact patrol mission under weather conditions which necessitated flying at an altitude of only 100 meters. When the front lines machine guns opened an effective fire on his plane, he was wounded in the feet, but he continued on the mission until the front lines of the American troops were located and his observer had written out a report for the division commander."

Returning to the 1st Aero Squadron December 22, 1918, he served therewith to March 9, 1918. Thereafter, until his return to Garden City, L.I., New York, in September, 1919, he was on detached service at the University of Grenoble, France.

Lieut. Richardson, following his honorable discharge from the military service, made his home in Philadelphia. He contributed many articles to aviation publications. He was president of the H.D. Catty-Franz Euler Corporation, a foils and cellophane concern. Surviving are his widow and three children.

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20TH BOMBARDMENT SQUADRON HAS ITS INNING

The 20th Bombardment Squadron, GHQ Air Force, Langley Field, Va., finally received their first B-17, and lost no time in getting the squadron insignia painted on its nose, and the tail decorated with a fine large number 50. The crew of this airplane consists of the following officers and enlisted men: Major V.J. Meloy, pilot; Lieuts. A.H. Rogers, co-pilot; F.E. Glantzberg, navigator; Tech. Sgt. A.L. Wheeler, crew chief; Pvts. 1st Cl. C.D. Lake, radio operator, P.C. Salconi, T. McNutt and Pvt. J.E. Colbert, gunners.

COOLING FACTOR IN AIR COOLED-ENGINES By the Materiel Division Correspondent

With increase in horsepower output of our newer air-cooled engines, the cooling of the engine now approaches the paramount position in the minds of our engineers. In order to obtain uniform and fair comparisons of various engine-airplane combinations, some cooling factor for a typical engine had to be determined.

Airplanes are accepted and tested throughout the entire year, and the temperature at Dayton varies from some twenty below to a "mint julep day" of one hundred in the shade. The question arises - if an engine-airplane combination cools in Dayton in January, will it cool in Texas in July? If cylinder temperatures rise to 200° from a basic cool air temperature of 30°, will they necessarily rise to 230° from a basic warm temperature of 60°, etc. Engineers, manufacturers, and the industry have various factors, no two of which agree. The Power Plant Branch consequently has been at a loss to referee definitely the complications that arise in research and competitive buying.

Although realizing that no two engine-airplane combinations will be exactly alike, comprehensive tests of a typical set-up would indicate the general trend and give a basic curve from which to start.

An A-17 airplane was picked as a typical air-cooled engine-airplane combination, and recently tests were conducted from the extremes of the localities of Minneapolis and St. Paul, Minn., to Miami, Florida, at various altitudes, various temperatures and mixture settings. The data gathered are in the process of analysis, and it is hoped that a definite, or at least a practical factor, may be reached in engine calculations.


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ANOTHER B-17 for 49TH BOMB. SQUADRON

The following crew was recently ordered to Seattle, Wash., to take delivery of the second B-17 Bombardment airplane for the 49th Bombardment Squadron, GHQ Air Force, Langley Field, Va.: Major C.V. Haynes, supervisor; Captain C.W. Cousland, pilot; 1st Lieut. J.S. Mills, co-pilot; Technical Sergeant W.W. Fry, crew chief; Staff Sergeant J.A. Piper, assistant crew chief and Sergeant G.R. Charlton, radio operator. Says the News Letter Correspondent: "The Boeing plant has speeded up production, and we understand we will have all thirteen of the B-17's before many months roll by."

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THE ANNUAL SPRING HORSE SHOW AT MAXWELL FIELD ✓



THE annual Spring Horse Show, and one of the most colorful in recent years, was held in the "Riding Ring" immediately in front of beautiful Austin Hall at Maxwell Field, Ala., on Saturday morning, April 24th, with a large crowd, including visitors from Montgomery and surrounding cities, Barksdale Field, La., and Pensacola, Fla., on hand.

Under the spell of the beautiful music rendered by the Naval Air Station Band, the show got "under way" promptly at 8:00 o'clock with the Children's Hack Class, consisting of 23 entrants, riding into the ring. This class was open to all children of the Senior Riding Class at the Field and was won by Miss Louise Owens, riding "Hisso," who received a trophy and ribbon. Second place was captured by Sunny Martenstein, riding "Dixie," who received a ribbon, and third place was won by Elwood Garrett, riding "Molly."

Grooming competition followed, and awards were made to Privates Cheek, Kline, and Lewis, of the Headquarters Squadron, who won first, second and third places, respectively.

The Children's Hack Class, open to all children of the Junior Riding Class, followed, and of the 13 entrants, Nancy Hackett, riding "Texas," captured first honors and the beautiful trophy. Second place went to Arrie Tomberlin, riding "White Bottom," and third to Jack Laird, riding "Dixie." All were awarded ribbons.

The next event was the Children's Jumping Class, with eleven entrants. Bobby Bartron, on "Billy," captured first honors and the trophy, followed closely by James Garrett on "Hisso" and Jane DeFord, riding "Dusty." All were presented with ribbons.

The Officers' Chargers followed. Horses were shown at walk, trot and canter, and first place with the trophy went to Captain Ralph F. Stearly, riding "Stony Ford." Second honors were won by Lieut. Clayton E. Hughes, riding "Richard K," and third place was won by Lieut. Joseph G. Hopkins, riding "Dixie." All received ribbons.

Private Mount Class was the next event, which was also captured by Captain Ralph F. Stearly on his "Stony Ford," with second honors being won by Lieut. Bennett W. Wright, USN, and third honors going to Lieut. Carl R. Storrie on "Berk Boy."

The next event of the Show, "Pairs of Road Hacks," drew the special interest of the spectators as the many couples came riding into the ring. Major Morill Ross, Field Artillery, riding "Pivot,"

and Mrs. S.A. Blair, riding "Dolly," captured first honors and the trophy. Second ribbon went to Captain Joe Smith, riding "Stony Ford," and Mrs. Ralph F. Stearly, riding "Fairy Story," and third ribbon was awarded Lieut. Storrie on "Nig," and Mrs. William H. Powell, riding "Dusty."

Open Jumping, one of the most exciting events of the Show, was next on the program, with a very large list of entrants. Mrs. Garrett captured first place in this event and the trophy, with Captain R.G. Harper second and Captain C.W. Davies, third ribbon.

The Ladies' Hack Class, riding in competition for the Maxwell Field Woman's Club Trophy, followed. This event was open to all members of the Ladies' Equestrian Classes, and horses were shown at the walk, trot, canter and other movements as directed. Mrs. S.A. Blair, riding "Kentucky," captured the important trophy and first ribbon in the event. Second honors were won by Mrs. Ralph F. Stearly, on "Stony Ford," and third place went to Mrs. Kenneth C. McGregor, riding "King."

Following this event, awards were presented to the members of the Ladies' Riding Class who were picked as showing the most improvement during the class year, and Mrs. Ralph F. Stearly was awarded first honors in this class. Second ribbon went to Mrs. H.S. Hansell, Jr., with third place being awarded Mrs. F.F. Everest, Jr.

Hunt Teams of Three then took to the course and went through their plentiful supply of jumps at a hunting pace in tandem. The team composed of Mrs. R.L. Creed, Lieut. B.W. Wright and Mrs. Garrett captured first honors in the event. Second ribbon went to the team comprising Captains E.W. Barnes, R.W. Harper and W.E. Whitson, and third ribbon to the team of Captains B.J. Peaslee, C.W. Davies and Lieut. J.G. Hopkins.

Preparations were then made for the Polo Bending Race which immediately followed. This event was open to all, and horses were run through a series of stakes, alternately passing them on the right and left. Knocking down a stake or failing to pass the stakes correctly resulted in disqualification. Riders carried polo mallets, and first ribbon and the trophy was awarded to Lieut. B.W. Wright, U.S. Navy, riding "Peggy." Second ribbon went to Captain Stearly on "Stony Ford," and third honors to Mrs. F.W. Evans, riding "White Bottom."

The last event of the Show, "Musical Chairs," open to all on the Post, was then called by the announcer. Over 20 entries responded, and that exciting event got under way. Elimination followed gradually until Jack Lunday, Bobby

George and Margaret Hackett were left in the ring. Jack Lunday was the first to fail in getting his chair and was eliminated, winning third ribbon, followed by Bobby George, who failed on the second attempt, leaving Margaret Hackett her chair and the trophy.

During the Show, the Ladies' Riding Class presented a ten-minute silent drill which was acclaimed the most interesting event on the program. Under the supervision of Major Richard L. Creed, Cavalry Instructor at the School, and Mrs. Creed, also an ardent horsewoman, the Ladies' Riding Class performed with well ordered effectiveness, executing the delicate movements abreast and in perfect silence.

Following the Show, in appreciation of the many hours of patient instruction and much effective help furnished the classes, Major and Mrs. Creed were presented with a gift of appreciation from the Ladies' Class. The Children's Riding Classes also presented Captain Henry L. Kimmison, Mrs. Frederick W. Evans and Mrs. William H. Powell, instructors, with gifts of appreciation for their untiring work with the classes throughout the year.

Music was furnished throughout the colorful show by the Naval Air Station Band, and a most enjoyable day was acclaimed by the large crowd witnessing the show.

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THE CREEDS WIN MANY HONORS IN HORSE SHOW

Horse Show teams from Fort McPherson, Ga.; the Alabama Polytechnic Institute at Auburn; from Maxwell Field, Ala., and the many participants from the Infantry School made keen competition in the 15th Annual Horse Show, held at Fort Benning, Ga., during the period April 29th to May 1st.

Representatives from Maxwell Field who participated in and placed in the following classes were:

"Individual Polo Pony Class" - won by Major Richard L. Creed, riding "John Chip" and third place in the same event was won by Major Creed, riding "John Milliken."

"Polo Pony Stake Race" - won by Major Richard L. Creed, riding "John Chip."

"Dressage Class" - won by Major Richard L. Creed, riding "Berk Boy."

"Teams of Three Polo Ponies" - won by Major Creed, Lieuts. Clayton E. Hughes and Bennett W. Wright.

"Championship Polo Pony Class" - won by Major Creed, riding "John Chip."

"Pairs of Road Hacks" - second place, won by Major and Mrs. R.L. Creed, riding "John Chip" and "Berk Boy."

"Ladies Hack Class" - won by Mrs. R.L. Creed, riding "Berk Boy."

All four entrants from Maxwell Field returned with beautiful trophies won at the Show, and with the "Championship Polo Pony Class" in the bag which, incidentally, is one of the much coveted championships at the Show. The Tactical School competitors feel justly proud of their Equitation Instructor, Major Richard L. Creed, who has done so much for all of the enthusiastic horsemen at the Field and who really brought home the "bacon" in the Benning Show this year.

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MANEUVERS AT VALPARAISO, FLA.

The 1936-1937 Class at the Air Corps Tactical School, Maxwell Field, Ala., completed one week's maneuvers at the Valparaiso Bombing and Gunnery Base at Valparaiso, Fla., on May 2nd.

The movement was made from Maxwell Field to the Valparaiso Base by airplanes on the afternoon of April 25th. P-12 type airplanes were used for fixed gunnery firing during the maneuvers. A-17 airplanes were used for flexible gun firing. The O-19 and C-45 airplanes were used for towing targets. The B-6's were used for navigation missions.

The daily gunnery schedule required each student of the section firing to fire three ground target missions and two tow target missions. The average number of daily missions was 230.

During these maneuvers, the officers were quartered in tents at the Valparaiso Bombing and Gunnery Base, and in the temporary cabins erected at White Point. The enlisted men were quartered in the Barracks at the Valparaiso Bombing and Gunnery Base, with the excess from this station quartered in tents.

All flying operations were conducted in accordance with flying regulations of Maxwell Field, where they applied on the Valparaiso airdrome, and in accordance with the provisions of the school operations order published for the maneuver. Two-way radio contact between the tow target airplane and the ground station was established every ten minutes.

All dispatching of airplanes from the gunnery base was done by an officer, using the public address system. In this manner there was no lost motion in accomplishing missions or any congestion of traffic. The flying line and airplanes were maintained by 45 enlisted men from the Engineering Department at Maxwell Field.

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Lieut. Colonel William C. Ocker (Major), Air Corps, of Brooks Field, Texas, is under orders to proceed to Barksdale Field, La., for duty, reporting not later than June 15, 1937.

WASHINGTON OFFICE NOTES

Brigadier General Henry C. Pratt returned to Maxwell Field, Ala., with his Aide (1st Lieut. Dwight B. Schanep) on May 12th, following temporary duty in the Chief's Office.

Officers leaving for the March Field Maneuvers were Major General Oscar Westover and Capt. Luther S. Smith on May 7th, Colonel H. C. Richards on May 8th, and Lieut. Colonel Gerald E. Brower on May 10th.

Major Edward V. Harbeck, Jr., and Capt. Donald F. Stace departed May 10th on leave of absence.

Officers who arrived in the Chief's Office early in May for temporary duty were Lieut. Colonel Edwin B. Lyon, from Randolph Field; Major Milo McCune, from Barksdale Field; Major Hugh A. Bivins, Captain Clarence S. Irvine and 1st Lieut. Daniel C. Doubleday, from Wright Field; Major James T. Hutchison and Captain Randolph P. Williams, Langley Field; Captain Harrison G. Crocker, Maxwell Field, and Captain Ray H. Clark, Chanute Field.

Major William B. Souza returned April 28th from leave of absence, and on May 5th departed on an inspection trip.

Officers from other stations who were in the Chief's Office recently for conference were Major C. F. Wheeler, 1st Lieuts. Pearl H. Hobe and James L. Jackson, April 28th, from Wright Field; Captain James B. Haddon, from the Air Corps Tactical School, Maxwell Field, Ala., on May 4th; and Major Otto G. Trunk, from Langley Field, Va., on May 12th.

Colonel Alfred H. Hobbey and Major Leland W. Miller left for Wright Field on May 11th.

Colonel Rush B. Lincoln returned April 29th from leave of absence.

First Lieut. H. F. Gregory returned to his station, Fort Sill, Okla., May 6th, after being on temporary duty in the Chief's Office.

Lieut. Colonel Howard C. Davidson left for Wright Field, May 2nd, for conference.

Visitors to the Chief's Office were Major Bernard S. Thompson, Hensley Field, Texas, April 28th, during the course of a navigation flight; 1st Lieut. John J. O'Hara, Jr., Brooks Field Texas, enroute to Panama; and Major Arthur Thomas, Instructor, Missouri National Guard Air Corps, May 10th, enroute to New York.

Lieut. Colonel William E. Lynd returned May 3rd from the Medical School at Carlisle, Pa., where he delivered a lecture.

Major Karl S. Axtater returned May 6th from an inspection trip to Randolph, Brooks and Kelly Fields.

Major Morton H. McKinnon returned May 9th from Wright Field, where he was on temporary

duty.

Captain Evers Abbey left May 10th for Wright Field, and Kansas City, Mo.

Majors Alfred W. Marriner, Arthur E. Easterbrock and James A. Mollison returned from conferences at the Tactical School; the Air Corps Training Center; Ft. Leavenworth, Kansas; and Wright Field, relative to personnel and training.

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WAR DEPARTMENT ORDERS
Changes of Station

To March Field, Calif: Major Paul H. Prentiss (Captain) from Randolph Field; 1st Lieut. Budd J. Peaslee, upon completion of present course of instruction at Air Corps Tactical School, Maxwell Field, Ala.

To Mitchel Field, N.Y.: Major Phillips Melville, upon completion of tour of duty in Hawaiian Department.

To Selfridge Field, Mich.: Lieut. Colonel Clinton W. Howard, upon completion of present course of instruction at Army War College; Major Joseph H. Davidson, upon completion of present course of instruction at Command and General Staff School, Fort Leavenworth, Kans.

To Barksdale Field, La.: Major Aubrey C. Strickland and Captain Milo N. Clark, from Randolph Field, Texas.

To Langley Field, Va.: 1st Lieut. H. F. Gregory, from Fort Sill, Okla., for duty with 3rd Observation Squadron.

To Wright Field, Ohio: 1st Lieut. Samuel O. Redetzke, upon completion of present course of instruction at Air Corps Engineering School.

To Fort Riley, Kansas: Captain Jack Greer, from Langley Field, Va.

To Duncan Field, Texas: 1st Lieut. Thomas B. McDonald, upon completion of present course of instruction at Air Corps Engineering School, for duty at San Antonio Air Depot.

To the Philippines: Captain Frederick A. Bacher, Jr., from duty as Instructor, A. C. Primary Flying School, Randolph Field, Texas.

To Hawaiian Department: 1st Lieut. Sory Smith and 2nd Lieut. Edward S. Allee, upon completion of present course of instruction at Air Corps Technical School, Chanute Field, Ill.

To Washington, D.C.: Lieut. Colonel William E. Farthing (Major) upon completion of present course of instruction at Army War College.

To Pasadena, Calif.: 1st Lieut. John B. Ackerman from Maxwell Field, Ala., and 1st Lieut. Thomas S. Moonman, Jr., from Mitchel Field, N.Y., to take course of instruction in mathematics and meteorology at the California Institute of Technology.

To Nashville, Tenn.: Major James L. Grisham (Captain) from March Field, Calif., for duty as instructor, Air Corps, Tennessee National Guard.

Retirement: Lieut. Colonel Edward L. Hoffman, Maxwell Field, Ala., May 31, 1937, for disability incident to the service.

Resignation: 1st Lieut. Douglass Thompson Mitchell, Air Corps.

NOTES FROM AIR CORPS FIELDS

Langley Field, Va., May 4, 1937.

Second Bombardment Group: The Headquarters Squadron has been concentrating on getting ready for the field exercises at Rocky Mount, N.C. Now that we are well established and organized, we expect the next ten days to be merely routine until time to pull up stakes and move back to Langley.

Ratings and promotions in the Squadron since March 1st were as follows:

Privates, 1st Class. H.W. Zaun appointed Corporal; W.H. Heubi to Specialist, 3rd Class; J.O. McKee to Specialist, 4th Class; Privates J. Gutowski, J.G. Peck, T.H. Snyder and G.W. Tolar to Private, 1st Class; Privates W.G. Lee to Specialist, 5th Class; N.E. Emery and E. Holmes to Specialist, 6th Class.

20th Bombardment Squadron: This Squadron has held the social spotlight during the past few weeks with the marriage of the daughter of the Squadron Commander, Major Meloy, to the Squadron's crack navigator, Lieut. W.O. Senter. An impressive military ceremony was held at the Post Chapel on April 10th, and a reception afterwards at the Club. The wedding party consisted of Mrs. D.P. Gibbs, matron of honor; Miss Peggy Grimes, of Fort Leavenworth, Kansas; Miss Regenia McKeever, of Washington, D.C.; Miss Ann Lawton, of Maxwell Field, Ala., and Miss Ann Moore of Fort Monroe, Va. Captain R.E. Fisher nobly did the honors as best man, while Captain R.E. Nugent and Lieuts. G.E. Williams, D.R. Gibbs, E.G. Simenson, T.G. Wold, T.C. Musgrave, B.W. Armstrong and T.C. Odom added the distinctive military touch as ushers. The young couple left immediately after the reception for Bermuda. Messages were received from Richmond, Washington, New York City and Bermuda, telling of their delightful trip. Only one hitch occurred so far, when they missed the boat out of New York and had to ride a tugboat out through the harbor to catch up with it.

Their many friends unite in heartily wishing Ruth and Oscar Senter all the happiness in the world. We have heard that the Sea of Matrimony will tax the best navigators to the limit, Oscar.

The following promotions and ratings have taken place recently in the 20th Bombardment Squadron: Privates J.W. Couper and H.H. Gibson promoted to Privates, 1st Class; Private, 1st Class, J. Bettinger rated Specialist, 3rd Class; Privates R.M. Coldflesh and A.W. Parrish rated Specialists, 6th Class.

49th Bombardment Squadron: Flying Cadet L. Eyre reported back for duty April 12th, after spending three weeks on furlough, visiting in San Antonio and Los Angeles.

96th Bombardment Squadron: The following promotions were made in the Squadron: To Staff Sergeant - Sergeant C.A. Dively; to Sergeant, Corporals Gib Bradley, A.M. 1st Class, and Anthony Zamberland, A.M. 2nd Class; To Corporal, Privates, 1st Class, Daniel J. Smith and W.A. Withers; To A.M., 1st Class, Corporal, A.M. 2nd Class, George Billy; To A.M. 2nd Class, Private Amil Mallada; to Specialist, 1st Class, Private, 1st Class, B.E. Beldin, Specialist, 2d Class; To Specialist, 2nd Class, Private, 1st Class, P.L. Culp, Specialist, 3rd Class; To

Specialist, 3rd Class, Private, 1st Class, M.J. Karpiak, Specialist, 4th Class; to Specialist, 4th Class, Private, 1st Class, P.E. Engle; To Privates, 1st Class, Privates J.J. McCaughill, J.A. Brown and N.M. Heaton.

Hq. and Ho. Squadron, 8th Pursuit Group: The "war" is over and we are back in barracks at Langley Field. Casualties: One tent, G.I., Officers. These Sibley stoves are tricky things and bear watching after you build a fire in 'em.

The Group was very fortunate in having exceptionally fine weather for this time of the year throughout the period of maneuvers, and it is believed that the exercise was thoroughly enjoyed by all participants.

33rd Pursuit Squadron: On April 26th, 2nd Lieut. Marshall A. Elkins, Air Reserve, and Miss Sheridan Wood Rush, daughter of Lieut. Colonel H.S. Rush, D.C., Langley Field, Va., were married at the Post Chapel, Langley Field.

35th Pursuit Squadron: The 35th Pursuit Squadron returned to its home station on the afternoon of Friday, April 23rd, after a tour of 11 days in the field with the rest of the 8th Pursuit Group. The Group occupied the National Guard Airport at Virginia Beach, Va., as its function in the 1937 Field Exercise of the Second Wing, GHQ Air Force.

During the exercise, the 8th Pursuit Group engaged in firing front and rear guns on sleeve and ground targets as individual six-plane squadrons and as an 18-plane group delivering long range mass and wave fire on special ground targets. Very satisfactory results were realized in the mass firing, and this function was performed by the Pursuit Group in the final phase of the Wing Exercise, the varied gunnery and bombing demonstration staged for a visiting Congressional party on April 24th.

In addition to other activities at the Camp, the newly assigned Flying Cadets were given training in aerial gunnery on ground targets, as per T.R. 440-40. We won't elaborate on scores.

Although little rain was experienced in the field, the weather was too cool to permit much in the way of recreation, and the beach was deserted in favor of the more strenuous exertions of soft ball and volley ball.

Now that the Squadron is back home again, the principal activity seems to be "blitzing" up the old PB's and getting that other shirt boiled in preparation for the long trek to the West Coast. There is much speculation about the ingenious plumbing appearing in some of the airplanes slated for the trip.

The 35th welcomes the addition of another pilot to the organization: one Flying Cadet Sluder, Chester L., transferred from Bombardment at Mitchel Field. This gives us a total of five of the young men in blue.

36th Pursuit Squadron: A few days before breaking camp, the 36th Squadron Enlisted Men's Long Knockers took over the Officers and Cadets, All Rotten Athletic Club, in a fast nine inning game of baseball to the tune of 21 - 15. Private, 1st Class, Gazdak, Operations Clerk, showed great form and ability on the pitcher's

mound, fooling everyone except the Operations Officer, Lieut. Kinsgrave who, familiar with Gazdak's tricks, connected with four homers. According to the spectators, who turned out in large numbers, the outstanding player for the officers' combination was 1st Sgt. Joe Laver, eagle eyed and straight seeing, quick deciding and fast calling umpire, referee and chief officiator.

On the same evening the Officers and Cadets All Rottens redeemed, in a small way, their reputation for feats of courage and ability by sending the 33rd Pursuit Volley Ballers down in ignominious defeat.

Among our cadet flyers, we also had our stars. Although a rival beat our men in short landings (by taking out a tree as he came in), no one could compete with Joe Hunker, our candidate for long landings.

At this writing, all of our pilots are looking back on the Wing Exercises with pleasant memories and hope that when we take off this Monday for California it will be on as pleasant and enlightening a maneuver.

37th Attack Squadron: On the dreary cold afternoon of April 12th, the quiet and peace of Battle Park in Rocky Mount, N.C., was disturbed by the rumbling of trucks, the striking of mallets on tent pins, and a bedlam of voices as the 37th Attack Squadron and the 2nd Bombardment Group pitched their camp for the 2nd Wing Field Exercises. The soothing music of the rippling stream that flowed by the officers' area was not much appreciated the first night when the temperature dropped to 35, and during the other nights the sleep-inducing murmur of the stream fell on but a few ears, for all the lads were usually in town enjoying the generous and pleasant hospitality of the citizens of Rocky Mount.

Under the skillful guidance of the 37th's Mutt & Jeff team - Captain Ned Schramm and Master Sergeant Nero - the Squadron functioned smoothly, learned a great deal, and flew some very interesting missions, including a cooperative mission with the Chemical Warfare School at Edgewood Arsenal.

Rare, indeed, are the times when a "meat wagon" is involved in an airplane accident, but such was the case when, on April 16th, Flying Cadet Jones was taxiing off the Rocky Mount Airport and ran into the ambulance. The right wing was damaged to the extent that it had to be replaced by a new wing shipped from MAD. The ambulance suffered only minor scratches and bruises.

The gilt trimmed portrait of Cassanova for outstanding social achievement by an officer of the 37th goes to Lieut. "Peanuts" Pender of the Carolinian Pattons and Penders for his fearless and courageous "cut-throat" activities against the Bombardment Group as a whole and Lieut. Adair, of the 20th Bombardment Squadron, in particular; also against his camp tent-mate, Lieut. Berquist. The corresponding award to an enlisted man has to be duplicated because of the tie between Corporal J.D. Smith and Private, 1st Class, Bobbitt.

The Squadron is busily occupied in preparing for the West Coast GHQ Maneuvers, and those going are impatiently waiting to begin what is

expected to be an intensely interesting, instructive, and very enjoyable month in California. On Monday, May 3rd, the 37th was scheduled to fly to Barksdale Field to become a flight of the 13th Attack Squadron. The 13th was to take off early the next morning for its California Base - Delano. Members of the 37th Attack Squadron designated to participate in the maneuvers were Captain Schramm, Lieuts. Berquist, Day, Air Corps; Eubanks, Pender, Willoughby, Air Reserve; Flying Cadet Russell; Master Sergeant Nero; Staff Sergeant Mishmash; Sergeant Oldson; Corporal Martin; Privates, 1st Class, F.R. Smith, Wagner and Dunn.

Advanced Flying School, Kelly Field, May 6th.

On Saturday, May 1st, at Brackenridge Park, Pattie Jones, a member of the Kelly Field Riding Club, riding "Ornery" in the walk and trot class (Inner School Horse Show), won first prize and was awarded a silver cup and a blue ribbon. Miss Jones is the daughter of Major M.H. Jones, QMC, of Camp Normoyle.

The Brooks Field Ganders defeated the Kelly Field Flyers 15 to 10, at Brooks Field. Garland and Curry, both heavy hitters for Brooks, hit home runs, bringing in three runs. Brooks had two big innings - making six runs in the second and eight runs in the eighth.

The Kelly Field Flyers defeated the Brooks Field Ganders, 4 to 3, at Kelly Field on April 28th. Brooks scored two runs in the second, and then it was a pitchers' duel until the 8th, when Villaneva, pitching for Brooks, was relieved while Kelly was scoring two runs. Towle knocked a long fly to left field, scoring Poziak with the winning run in the ninth.

Loose fielding proved costly to the Kelly Field Flyers, and they dropped a 5 to 1 practice game to the 23rd Infantrymen on the dough-boys' home diamond. Two runs came in during the 6th when two Flyer outfielders permitted a fly to drop between them, and a home run resulted. A misjudged drive to right field and a wild throw helped the victors to score their other three runs.

An 18-plane formation, led by Major John V. Hart, circled over San Antonio from 3:00 to 3:30 p.m., before the Battle of Flowers, on Friday, April 23rd. This Battle of Flowers parade culminates a week's festivities in San Antonio, called the Fiesta de San Jacinto, which is held every year in honor of the men who died in defense of the Alamo, this year being the 101st since the Fall of the Alamo. Each year a king and queen are selected, together with attending dukes and duchesses. A coronation and other ceremonies are held.

As a matter of past history, Colonel A.N. Krogstad, Commandant of the Air Corps Advanced Flying School, was the "Duke of El Paso" in 1915, when he was in the Infantry, stationed at Fort Sam Houston.

Major General James B. Allison, Chief Signal Officer, inspected Signal activities at Kelly Field on April 26th.

Lieut. Colonel Arthur E. Easterbrook, from the Office of the Chief of the Air Corps, inspected Kelly Field airplanes and equipment on April 28th. He was assisted by Major A.W. Marriner and Major James A. Mollison.

Captain Charles A. Bassett, of Wright Field, arrived at Kelly Field on May 2nd to deliver a series of lectures to students on "Engines and Equipment." He flew an O-46A plane, returning to Wright Field on May 5th.

Clark Field, Pampanga, P.I., April 14th.

Upon the departure of the March Transport, the Third Pursuit waved good-bye to its commanding officer, Major C.W. Ford, and Mrs. Ford, who left for their new station at Cleveland, Ohio, Major Ford being detailed to duty with the Ohio National Guard. Major Ford was replaced here by Major Lloyd Barnett, who came to this Squadron from the 28th Bombardment Squadron at Nichols Field. Aboard the same Transport were Lieut. and Mrs. W.M. Morgan, leaving for Wright Field, and Lieut. and Mrs. H.W. Bowman, leaving for Langley Field. Lieut. and Mrs. P.B. Wurt-smith sailed from Manila April 14th for a tour of French Indo-China, and will catch the May Transport at Chinwangtao for the States on their way to Selfridge Field.

Lieut. and Mrs. W.M. Canterbury just returned from a month's leave of absence which was spent traveling in Southern China, French Indo-China, and Siam. Major Barnett sails April 17th for a month's duty in Japan as aeronautical inspector.

Captain and Mrs. S.W. Van Meter are spending the month of April on detached service at Camp John Hay in Baguio

A daughter was born to Lieut. and Mrs. J.E. Blair in March.

Mrs. S.W. Cheyney, of Berkeley, Calif., recently returned home after an extended visit here with her son and daughter-in-law, Lieut. and Mrs. S.W. Cheyney.

Fort Stotsenburg's annual Sports Week was held last month, and a number of the Air Corps officers and their wives brought home many a trophy testifying to their skill at the various sports offered.

The Third Pursuit baseball team, under the able leadership of Lieut. R.A. Legg, is completing its most successful season in history. With Lieut. Legg's pitching ability and the support of a mighty fine bunch of players, they were hard to stop. The play-off of our tie with the 24th Field Artillery will take place at an early date.

With the coming of the May boat, we hope to receive at least two new officers, and with the new (to us) P-26's being unloaded on the docks at this writing, the Third Pursuit is looking forward eagerly to its new personnel and equipment.

San Antonio Air Depot, Texas, May 5th.

On April 26th, Major General James B. Allison, Chief Signal Officer of the Army, visited this Depot and inspected aircraft radio matters in the course of his recent visit to the Eighth Corps Area and the Air Corps stations in this vicinity.

Major A.W. Marriner, of the Office of the Chief of the Air Corps, was a visitor at this Depot on April 29th, and conferred on engineering matters, in connection with a recent inspection of airplanes at Brooks, Kelly and Randolph Fields.

Lieut. Colonel Morris Berman, Depot Executive Officer, with Senior Clerk Harry F. Williams, of Depot Headquarters, returned by air April 27th from a week's conference with personnel of the Materiel Division on civilian personnel problems.

Lieut. Max H. Warren, Asst. Engineering Officer of the Depot, at the termination of four days' leave, visiting in Illinois, ferried a P-6D plane from Scott Field to this Depot, April 29-30.

Tech. Sgt. P.B. Jackson, pilot; Master Sgt. C.P. Smith, co-pilot, and Sgt. H.R. Riley, mechanic, of the 3rd Transport Squadron, left here April 29th in the Depot's C-33 Transport to participate with the 1st Provisional Transport Squadron in the GHQ Air Force Maneuvers on the West Coast during the first ten days in May.

Property & Supply Clerks Frank Estes and D.N. Nolan, of the Depot Supply Department, left by air April 29th for Wright Field, Ohio, on several days' temporary duty to confer with Field Service Section personnel on Air Corps Supply matters.

Sgt. Albert A. Malunait, of the 3rd Transport Squadron, this Depot, who has been absent at the Air Corps Technical School, Chanute Field, taking the radio course, has been ordered from that School to the Fitzsimons General Hospital, Denver, for observation and treatment.

On April 29th and 30th, this Depot was visited by a group of Naval officers of the Bureau of Aeronautics, Navy Department, in connection with the annual tour by air of Naval Assembly and Repair officers of the Bureau of Aeronautics to various Army, Navy and commercial aircraft establishments, to confer on mutual problems of airplane maintenance and overhaul. Personnel making the tour this year, who also visited Randolph Field, were as follows: Lieut. Commanders L. Harrison, Naval Air Station, Pensacola; H.G. Kinnard (SC), Naval Aircraft Factory, Philadelphia; I.M. McQuiston, U.S.N.R. Bureau of Aeronautics, Washington; Lieuts. W.D. Johnson, Bureau of Aeronautics; C.W. Oexle, Naval Air Station, Norfolk; C.C. McDonald, Naval Air Station, Anacostia, D.C.; T.R. Frederick, Naval Air Station, San Diego; Messrs. W.H. Montgomery, Bureau of Aeronautics; J.H. Stevenson, Naval Aircraft Factory, and a crew of three enlisted men. This visit, as was the case of all such visits in the past, was greatly enjoyed by this Depot and proved of immense benefit in the interchange of ideas and information and in furthering the spirit of cooperation between the two aeronautical services.

Aberdeen Proving Ground, Md., May 9th.

On Friday, May 7th, an impromptu reunion of former commanding officers of the Air Corps Detachment at this post occurred when Major DeShields came from the Middletown Air Depot in a BT-2B1, to be followed shortly by Lieut. Colonel Jacobs, from Washington, in one of Bolling Field's BT-7's. Captain Watkins, currently present "Skipper," was here too; so for a short time we had three C.O.'s.

Technical

INFORMATION AND ENGINEERING NEWS
Air Corps Materiel Division ✓

Mechanics' Winter Suit, Type E-1.

An Engineering Section Memorandum Report furnishes information for standardization of Type E-1 mechanics' winter suits. This suit consists of a jacket and trousers for use under the mechanics' coveralls. It is fabricated with 3/8-inch sheep shearling and contains an interlocking fastener on the front jacket opening, extending from the waist to the collar attaching seam. The trousers are provided with elastic webbing suspenders and an interlocking fastener on the front opening and on each leg cuff. The jacket is also provided with a 4-inch wide sheep shearling collar for extending above the coverall collar for protection of the wearer's neck. ✓

Shoes, Mechanics', Winter, Type B-1.

An Engineering Section Memorandum Report provides information relative to standardizing the Type B-1 mechanics' winter shoes. This type shoe is identical in design to the Type A-6 pilot's winter flying shoe except that slipper inserts are not provided. The Type B-1 shoe is fabricated with 3/4-inch sheep shearling and contains an interlocking fastener on the front opening buckle and strip encircling the top of the shoe as the fastening means. A 3-inch rubber foxing and heavy rubber sole and heel are also provided on this type shoe. ✓

Rafts, Pneumatic.

An Engineering Section Memorandum Report furnishes information relative to standardizing three bladder type pneumatic rafts. The Types A-2, B-3, and C-1 rafts are similar in construction to the standard Types A-1 and B-2, except that they are constructed with a heavy rubberized duck casing containing "Latex" rubber bladders. The manifold is covered with rubber to prevent chafing and metal cars are provided in place of the wooden type. The capacity of the three types is 1,000 pounds for the A-2; 500 pounds for the B-3, and 250 pounds for the C-1. ✓

Switch, Ignition and Master, Type B-4A.

An Engineering Section Memorandum Report provides information necessary for the classification of the Type B-4A ignition and master switch as standard. This switch is intended for use in twin-engine airplanes for control of the ignition circuits and for safetying starting, booster coil, pitot tube heater, and other circuits which may require safetying. ✓

Tow Target Windlass.

An Engineering Section Memorandum Report furnishes information regarding correction of difficulty referred to in unsatisfactory report from France Field, C.Z., on tow target windlass. The Type C-4 windlass is primarily designed

for use in observation type airplanes only, and not on bombing type airplanes. The capacity of the Type C-4 windlass is 4,000 feet of 1/8-inch cable. This is considered sufficient if the windlass is used on observation type airplanes.

New requirements for aerial gunnery targets have recently been set up by the Air Corps Technical Sub-Committee, under date of November 17, 1936, and approved by the Chief of the Air Corps under date of December 10, 1936. These requirements cover the maximum length of cable to be used which was set at 7,000 feet by the Artillery representative on the Board. A project covering the development of a windlass for this amount of cable is now in progress. A motor-driven rewind mechanism is also included in connection with this development.

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Rockwell Air Depot, Coronado, Calif., May 3rd.

On Saturday, April 10th, at 1:00 p.m., eight members of the 4th Transport Squadron departed for Las Vegas and Boulder City, Nevada, in a C-27C, piloted by Private Vernon M. Byrne, to inspect the Boulder Dam and the above mentioned cities. The trip was a tremendous success, and the sights were plentiful, especially the Boulder Dam. On the return trip Sunday afternoon, the course was plotted via Death Valley and Los Angeles. The personnel making the trip were, in addition to the pilot, Privates, 1st Class, J.W. Green, G.S. Luse, L.D. Sprague, Privates P.W. White, R. Van Slych, W.G. Rhoads and H.H. Collier.

Major Lowell H. Smith, Chief of the Inspection Division, Office of the Chief of the Air Corps, arrived at this Depot on April 12th on an inspection tour. Accompanying Major Smith was Major Malcolm C. Grow, Chief of the Medical Division, O.C.A.C. While here, Major Grow conferred with the Flight Surgeon, Captain Jasper N. Knox, Medical Corps, regarding that Department of the Air Corps. They departed in their A-17 for Tucson, Arizona, April 14th.

Major William N. Lanagan, Director, Department of Mechanics, Air Corps Technical School, accompanied by Sergeant Floyd J. Leonard, arrived at this Depot April 13th in a BT-9 on an inspection tour of Air Corps stations and aircraft factories on the West Coast. From here they cleared for March Field, Calif.

Lieut. Colonel S.J. Idzorek departed on April 13th on an inspection trip to Moffet Field, Oakland, Pearson Field and Fort Lewis, and returned on the 17th. The trip was made in a C-27, piloted by Master Sergeant Peter Biesoit.

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Fort Sill, Okla., May 12th.

Major F.D. Lynch and Staff Sergeant J.F. Murray departed for Bolling Field on May 4th to receive the Cheney Award from General Craig at appropriate ceremonies at that field on the 8th.

Lieut. H.F. Gregory, the chief "Windmill Salesman," is actually back with his unit for duty after more than a year of detached service with the "Jeeps." He arrived here May 10th from leave and detached service at the Office of the Chief of the Air Corps.

Air Corps

AIR CORPS LIBRARY
OFFICE OF THE CHIEF
WASHINGTON, D. C.

NEWS LETTER

F. C. BARRY

ISSUED BY
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Information Division
Air Corps

June 1, 1937

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.

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THE GENERAL HEADQUARTERS AIR FORCE EXERCISES ✓

THE GHQ Air Force, with the 63rd Coast Artillery (Anti-aircraft) attached, concentrated in the Hamilton Field - March Field areas and conducted operations therein during the month of May, 1937. The Primary purpose of the exercise was to test the full-strength organization of the various units of the General Headquarters Air Force as set up in tentative test tables of organization.

In planning for this exercise, it was apparent to Major General Frank M. Andrews, the Commanding General of the General Headquarters Air Force, that before any real test of organization could be made it would first be necessary to assemble full strength units of all types of aviation assigned to the GHQ Air Force and then to operate them under conditions as nearly approaching those which might be expected in war.

It was also apparent from the beginning that, although this was to be primarily a test of the soundness of organization, other characteristics, inherent in an air force which is capable of being at all times ready for immediate action, would also undergo test. Among these characteristics are: high mobility; efficient supply; and proper training.

The following units, composed and located as follows, engaged in the exercise:

Advance Echelon, Hq. GHQ Air Force, at March Field, Calif.

15 officers, 22 enlisted men, 8 airplanes of various types.

Headquarters, 2nd Wing, at Hamilton Field, Calif.

8 officers, 25 enlisted men, 8 airplanes of various types.

Headquarters, 1st Wing, at March Field, Calif.

11 officers, 70 enlisted men, 2 airplanes of various types.

Headquarters and Headquarters Squadron, 7th Bombardment Group, at Fresno, Calif.

13 officers, 81 enlisted man, 3 B-10B airplanes (Martin bi-motored Bombers).

9th Bombardment Squadron at Fresno, Calif.

30 officers, 163 enlisted men, 13 B-10B airplanes (Martin bi-motored Bombers).

31st Bombardment Squadron at Stockton, Calif.

30 officers, 163 enlisted men, 13 B-10B airplanes (Martin bi-motored Bombers).

32nd Bombardment Squadron at Merced, Calif.

30 officers, 163 enlisted men, 13 B-10B airplanes (Martin bi-motored Bombers).

Headquarters and Headquarters Squadron, 3rd Attack Group at Bakersfield, Calif.

12 officers, 78 enlisted men, 5 A-17 airplanes (Northrop single engine attack).

90th Attack Squadron, Bakersfield, Calif.

30 officers, 177 enlisted men, 28 A-17 airplanes (Northrop single engine attack).

34th Attack Squadron at Visalia, Calif.

30 officers, 177 enlisted men, 28 A-17 airplanes (Northrop single engine attack).

13th Attack Squadron at Delano, Calif.

30 officers, 177 enlisted men, 28 A-17 airplanes (Northrop single engine attack).

Headquarters and Headquarters Squadron, 1st Pursuit Group at Muroc Dry Lake, Calif.

12 officers, 78 enlisted men, 5 PB-2 airplanes (Consolidated bi-place Pursuit).

27th Pursuit Squadron at Muroc Dry Lake.

30 officers, 143 enlisted men, 28 PB-2 airplanes (Consolidated bi-place Pursuit).

94th Pursuit Squadron at Muroc Dry Lake.

30 officers, 133 enlisted men, 28 P-26 airplanes (Boeing single seater Pursuit)

55th Pursuit Squadron at Muroc Dry Lake.

30 officers, 133 enlisted men, 28 P-26 airplanes (Boeing single seater Pursuit)

88th Reconnaissance Squadron at Hamilton Field, Calif.

9 officers, 88 enlisted men, 6 airplanes of various types.

Hamilton Field Air Base.

19 officers, 460 enlisted men, miscellaneous airplanes.

March Field Air Base.

24 officers, 469 enlisted men, miscellaneous airplanes.

63rd Coast Artillery (AA) at Muroc Dry Lake, Calif.

22 officers, 600 enlisted men, .30 and .50 caliber machine guns, 3-inch AA guns, sound locators and searchlights.

In rough figures, the men and airplanes engaged in this maneuver totalled 425 officers and flying cadets, 3400 enlisted men and 260 airplanes.

The Concentration: Since none of the V-7353, A.C.

GHQ Air Force units stationed throughout the country were operating on a full strength basis - some squadrons consisting of one flight, some of two flights - it was necessary to deplete all of the units not engaged to practically inoperative status in order to bring the Bombardment, Pursuit and Attack Groups engaged in this exercise to full strength. Men and airplanes from Langley, Mitchel, Selfridge, Barksdale and the West Coast Air Bases were concentrated to accomplish this organization. The 88th Reconnaissance Squadron was not brought up to full strength for several reasons, an important one being that the GHQ Air Force reconnaissance squadrons are not yet equipped with a standard type airplane and no true test of organization could be attained if a single squadron was required to operate and maintain the many different types with which these squadrons are at present equipped.

The period May 1 to May 9 was devoted to the concentration.

The combat airplanes, manned by their crews, converged on their operating airdromes with great rapidity, most of them arriving at their destination within 48 hours after departing from home stations. These units made daily flights during the remainder of the concentration period in order to familiarize themselves with the terrain over which they would be operating during the ensuing few weeks.

The ground echelon of technical personnel and supplies was moved into the operating area by air, rail and motor transportation and assembled much slower than the combat airplanes and crews.

A provisional Air Transport Squadron, composed of 11 Douglas and two Lockheed Transport airplanes, comprised the air transport component for the ground echelon. As there were an insufficient number of air transports in the Army Air Corps to bring the ground echelon into the maneuver area in a single trip, it was necessary to operate an airplane shuttle service back and forth across the country until the last man and the last item of supplies were landed at the maneuver airdromes. This shuttle service occupied the period, May 1st to 10th. The crews of some of these Transport planes flew as many as 100 hours in ten days. The Air Transport Squadron was inactive from the completion of the concentration to the start of the evacuation on May 22nd. In the interim, some of the Transport planes were released to their home stations while others were turned over to the March and Hamilton Field Air Bases to provide air transport service between the Air Bases and the outlying airdromes during the tactical period.

Recalling memories of World War days, a trooptrain carrying men and supplies

departed from Barksdale Field on May 1st, made a stop at March Field to take on additional passengers, and discharged its load at Muroc, Bakersfield, Delano and Fresno.

All men and supplies not transported by air or rail were moved to their maneuver stations by motor convoy. This mode of transportation was used for the comparatively short hauls between the West Coast bases and the dispersed airdromes.

The Operating Period.

Tactical Operations began on May 10th and ended on May 21st. Each unit engaged in the exercise was assigned to either the defending force or the attacking force.

The opposing units consisted of:
1st Wing (Defending Force)

1st Wing Headquarters located at March Field.

1st Pursuit Group located at Muroc Lake (all Squadrons).

63rd Coast Artillery (Anti-aircraft), located at Muroc Lake.

The March Field Air Base.

2nd Wing (Attacking Force)

2nd Wing Headquarters located at Hamilton Field.

7th Bombardment Group with squadrons located at Fresno, Merced and Stockton.

3rd Attack Group with Squadrons located at Bakersfield, Delano and Visalia.

88th Reconnaissance Squadron located at Hamilton Field.

The Hamilton Field Air Base.

The Advance Echelon of Headquarters, GHQ Air Force, was not an operating agency during the tactical period. It did, however, prescribe the situations in order to control the operations and direct them along lines which would assure that maximum benefit could be derived from the short time available. The issuance of all detailed orders and instructions, the tactical employment of all weapons, and all other necessary details were left to Wing and subordinate commanders. Copies of all such orders and instructions were furnished to Headquarters, GHQ Air Force, with minimum delay.

Muroc Dry Lake and vicinity was assumed to be the City of Los Angeles, with its airplane factories, docks, harbors and other facilities. This site was selected as the defended area because it offered the opportunity to conduct actual bombing and chemical operations. Targets representing the facilities and installations of this metropolis were outlined with lime on the sands of the Lake, and it was at these objectives that the opposing Bombardment directed the force of its attacks.

Additional bombardment targets were erected on Great Salt Lake, Utah, where a

few of the bombardment attacks were directed.

The 53rd Coast Artillery (AA) was disposed in the vicinity of the town of Muroc. These anti-aircraft defenses and the Pursuit encampment were targets for the opposing attack aviation.

Of noteworthy interest on the defensive side was the part played by the California Edison Company in manning the air intelligence net. An air intelligence net consists of a series of observation posts manned by ground observers located at considerable distances from the object of enemy air attacks. As enemy planes move into the intelligence net, ground observers report the location, number and type of airplanes, their altitude, direction of flight and the time they are observed. This information is rushed by the quickest means of communication available to the defense forces who prepare to engage the approaching planes before they can strike the target. Due to the shortage of army personnel and to the lack of funds with which to set up the elaborate communications net necessary to get complete coverage for the defended area, the defending force called upon the California Edison for assistance and received an enthusiastic response. The complete facilities of this Company were put at the disposal of the defending forces; many special wires were laid, and observation posts were manned by Company employees who telephoned vital position reports of the attacking aircraft to the commander at Muroc Lake. This cooperation was rendered without expense to the government and served to illustrate a procedure which will be followed in actual warfare. Tomorrow's aircraft will strike with such startling rapidity that the successful defense of our vital areas will depend largely upon the assistance of this kind which patriotic citizens can render.

As a double check, to insure that the defending force received warning of an approaching attack, each combat unit or single airplane of the attacking force reported its position by radio as it entered the area covered by the net.

Aerial camera guns were used in lieu of machine guns. Smoke screens were laid to reduce the effectiveness of the anti-aircraft fire against the attacking forces of Bombardment aviation. Lime water and tear gas were used to teach the ground forces how to protect themselves from gas attacks.

All of the problems were designed to conform to actual war methods as far as conditions would permit. Two four-hour periods out of each 24 hours were the average operating periods. However, some squadrons, especially Bombardment, flew

as much as 15 hours in a single day. Some missions were performed during daylight while others involved night operations. All sorts of weather conditions were encountered.

Valuable lessons were learned about each of the following subjects:
Tactical employment of Bombardment, Pursuit and Attack Aviation,
Coordinated Bombardment and Attack aviation,
Coordinated Pursuit and Anti-aircraft action,
Bombing proficiency,
Aerial gunnery proficiency, using camera guns,

Pursuit interception,
Illumination of Bombardment aircraft by Coast Artillery searchlights to assist Pursuit interception.

Proficiency of Attack Aviation in neutralization of anti-aircraft artillery by use of smoke and chemicals.

Effects of gas on morale.
Effects upon efficiency of personnel when wearing gas masks,

Gas alarm system,
Airdrome defense,
Practicability of extent of Air Intelligence Net,

Combat intelligence training,
Illumination of Bombardment targets by reconnaissance units.

The Deconcentration

The deconcentration period began on May 22nd and ended May 30th, and might be called the "Concentration in Reverse." Units were moved to their home stations by the same means of transportation as had been employed to concentrate them. As soon as the air combat units pulled out of their airdromes, air base personnel dismantled the tent cities, loaded remaining equipment and supplies and proceeded to the home bases.

In conclusion, it might be well to say a word about the role played by the March Field and Hamilton Field air bases during the exercise, for, after all, this GHQ Air Force exercise was a test of these bases just as much as it was of the air combat units.

The spectacular side of GHQ Air Force operations is the flying, shooting and bombing. Few people stop to realize the huge amount of ground effort incident to "keeping the airplanes and combat crews in the air."

An air base comprises the installations and facilities required by and provided for the operation, maintenance, repair and supply of a specific air force, and as a rule covers a considerable area, especially if the installations and facilities must be orderly dispersed because of terrain, security and other considerations.

A typical Air Base comprises an airdrome together with permanent shops, warehouses, communications and other necessary facilities.

ties. It includes, in addition, such necessary auxiliary airdromes as can be serviced by the base.

An Air Base exists for the primary purpose of providing the services necessary for the operations of combat units. It must provide clothing, food, shelter, bombs, ammunition, spare parts, photographic laboratory facilities, fuel, light, heat, maintenance engine crews, hospitalization, weather service, radio, teletype and telegraph facilities, mail service, police service and a million and one other things. It can be seen that the GHQ Air Force must depend upon a large ground component of technical personnel, supplies and equipment in order to carry on sustained operations. Without the assistance of the ground echelon, the air echelon is as immobile as it would be without one drop of gasoline for its engines.

The GHQ Air Force was fortunate in having two fine air bases in California capable of meeting the demands placed upon them by the air combat units. It is not as fortunate in other sections of the country; however, a bill passed by our Congress authorized bases in important areas in the continental United States, and the War Department Appropriations Bill, now before Congress, carries an item for the construction of another base in the Pacific Northwest, near Tacoma.

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ARTILLERY FIRING AT CAMP STANLEY

The 22 students of the Observation Section of the Air Corps Advanced Flying School, Kelly Field, Texas, have just completed their course in Observation of Artillery Fire. The Ground School course was conducted by Captain R.E. Randall, instructor, and lasted for 24 recitation hours. This was followed by simulated artillery fire on the Kelly Field miniature range. In this phase of the training, each student had a minimum of ten problems to familiarize him with the procedure of artillery adjustment. The next phase was adjustment of simulated artillery fire on the puff target range, where bursts were simulated by smoke puffs and observed by the students at 4,000 feet. Two-way radio communication was used.

On April 28th, the adjustment of actual artillery fire was begun. Captain J.C. Strickler, Commanding "B" Battery, 15th Field Artillery, gave a lecture on artillery firing and a demonstration with the students at the battery position.

An instructor team of Lieut. J.C. Covington, observer; Lieut. E.R. Todd, pilot, demonstrated three problems in aerial artillery adjustment. At the conclusion of this demonstration, some additional excitement was furnished in the form of

two 10-foot rattlesnakes which were found near the battery position and promptly dispatched without the aid of field pieces.

Following the demonstration, the students began to fire problems, 124 separate problems being fired. Each student fired a problem of the following types:

Bracket prearranged.

Lay-on-Me (airplane flying the gun target line to locate the target).

Problem using a reference point.

Problem using ladder brackets with smoke shell, followed by a changed target problem using one gun for precision adjustment on the target.

Problem in which the target was designated by map coordinates by the battery commander, allowing the student to shift to a target requiring battery precision.

A total of 1289 rounds was fired. The firing battery was commended by the Air Corps instructors on its firing efficiency and the accuracy of its laying. All communication was two-way radio.

The ground radio station was operated by Corporal Guthrie and Private Chedester, both of the 12th Air Base Squadron.

The Air Corps instructors were Captain R.E. Randall, Chief Instructor; Lieuts. S.E. Anderson, J.C. Covington, E.R. Todd, W.L. Kennedy and E.J. Timberlake.

*Ed. Note: According to an authority on reptiles in the State of Texas, the largest rattler discovered in the Lone Star State measured seven feet, and that was way back in 1888. He states that they don't grow even that long nowadays, averaging about five feet in length.

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BUGLE CALLS WITHOUT BUGLERS

The Mitchel Field Control Tower Operator has taken over the duties of the Base Buglers. By means of a phonograph with a crystal pickup, an amplifier and two high quality loud speakers, bugle calls having exceptional clarity and perfection are played. The loud speakers are located on the Headquarters Building, and the calls can be heard over the entire base area.

An added feature - March Music - is played four times daily, while squadrons are marched to and from work on the line. The "Star Spangled Banner" is played for Retreat and daily, except in inclement weather. When reviews are scheduled, troops march to the strains of the best bands in the land.

The only complaint has been that reveille is much too penetrating and sleep-dispersing.

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During the month of April, the Engineering Department of the San Antonio Air Depot, Texas, overhauled a total of 18 airplanes and 66 engines, and repaired 40 airplanes and 36 engines.

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INTERNATIONAL LAWYERS AROUSED OVER AIRCRAFT
By Captain Corley McDarment, U.S. Army, Retired.

AIRPLANES have written a great question mark in the troubled skies of international law as well as modern warfare," declared Dr. John H. Spencer, youthful member of the U.S. State Department, in a talk before the annual meeting of the American Society of International Law at the Carlton Hotel, Washington, D.C., April 30th. Dr. Spencer should know about such matters. Before joining the State Department, he was legal advisor to the Emperor of Ethiopia who, it will be remembered, made a better fight in the halls of Geneva than on the plains of Abyssinia.

Born in Iowa, but schooled in the universities of Germany and France, Spencer continued to give legal advice to the "King of Kings" at Addis Ababa until May 5, 1936. The victorious Italians entered the city May 7th! Spencer escaped amid a hail of machine gun bullets and the reverberation of aerial bombs.

Being in the country during the conflict, Dr. Spencer had an excellent opportunity to observe the effects of aerial warfare upon the civilian population and to note some startling gaps in international law caused by airplanes. Speaking before the assembled international lawyers in Washington on "The Legal Aspects of Aircraft in Belligerent Operations," Dr. Spencer said:

"Behind the lines is where the airplane is the greatest weapon. Low flying airplanes decimated whole herds of cattle, destroying the morale of soldiers and civilians alike. On market days, when herds were collected, the greatest damage was done. The market days had to be discontinued."

Dr. Spencer said that the gas bombs which the Italian aviators dropped had only a limited effect, but when the gas was released as a spray in the air, havoc resulted. Soldiers and civilians were partly blinded, livestock was sickened and water rendered unfit for use.

It is a violation of Article 25 of The Hague Agreement of 1907 to fire upon undefended towns, Red Cross units and ambulances. But the Ethiopian Government officially reported fifty cases of aerial machine gun and bombing attacks upon undefended towns and at least 18 such attacks upon Red Cross units and ambulances, by the Italians. But the fine question for international law to redefine is what is an "undefended" town? Does a single inhabitant blazing away at a hostile airplane change the status of a town from "undefended" to "defended," thus giving airplanes the right to fire and bomb at will? True, a single lucky shot from a rifle may bring down an airplane. But one set of figures showed

that the percent of hits from regular anti-aircraft guns during the World War was only .75 of one percent. And some authorities would consider five percent hits high for the best anti-aircraft batteries today. Nevertheless, one man with one rifle and one bullet may bring down an airplane, and hence is a potential "defender" of a town. At least the Italians apparently thought so and bombed accordingly.

The Ethiopian Government gave orders for towns not to fire upon passing airplanes, lest retaliatory attacks be made. But there was no effective way to prevent herdsmen near the edge of a town, or over-zealous citizens from taking pot shots at passing planes. The natural impulse of the aviators was to return a spray of machine gun bullets or drop a few bombs in the general direction or vicinity of where they believed the hostile fire originated.

Under strict interpretation of international law, towns so lightly defended against aircraft would be classed as "undefended" - yet there is just enough doubt to give belligerent aircraft an open door.

In the bombing of ambulances and Red Cross units, the Italian aviators claimed they were often so close to the line of combat that no distinction could be made between them and other vehicles. Moreover, in bombing from high altitudes where accuracy was not so good, bombs may have fallen near or upon inviolable units when not intended. When ambulance crews thought they were being fired upon by airplanes, whether they were or not, they would open fire. This would give the airmen an excuse to return the fire.

And here enters another point for international law: When does an ambulance crew cease to be a noncombatant unit? For example, when the crew of an ambulance train has engaged fire with an airplane one day and placed itself upon a combatant status, is it still upon that status the next day when the plane returns? International law says "No." When an engagement has been definitely broken off and the forces withdraw, a new deal is on - a new game altogether has started. The airplane has no right to fire upon the ambulance train unless the crew first fires upon the airplane. But can aviators depend upon that? Can they afford to fly low over an ambulance train on the way to attack the fighting troops and trust that hostile fire will not be opened upon them today as it was yesterday? If the crew of that train was particularly active in its fire the day before, the airmen will have their own ideas as to the change of heart overnight. The next day may be another

battle, but it is still the same war. There is enough doubt about the matter to make it a new problem for international law.

Another problem which international lawyers would like to doctor up, if possible, is the aerial attack, or battle, in which there is no follow up, and no attempt made to capture. This is the aerial attack made far behind the lines, sometimes hundreds of miles from the fighting lines. It is undoubtedly against noncombatants, and its effect can be only one of morale. Are such attacks fair? Attacks against munitions plants and railroad centers are undoubtedly fair and legal. If armed troops could land from airplanes and capture a town deep within enemy territory, no question of legality could be raised, but the "useless" attack, where no intention is made to capture, is another matter. Unrestricted use of aircraft in warfare hints at a fearful interpretation - a new philosophy of war. Instead of confining the conflict to armies, it is spread to civilians, including women and children, in the farther recesses of a country, and it even falls upon the unborn.

Another angle not sufficiently covered in international law is the case in which a hostile aviator is captured by irresponsible civilians far from the fighting lines and executed. Prisoners of war are entitled to certain rights under laws of warfare. But the law presumes the capture to be made by military personnel, or at least by constituted civilian authorities. What punishment, if any, should be imposed upon a country when one of its isolated natives has executed an aviator captured hundreds of miles from the fighting lines? The natural retaliation during the Italo-Ethiopian war was an attack against the section of the country where the illegal acts occurred. And while this may be the "human" thing to do, is it legal? Answering atrocity with atrocity leads into an abyss of barbarism which may engulf the whole of civilization.

What can international law do to humanize warfare in the face of rising air power? Dr. Spencer quite properly did not touch upon the moral issues of the Italo-Ethiopian War, but only the legal aspects presented by modern aerial warfare. However, it was with a serious face and grave voice that the scholarly Philip Marshall Brown, acting Chairman, arose after the address of Dr. Spencer and broke the awed silence with: "We have just heard one of the most significant talks of our times. One of the greatest problems before international law today is that question mark written in the sky - by airplanes."

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THE MANEUVERS AT ROCKY MOUNT, N.C.

The month of April was a busy one for the 2nd Bombardment Group. The entire unit moved to Rocky Mount, N.C., for the 2nd Wing Field Exercises, leaving only a detachment at Langley Field to handle the necessary work. The Exercises were very successful. The weather being ideal, the missions were run off in fine shape.

The final day of the camp included breaking camp and loading the trucks of the ground echelon and starting the motor convoy on the return trip to Langley Field. On the last day, the air echelon returned to Langley Field early in the morning for a demonstration for the Vice President of the United States and Members of Congress. Nine B-10B's and one B-17 participated in this demonstration. Bombs were dropped on the old bombing range.

The development program for the Y1B-17 was carried on as usual during the Wing Exercises, and the project is progressing rapidly.

49th Bombardment Squadron: After returning from the two weeks' sojourn at Rocky Mount, N.C., the organization had time to check equipment and get ready to move to the West Coast for the GHQ Air Force Concentration.

20th Bombardment Squadron: The Squadron finished an enjoyable and instructive two weeks in the field at Rocky Mount, N.C. The landing field was good, the camp site in Battle Park was excellent and the hospitality of the townspeople superb. The Squadron left Rocky Mount with regret, but promised to return.

21st Reconnaissance Squadron: The students of the Navigation School, conducted by this Squadron, participated in a small way in the Second Wing Field Exercises by making some very successful reconnaissance missions in the Middle Atlantic Sector for the purpose of locating enemy naval units. These missions indicate the importance of the work being accomplished by the Navigation Unit, both to the 2nd Bombardment Group and to the GHQ Air Force.

96th Bombardment Squadron:

Dear Pa:

The Ninety-Sixth (apologies to the 20th, 49th and 37th) again won another war. Place: Rocky Mount, N.C. When: April 12 to 24, 1937.

The first day found us in camp, very comfortably situated, you know, all the comforts of home; electric lights and heaters in tents, hot water, and radios. It looked more like amateur campers on a lark. That night we leaned back in our chairs around the camp fires, smoking, telling stories, and forgetting that we were ready for battle.

It started with a bang. Orders came

(Continued on Page 11)

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A TIN ROOF IN JAQUE
By the News Letter Correspondent

To the casual traveler who now flies from Panama toward Rio and Santiago, the far reaching jungle will not only be broken by the welcome sight of an emergency landing field on Panama's Colombian border at Jaque, but a metal roof on the only modern building for hundreds of miles will be seen winking an invitation from the equatorial jungle at latitude seven degrees - 30 minutes north.

Jaque, situated on the extreme southeastern tip of Panama, is the rugged Sapo Mountain range in our last outpost near South America, and is also located on the tip of the imaginary horseshoe that describes Panama Gulf which makes it of great importance as the site of a storage depot for fuel for contemplated cross-country flights into South America.

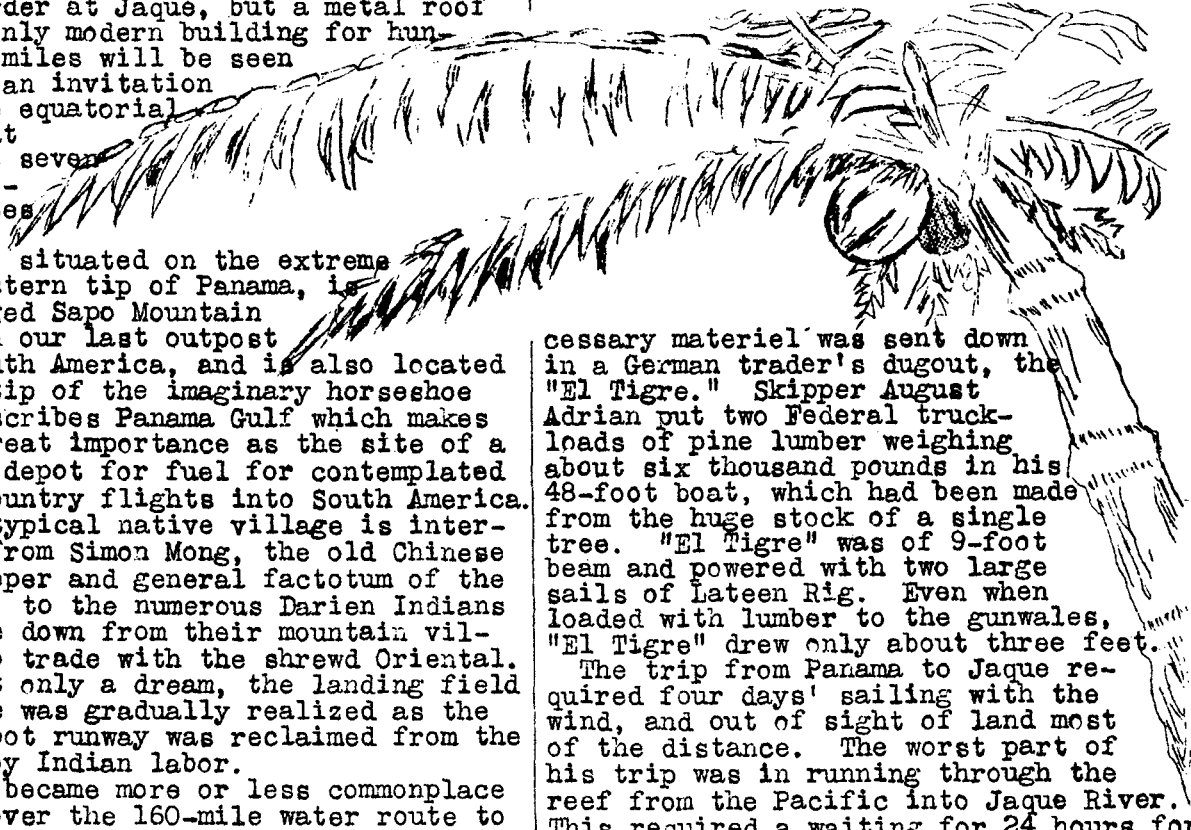
This typical native village is interesting from Simon Mong, the old Chinese storekeeper and general factotum of the village, to the numerous Darien Indians who come down from their mountain villages to trade with the shrewd Oriental. At first only a dream, the landing field at Jaque was gradually realized as the 3,000-foot runway was reclaimed from the jungle by Indian labor.

As it became more or less commonplace to fly over the 160-mile water route to the Colombian border, the importance of a radio station began to be realized; also, as navigation flights far into South America became possible with the arrival of more modern flying equipment, a storage place for fuel became important as well as a house that might possibly be used as shelter in case of an overnight stop. Therefore, even though Jaque is situated far from the beaten track and well into the hinterland of Panama it still rivals El Volcan and Rio Hato in conveniences.

To construct a building on the Jaque field became quite a problem when it was considered that Jaque was 160 miles Southeast of Panama, which involved a flight in land planes over water that is so filled with coral reefs and submerged rocks that only the smallest boats can make regular runs through it.

Jaque is hundreds of miles from the nearest highway and, although that city will some day be very close to the proposed Pan-American Highway from Mexico City to Rio de Janeiro, that day is far into the future, as there now exists only thirty miles of road over a route that will by land be about three hundred miles, and most of that will be

long bridges and mountain passes. Transportation by air and water was then the only solution, and water transportation only if native dugouts could be obtained. First of all, the great bulk of the ne-



cessary materiel was sent down in a German trader's dugout, the "El Tigre." Skipper August Adrian put two Federal truckloads of pine lumber weighing about six thousand pounds in his 48-foot boat, which had been made from the huge stock of a single tree. "El Tigre" was of 9-foot beam and powered with two large sails of lateen Rig. Even when loaded with lumber to the gunwales, "El Tigre" drew only about three feet.

The trip from Panama to Jaque required four days' sailing with the wind, and out of sight of land most of the distance. The worst part of his trip was in running through the reef from the Pacific into Jaque River. This required a waiting for 24 hours for the right time to shove hard with the poles, heave up with the foresail, and let the force of the Pacific sweep "El Tigre" into the calm waters of the river. After successfully landing, thirty Indians moved the material to the site of the building.

In the meantime, three of Keystone's best 6-A's were pressed into service along with the Bellanca, and used to transport the corrugated roofing, nails, cement, the balance of the lumber, and eight men along with enough water and provisions to last them until the next flight. These flights were made to Jaque almost every day during the construction and totaled 25 trips before the last coat of paint had been put on and the concrete piles wrapped with creosoted burlap to keep off the ants. These plane-loads with Adrian's boatload placed all of the material to be used in the construction work at Jaque, but as it was feared that the water supply at that village was impure, it was decided to run trips for water, fresh meat and provisions every day.

The construction moved along rapidly after the problem of supply had been accomplished, and the men pulled down the

tent and moved into the best house in Darien Indian country in four days' travel. Windows, doors, screens, concrete foundations and steps, a front porch and all. Then the most amusing incident of the week occurred. On one of the early flights a Medical Corps man was sent down - Private Kelly - who soon made himself the most sought after man in Darien by his remedies for various maladies that quickly worked a cure which the witch doctors in the village had failed to effect. Kelly first cured an Indian of a very badly infected finger which had baffled the Indian doctor a long time. He experimented with quinine, made experiments to cure skin rashes and old cuts, etc. Whatever the result of Kelly's missionary work was, his stock is way up in that never-never-land. In two days after the first cure had been telegraphed via the grapevines to the other villages, the rivers contained a solid stream of Cayucas filled with Indians with everything from hangnails to toothaches. Kelly's cures must have worked, because to this day he is EL DOCTOR in that country and has received presents that include Ocelots, parakeets and earrings. The doctor, when he returned, also had blood specimens from every Indian in the country.

Now Jaque boasts of at least one modern building, and as soon as radio sets are available will no doubt have the first broadcasting station in Darien, as well as the first filling station, whether the highway is fifty years from completion or not. Perhaps some day away back in the USA we'll hear Radio Station HAR-K calling with some red-skinned crooner - Quien Sabe, for there is no telling there in the country of the Chucunaque and the Sapos, where the blow gun still is the weapon of prime defense and, even though very little is said about the subject, SHRUNKEN HUMAN HEADS from tribal enemies still are to be found.

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5TH COMPOSITE GROUP IN JOINT MANEUVERS

The annual Hawaiian Department Maneuvers, climaxed by 48 hours of intensive activity during the Concurrent Exercise with the U.S. Fleet, are a thing of the past. The period from April 12th, when the 5th Composite Group took the field, and April 25th, when the assembled "enemy" fleet made its final "assault" on the embattled shores of Oahu, was characterized by strenuous activity on the part of operations and communications personnel, as well as flying officers and combat crews. The Group played an important part with its new (in Hawaii) Martin Bombers, performing several missions of over four hours each and pushing far to sea the powerful bombardment arm of the Wing Com-

mander, Brigadier General Barton K. Yount.

A humorous slant on the grim game was introduced when the enemy, having discovered the Group Command frequency, endeavored to confuse operations by "jamming" interference and fake orders. Not having the proper means of authentication, their efforts deceived no one, and radio frequencies were promptly changed. Moreover, it was demonstrated that the game can be played both ways when Lieut. Daniel A. Cooper, the Group Communications Officer, using the old frequency, ran some totally imaginary missions, apparently followed closely by the enemy, judging by his efforts to interfere.

While the War was devoid of umpires and the results may therefore never be known, the 5th Group played a significant part and takes great satisfaction in the generous commendation issued by the Department and Wing Commanders.

The cessation of hostilities only marked a change in activities for the Group, for it started making preparations for the annual Department Commander's Inspection, beginning May 12th, as strenuously as it fought in the late unpleasantness.

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PARACHUTE MAN LEAVES MAXWELL FIELD

As his parting gesture after almost four years in the Army Air Corps, Marion F. Davidson, Jr., 13th Air Base Squadron, Maxwell Field, Ala., applied for and received permission to perform his fifth parachute jump on the morning of May 7th, the date upon which he was leaving the military service.

He was accompanied on the trip in one of the B-6 Army Bombing planes by Private Frank S. Stovall, also of the 13th Air Base Squadron. Upon reaching their proper altitude for the jump, both leaped from the plane. Davidson landed on the edge of the field, but Stovall missed the field and landed in the center of the Alabama River which runs along the north boundary of Maxwell Field.

Lieut. Marion Huggins, pilot of the Bombing plane, seeing Private Stovall's plight, circled the spot, flying low to attract attention. Davidson, sensing the danger, raced to the river, and leaping into the swift rushing water swam to Private Stovall's assistance. Both being strong swimmers, there was little danger to either, but Davidson's timely assistance certainly helped Stovall, who was swimming around in the water hanging on to his Triangle training parachute and waiting for assistance.

Lieut. Dyke F. Meyer and Private Venus, who arrived at the scene, secured a rowboat which was close by, and rowed to the assistance of the swimmers, bringing them and their parachutes safely to shore. It was an exciting experience for both men



NO FIDDLING IN BUILDING ROME.

Weeds are more or less chnoxious to most people, and these weeds include certain brands of "what the country needs most." There is one weed, however, which is particularly odious to the Commanding Officer of Mitchel Field - that species with yellow petals which frugal folks are fond of gathering for the purpose of concocting quite a potent drink.

Dandelions grow everywhere, and the post of Mitchel Field was no exception to the rule. In consequence, a general clean-up followed, and garden tools were very much in demand. It happened that the dandelions grew in such profusion around the hangar of the 97th Observation Squadron that the Commanding Officer of that outfit deemed it wise to detail two men to proceed with the job of eliminating the pesky weed from that neighborhood.

One of the men on the detail took his task seriously, and the dandelions were being pulled up with commendable regularity. The other man, either through sheer laziness or distaste for the calling of "a son of the soil," was inclined to take things rather easy.

Observing his companion falling down

on the job, the Industrious Enlisted Man growled:

"Hey, Pete! You'd better get going; you know what the Kayo said about this job."

"Aw, pipe down! What's the rush? Rome wasn't built in a day!"

"Yeah, that's true," rejoined the I.E.M., "but Colonel Frank wasn't there!"

Ace (relating war experience): "I had flown three miles over the German lines when I found that my engine was missing."

Girl: "Heavens! How could you fly so far without an engine?"

"They had to fire one of the observers."

"Was it on the ground that he was incompetent?"

"No, it was while he was in the air."

"Stay here with the balloon until the enemy is in sight - then run," said the Captain, as he started off for the rear.

"Where are you going?" shouted a private.

"I'm starting now, men - on account of my rheumatism."

THE PANAMA - GUATEMALA FLIGHT
By the News Letter Correspondent

WHEN the dry season comes to Panama, the Air Corps won't stay put in the Zone; for, in addition to the regular maneuvers, there are planned many trips into new terrain of Central and South America. And there were no exceptions this year, the longest trip to date being to Guatemala City.

Starting in February to gain momentum among the officers of France and Albrook Fields, the idea of the flight finally resolved itself into a take-off on the morning of April 5th. Participating in the flight was Brigadier General George H. Brett, Commanding General of the 19th Composite Wing, flying as a free lance in a B-10 airplane; six additional B-10's under the command of Major Willis R. Taylor; six P-12's and one C-27, under the command of Lieut. Colonel William O. Butler, who was also Group Commander.

The P-12's and the Bellanca left the two Canal Zone fields at 6:00 a.m., and rendezvoused at David, proceeding from there up the Pacific coast. The B-10 flight rendezvoused at Puntarenas, Costa Rica. The France Field contingent, heading out over the Atlantic, turned in across Costa Rica and flew down the richly cultivated, mountain-flanked San Jose Valley. The peculiar geography of this part of the world was brought to our attention by the fact that the shortest course for the Albrook B-10's between the two Pacific Coast points of Albrook and Puntarenas took them well out over the Atlantic Coast.

After stopping at Managua, Nicaragua, for lunch, we proceeded on across Lake Managua with its Fujiyama-like Monotombo, and then over a small active volcano with steam pouring out of its well defined crater. A little farther on we passed over an extinct crater whose circular knife-edge rim, three miles in diameter, dropped several thousand feet to a turquoise lake. The whole region was full of volcanoes, but their smoke and the blue haze from burning tobacco fields limited our visibility so that we missed most of them.

Another half hour through the hazy mountains brought us over and past San Salvador, well shut in by precipitous ranges. We soon cut toward the Pacific Coast and flew for an hour along the beach and uneventful lowlands of Guatemala. To our right we could see the mountains, wreathed in clouds and blue haze, guarding the interior of the Republic.

We soon swung right toward an opening marked by the tortuously winding railroad leading from coastal San Jose up through a pass. The valley quickly rose to meet us, and as we climbed to escape it we

were continually flanked by mountains half buried in clouds. At places the valley became so narrow that it looked like Gaillard Cut, and our "cross country echelon" quickly became the more comfortable "follow the leader."

At 6,000 feet we finally poured through the last bottle neck pass into a wide, sunny, mountain-rimmed valley, in the center of which sprawled a white gleaming city, appearing to us like the City of Baghdad.

We found that the cool mountain City of Guatemala lives well up to the illusion of our first aerial glance. The strongest first impression we received was of its military orderliness. Everywhere were military uniforms and government buildings, along the boulevard parks and in the midst of the business section.

But perhaps the most lasting impression is of the striking contrast between the ancient and the modern culture of Guatemala. Down a sleepy Spanish street paved with stone flanges rumbled an ox-drawn cart led by a boy tapping the yoke with a stick; while only a block away a concrete thoroughfare leads past modern, even modernistic, shops, and widens as it passes through an impressive park. Down the side streets scurry native women, barefooted, and dressed in the bright colors that only Guatemala can produce, carrying baskets of vegetables and flowers on their heads; while around the corner thrive the latest fashions and customs of our civilization.

In the park an ancient and immensely rich cathedral faces a modern conch shaped orchestra stand, and in the evening the park is full of people listening to the concert by the hundred-piece symphony orchestra. After a few days you realize that here exists the best of Spanish civilization, flavored by a more ancient culture which it does not succeed in entirely relegating to the countryside.

We did not, however, spend all our time in Guatemala City. Some made a trip to Antigua, once the center of all Spanish domain in the New World, but since reduced by a nearby volcano (except for one well preserved church, dated 1527) to magnificent ruins. And another trip was made to the land of the Chichi Indians, some 30 miles away and 5,000 feet higher in the mountains.

These Indians are famous for their religious fervor. Dressed in black knee breeches and shirts, they keep incessant pilgrimages up the steps of the various churches, moving in a blue haze of smoke from the torches they carry. Part of the service is a flute player continually on duty in a church tower. They are Catholics; but the local priest, Dr. Rossbach, claims it has taken too many years to gain their confidence for him to risk at-

tempting to change the somewhat unorthodox ritual of his parishioners,

Dr. Rossbach, by the way, possesses what is probably the most extensive knowledge of Mayan culture in the world, and in thirty years has assembled an invaluable collection of ancient Mayan jade carvings. Those who made the Chichicastenango ("land of") trip claim it in itself is well worth the whole flight, just for the privilege of talking with Dr. Rossbach.

In Guatemala we were entertained at the American Legation by the Minister, Mr. Desportes; and here we met many other residents of the city, including several members of the Guatemalan Air Force, graduates of Kelly Field. Our visit was also made pleasant by the kind hospitality of Lieut. Colonel and Mrs. John F. Davis. Colnel Davis is Commandant of the Guatemala Military Academy.

Due to the pressure of official business at home, General Brett, accompanied by Lieut. Shedd in another B-10, departed on Wednesday morning for Panama. For the rest of the flight, all good things, including money, soon come to an end; and after we had bought all the native belts, shawls and shoes we could afford, we left for home, carrying pleasant memories of the hospitable mountain city. Bad weather in the bottle neck pass held us up until 3:00 p.m., on April 9th, so that we ducked out just in time to spend the night in San Salvador, where we were entertained at the home of the American Minister, Dr. Corrigan. The next morning we were off to Managua, and so home to bed. Thus ended a 2,000-mile trip through five Central American countries, well satisfying our wanderlust - for several months, at least!

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The Maneuvers at Rocky Mount, N.C.
(Continued from Page 6.)

in thick and fast, causing the teletype to sound like a teletype. From then on we were kept on the jump, bombing enemy camps at Virginia Beach and Edgewood Arsenal, destroying enemy supplies near Mulberry Island, fighting off enemy Pursuit near Smithfield, annihilating Red air and ground troops by the hundreds. Every mission was successful, every bomb found its mark; the enemy's equipment was being destroyed so fast that we expected to hear of an armistice early during the second week. Morale was high, health of all the men and officers excellent.

That didn't last long. One day while I was receiving messages over my radio I heard m.g. fire (machine gun). I jumped to my guns in time to see a Red peashooter streak by. A minute later one got us. Luckily, only one cylinder was blown, and we were able to repair it in enemy territory under cover of darkness. In being

forced down, the pilot picked a small field near Langley Field where we hid while making repairs. Although the field was full of irrigation ditches, we made a successful take-off and returned to Rocky Mount.

During our absence, Red Pursuit had attacked our camp. The Squadron suffered heavy losses, including two airplanes, all of our mess equipment, four officers and seven men. We were too busy to do much about anything except work. The Red fleet was approaching and our orders were to sink it.

On the next two missions, the Red fleet was completely wiped out,* and we received word that the war was over. Just when we expected to return here, we started to erect a more permanent camp. That means we won't return until December 12th. How about sending me some dough?

Your soldier son,
John.

P.S. I forgot to tell how we almost lost one ship at sea. We were flying about 150 miles from shore when some stray shrapnel struck the left engine and it started to catch on fire. The pilot shut it off and flew on one engine for twenty minutes to allow it to cool off, then he started it and the thing seemed to be okay. The whole crew had at least one leg over the side while it was acting up. They said they weren't scared.

P.P.S. Don't forget the dough. I know a cute Rocky Mountaineer, and I've gotta date.

Headquarters and Headquarters Squadron:
This organization together with the tactical units of the Group just completed two weeks of Field Exercises at Rocky Mount, N.C. Due to the excellent cooperation and friendship of the people of this enterprising city, an excellent time was enjoyed by both officers and enlisted men. Entertainment was lavishly offered by the city, and within the limitations required by a daily four-hour mission, were accepted by all concerned. The intense interest of the people of this district in the Air Corps and our small "show" located on their airdrome was shown by the immense crowds which came to the field daily. On Sunday, and again on the following Friday, which was "Open House" day at the camp, the highways were swamped. State Police estimated that from seven to ten thousand automobiles came to the airport. On Friday, Major Giles brought down one of the Y1B-17 Bombers, so we were able to put on a comparative display of aircraft, using a Y1B-17, a B-10B and an A-17 Attack plane.

*All of our fleet was supposed to be doing business on the West Coast.

MAINTENANCE NAVIGATION FLIGHT BY ADVANCED SCHOOL STUDENTS

On Monday, May 17th, in accordance with a plan previously outlined, 74 airplanes from the Air Corps Advanced Flying School, Kelly Field, Texas, took off on the customary maintenance navigation training flight, as ordered by the Secretary of War. The flight was commanded by Major R.D. Knapp, Director of Flying Training at the Air Corps Advanced Flying School. Members of his staff included Captain R.E. Randall, Publicity Officer; Captain John C. Crosthwaite, Adjutant; and Captain Ralph E. Holmes, Commandant of Cadets. The Commanding Officer and his staff flew BT-8 type training airplanes.

The flight sections consisted of the Observation Section, with 26 Observation type airplanes and Captain O.P. Weyland in charge; the Pursuit Section, with 24 Pursuit type airplanes and Major John V. Hart in charge; and the Attack Section, with 11 Attack type airplanes and nine bi-motored airplanes and Captain Glen C. Jamison in charge.

The purpose of the flight is to give the students their final navigation training flight, using all the navigational aids available; to acquaint them with operations and use of the Federal airways; to further their instruction in maintenance of airplanes on field maneuvers; and to create an interest in the various colleges visited as to the educational facilities offered by the Air Corps at the Army flying schools.

On the first day all sections proceeded to the University of Oklahoma at Norman, where they rendezvoused at 3:00 p.m. On Tuesday, all sections effected a rendezvous at Stillwater, Oklahoma, at 11:00 a.m., where the Observation and Bombardment airplanes remained overnight. Stillwater is the site of the Oklahoma A. & M. College. The Attack Section, minus the bi-motored airplanes, proceeded to Lawrence, Kansas, to visit the University of Kansas, arriving there at about 4:00 p.m. The Pursuit Section went to Columbia, Mo., visiting the University of Missouri. They arrived there at about 4:20 p.m.

All sections rendezvoused on Wednesday at the University of Arkansas, Fayetteville, Ark., at 4:00 p.m. The Observation and Bombardment airplanes made the trip via Claremore, Oklahoma, where they stopped at Will Rogers Airport at 10:00 a.m., and visited the Oklahoma Military Academy. They were scheduled to return to Kelly Field on May 20th.

"Numerous clippings of the publicity accorded this flight at the various towns through which it passed have been received by this office," reports the News Letter Correspondent, and he adds: "It is evident that a great deal of interest in the Air Corps Advanced Flying School is being exhibited, particularly by college students."

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BOLLING CONTROL TOWER IS A GOOD WATCH TOWER

On the afternoon of May 11th, Lieut. Colonel Gerald E. Brower, Air Corps, donned his flying equipment, obtained his clearance from Operations, and went out to his airplane, an A-11, prepared to make a navigation flight to Langley Field, Va., and return. Before leaving the line, he called the control tower to check his radio and receive take-off instructions, and then proceeded to the north-south runway. Private H.W. Fraley, the operator on duty at the tower, had formed a habit of watching closely all airplanes taking off or landing, and was rewarded for his watchfulness. As Col. Brower passed the tower on the take-off and just a few feet before the plane left the ground, the operator noticed the left tire lose its shape and begin to flop around. He waited a few minutes and when the pilot called in again he notified him of the flat tire and asked for any instructions. Col. Brower answered that he had noticed a few bumps just before the plane left the ground, but wasn't sure that it was caused by a flat tire, and he came back to the field

to land. The tower operator had notified Operations, and the crash truck and ambulance were standing by. Fortunately, the landing was made without mishap and the plane was brought back to the hangar for a tire change.

A few weeks previously, the same operator had a similar experience with a Navy plane, though not so successful. He had watched a formation of three Navy planes with retractable landing gear take off from the Naval Air Station across the way for some practice flying. On returning to the field, the first and second pilots circled, lowered their landing wheels and came in for a landing. The third pilot also circled in a glide, but did not lower his wheels, so the tower operator quickly tried to contact him by radio. He received no answer, and there was no indication that the pilot had heard him, for he was still coming in with his wheels up. The operator then tried to attract the pilot's attention with the traffic control light, but failed again. He then picked up his field glasses for a closer look at the plane and focused

his vision on it just in time to see the look of surprise on the faces of both the Navy pilot and his observer. The plane was considerably damaged, but neither of the occupants was injured. Had the pilot glanced at the control tower he may have avoided the accident.

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PHOTOGRAPHS OF THE CONCHAS DAM PROJECT

First Lieut. Charles F. Densford, Air Corps, pilot, and Staff Sergeant Herman L. Chestnutt, Air Corps, photographer, returned April 24th from Conchas Dam, New Mexico, where they photographed the progress of construction on a project of the U.S. Army Engineers.

This is the second of a series of progress photographs made at intervals of approximately four months by this photographic team. The Army airmen in a period of ten days spent 26 hours and 55 minutes in the air, made 47 vertical photographs and 48 oblique photographs, also 200 feet of 16 mm. movie film. It is anticipated that the next flight will be made about September 1st, next.

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MORE GOOD SHOOTING BY LIEUT. DENSFORD

Lieut. Charles F. Densford, Air Corps, stationed at Kelly Field, Texas, resumed activity in pistol shooting, taking third place in the San Antonio Spring Pistol Championship on May 9th, and by winning individual honors in a match at Monterrey, Mexico, conducted by the Asociacion Regiomontario de Caza y Tiro. In the last-named match, Lieut. Densford got within one point of a perfect score-199 x 200. His nearest competitor, Mr. Ogden of the Border Patrol, scored 194 out of 200.

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FORT SILL A BUSY PLACE DURING MANEUVERS

The transportation of GHQ Air Force troops to the West Coast kept Fort Sill, Oklahoma, on practically a 24-hour schedule during the first part of May. The Provisional Transport Squadron, consisting of eleven C-33's and one C-36, made five overnight stops at Fort Sill from May 1st to 10th. On their three trips through to the West Coast they carried about 350 men and officers, who were accommodated at Fort Sill on the overnight stops. In addition to the Transports, 15 PB-2's made a stop for service on May 2nd, and 28 P-26's made an overnight stop on May 4th.

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MORE Y1B-17 BOMBERS REACH LANGLEY FIELD

Major Vincent J. Meloy, Commanding Officer of the 20th Bombardment Squadron, recently arrived at Langley Field with the first Y1B-17 for that organization. The flight from Seattle, Wash., was made on schedule all the way. At one point it was necessary to go to 17,000 feet to pass over a dust storm. The ferry crew on this airplane, in addition to Major Meloy, were Major Barney M. Giles, Flight Supervisor and co-pilot; 1st Lt. F.E. Glantzberg, Navigator; Master Sgt. H.R. Kashe, Crew Chief; Staff Sergeant L.L. Fiebrich, Assistant Crew Chief; and Private, 1st Class, C.D. Lake, Radio Operator.

The 20th is very proud of its new "Flying Fortress."

The 96th Bombardment Squadron added another Y1B-17 to its list of assigned airplanes when Captain C.E. O'Connor, 1st Lieuts. W.H. Higgins and W.C. Bentley, accompanied by Technical Sergeant G.W. Olson, Staff Sergeant Harry Sichert and Corporal D.J. Smith arrived at Langley Field from Seattle, Wash., on May 9th. The flight was made in two "hops," the first from Seattle to Cheyenne, via Portland, in order to avoid icing conditions, on May 8th, and the second from Cheyenne to Langley Field, the route passing over Lincoln, Neb.; Chanute Field, Ill., and Patterson Field, Ohio. The total distance was approximately 2600 miles, and the total flying time was 15 hours.

On May 5th, Major Barney M. Giles, pilot; 1st Lieut. P.G. Miller, co-pilot; 2nd Lieut. L.S. Wait, co-pilot-engineer; Master Sergeant Haney, flight engineer; and Sergeant Connor, radio operator, took off from March Field, Calif., at 6:25 p.m. (PST) and arrived at Langley Field, Va., at 7:15 a.m. (PST), making a non-stop flight in 12 hours and 50 minutes. The distance flown was 2450 miles.

Immediately after the take-off, an altitude of 14,000 feet was gained and maintained until 9:50 p.m., when it became necessary to descend to 10,700 feet, due to icing conditions. At 11:45 p.m., 14,000 feet was resumed and maintained until arrival at Langley Field.

The B-17 performed very satisfactorily throughout the flight. This plane did not have the bomb bay tanks installed. Had these tanks been installed, the elapsed time would have been reduced something like two hours, inasmuch as maximum cruising speed could have been maintained throughout the flight.

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Biographies

LIEUT. COLONEL CHARLES B. OLDFIELD

Lieut. Colonel Charles B. Oldfield, Air Corps, who was recently assigned as Commanding Officer of Air Corps troops at Fort Lewis, Wash., is a native of Norfolk, Va., where he was born April 3, 1891. After service in the Regular Army as a Private, Company M, 29th Infantry, and as Corporal and Sergeant, 1st Class, Quartermaster Corps, from November 3, 1912, to November 28, 1916, he accepted a commission on the following day as a second lieutenant of Infantry, and was promoted to 1st Lieutenant on the same date; to Captain of Infantry, June 16, 1917, and to Major (temporary) of Infantry, August 15, 1918. He was discharged from this temporary rank on February 11, 1920.

Detailed to the Air Service in October, 1920, Colonel Oldfield received his primary flying training at Carlstrom Field, Arcadia, Fla., which he completed in April, 1921, and his advanced training at the Air Service Observation School at Post Field, Fort Sill, Okla., from April 13 to September 15, 1921, following which he was a student at the School for Aerial Observers at Fort Sill to December 15, 1921. He was rated as Airplane Pilot, October 14, 1921, and as Airplane Observer, April 17, 1922.

After a brief period of duty as an instructor at the Air Service Observation School, Post Field, Colonel Oldfield was detailed to duty as Executive Officer, 95th Division, Organized Reserves, Air Service, with station at Oklahoma City, Okla., to April 2, 1922, and at Muskogee, Okla., to February 20, 1925.

For over five years, and up to August, 1930, Colonel Oldfield was stationed at the Air Corps Primary Flying School at Brooks Field, San Antonio, Texas, where he served as Executive Officer of the post and as Assistant Commandant of the School. At various times he served as Commanding Officer and Commandant at Brooks Field during the temporary absence of the regular incumbent of these positions.

Following duty as a student at the Air Corps Tactical School at Langley Field, Va., from August, 1930, to July, 1931, he was, upon graduation, assigned as a student to pursue a two-year course of instruction at the Command and General Staff School at Fort Leavenworth, Kans.

On June 13, 1933, Colonel Oldfield assumed command of the 12th Observation Squadron at Brooks Field, Texas, and he served at that post until March 6, 1935.

Early in 1934, during the operation of the Air Mail Service by the Army Air

Corps, he served on the staff of Brigadier General Henry H. Arnold, then commander of the Western Zone. In February, 1935, he graduated from the Advanced Air Navigation School which was conducted at Rockwell Field, Calif.

Colonel Oldfield's next duty assignment was with the GHQ Air Force at Langley Field, Va., where, by virtue of his position as Commanding Officer of the 2nd Bombardment Group, he was, on April 2, 1935, advanced to the temporary rank of Lieut. Colonel. He received his permanent promotion to the rank of Major on December 20, 1927.

During the latter part of March, 1936, he led a ferry flight of nine Martin B-10B Bombardment airplanes from Langley Field, Va., to France Field, Panama Canal Zone, via Brownsville, Texas; Mexico, and several Central American countries.

Colonel Oldfield's total flying time is approximately 5800 hours.

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LIEUT. COLONEL HOWARD J. HOUGHLAND

Lieut. Colonel Howard J. Houghland, Air Corps, now on duty as an instructor at the Cavalry School at Fort Riley, Kansas; was born at Scottsburg, Indiana, July 9, 1891. Enlisting in the Army in September, 1909, he served as Private, Corporal and Sergeant, Company H, 27th Infantry; and as Sergeant, 1st Class, and Quartermaster Sergeant, Quartermaster Corps, to December 3, 1916. He accepted a commission as 2nd Lieutenant of Infantry on December 4, 1916, and from January 2, 1917, to April 13, 1917, he was a student at the Army Service School at Fort Leavenworth, Kans.

After serving with the 26th Infantry at Harlingen, Texas, to June, 1917, he was ordered to duty overseas, and served in various capacities at a number of stations, and participated in the Montdidier-Noyon, Aisne-Marne and St. Mihiel operations. He served in France until October 20, 1919; and in Germany as Personnel Adjutant, Provisional Infantry Brigade, to May 28, 1920, and as Commandant, General and Commercial School, Educational and Vocational Training, Coblenz, to January 5, 1921.

Returning to the United States in January, 1921, Colonel Houghland was detailed to the Air Service and assigned as a student at Carlstrom Field, Arcadia, Fla., for flying training. He completed the primary flying course in September, 1921, and was transferred to the Advanced Flying School, Kelly Field, Texas, where he completed advanced training in Bombardment Aviation on December 23, 1921. He received the ratings of Airplane Pilot and

V-7353, A. C.

Airplane Observer.

Colonel Houghland remained at Kelly Field as Adjutant of the 2nd Bombardment Group and Commanding Officer of the Headquarters Detachment of that Group until June 26, 1922, when he was transferred with this organization to Langley Field, Va., where he performed these same duties until August 29, 1922. He commanded the 3rd Air Park at Langley Field to October 11, 1922, and was then assigned to duty as a student at the Air Service Tactical School, graduating June 15, 1923.

After service as an instructor and as Operations Officer of an ROTC summer training camp at Maxwell Field, Ala., to September, 1923, he was transferred to Kelly Field and assigned to the 3rd Attack Group, performing among various other duties those of Group Operations Officer, Group Personnel Officer and Group Intelligence Officer.

On June 27, 1924, Colonel Houghland was placed in command of a detachment of the 12th Observation Squadron and transferred to Fort Sam Houston, Texas. In August, 1925, he was assigned as a student at the Command and General Staff School at Fort Leavenworth, Kansas, and following his graduation therefrom in June, 1926, he was transferred to New York City for duty with the Organized Reserves of the 2nd Corps Area.

Assigned in June, 1928, as Air Officer of the 7th Corps Area, Fort Omaha, Neb., Colonel Houghland served in this capacity until June, 1934, and performed additional duty as Unit Instructor of the 314th Observation Squadron from September, 1931.

From June 15, 1934, to March 11, 1935, he was on duty as Executive Officer at Langley Field, Va., and to May 31, 1935, he served as commanding officer of the 58th Service Squadron. He was then assigned to his present duty as Instructor at the Cavalry School at Fort Riley.

Colonel Houghland was promoted to 1st Lieutenant, November 26, 1916; to Captain, June 15, 1917; to Major, December 15, 1927, and to Lieut. Colonel (temporary) June 16, 1936.

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The following-named Air Corps officers are under orders to proceed to Maxwell Field, Ala., for duty, reporting about July 1, 1937:

Major Fred C. Nelson (Captain) from Selfridge Field, Mich.

Captain George A. Whatley from the San Antonio Air Depot, Duncan Field, Texas.

1st Lieut. Robert Lewis Easton from Randolph Field, Texas.

1st Lieut. Hoyt L. Prindle from Maxwell Field, Ala.

General Malin Craig, Chief of Staff of the United States Army, issued the following statement on May 28th, which was proclaimed by the President as National Aviation Day:

"The first observance of National Aviation Day serves to remind us of the great progress that has been made in both civilian and military aviation in the United States in the past few years.

Travel by aircraft has become commonplace. The time consumed in crossing the United States has been reduced from days to hours, and that in crossing the Pacific from weeks to days. Skill in navigation and improvements in aviation engineering have made flying a safe and comfortable means of travel.

Progress in military aviation has been equally pronounced. The combat aircraft now being delivered to our army are unsurpassed elsewhere, and are double or treble the power of the types purchased a few years ago.

The United States Army now has on hand and under order approximately 1,650 modern airplanes, of which by far the greater number are combat planes. In addition we have a number of planes technically classed as obsolete but still suitable for service. In the Army appropriation bill now pending before the Congress, provision is made for about 550 additional planes, so that deducting estimated losses due to obsolescence, deterioration and accidents, we should have in another year in the neighborhood of 2,000 army airplanes of recent types. Adding the number of modern planes possessed by the Navy and the Marine Corps, our total strength in military planes will soon be well over 3,000."

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PHOTOGRAPHING OF SOLAR ECLIPSE

As a member of the Hayden Planetarium-Grace Expedition, Major Albert W. Stevens, Air Corps, sailed on May 21st on the S.S. SANTA CLARA for Peru, expecting to arrive on June 3rd, for the purpose of obtaining aerial photographs of the solar eclipse on June 8th. Included in the Air Corps photographic equipment taken on the journey were one Air Corps Type A-2 (Akeley Sound) camera, one Air Corps K-3 B single-lens camera, and one Air Corps K-6 single-lens camera.

It is proposed to take photographs from an airplane at an altitude of 28,500 feet approximately over the peak Huascaren.

There is a possibility, of course, that clouds may prevent a view of the corona from the ground, and in that event pictures from an airplane may show the shape of the corona, even though the image of

(Continued on Page 17)

CHANUTE FIELD PERSONNEL INSPECT YLB-17

A YLB-17 airplane arrived at Chanute Field, Rantoul, Ill., on May 10th. It was piloted by 1st Lieut. R.L. Travis, with 2nd Lieut. C.J. Cochran as co-pilot and 2nd Lieut. J.L. Templeton as bombardier.

During the four days that the airplane remained at Chanute Field, enlisted students of the Department of Mechanics of the Air Corps Technical School performed an inspection on this airplane. Student officers of the Maintenance-Engineering Course were given the opportunity thoroughly to examine the airplane, fly in it, and study the new features thereof.

Student officers from the Armament Department were also afforded an opportunity to inspect the new armament installations and to ride in the airplane and observe the new features which this airplane embodies.

Other school and post personnel took advantage of the opportunity to examine the plane and observe the latest type of engineering, armament, radio and navigation installations in a Bombardment airplane.

The Acting Commandant, Major E.G. Harper, and the school and post personnel expressed their appreciation for the splendid cooperation of the GHQ Air Force in providing the school with this latest type of aircraft for instructional purposes.

The arrival of this airplane at Chanute Field was but another step in accordance with the policy inaugurated by Lieut.-Colonel Junius W. Jones, Commandant of the Air Corps Technical School, when he first assumed command. In brief, this policy is based upon the well-known fact that technical specialists to be of most value to the service must be trained and thoroughly familiarized with the maintenance, repair and inspection of the latest aircraft and auxiliary equipment.

At present the following airplanes are being used for instruction of student personnel: two PB-2's, one A-17A, one B-10, one XB-14, one C-33, one O-46 and one BT-9.

Lieut. Colonel Junius W. Jones is now at the Douglas Aircraft Factory preparing to ferry a new B-18 airplane to Chanute Field for use in instructing students.

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Colonel Albert L. Sneed, Air Corps, who has held temporary rank as such since June 22, 1936, was promoted to the permanent rank of Colonel, May 1, 1937.

Major Austin W. Martenstein, Air Corps, Instructor at the Air Corps Tactical School, is under orders for duty as a student at the Army War College in August.

COMMENDATION FOR MARCH FIELD ENLISTED MEN

Private, 1st Class, Robert C. Jones and Private Fred S. Pretzer, of the 4th Air Base Squadron, March Field, Calif., went driving to Riverside on April 11th, last, and when they passed along Victoria Ave. about 5:45 p.m., they saw a burning wreck with flames licking greedily about a human figure lying next to it. They immediately decided they might be of assistance.

It appears that Sergeant Dan Davis, of the Riverside Police Department, who was driving a car, had crashed into a palm tree and was knocked unconscious through the impact. A Miss Margaret Paden, who happened to be in the vicinity, had succeeded in dragging the unconscious policeman from the car. The two soldiers helped to carry him across the street to safety just as the gasoline tank of the burning car exploded. They thought very little of their assistance at the time, but the officials of Riverside felt that their timely help and thoughtfulness was worthy of commendation, as attested by the following letters:

"Please accept the thanks of the Governing Body of Riverside, and the admiration of its people, for your prompt and effective work in assisting Miss Margaret Paden with rescuing Police Sergeant Dan Davis, after she had dragged him from his burning automobile last Sunday afternoon.

Your prompt first aid no doubt has materially contributed to Sergeant Davis' fair condition and hope for recovery in the hospital.

Not only the thanks of Sergeant Davis, but also those of his brother officers go to you for your prompt and willing action.

Sincerely,
W.C. Evans, Mayor."

"Please accept our sincere thanks for the aid rendered to our brother officer Sgt. Dan Davis when he critically injured himself in an accident on Victoria Avenue, Sunday, April 11th.

Your timely arrival, your valuable assistance in removing him to safety and the first aid you gave him resulted in saving his life, for otherwise he would have burned to death.

Words are a poor medium at a time such as this, but the members of the Riverside Police Department through me, wish to express their sincere appreciation for a noble deed, promptly and efficiently performed. Members of the Riverside Police Department, by
Nestor N. Brule, Chief-of-Police."

We, members of the Army Air Corps, congratulate these two sincere young soldiers and hope that their action will set a shining example to all of us.

V-7353, A.C.

NOTES FROM THE WASHINGTON OFFICE

Major General Oscar Westover and Captain Luther S. Smith returned from the West Coast maneuvers on May 20th; Colonel H.H.C. Richards on May 21st, and Lieut. Colonel Gerald E. Brower on May 25th.

Lieut. Colonel William E. Lynd left May 27th on a navigation flight to the West Coast.

Colonel Wm. C. McChord returned May 27th from a navigation flight to March Field for the purpose of observing the GHQ Air Force Maneuvers. Later he visited Tacoma and Seattle in order to observe air activities in the Northwest.

Colonel Rush B. Lincoln returned May 28th from Lakehurst, N.J., where he served on a board to investigate the cause of the Hindenburg airship disaster.

Captains Harrison G. Crocker, of Maxwell Field, and Ray H. Clark, of Chanute Field, returned to their respective stations on May 15th, following temporary duty in the Chief's Office.

Major Hugh A. Bivins and Captain Clarence S. Irvine returned to Wright Field on May 16th, after temporary duty in the OCAC.

Captain Evers Abbey returned May 16th from a navigation flight to Wright Field and Kansas City, Mo.

Lieut. Colonel Howard C. Davidson returned May 20th from a meeting of an evaluation board at Wright Field.

Recent visitors to the Chief's Office were Colonel Henry B. Clagett, from Selfridge Field; Colonel Jacob H. Rudolph from Maxwell Field; Major Ray A. Dunn, from Maxwell Field; Major Theodore J. Koenig from Mitchel Field; Lieut. Colonel William B. Wright, from Fort Hayes, Ohio; 1st Lieut. Frederick R. Dent, Jr., and C.S. Draper, students at the M.I.T., Boston, Mass.

Major Clarence P. Kane, until recently on duty at the Hawaiian Air Depot, reported May 22nd for temporary duty in the Supply Division before entering upon his duty as a student in the next course at the Army Industrial College.

Major Alvan C. Kincaid left May 22nd for Charleston, S.C.

Colonel Chalmers G. Hall returned May 27th from a conference at Wright Field.

Major Morton H. McKimmon left May 27th on a navigation flight to Dallas, Texas.

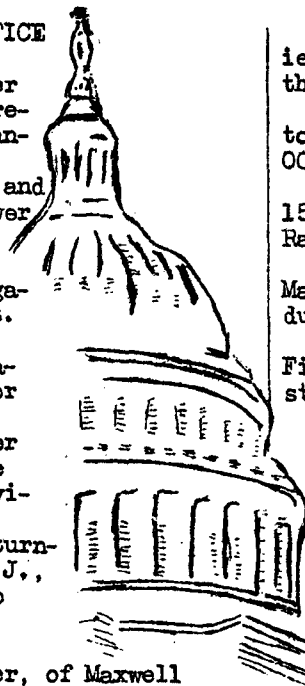
First Lieut. John A. Austin returned to Wright Field, May 27th, after temporary duty in the Chief's Office.

Captain Stewart W. Towle returned May 26th from Wright Field.

Major William B. Souza returned May 22nd from a navigation flight to Mitchel Field, and Capt. James B. Jordan returned the previous day from Langley Field.

Major Edward V. Harbeck, Jr., returned from leave of absence on May 18th.

Captain James W. Spry left May 22nd on a technical inspection trip.



Brigadier General Henry C. Pratt, accompanied by 1st Lieut. Dwight B. Schanep, were in the OCAC on May 12th for conference.

Major James T. Hutchison returned May 12th to Langley Field after temporary duty in the OCAC.

Lieut. Colonel Robert L. Walsh left May 15th for the Air Corps Training Center, Randolph Field.

Major Austin W. Martenstein returned to Maxwell Field May 25th, following temporary duty in the OCAC.

First Lieut. John R. Sutherland, of Langley Field, was a visitor while enroute to his new station in the Hawaiian Department.

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18TH RECON. SQUADRON IN MANEUVERS

The 18th Reconnaissance Squadron, Mitchel Field, N.Y., was attached to the 9th Bombardment Group during the Second Wing Concentration, which was based at Phillips Field, Aberdeen, Md., where it served as "eyes" for the Group. Upon receipt of information of approaching enemy men-of-war, the 18th flew to the last reported position and kept the enemy in surveillance until the Group arrived. Splendid weather prevailed throughout most of the period, and much was accomplished.

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LONG FORMATION FLIGHT BY 99TH BOMB. SQUADRON

At sundown one evening in March, the renowned Flight "A" of the 99th Bombardment Squadron, Mitchel Field, N.Y., commanded by 1st Lieut. "Joe" Baylor, took off on their routine training flight with their destination Mitchel Field, non-stop, via Pittsburgh, Columbus, War (W.Va.) Bluefield, Clifton Forge, Washington and Philadelphia. Departing from Mitchel Field at 6:30 p.m., the flight again reached Mitchel Field at 3:30 a.m., the following morning after nine hours of night formation covering approximately 1200 miles.

Upon landing, the ships still contained enough fuel to carry them an additional 350 miles. The radio operators maintained contact with Mitchel Field throughout the flight and sent position reports to the Group radio station at 30-minute intervals. None of the members of any crew was relieved from his duties during the entire nine hours. The navigation was faultless, and Lieut. Baylor estimated his time of arrival over each check-point with the minute.

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Photographing of Solar Eclipse

(Continued from Page 15).

the moon's disk be only .20 inch in diameter, using the longest focal length lens that we can utilize in an airplane.

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Major Wendell B. McCoy, at present on duty as Instructor, Air Corps, Tennessee National Guard, is under orders to proceed about September 1st, next, for duty at Brooks Field, Texas.

V-7353, A.C.

REMAINS OF NORMAN PRINCE GO TO LAST RESTING PLACE

A local newspaper carried a brief announcement to the effect that the body of Norman Prince, World War aviator, will be placed in the Washington Cathedral on Tuesday, June 1, 1937; that the remains of one of the founders of the famous Lafayette Escadrille were transported to this country from France on a French liner.

Norman Prince, a native of Pride's Crossing, Mass., just north of Salem, was born on August 31, 1887. He was a graduate of Harvard University and took up the legal profession. His aviation career is described in the Book "The Lafayette Flying Corps," as follows:

"Before the War, Norman Prince had spent many pleasant hunting-seasons at Pau, where he had made friends among the French and learned to speak the language fluently. When the war broke out in 1914 it was natural that his thoughts should turn to France, the country he had grown to love and admire almost as his own. He might have gone overseas as an ambulance driver or to enlist in the infantry, but - like many other horsemen and polo-players - he had become interested in flying, and it occurred to him that if he became a pilot before offering his services to France, he might be received as a member of the Flying Corps - a possibility which appealed to all his instincts as a sportsman. November found him, in company with Frazier Curtis, at the Burgess school at Marblehead, Massachusetts, learning to pilot hydro-aeroplanes, and it was here that he conceived the idea of organizing a squadron of American volunteer airmen to serve with the French. Curtis, also a sportsman and a sincere believer in the Allied cause, gave the project his encouragement from the first, although he confessed that before agreeing to offer his services to France, where he felt that ignorance of the language might prove a serious handicap, he planned to attempt enlistment in the British Royal Naval Air Service.

On January 20, 1915, Prince sailed for France on the Rochambeau, and on March 4 he signed his enlistment papers and was sent to be trained at Pau. During the five weeks that elapsed between his arrival in Paris and his enlistment, he worked day and night to interest the French in his project. He obtained the active cooperation of the de Lesseps brothers; he arranged for introductions and interviews through the kind offices of Mr. Robert Chanler; he laid his plans before Mr. Robert Bliss, who introduced Prince to M. de Sillac. His enthusiasm and energy were irresistible; before his departure for Pau he had fairly launched the movement which resulted in the formation of the Escadrille Americaine.

Prince was not a man to linger in the schools. On May 1 he was breveted and was soon at the Front, piloting a Voisin with the Escadrille V.B. 108, where his exploits and adventures are too well known to need description. In the autumn he was transferred to the Squadron V.B. 113 equipped with Voisin-Cannon planes - an innovation of which great things were expected. But the life of comparative inactivity irritated Prince, who had the restless and aggressive

temperament of a genuine pilote de chasse. On October 30, 1915, he wrote M. de Sillac: "The squadron with which I am at present is en repos. I dislike to stay in such a situation and would prefer to be a member of a unit more active than the Escadrille of Avions-Canons, which works rarely except during attacks."

In December, 1915, Prince was given leave, with Cowdin and Thaw, to spend three weeks in the United States - a visit which aroused a vast amount of public interest. All three were sons of families well known at home, and there was a wide appeal in the thought of these young men in French uniform, all of whom had seen action on the Western Front and who were members of a branch of the service which still attracted a certain romantic interest. The newspapers gave entire columns to the subject, and when Germany protested that the visiting pilots should be interned, the question was discussed from one end of the country to the other.

On his return to France, Prince was sent to the R.G.A., at Le Bourget, for perfectionment on Nieuport, and on April 20, 1916, he reached the Front again - this time as a fighting pilot of the newly formed Escadrille Americaine, the realization of his old dream. His career with the Squadron - as brilliant as it was brief - has been described so fully in a score of magazine articles and books that nothing remains to be said. Like Rockwell and Chapman, he was a pilot of the first order, a real combatant, who would have gone far had he been spared. The Croix de Guerre, the Medaille Militaire, and Legion d'Honneur (awarded him as he lay dying of his wounds) are evidence of the esteem in which his French chiefs held him. He made his last sortie on October 12, 1916, the day of the great raid on the Mauser Works at Obendorf. Lufbery, de Laage, Masson, and Prince had accompanied the bombers as far as their fuel capacity permitted, and returned to a friendly aerodrome to fill their tanks, taking the air once more to protect the returning raiders. Darkness was drawing on; the bombers were straggling home, harried by determined and aggressive Fokkers. Prince shot down one of the enemy, and when the last of the Allied machines had crossed the lines and it was nearly dark, he made for the field at Corcieux, in the Vosges. Let his friend McConnell tell the rest of the story:

"He spiraled down through the night air and skimmed rapidly over the trees bordering the field. In the dark he did not see a high-tension electric cable that was stretched just above the tree-tops. The landing gear of his aeroplane struck it. The machine snapped forward on its nose. It turned over and over. The belt holding Prince broke and he was thrown far from the wrecked plane. Both of his legs were broken and he naturally suffered internal injuries. In spite of the terrific shock and his intense pain Prince did not lose consciousness. He even kept his presence of mind and gave orders to the men who had run to pick him up. Hearing the hum of a motor and realizing that a machine was in the air, Prince told them to light gasoline fires on the field. "You don't

want another fellow to come down and break himself up the way I've done," he said. Lufbery went with him to the hospital in Gerardmer. As the ambulance rolled along Prince sang to keep up his spirits. He spoke of getting well soon and returning to service. It was like Norman. He was always energetic about his flying... No one thought that Prince was mortally injured, but the next day he went into a coma. Captain Happe... accompanied by our officers, hastened to Gerardmer. Lying unconscious on his bed, Prince was named a second lieutenant and decorated with the Legion of Honor... He died on the 15th of October... was brought back to Luxeuil and given a funeral similar to Rockwell's. It was hard to realize that poor old Norman was gone.... He never let his own spirits drop and was always on hand with encouragement for others. I do not think Prince minded going. He wanted to do his part before being killed and he had more than done it. Day after day he had freed the lines of Germans, making it impossible for them to do their work, and three of them he had shot to earth. "

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ASSIGNMENT OF GRADUATES OF A.C. TECHNICAL SCHOOL

The following-named Air Corps officers, upon the completion of their present course of instruction at the Air Corps Technical School, Chanute Field, Rantoul, Ill., are assigned to stations, as follows:

To Air Corps Training Center, Randolph Field:

1st Lieuts. Berkeley E. Nelson, Walter E. Todd, Morley F. Slaght.

To Langley Field, Va.:

1st Lieuts. Carl W. Carlmark, Lester L. Kunish, Nicholas E. Powel, James S. Sutton, Howard Moore, 2nd Lieut. William H. Wise.

To Mitchel Field, N.Y.:

1st Lieut. Richard T. King, Jr., 2nd Lieut. Francis L. Rivard.

To Fort Leavenworth, Kansas:

1st Lieut. John J. Hutchison, 2nd Lieut. Ray W. Clifton, for duty with Air Corps Detachment.

To Fort Riley, Kansas:

1st Lieut. Clarence T. Mower for duty with the Air Corps.

To Scott Field, Ill.:

2nd Lieut. Chester W. Cecil, Jr.

To March Field, Calif.:

1st Lieuts. Richard A. Grussendorf, Archibald J. Hanna, Henry K. Mooney.

To Fort Lewis, Wash.:

1st Lieut. David H. Kennedy, for duty with the Air Corps.

To Hamilton Field, Calif.:

1st Lieut. Hansford W. Pennington.

To Chanute Field, Ill.:

Captain Narcisse L. Cote, 1st Lieuts. Norman H. Ives, William P. Sloan.

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NEW INSTRUCTORS FOR NATIONAL GUARD AIR CORPS

Four Air Corps officers, now on duty as students at the Air Corps Tactical School, Maxwell Field, Ala., are under orders, effective upon the completion of their present course of in-

struction, to proceed to duty as instructors with National Guard aviation units, as follows:
Major George P. Tourtellot (Captain) to Detroit, Mich., 33rd Division Aviation, Mich. National Guard.

Major Bernard T. Castor (Captain) to Chicago, Ill., with 33rd Division Aviation, Illinois National Guard.

Captain Clinton W. Davies to Newark, N.J., with 44th Division Aviation, New Jersey National Guard.

Captain John H. Dulligan (from Command and General Staff School, Fort Leavenworth, Kans.) to Indianapolis, Ind., with 38th Division Aviation, Indiana National Guard.

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WING REVIEW FOR MAJOR GENERAL STONE

A number of planes from Albrook and France Fields flew a review on April 20th in honor of Major General David L. Stone, new commander of the Panama Canal Department.

The 19th Composite Wing, led by General George H. Brett, passed the reviewing stand at 9:40 a.m., following General Brett and his two wing men came B-6, O-19, P-12 and B-10 type planes. Three pass-bys were made, and even though the air was rough, as it always is in Panama, the formations flown were excellent. The difficulty of properly spacing ships of four different speeds was ironed out by several practice reviews, and the spacing was coordinated perfectly during the review.

General Stone, having only recently arrived in Panama, was greatly impressed upon witnessing his first Wing Review in the Panama Canal Department. After all ships had landed, he called all the officers and men participating in the Review and gave a short talk in which he commended them on the highly efficient manner in which the Review was handled, commenting on the absence of excessive commands, the fine team work of the entire personnel of the Wing and the fine morale displayed.

Late in the afternoon a reception was held in honor of General Stone. The 74th Squadron hangar was decorated for the occasion, draped with flags of all nations, potted palms surrounding the dance floor, and a B-10 flanked by two P-12's on display, thus giving it a festive appearance, indeed. All officers from France and Albrook Fields were present and endeavored to entertain the many guests, in which they succeeded nobly. A light shower just before the reception made it delightfully cool for dancing, which everyone enjoyed to the strains of very excellent music.

The reception completed an enjoyable day at Albrook Field, and all Air Corps personnel in Panama hope to have the pleasure of repeating the occasion with similar pleasant results.

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Having completed his tour of duty at Indianapolis, Ind., as Instructor, Air Corps, Indiana National Guard, Major Guy H. Gale (Captain), Air Corps, under special orders of the War Department recently issued, is to proceed to Fort Lewis, Washington, for duty with the Air Corps.

GARDENING POPULAR AT LANGLEY FIELD
By Mrs. Walter Bender

A Garden Club was organized at Langley Field, Va., on March 30, 1937, at a meeting held in the Officers' Club. Following the appointment of a committee consisting of Mesdames Andrews, Brant, Weaver, Maxwell, Bender, Glen, McLennan and Hale, officers of the Club were elected, as follows: Mrs. Walter Lloyd Bender, Chairman; Mrs. Maxwell, Secretary; Mrs. Hale, Program Chairman; Mrs. Glenn, Corresponding Secretary, and Mrs. McLennan, Treasurer.

The Crepe Myrtle was decided upon as the post flower, and it was agreed to use them as the principal decorative shrub for the post boulevards.

The Motto:

'We pass this way but once
Let us beautify the path as we go
So that the world may see which way we went.'

Following the publication of a bulletin in April, containing garden hints and club news, immediate results were noted. Colonel Calvert filled all requests for black top soil. Gardens of all descriptions took form.

The post gardener reported that many calls were made for plants, and the supply of rocks and broken cement (which heretofore were unsightly piles) were used to make rock gardens and retaining walls to hold the soil in place.

Colonel Calvert, Q.M.C., was able to obtain 200 very fine large Crepe Myrtle bushes. These are unusually beautiful ones, and they are all putting forth a vigorous growth. They have served to eliminate some of the barren spots at the post and to add much interest to Dodd Boulevard, where they are planted from Headquarters to the circle entering the post.

It is planned to complete the circle and continue the bushes to the gate, and then to complete another boulevard next Spring if funds are available.

During the first week in May, a Flower School was conducted by Mrs. H.C. Weller, of Norfolk, President of the Federation of Norfolk Garden Clubs. The school was held each morning, from 10 until 12 o'clock, and much interest was shown. This school was attended by about fifty women. Mrs. Weller was an interesting instructor.

The first day's lesson was in flower arrangement, and ribbons were awarded for the most attractive and artistically arranged pieces. On the second day, many arrangements were brought in by the ladies, and a small flower show was held. The lesson was in arrangements, and judging ribbons were awarded, as follows:

Table Arrangement: Mrs. Andrews.
Small pitchers: Mrs. Gibbs, Mrs. Carey.
Pair of Vases: Mrs. Calvert.
Miniatures, 3 inches: Mrs. Prindle, Mrs. Maxwell.
Miniatures, 5 inches: Mrs. Gilkeson, Mrs. McCormick.
Bubble Bowl: Mrs. Weaver.
Large Arrangement: Mrs. Stoner, Mrs. Odom.
Medium Arrangement: Mrs. Hale, Mrs. Glenn.
Wild Flowers in the Jap manner: Mrs. McLennan,

Mrs. McCormick.

On Wednesday the lesson was on the care and preservation of cut flowers, which was very interesting and helpful. There were a good many exhibits, and these were judged by the ladies of the class. The awards were as follows:

Flowers in the Jap manner: Mrs. McLennan, Mrs. Lewis.
Pair Class: Mrs. Maxwell, Mrs. Bender.
Wild Flowers: Mrs. Bender, Mrs. Hutchison.
Table Arrangement: Mrs. Gibbs, Mrs. Hale, Mrs. Hutchison.
Miniatures: Mrs. Bender, Mrs. McCormick.
Bottles: Mrs. Andrews.
Vases: Mrs. Andrews, Mrs. Kilpatrick.

On Thursday morning, twelve of the students were given written examinations. Diplomas were scheduled to be awarded the graduates at the meeting on Friday, May 28th.

The school was concluded with a trip to Fort Boykin, where the group was the guest of Col. and Mrs. Walter Reed Weaver. Fort Boykin is a garden of great beauty. The trees and shrubs are of such blooming varieties that each season a different color scheme is observed. In early spring the reds and pinks, then the yellows, the whites, the lavenders, etc. It was a great pleasure to be included in this party.

The flower school was a financial success. Each student paid 50c, and enough attended to cover all expenses. The course was most valuable and much enjoyed by all who attended.

The Garden Club was invited by the Hampton Roads Garden Club to take part in the flower show held by them May 12th and 13th. This invitation was accepted, and arrangements were made by Mrs. Giles, Mrs. Carey, Mrs. Hale and Mrs. Glenn.

Mrs. Giles captured a second prize with her beautiful blue jug filled with California poppies.

The gardens along the water front are very attractive. General and Mrs. Andrews, and Colonel and Mrs. Weaver have greatly improved their's.

Many interesting and attractive gardens are to be noted. Major and Mrs. Otto Trunk have a very lovely lily pool. Major Trunk also has a very attractive vegetable garden. Green lattice supports demonstrate that a vegetable garden can be a thing of real beauty.

Major and Mrs. C.V. Haynes have made a beautiful border about two feet wide the full length of their yard. They have edged it with box wood and filled it with old fashioned flowers. White garden chairs complete the effect.

Over Colonel and Mrs. Jay Calvert's doorway grows a red, red rose. It has taken much coaxing and love to make a climbing rose do just that, but it is a thing of beauty and is just what these porches need to make them attractive. His other flowers are well arranged.

Major and Mrs. Glen C. Salisbury have a new moon in their yard, but it is of rock and under a weeping willow tree. The borders about the quarters of Majors Trunk and Salisbury

have been widened and are colorful with bright flowers and roses.

Major and Mrs. Vincent Meloy have a long row of healthy looking Zinnias that will be a joy this fall. Major and Mrs. Frank Brooke have a beautiful pink rose climbing up the side of their sun porch windows. Their flowers are very lovely. They also have the best indoor garden.

A white rose that climbs over the doorway of Lieut. and Mrs. Lee has been remarked upon by many passers-by. Lieut. and Mrs. Stuart McLennan have an old fashioned flower garden. It is really an unusual one. Captain and Mrs. Kenneth Gould have a wide border and a new rock garden. We see them working there and enjoying it so much that we are anxious to see just what will happen.

Mrs. Wittkop has a beautiful and well planned garden. She spends a lot of time in it. Major and Mrs. Hickey have a pretty garden this year. They have vegetables also. Captain Twitchell has radishes ready for his table and his beans are in bloom. Lieut. and Mrs. Dudley Hale have landscaped their entire lawn, setting out attractive shrubs, bulbs and many perennials. These are beautifully arranged and add greatly to the appearance of this corner.

Major and Mrs. Melvin Asp and Captain and Mrs. Ned Schramm have combined their project to make a symmetrical and pleasing effect. This is an ideal arrangement for double quarters.

Lieut. Colonel and Mrs. Walter Bender expect to have onions with a carnation flavor. She grows vegetables between each row of flowers. And here is the answer to the question of how long does it take to have a beautiful garden - come and see. It was all started and planted this spring when we started the garden club.

All of the gardens have been visited, and many of the items are not new improvements. Lack of space prohibits a more detailed personal list, but many others of especial beauty and interest have been noted, adding much beauty and charm to the post.

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KELLY SHIP WINS MODEL PLANE TEST

On Sunday, May 9th, the San Antonio unit of the International Gas Models Association of America held a practice meet at Kelly Field in preparation for a State Meet at this post on June 6th. Six model airplanes were entered. The official winner of the contest was the "Kelly Flyer," handled by Private William Hewgley, 12th Air Base Squadron. A number of officers at Kelly Field contributed to the expense of procuring this model.

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NEW POLO FIELD AT RANDOLPH

The new polo field at Randolph Field, Texas, was officially opened on May 19th with a game between the San Antonio Polo Club and the Air Corps Polo team. The San Antonio Club won by a score of 6 to 1. The Air Corps team is composed of Lieut. Colonel Thomas W. Hastey, 1st Lieuts. A. W. Kissner, J. K. Brown and Cecil Combs.

PICKINGS FROM MATERIEL DIVISION, WRIGHT FIELD

Your Power Plant Correspondent, without lengthy discussion, and with all due respect to Mr. Winchell and his column, not to mention spring fever, will ask you: Did you know that -

The R-2600 (Wright) has just passed a very commendable type test at 1500 horsepower take-off rating.

About four out of five Unsatisfactory Reports received recommend that the broken part be made of heavier and stronger material.

Ice may form in the throat of your carburetor on a very warm day if the humidity is high.

Lieut. G.F. Smith, the new boss of our Engine Installation Unit, is the father of a bouncing baby girl - a blonde.

Lieut. J.W. Sessums, the new understudy of "Bill" Irvine, is the father of a bouncing baby girl - a brunette.

An honest effort is being made to soundproof the torque stand.

689 Inspection and Evaluation Boards have kept us head over heels in work during the past few months.

The V-1710 (Allison) has passed the type test and has some 100 hours' flying time in the A-11A.

Our new electric blower fans are almost installed, and the engineers can hardly wait until they hear the roar of the big windjammers.

Captain F.D. Klein, after an extended tour of duty as Officer in Charge of the Fuels and Lubricants Laboratory, is about to forego his octane numbers for a pineapple uke.

When you leave the ground on a hot summer day of 100 in the shade your gasoline is boiling by the time you have reached 15,000 feet.

It would be a big help in solving problems presented in Unsatisfactory Reports if more clues to the failure were presented. In other words, did it happen at wide open throttle, nose down; after hours of running with a lean mixture; on a youngster's first trip to his home town; did a truck back into it, or did a recruit drop it on the Hangar floor?

The R-680-7 (Lycoming) recently passed the type test.

So far it looks like spark plugs and flexible drive shafts are a horse on the house, but we have hopes; be patient.

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RESERVE LIEUTENANT WRITES A BOOK

Second Lieut. Bierne Lay, Jr., Air Reserve, now on extended active duty at Langley Field, Va., has written a book, entitled "I Wanted Wings," which has been acclaimed by critics as one of the most fascinating books ever written about flying. "This is not a book for fliers" says Lieut. Lay in his preface. Nevertheless, plenty of fliers will sit on the edge of their chair and hold their breath while reading parts of it. In fact, despite Lay's statement, the book may be appreciated more by aviators than civilians. No better exposition of the inner thoughts of young Army aviators has ever been written, according to other aviators who have read it. Lieut. Lay's power of description and pathos puts him way out in front as a writer.

RETIREMENTS

Sergeant CoVern Price, a veteran of the Spanish-American War and of many engagements in the Philippines, retired from active service at Maxwell Field, Ala., on April 30th, after having served almost 35 years in the U. S. Army.

Sergeant Price served his first enlistment, from April 24, 1898, until May 24, 1899, in the Infantry, and from 1899 until his retirement, his Army service was in the Medical Department throughout.

Over the period of some 39 years since his first entry into the Army, which was at Cleveland, Ohio, where the old Sergeant returned to enlist five different times during his service, he covered the entire United States and most of its possessions. He served four months in Cuba in 1899; was mustered out of the service at Savannah, Ga.; reenlisted in the Medical Department; served in the Philippines until December, 1902; returned to the Islands for another tour of duty; served at Fort McDowell, Calif., during the San Francisco earthquake in 1906; reenlisted July 28, 1907, and served successively at Fort Jay, N.Y., Fort Warren, Mass. New York City, Fort Williams, Fort Levett and Fort McKinley, Maine, and upon his discharge from the Army on July 27, 1910, returned to civil life and resided in Florida.

Reenlisting in the Army during the World War, on December 8, 1917, at Orlando, Fla., he served as Drill Sergeant at the Officers Training Camp at Camp Greenleaf, Ga., until June, 1918, and then accompanied Base Hospital #77 to France. When he landed at Liverpool he recalls shaking hands with King George.

Returning from overseas with the 29th Division, which was demobilized at Camp Merritt, N.J., May 23, 1919, he reenlisted the following day and returned to France, where he remained until December, landing again in New York on Christmas Day. Assigned to Plattsburg Barracks, N.Y., he remained there until discharged on May 25, 1922. For the next ten years, Sergeant Price served successively at Fort Moultrie, S.C.; New Orleans, La.; Camp McClellan, Ala.; Fort McPherson, Ga.; Fort Wadsworth, N.Y., and arrived at Maxwell Field in December, 1932, where he was stationed until the date of his retirement.

Sergeant Price, reaching 64 years of age upon his retirement, looks back upon his many years of Army service with fond memories. He stated that the recruiting slogan "Join the Army and see the World" has certainly been true in his case, and that he has never regretted a single incident in his long Army career. Upon his departure from his long active service, his fellow soldiers in the Medical Detachment at Maxwell Field presented their oldest soldier comrade with a fitted traveling case along with their best wishes for his future success.

Master Sergeant William R. Church, stationed at Kelly Field, Texas, was retired from active service in the Army on May 31st. Sergeant Church first entered the service on October 26, 1905, and was assigned to the 93rd Company, Coast Artillery Corps, at Fort Stevens Oregon. He has served with the Infantry and the Air Corps since that date. He has been on duty at

Kelly Field for the last four years, serving variously in the 41st, 42nd, and 62nd Squadrons. He has ten honorable discharges which bear the notation: "Character: Excellent."

Sergeant Church expects to make his home in Fort Leavenworth, Kansas.

Warrant Officer Frank Bahel retired from active service on April 30, 1937, being at that time stationed at the Middletown Air Depot, Middletown, Pa. He was born in Chester Co., Pa., June 15, 1876, and enlisted in the Army on November 9, 1895. He served as a commissioned officer in the Air Corps during the World War, being appointed a 1st Lieutenant on August 28, 1917, and promoted to Captain on February 19, 1918. Following his honorable discharge as a commissioned officer and his appointment as a Warrant Officer, Bahel served with the Air Corps at Lee Hall, Va.; Langley Field, Va.; Aberdeen, Md.; Burgess Field, Uniontown, Pa.; and Middletown Air Depot. He was specially qualified in property and finance matters, and his efficiency reports showed that he performed his duties in a highly satisfactory manner.

WRIGHT FIELD COMMENDED FOR FLOOD RELIEF WORK

The following appreciation comes in a letter to Wright Field from Dr. A.T. McCormick, of the State Department of Health, Kentucky:

"In this connection, permit me to say again to you what I have already said to the Chief of Staff in Washington in appreciation of the service you rendered not only to this Department but to the people of the whole Commonwealth of Kentucky during the flood. I tremble to think of what might have happened had it not been for the Army Air Service. Without their really heroic work our inoculation of the potentially infected refugees would have been impossible, and I am grateful to everybody in the Air Corps."

"It is a privilege to be of service in times of such emergency and an equal privilege to learn that service given proved of real value to its recipients," says the Wright Field Correspondent.

According to a recent press release from the Bureau of Aeronautics, Navy Department, a Cadet of Scouting One, while cross-country in the "Link Trainer," suddenly decided he was flying through bad weather. The plane rocked and rolled so much that the pilot had difficulty in maintaining his course. Coming out from under the hood to ascertain whether or not the machinery was at fault, the startling fact that an earthquake was in full swing was told him by an agitated operator, and it wasn't included in the regular weather broadcast, either.

Major Alonzo M. Drake (Captain) Air Corps, is under orders for duty at Detroit, Mich., as Procurement Planning Representative, upon completion of his course of instruction at the Army Industrial College.

WAR DEPARTMENT SPECIAL ORDERS

Changes of Station

To Buffalo, N.Y.: Major Edmund C. Langmead, upon completion of present course of instruction at Army Industrial College, for duty as Procurement Planning Representative for the Air Corps.

To Bolling Field, D.C.: 1st Lieut. Floyd B. Wood, upon completion of present course of instruction at the Massachusetts Institute of Technology, Cambridge, Mass.

To Edgewood Arsenal, Md.: Captain James F. Phillips from Aberdeen Proving Ground, Md.

To Fort Riley, Kansas: Captain Jack Greer from Langley Field, Va.

To Hawaiian Department: 1st Lieut. Harry E. Wilson, upon completion of his present course of instruction at Air Corps Tactical School, Maxwell Field, Ala. Previous orders revoked.

To Fairfield Air Depot, Patterson Field, Ohio: Captain Raymond E. Culbertson. Previous orders in his case amended.

To Inglewood, Calif.: Captain John S. Griffith from March Field, and Major Kenneth B. Wolfe (Captain) upon completion of present course of instruction at Command and General Staff School, Fort Leavenworth, Kansas, for duty as Air Corps Representative at the plant of the Northrop Corporation.

To Langley Field, Va.: Major Russell L. Maughan (Captain) upon completion of present course of instruction at Army Industrial College; 1st Lt. Hollingsworth Gregory, from Fort Sill, Okla., for duty with the 3rd Observation Squadron.

To Mitchel Field, N.Y.: Major Phillips Melville from the Hawaiian Department.

To Duncan Field, Texas: 1st Lieut. Thomas B. McDonald, upon completion of present course of instruction at Air Corps Engineering School, Wright Field, for duty at San Antonio Air Depot.

To San Antonio, Texas: Captain Nathan F. Twining, upon completion of present course of instruction at Command and General Staff School, Fort Leavenworth, Kansas, for duty as Technical Supervisor, San Antonio Air Depot Control Area.

To Newport, R.I.: Major Max F. Schneider (Captain) from duty as student at the Army Industrial College, Washington, D.C.

To the Philippines: Captain Alden R. Crawford, upon completion of present course of instruction at Command and General Staff School, Fort Leavenworth, Kansas; 1st Lieut. Andrew Meulenberg and 2nd Lieut. John O. Neal, upon completion of present course of instruction at Air Corps Technical School, Chanute Field, Ill.

To Selfridge Field, Mich.: Lieut. Colonel Clinton W. Howard, upon completion of present course of instruction at the Army War College; Major Joseph H. Davidson, upon completion of present course of instruction at Command and General Staff School, Fort Leavenworth, Kansas.

To Wright Field, Ohio: Major Myron R. Wood (Captain) upon completion of present course of instruction at the Army Industrial College, for duty in the Industrial War Plans Section; 1st Lieut. Samuel O. Redetzke, upon completion of present course of instruction at Air Corps Engineering School, Wright Field, Ohio; 1st Lieut. Rudolph Fink, from Selfridge Field, for duty as student at Air Corps Engineering School, reporting not later than August 1st.

To the Philippines: Captain John P. Kirkendall, upon completion of present course of instruction at Air Corps Advanced Flying School, Kelly Field, Texas.

To Washington, D.C.: Lieut. Colonel Harrison W. Flickinger (Major) upon completion of present course of instruction at Army Industrial College, Washington, D.C., for duty as a member of the Aeronautical Board, Office of the Chief of the Air Corps; Major Russell C. MacDonald, from Middletown, Pa., Air Depot, to Walter Reed General Hospital for observation and treatment.

Orders Revoked

Assignment of Captain Guy Kirksey, from Hamilton Field, Calif., to Panama Canal Zone.

Assignment of 1st Lieut. Thomas L. Thurlow, from Wright Field, to Langley Field, Va.

Transfer

1st Lieut. Charles E. Wheatley, Jr., Cavalry, to the Air Corps, April 3, 1917, and upon completion of present course of instruction at Air Corps Advanced Flying School, Kelly Field, to proceed to the Hawaiian Department for duty.

Retirement

Captain Walter Miller, May 31, 1937, for disability incident to the service.

Extended Active Duty for Reserve Officers

2nd Lieut. Francis Keene, Jr., to Brooks Field, Texas, to May 31, 1940.

2nd Lieut. Maurice Milton Beach, Detroit, Mich., to Rockwell Field, Calif., to June 6, 1940.

2nd Lieut. D'Ross Ellis, of Stillwater, Okla., to Brooks Field, to May 31, 1940.

2nd Lieut. Louis Rector Hughes, Jr., of Kansas City, Mo., to Marshall Field, Fort Riley, Kansas, to April 25, 1940.

2nd Lieut. Richard B. Stophlet, of Toledo, Ohio, to Patterson Field, Fairfield, Ohio, to April 18, 1940.

2nd Lieut. George Marshall Murchison, of Grapeland, Texas, to Barksdale Field, La., to May 31, 1940.

2nd Lieut. Donald Earl Meade, of Hays, Kans., to Selfridge Field, Mich., to April 30, 1940.

2nd Lieut. J. Will Campbell, of Dalhart, Tex., to San Antonio Air Depot to May 31, 1940.

2nd Lieut. Sven H. Ecklund, of Lincoln, Neb., to Rockwell Field, Calif., to April 30, 1940.

2nd Lieut. James Marshall Treweek, to Patterson Field, Ohio, to May 2, 1940.

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Assignment of 1st Lieut. Robert Lewis Easton from Randolph Field to Bolling Field revoked.

The following named Air Corps officers are under orders to proceed to Pasadena, Calif., to take a course of instruction at the California Institute of Technology, reporting not later than June 30, 1937, viz:

1st Lieuts. Hilbert F. Muentzer and Sidney A. Ofsthun, from Randolph Field, Texas, and 1st Lieut. Harold L. Smith and 2nd Lieut. William S. Stone from March Field, Calif.

It is reported that Randolph Field will celebrate the seventh anniversary of its dedication with a full day's program, including a field meet and other features, on June 18th. The field was dedicated on June 20, 1930.

NOTES FROM AIR CORPS FIELDS

Langley Field, Va., May 11, 1937.

2nd Bombardment Group: The activities of the Group Navigation School is being directed by 1st Lieut. J.W. Egan, who succeeded Captain A.Y. Smith, recently transferred to the 49th Bombardment Squadron.

First Lieut. D.R. Gibbs was transferred from Headquarters and Headquarters Squadron to the 20th Bombardment Squadron.

Second Lieut. J.B. Montgomery was transferred from Headquarters and Headquarters Squadron to the 49th Bombardment Squadron.

Major Barney Giles has not yet recovered from the shock of preparing for the trip with the GHQ Staff to the West Coast with all of ten minutes to prepare to take off.

Our bombing range on Plum Tree Island is being used by the 9th Bombardment Group for record bombing and gunnery.

49th Bombardment Squadron: Major C.V. Haynes and Captain C.W. Cousland and 1st Lieut. J.S. Mills departed for Seattle to take delivery of the second of the Y1B-17's assigned to this Squadron.

The following received the congratulations of the Squadron on their recent promotions, viz: Corporals Wesley F. Edwards and Marshall Peterson to Sergeant; Privates, 1st Class, John Babis and Lewis D. Smith to Corporal; Privates Marvin S. Cranfill, Michael J. Lukic and Donald A. Mackey to Private, 1st Class.

20th Bombardment Squadron: "In the Army there is sobriety, and promotion is very slow," but, in spite of this, the efficiency of the following-named enlisted men has been recognized, and they were promoted, as follows: Corporal G.C. Ikmur to Sergeant; Privates, 1st Class, A.W. Lynn and C.D. Lake to Corporal; Privates P.R. Redcay, E. Ellis, J.W. Couper and H.H. Glenn to Private, 1st Class.

21st Reconnaissance Squadron: During the month of April, the Squadron continued building up its strength in personnel by receiving 13 new members, 12 being recruits and one a previous service man. With these new men, the enlisted strength of the Squadron is now 99.

Major Hugh C. Downey, our Squadron Commander, has been receiving congratulations upon his promotion to that rank. We all extend our best wishes to Major Downey and wish him all possible success.

Headquarters and Headquarters Squadron: A rating of Staff Sergeant was given Sergeant Mike Cibinic; Corporal George A. Ludwig was promoted to Sergeant, and Privates, 1st Class, Paul H. Smith and Lewis B. Wilson to Corporal.

Langley Field, Va., May 19, 1937.

Hqrs. 2nd Bombardment Group: The Mackay Trophy, for the most meritorious flight in 1936, was presented at ceremonies at Bolling Field on May 8th. For their flight from Langley Field to Allegan, Mich., in fog, thunderstorms and heavy overcast skies, six officers and three enlisted men were awarded the Mackay Trophy. With Charles D. Horner, President of the National Aeronautic Association, looking on, General Malin Craig, Chief of Staff of the Army and Acting Secretary of War during Secretary Woodring's absence, made

the presentation to Captain Richard E. Nugent, who commanded the flight; 1st Lieut. Edwin A. Simenson; 2nd Lieuts. William P. Ragsdale, Jr., Burton W. Armstrong, Herbert Morgan, Jr., Staff Sergeant Howard M. Miller and Sergeant Frank B. Connor. First Lieut. Joseph A. Miller, although having participated in this flight, but since transferred to foreign service, could not be present at the ceremony, nor could Tech. Sergeant Gilbert W. Olson, also a participant in this flight, who was on detached service at the Boeing plant at the time of the presentation. However, the names of these men were included in the presentation.

Nine officers and 37 enlisted men of this Group departed May 8th for the GHQ West Coast Concentration Exercises.

49th Bombardment Squadron: Master Sergeant L.L. Johnson received the congratulations of the Squadron on his recent promotion from 1st Sergeant. He immediately went on furlough, a celebration being in order.

Second Lieut. K.H. Gibson ferried a PT-3 from Langley Field to Atlanta, Ga., via Rocky Mount, N.C., recently. The Squadron Commentator wonders what kept our fair-haired Lieutenant overnight at Rocky Mount.

Flying Cadet Lloyd Eyre was transferred to the 21st Reconnaissance Squadron. Although he looked forward to duty with the 21st, he left the 49th with regret.

Officers and men of the Squadron, including Captain A.Y. Smith, 1st Lieut. D.M. Kilpatrick, 2nd Lieuts. J.E. Barton and K.A. Cavenah, left on the morning of May 2nd, and arrived at Hamilton Field, Calif., on May 4th, for the West Coast Maneuvers.

Squadron Commander, Major C.V. Haynes, is expecting to ferry another Y1B-17 from Seattle to Langley Field.

20th Bombardment Squadron: The Squadron sent all but one of its Martin Bombers to California for the Maneuvers. The N.A.C.A. has the use of the last Martin for check purposes, which leaves the Squadron with one Boeing B-17 and one P-6E for flying, at present.

Promotions during the past two weeks were as follows: Corporals Lewis Hayduke and Leslie W. Holland to Sergeant; Privates, 1st Class, Almando Desander and Dwight J. Pulliam to Corporal; Privates Charles G. Hennessey and John W. Yankowsky to Private, 1st Class.

Major B.M. Giles and 2nd Lieut. James H. Patrick, Jr., were presented with Distinguished Flying Crosses on April 27th. Major General Andrews made the presentation. Brigadier General Brant was also present at the ceremony and added his congratulations to the two officers. A formation was held, and all personnel attended.

First Lieut. and Mrs. W.O. Senter returned to the post from their Bermuda trip. The bride, formerly Miss Ruth Meloy, and her husband were driven around the post in great style, as is the usual custom for newlyweds.

Headquarters and Headquarters Squadron: Pvt. 1st Class, McKee was transferred to the 21st Reconnaissance Squadron on May 4th.

On May 4th, the following enlisted men re-

ceived new ratings, as follows: Private Zaun appointed Private, 1st Class, and Specialist, 3rd Class; Private, 1st Class, Specialist 2nd Class Boyd to Specialist, 1st Class; Private, 1st Cl. Wilson, Specialist 3rd Class, to Specialist, 2d Class; Private, 1st Class, Hughes, Specialist, 6th Class, to Specialist, 4th Class; Private McCown to Specialist, 6th Class; Corporal Haizlip and Private, 1st Class, Raynor, to Air Mechanic, 2nd Class.

21st Reconnaissance Squadron: It would seem to us that congratulations are in order. Private, 1st Class, AM 2d Class Ernest F. Lay and Private 1st Class Alex Westbrook were recently promoted to Corporal. They have worked hard for this promotion and justly deserve same. May they work just a little harder and get higher on the road to success.

The Squadron gained such good men as Tech. Sgt. Henry Camire from Base Hqrs. and 1st Air Base Squadron; Sergeant Floyd W. Brewer; Private, 1st Class, Attilio Verna and Private, AM 2nd Class, James H. Ladd from the 2nd Photo Section; Private, 1st Class, James O. McKee from Hq. and Hq. Squadron, 2nd Bomb. Group; and Privates Harry E. Beer and John J. Nowading from Base Hq. and 1st Air Base Squadron. We are in hopes that they will be with us for a long, long time. Our former Supply Sergeant, Staff Sergeant Jesse W. Wade (transferred to Hawaiian Department) has been replaced by Staff Sergeant Robert L. Mullen, who is attached to the Squadron until Staff Sgt. Wade is assigned to his organization in Hawaii. We regret that the Squadron lost such good men as Staff Sgt. Wade, Sgt. Albert G. Kovel (transferred to Panama Canal Zone) and last, but not least, Staff Sgt. William H. Sadler, who was attached to the Squadron until transferred to Barksdale Field, La.

33rd Pursuit Squadron: While all the rest of the flying personnel of the Squadron are participating in the West Coast Maneuvers, the Stay at Home Cadets of this organization are having a small war of their own on the range at Plum Tree Island. Not to be outdone by the West Coast Warriors, our Cadets have been hitting the ball at 5:45 a.m. each morning firing on ground targets. Some very good scores have been turned in to date. After firing is over, ground instruction in the hangar in Armament, Communications, etc., then occupies the greater part of the remainder of the day. Boy, do they like it!

35th Pursuit Squadron: On May 2nd, six officers and one Flying Cadet of the 35th departed for the GHQ Concentration Exercises on the West Coast, and we, who were left behind, envy the personnel of this flight, inasmuch as it is in all probability a very educational experience to all involved.

The four remaining Cadets, recently attached to the Squadron, were left in charge - quotations around the word charge - Cadet Myers, as Asst. Engineering Officer, runs around in the morning looking properly worried, while the Crew Chief gets the planes out in the usual manner; Cadet Perry, as Asst. Communications & Supply, signs on the dotted lines and checks the supplies, etc. As Asst. Operations & Intelligence Officer, Cadet McNowan manages to keep the pilots on their proper missions. Of course, Captain Bodle, temporarily in command of the Squadron

and the usual officer staff, has something to do with the operation of the squadron during the absence of the regular personnel.

The Cadets are busy this month trying to qualify in ground gunnery. Flying starts at 5:30 a.m. daily, so as to take advantage of the smooth morning air, and to date the weather man has been very good to us in that manner. There are the usual excuses of poorly sighted guns, rough air and jammed guns, but even with these adverse conditions we think there will be a qualification or two.

Advanced Flying School, Kelly Field, May 20th.

Kelly Field lost this month the services of three officers who have been stationed here for the past six years. Major Louis N. Eller, Commanding Officer of the 61st School Squadron, goes to Selfridge Field; Captain James M. Fitzmaurice, who has commanded the 22nd Photo Section and also served as a Bombardment Instructor, goes to Langley Field; and Captain George H. Steel, Post Exchange Officer, goes to Chamute Field.

First Lieut. Benjamin J. Webster arrived here for duty on May 13th. He was previously stationed at Wheeler Field, Hawaii. He was detailed as Asst. Post Operations, Intelligence and Meteorological Officer.

Major Albert B. Pitts reported for duty on May 11th, and was detailed as Commanding Officer of the Detachment 7th Signal Service Company and Post Signal and Communications Officer. He was previously stationed at Randolph Field.

Lieut. Daniel S. Campbell, who was previously stationed in Hawaii, reported April 29th and was assigned to the 61st School Squadron, where he is performing the duties of Squadron Adjutant, Supply Officer, Mess Officer, and Operations Officer.

Colonel Frank D. Lackland, Chief of the Field Service Section of the Materiel Division, Air Corps, Wright Field, Ohio, visited Kelly Field and other Air Corps stations in San Antonio with reference to engineering and supply matters. He has been visiting Air Corps stations throughout the East, and will return to Wright Field upon completion of his duties in San Antonio. Colonel Lackland is well known in San Antonio, having commanded Duncan Field, Dodd Field and Brooks Field.

Colonel H.H.C. Richards, from the Information Division, Office of the Chief of the Air Corps, visited Kelly Field on his return trip from California where he witnessed the GHQ Air Force Maneuvers in the vicinity of Muroc Lake. He left Kelly Field for Randolph Field to join General Andrews, Commanding General of the GHQ Air Force, who passed through there enroute to Washington, D.C., from the GHQ Air Force Maneuvers. Colonel Richards is well known in San Antonio, having been stationed at posts in this vicinity from 1930 to the time of his departure in 1936. His last duty here was as Assistant Commandant of the Advanced Flying School.

San Antonio Air Depot, Duncan Field, May 20th.

Colonel Frank D. Lackland, Chief of the Field Service, Materiel Division, Wright Field, visited this Depot May 14th to 18th in the course of a tour by air of various Air Corps stations, con-

referring on supply and engineering problems.

Captain Joseph E. Hicks, of the Headquarters of the Air Corps Materiel Division, Wright Field, visited this Depot by air, May 6th to 10th, conferring on maintenance of supplies and equipment, leaving for the Rockwell Air Depot, Coronado, on the same mission, whence he was to visit the GHQ Air Force Exercises in California to observe supply problems.

Major Elmer Perrin, 3rd Transport Squadron Commander and Post Operations Officer, as pilot, with Staff Sgts. Paul S. Blair, co-pilot, and George L. McCollum, mechanic, left on May 20th in the Depot's C-33 Transport for March Field, Calif., to ferry personnel returning from participation in the GHQ Air Force Exercises in the 9th Corps Area.

Mr. Albert Mertz, Senior Air Corps Engine Inspector at the Rockwell Air Depot, Calif., visited this Depot May 6 to 8, on temporary duty studying inspection methods here, enroute returning from attending a class in magnaflex instruction in the Materiel Division, Wright Field.

Third Transport Squadron: Private Edward T. Hausafus, Airplane Pilot, was honorably discharged May 13th. He intends to enter employment with the Pan-American Airways, Brownsville, Tex. Private Harvey C. Rupe joined the Squadron May 10th by transfer from the Base Headquarters and 8th Air Base Squadron, Brooks Field.

Luke Field, T.H., May 4, 1937.

When the U.S.A.T. GRANT docked at Honolulu recently, it was discovered that there were a number of Martin Bombers aboard. Great consternation was evident in local circles when it was further discovered that said Bombers were destined for delivery to the Philippines. There was small consolation to be gathered, however, in the rumor that there MAY be some more later on for us. We need 'em!

The Luke Field social calendar has been meeting with great success under the aggressive guidance of our Club Secretary, Lieut. Paul E. Ruestow. The Officers' Club was recently expanded to include a large game room. It has been found that a large number of the command still enjoy a good game - of some kind or other.

Major Dache M. Reeves has been forging ahead steadily on the construction of his boat. Upon being interviewed on the subject, he refused to divulge any information as to the scheduled date of completion, but grudgingly admitted that he was at present being held up by lack of parts, a good old Air Corps excuse which the local business world seems to have adopted since the recently concluded maritime strike.

Business has been combined with pleasure by some members of the command who have performed their "around the island reconnaissance" in the company of their families, the latter furnishing picnic lunches with which the tired(?) reconnoiterers might refresh themselves.

The children of the post are spending two afternoons a week learning the fundamentals of dancing, of which the hula is the most popular. We believe in preparing our women-to-be for the job of properly entertaining our officers-to-be.

During the recent preparations of Howland Island for the possibility of its use by Mrs. (Amelia Earhart) Putnam, our Group Commica-

tions Officer, Lieut. Cooper, represented the Army in the expedition to that place. He returned with many excellent pictures of the runways, surf surrounding the island, and the many birds which make the island their home, as well as intimate shots of the personnel who made up the expedition. He tells a story about the boat drifting away from the island one night (due to great depths it is impossible to anchor), and spending all day trying to find its square mile of low lying coral.

Hawaiian Air Depot, Luke Field, T.H.

With the arrival of the USAT ST. MIHIEL from the mainland on March 18th, the Depot Supply welcomed a valuable new Assistant Supply Officer - Warrant Officer Arthur R. Trabold. Although he has been with us but a short few weeks, his experience of over thirty years' Army service, twelve of which have been among supply activities, is proving of inestimable value.

The Joint Army-Navy Maneuvers having just been concluded, this Depot can once more settle down to routine duties. Lest this give the impression of a semi-cosmic state of lassitude, it might be added that the Engineering Section is just starting a "Big Push" on engine overhaul since long-awaited parts have just been received, while the Supply Section is just as busy trying to unpack, classify and issue the parts mentioned above. In addition to this project, the annual audit is upon us, while the Department Commander's inspection is just around the corner. Tempus Fugit! Mayhaps 'twould have been better to have surrendered to the "Reds."

Fort Sill, Oklahoma, May 12th.

Second Lieut. Lawrence K. Welch, Air Reserve, who arrived at this station May 6th for three years extended active duty, was assigned to Flight "E," 16th Observation Squadron.

Lieut. H.F. Gregory, the chief "Windmill Salesman," is actually back with his unit for duty, after more than a year of detached service with the "Jeeps," (Autogyros). He arrived here May 10th from leave and D.S. at the Office of the Chief of the Air Corps.

Major F.D. Lynch and Staff Sergeant J.F. Murray departed for Bolling Field on May 4th to receive the Cheney Award from General Craig at appropriate ceremonies at Bolling Field on May 8th. They were scheduled to return to Fort Sill on May 12th.

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The first Army air squadron to arrive in Hawaii was the 6th Aero Squadron, from San Diego, Calif., March 13, 1917. This organization was under the command of Captain John B. Brooks, Aviation Section, Signal Corps, who on arrival relinquished command to Captain John F. Curry, Aviation Section, Signal Corps. Captain Brooks resumed command July 1, 1917, when Capt. Curry departed for the mainland. On November 14, 1917, Major Harold M. Clark, A.S.S.C., took command. Major Hugh J. Knerr assumed command on August 29, 1918, and relinquished command when the Squadron moved to Ford Island (Luke Field).

TECHNICAL INFORMATION AND ENGINEERING NEWS
Air Corps Materiel Division

Mapping Camera. ✓

A wide-angle accurate mapping camera has been received from Carl Zeiss, Inc., New York, incorporating a 4-inch (10 cm.) F/6.3 lens designed to cover a 7 by 7-inch negative. Numerous accessories for electrical automatic operation of the camera, as well as a recording statoscope and horizon indicator, are part of this equipment. Initial tests have been completed, and the negatives obtained are comparable with those obtained with the present standard type of tactical aircraft camera. This equipment was procured for experimental test on mapping projects and will be used in connection with Corps of Engineers' multiplex projection equipment.

MQ Developer, Modified to Avoid Precipitate. ✓

An Engineering Section Memorandum Report covers the results of tests to determine the suitability of Air Corps MQ developer modified to avoid the precipitate thrown down when the chemicals are dissolved in hard water. It was found that if the water used in dissolving the developer chemicals is first softened by the addition of 1.25 ounces of adjusted sodium metaphosphate to each 100 gallons of water to be used for each grain of hardness, no precipitate is thrown down, a clear solution being obtained. The advantages in using such a developer are (1) elimination of one of the causes of the diffusing film often deposited on negatives; and (2) facilitates keeping glassware, trays, and other developing apparatus clean. For these reasons it was recommended that the Air Corps MQ developer be modified by the addition of adjusted sodium metaphosphate, the amount required to be determined by the hardness of the water.

Parachute Harness Assemblies. ✓

An Engineering Section Memorandum Report furnishes information relative to the ultimate service life of parachute harness assemblies. It was recommended that the service limit of all parachute harnesses in domestic and Hawaiian use be increased to a maximum of three years. Due to unfavorable climatic conditions in Panama and the Philippine Islands, harnesses in these localities should not be used longer than two years.

Trainers, Instrument Flying and Landing. ✓

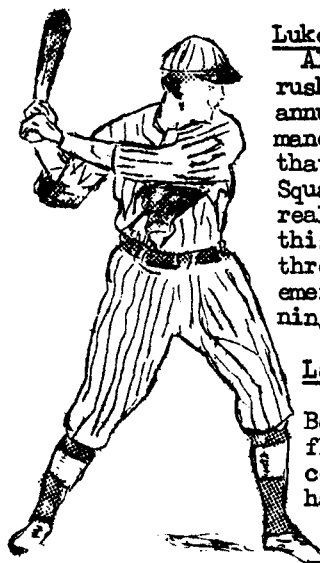
An Engineering Section Memorandum Report provides information for placing instrument flying and landing (aircraft) trainer, Type B-1, in Standard classification. The Type B-1 instrument flying and landing trainer is designed for installation in basic training or standard airplanes. Besides training the student in the art of instrument flying and landing, it also provides a means for the experienced pilot to obtain the necessary routine training without the necessity of flying the radio range beacons or necessitating the use of the instrument landing truck.

An Engineering Section Memorandum Report was prepared April 23, 1937, to provide information for placing the Type C-2 instrument flying and landing trainer in Standard classification. The Type C-2 instrument flying and landing trainer

consists of the following components: fuselage equipped with wheel control, rudder, complete set of instruments and radio aids. The fuselage is so mounted that it can be rotated in azimuth by means of the rudder, and the wheel or stick controls the bank and dive or climb. An instructor's table is provided where a problem in radio range orientation can be set up on a keying oscillator and amplifier assembly in such a manner that the student can locate the cone of silence or simulate an instrument landing. A recording device records or plots the course flown by the student, thereby permitting the student and instructor to know definitely where the student was flying at all times.

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KEEPING FIT



Luke Field, T.H.

Almost overlooked in the rush, occasioned by the annual Hawaiian Department maneuvers, is the fact that the 50th Observation Squadron turned out a really good baseball team this year. The team went through two rounds and emerged undefeated, winning eight contests.

Langley Field, Va.

Athletics in the 2nd Bombardment Group are flourishing. An officers' softball league has been organized, and competition and rivalry has been keen due to the fact that the

losers pay for the refreshments.

A baseball team was organized by the Hq. and Hq. Squadron, 2nd Bombardment Group, on May 1st. The first game was lost to the 2nd Wing GHQ team by the score of 25 to 1. The second game was won from the 20th Bombardment Squadron by the score of 9 to 3, and in the third game the 8th Pursuit Group team went down to defeat, 7 to 5. Uniforms have been purchased for all players, and everyone seems to feel confident that some more games will be won.

Kelly Field The Kelly Field baseball team is now tied for first place in the Army League around San Antonio. The Flyers defeated the 23rd Infantry, 6 to 4; then they trimmed the 9th Infantry 3 to 2 in a 10-inning game. Next the Medical Regiment fell a victim to the Kelly Field team's superior batting and fielding, the score being 8 to 4. Other teams which are tied with Kelly Field for first place are the 15th Field Artillery, Staff Troops of Fort Sam Houston, and Randolph Field.

Army War College Paddle Ball is an Army War College game and had its origin there in the summer of 1936. It was developed V-7353, A.C.



from the game of hand ball using tennis paddles and regulation red balls. Colonel B.Q. Jones, Instructor, Army War College, inaugurated the game.

THE GAME. The game is played by 2, 3 or 4 players under hand ball rules except for the use of squash telltale and upper back wall line, (Telltale, - top edge 17" above the floor on the front wall; upper back-wall line, - lower edge 6'6" above the floor). Also except for a receiving court (6' wide by 14' long, inside dimensions) on the center of the floor with its forward edge 18' from the front wall. In the doubles game, opponents take up positions on the serve on opposite sides of the court. The ball is served off the bounce as in hand ball.

RULES. Hand ball rules apply with the following additions regarding points and dead ball.

a. Dead ball: The ball is dead:-

(1) On the serve:

(a) On first serve only when the ball hits the telltale. (If the server hits the telltale twice on the serve, he is retired);

(b) When the opponent receiving the served ball, hits his own partner with the ball on the return of the receive, provided his partner is in his box opposite the server when hit.

(2) During volley play:

Whenever the ball hits above the back wall line.

b. Points:

(1) On the serve:

If the server serves the ball twice against the telltale, he is retired.

(2) During volley play:

Whenever the ball hits the telltale, the responsible player loses the point, or is retired.

THREE PLAYERS. When played by 3 players, the server plays the other two players. The server's opponents alternate in receiving the serve. The opponent not receiving the serve takes position behind the server during the serve.

FOUR PLAYERS. When played by 4 players, the opponents of the serving side alternate in receiving the serve. Partners during the serve take positions on the same side of the court opposite their opponents. Due to congestion in the court, two opponents should remain forward in the court, the other two should remain in the rear.

THE PADDLES.

The paddles (wooden paddle tennis paddles) should be provided with wrist bands to prevent their being thrown from the hand during play. Standard tennis racquets with the handles cut down to 5" lengths may be used. They make the game much faster.

THE BALL. A regulation red tennis ball is used. Red balls are more easily seen against the white walls of the court.

 Luke Big things are expected of the tennis aggregation of the 5th Composite Group during the coming months. Luke Field possesses a strong team - on paper. We hope to be able to publish impressive reports of its prowess in succeeding news letters.

Chanute The fencing season which has just Field been brought to a close was one of the most successful that Chanute Field fencers have experienced since the introduction of this sport.

Approximately 45 men came out for the fencing at the beginning of the season last November. Of this number 96 percent stayed until preliminary instruction had been completed and the regular team selected. In January, a second group began instruction. Of that group about 80 percent continued actively to participate in the sport.

Eight meets were held during the season, five with collegiate competition and three with independent clubs, with the following results:

Date	Victories	Score
1-21-37	Michigan State College (at home)	9-8
1-29-37	Salle di Armes Vical (St.Louis)	10-7
1-30-37	Washington University (St.Louis)	13-5
2-27-37	Purdue University (Lafayette)	10-7
4-17-37	Michigan State College (Lansing)	10-7
<u>Defeats</u>		
12-19-36	Edgewater Fencing Club (at home)	6-21
(First meet of the season. All these men were defeated later at the A.F.L.A. meets).		
1-31-37	St.Louis Fencers' Club (St. Louis)	8-9
(Midwest champion team, including one 1932 Olympic Team member. All men have had over 12 years' fencing experience. This score was the highest made against the Fencers' Club for seven years).		
2-13-37	Northwestern University (home)	7-10

In addition to the regular meets, the Air Corps Technical School team entered the Junior A.D.L.A. (Illinois Division (Illinois, Wisconsin and Indiana) individual championships, entering two sabremen and two epeemen. Won first and third place in sabre and went into the semi-finals in epee.

In the senior division, the A.C.T.C. team entered one foilsman, two sabremen and one epeeman. One sabreman and the epeeman got into the semi-finals but were defeated.

The three high men for the season were: Private James E. Regis - with a percentage of .733. Pvt. Regis is also Junior Sabre Champion of the Illinois Division of A.F.L.A. (Amateur Fencers League of America).

Private Elmer Woolen - with a percentage of .667. Private Woolen won third place in Junior A.F.L.A. Sabre.

Private M.W. Warren - with a percentage of .613.

The Commanding Officer, Lieut. Colonel Junius W. Jones, has extended congratulations to Major James E. Duke, Athletic Officer, and Sergeant Guy M. Shockley, Fencing Master, for the splendid fencing team which Chanute Field entered into competition this season.

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NEWS LETTER



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U.S. DEPARTMENT OF JUSTICE

FEDERAL BUREAU OF INVESTIGATION

WASHINGTON, D.C. 20535

MEMORANDUM

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Information Division
Air Corps

June 15, 1937

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.

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FLYING IS DIFFERENT
By "Pursuiter."

AVIATION history, written and unwritten, is filled with the "close shaves" experienced by those "early birds," aviation's heroes, who, through their engineering knowledge or because of their zest for flying and the adventures it offered have contributed so much to the aeronautical art. And if you do not want to take my word for it, just spend a little time around an operations office or hangar, military or commercial, when the ceiling's zero and the land-bound pilots are in a reminiscent mood. When they set up the hot air "wind sock" and really start "hangar flying," there naturally arises in the listener's mind this question: What would the status of aviation be today if the Great Barber had decided to make those close shaves just a little too close and, before they had performed their good work, presented our aerial pioneers with a pair of celestial wings and set their homing devices on the beacon of the Great Beyond where engine failures and "crashes" are unknown? (Assuming that all GOOD aviators are properly rewarded).

The escape of one of these men of destiny is etched deeply in my memory. I was flying at 7,000 feet, above a layer of clouds located at about 5,000 feet, as a member of a formation of twelve SE-5 single seaters. We were practicing three-ship attacks on an old DH-4 as a part of advanced training at Kelly Field, Texas. The system we were using was for three ships in V formation to attack at one time. The leader would bring his formation down in a terrific dive, pass below the target plane and then pull up into a stall underneath while his wing men attacked simultaneously from right and left. The formation in which I was flying had just completed its attack and was climbing for altitude to the rear of the target ship when I noticed another formation starting its dive. The leader passed underneath and the wing men came in from either side. Suddenly the two wing ships seemed to melt together, and pieces of fabric torn loose by the flying propellers started floating down toward the clouds. A collision in mid-air!

The two planes hung momentarily in space and then still together spun down into the clouds and out of sight. Neither

pilot had used his parachute. The entire formation broke up in the excitement and each man picked himself a hole in the clouds and dove through. As I came out under the clouds, there directly beneath me was the unmistakable gasoline fire of the crashed airplanes. With mingled hope and dread I searched the sky around us. Finally I spotted one parachute floating lazily down, and then, after what seemed like an interminable wait, I saw another. Dangling from one of those chutes was Charles Augustus Lindbergh. Three more times in the next two years he was saved by his parachute in order that he might fulfill his destiny.

Approaching the subject from a slightly different angle, let us assume that the Wright Brothers never felt that irresistible urge to abandon their bicycles and take to the air. Was it the finger of Destiny that prodded them on? Would another name be engraved on the monument at Kitty Hawk? Would there have been a first flight? Probably, but not until years later, and aviation would have been retarded just that much. And supposing Leonardo Da Vinci's flying machine had really flown instead of crashing with his mechanic, Astro da Peretola. When one considers the progress that the airplane has made in the brief span of 33 years since Kitty Hawk, one wonders what might have been accomplished in the five centuries since Leonardo.

Innumerable questions are brought to mind by the thought. For example: What could the British have done to the American colonists with a couple of good Attack groups? Would Napoleon have lost the battle of Waterloo if he had had a few Observation planes? Would Lee have been surprised at Gettysburg if he had been similarly equipped? Would the Kaiser have had the temerity to oppose the world if the nations had had the benefit of 500 years' development of their air forces? With Bombardment airplanes of unbelievable ranges and bomb-carrying capacity, which, judging from present developments, would have been created hundreds of years ago, the oceans would have been made untenable for battleships, and navies would have long ago been thrown into the discard.

But let us return to our men of destiny. Volumes could be written of their narrow

escapes from accidents and disease, or how some incident which seemed inconsequential at the time directed their footsteps upon the path of glory. Aviation is not alone in this. Supposing F.D.R. had not won his fight with infantile paralysis!

Enough for the men who did escape. They have taken their place in the firmament. What of those who did not escape? Certainly among them there were many whose kinetic ability along aeronautical lines would have had a tremendous effect upon the development of aviation had they not been "bumped off," "washed out" or otherwise pushed aside by the hand of fate. Those are the heroes who should be brought to the attention of the world. And it is in an effort to do just that that these lines are written.

There is, for instance, the man who many believe contributed more than any other individual to the advancement of flying; one Otto Fliegenschnell. Born in the early nineties, of German-American parentage, in a little town located on the cliffs overlooking the Hudson River, little Otto, during his early youth, gave no indication of developing into a prodigy.

But by the time he had graduated from high school two traits had shown themselves which were most irritating to his stolid German father, who made a comfortable living running a meat market. One of these was an unbridled passion for mathematics, which his father could not in any way apply to the production of bigger and better winerwursts; the other, and the most objectionable, was his habit of spending all his spare time, when he might have been helping in the meat market, lying on his back in some open meadow watching the seagulls circle lazily over the river, or climbing the precipitous cliffs in search of falcons which he captured in order that he might make a close-up study of the structure of their wings.

He followed the flights of the Wright Brothers avidly, and it was not surprising that when the World War started he learned to fly himself and made an enviable record overseas with the Lafayette Escadrille. After the war he continued his flying as a free lance test pilot. In 1934, while testing a sleek low-wing monoplane, he climbed to 20,000 feet and headed straight for earth in a terminal velocity dive. When the airspeed indicator showed well over 600 miles per hour, he started to ease back on the stick to pull the plane out of the dive but found that the controls had no effect. He "bailed out" with great difficulty, while the plane continued on to its destruction. Later a model of the plane was tested in a high speed wind tunnel, and it was found that the wings of the conventional design completely lost their lift when they reached the speed of

sound (750 miles per hour), and this is where our hero stepped into the breach by designing a type of wing which would retain its lift at any speed. Because of its design, wing resistance became practically negligible. Speed was multiplied many times until, with the engines available, a thousand miles per hour was common. Commercial schedules, military tactics, trans-oceanic flying, all were revolutionized. San Francisco was but a little over two hours from New York. The oceans no longer acted as a bulwark in our national defense. Overnight the world shrank, in effect, to one-fifth of its actual circumference. The Fliegenschnell airfoil became a byword among the aeronautical engineers of the world.

But I am getting slightly ahead of my story for, unfortunately, one day when young Otto was climbing one of his native cliffs to snatch a young falcon from its parental nest he leaned just a little too far. His foot slipped and he fell the two hundred feet to the rocks below, landing with a thud which flattened him out beyond all recognition. So, from that day until this none of what I have related has ever happened.

Then there is the case of Jacques De L'air, whose gasoline-driven turbine, because of its terrifically high speed and lack of friction, due to moving parts, developed amazingly high horsepower per unit weight of power plant, and completely revolutionized the design of aircraft and automobiles except that one day when his mother was lifting little Jacques from his crib she dropped him head foremost on the floor and he grew up to be a jibbering idiot.

Last, but not least, we have that Swiss engineer (the name escapes me at the moment) who invented the hermetically sealed internal combustion engine, fuel tank and fuel reclamation plant, so that with one charging of a ridiculously small fuel tank the happy cycle would continue indefinitely. Two days before the idea flashed to his mind he went for a climb on his favorite Alp and an avalanche buried him very deep.

So, as Parke Cummings might say, when you future chroniclers of aviation history are preparing your columns and feel tempted to record that aviation would be different IF -- you must also inscribe -- Aviation is different BECAUSE ---.

---oOo---

One of the new Y1B-17 Boeing Bombers, in a night flight from Langley Field, to Kelly Field, Texas, negotiated the distance in nine hours, taking off at 9:00 p.m., May 27th, and reaching destination at 6:00 a.m. the next day. The purpose of the flight was training in celestial navigation, as part of the work of the navigation school at Langley Field. The plane was piloted by Major C.V. Haynes, who was accompanied by three officers and five noncommissioned officers.

THE BRITISH SYSTEM OF PILOT TRAINING

Air Commodore R. Leckie, who is the Director of Training in the British Air Ministry of the British Royal Air Force, inspected the Advanced Flying School, Kelly Field, Texas, on May 21st. He was extremely interested in knowing that the United States has the same problems as they have in England. He stated that it gave him a comfortable feeling to know that the British are getting the same results as the Americans.

Colonel Lohman, Air Corps, Assistant Commandant of the Advanced Flying School, escorted the British visitor around the post and entertained him for lunch.

Air Commodore Leckie said that the British system of pilot training was similar to ours. Up to recently the duration of the course was one year, but due to the expansion of the Royal Air Force and the need for pilots, it was found necessary to shorten the course to 37 weeks, with a total of 150 hours' pilot time.

The British system of training consists of the same three phases as ours, i. e., primary, intermediate (or basic), and advanced. All their primary training, however, is done by thirteen civilian flying schools which are under contract with the Air Ministry. The students remain on civilian status, but they draw pay until they complete their primary pilot training. At this time they are taken into the Royal Air Force and given short service commissions as "flying officers," for a period of five years. They are sent to one of the ten Royal Air Force pilots' schools where they complete their basic and advanced pilot training. These phases include pilot training on modern single-engine and bi-engine training airplanes. Obsolete tactical airplanes are no longer being worn out by using them for training students. The students also receive training in gunnery and bombing, but little or no cross-country flying. These are purely pilots' schools, there being additional schools for those officers who are to specialize in Observation or flying instruction.

Upon completion of the course at the pilots' schools, students are sent to duty with tactical organizations, and at the end of five years' service they are returned to civil life as Reserve officers. A large number of them receive positions as flying instructors in the civilian flying schools which teach primary flying. A few of the most proficient pilots among them are selected to remain in the Royal Air Force and may secure an additional tour of five years' service, and eventually a permanent commission. However, the majority of officers having permanent commissions come from the Royal Air Force School at Cranwell. This school compares with the

British Army School at Sandhurst, which is similar to West Point. The course at Cranwell lasts two years. Students receive approximately 300 hours' pilot training, as well as a thorough training in ground subjects, before they receive their commissions.

Air Commodore Leckie is responsible for the training of enlisted mechanics, also. Their system of securing mechanics is to enlist young men and boys (minimum age 16 years) for a 12-year period. Not having as good an education as the enlisted men in the U. S. Army Air Corps, they spend the first three years as apprentices. During this time they work half a day in shops and the other half in school. The studies covered are comparable to our technical high schools. They then go to tactical organizations for full duty as mechanics. Upon the completion of this enlistment, they may reenlist for another nine years, at the end of which time they become eligible for retirement. The British visitor stated that at the present time there is one school in operation which is training 4300 apprentices, and that another school of the same capacity is being built.

Air Commodore Leckie appreciated the courtesies shown him on his visit and stated that his stay had been very enjoyable.

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FLIGHT TEST OF NAVIGATION EQUIPMENT

The Douglas C-33 airplane, assigned to the Equipment Branch of the Air Corps Materiel Division, departed from Wright Field on May 25th with a crew of six for New Orleans, La., with an ultimate destination of Brownsville, Texas, for the purpose of testing navigation equipment. The take-off from New Orleans to Brownsville was made at 1:25 a. m., May 26th, and the over-water flight was made during hours of darkness. The return flight to New Orleans was accomplished the same day, the take-off from Brownsville being at 7:20 a. m.

Celestial navigation was used throughout the flight, with the aid of both the experimental gyro-stabilized drift meter, and experimental drift signals were made on both over-water flights, these two instruments performing satisfactorily. The Type A-4 computer was employed in the reduction of observations and, on occasion, the Hydrographic Office Publication No. 214.

All navigation equipment functioned in a satisfactory manner. The airplane returned to Wright Field on May 27th.

A report is being prepared, describing the results obtained with the various items of equipment.

---oOo---

STUDENT NAVIGATION FLIGHT



On Monday, May 17th, the students of the Advanced Flying School at Kelly Field, Texas, took off on their Maintenance Navigation Flight. The itinerary called for stops at the University of Oklahoma, at Norman, Okla.; the Agricultural and Mechanical College at Stillwater, Okla.; the Oklahoma Military Academy at Claremore; the University of Kansas, at Lawrence; the University of Missouri, at Columbia, and the University of Arkansas at Fayetteville.

The first day's flight saw the Observation Section, under the command of Capt. O.P. Weyland, going to Fort Sill direct, and thence to a rendezvous at Norman, Okla., at 3:00 p.m. This flight consisted of 26 Observation airplanes, type O-25, O-19 and BT-2. Sixteen of these, in charge of 1st Lieut. Edgar R. Todd, landed on the Oklahoma University Polo Field, and remained there overnight. The remainder landed at Oklahoma City Airport for the night.

Nine Bombardment airplanes made the same itinerary as the Observation Section, and landed at Oklahoma City.

The Pursuit Section of 20 P-12's and 4 BT-8's, under the command of Major John V. Hart, and the Attack Section, with 11 A-12's and one BT-8, under Capt. Glenn C. Jamison, flew to the rendezvous at Oklahoma University by way of Hensley Field at Dallas, Texas. They all landed at Oklahoma City, where the students were immediately taken to the University by trucks.

While in the vicinity of Oklahoma City, Lieut. Egurrola, of the Mexican Navy, had a forced landing due to motor trouble. A successful landing was accomplished with minor damage to landing gear. The students were entertained and quartered by the Fraternities at the University.

On Tuesday, all flights rendezvoused at Oklahoma A. & M. College at Stillwater. The Pursuit Section gassed up, had lunch, and flew to the University of Missouri at Columbia. The Attack Section flew to Lawrence, Kansas, to visit the University of Kansas.

On Wednesday, these two Sections rendezvoused at Claremore, Okla., and had lunch at the Oklahoma Military Academy. Then all Sections rendezvoused at Fayetteville, Arkansas, at 4:00 p.m. All planes landed individually on narrow runways, with no difficulties. The planes were maintained and staked down for the night, and the students were again quartered at fraternities.

On Thursday, all Sections returned to Kelly Field, with students making individual navigation flights, departing at 10-minute intervals.

The Attack returned via Muskogee and Barksdale Field; the Pursuit via Hot

Springs and Barksdale Field; the Bombers via Muskogee and Dallas; and the Observation, via Little Rock, Ark., made a night flight from Dallas to Kelly Field. The last plane was in at 10:55 p.m.

The entire flight was unmarred by any serious airplane troubles, and the students gave excellent demonstrations of the perfection which they have reached on this, the eve of graduation from the Air Corps Training Center.

The flight was most ably commanded by Major Robert D. Knapp, who not only made the original survey and flight plan but consummated a most successful trip with a total of 74 airplanes.

Whereas the dual purpose of the flight was that of navigation and maintenance, the students of all the universities were told of the facilities offered at the Air Corps Training Center to further their education.

---oOo---

A GRACIOUS ACT

Private John B. Smith, Air Corps, recipient of the Cheney Award for 1931, is a firm believer in reciprocity. Recently he became the proud father of a son, whom he named John Cheney Smith.

The Cheney Award was presented to Private Smith in recognition of his heroism, loyalty and devotion toward an officer of his service. Trapped in the burning wreckage of a crashed airplane, the helpless pilot, Lieut. C.W. Causey, was released therefrom only through the valiant efforts of Private Smith, who slid head-first into the blazing cockpit and unfastened the pilot's shoe which was tightly wedged in the rudder bar.

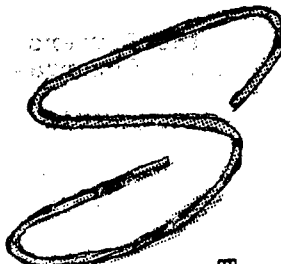
Advice of the naming of young John Cheney Smith was received from Mrs. Ruth Cheney Streeter, sister of the late Lieut. William H. Cheney, of the U.S. Air Service, who was killed in an air collision at Foggia, Italy, on January 20, 1918. Mrs. Streeter and her mother, Mrs. Mary C. L. Schofield, donated the Cheney Award in memory of the deceased of the American war-time pilot.

Private Smith, elated over receiving the Cheney Award, is fond of alluding to himself as "Hero Smith."

Mrs. Streeter's comment on Private Smith's gracious act is that he saw his duty and did it, and that it was really rather sweet of him.

---oOo---

Colonel John B. Brooks, Air Corps, a member of the War Department General Staff, recently visited Randolph Field for a few days. He is scheduled to become the Commandant of the Primary Flying School in the near future, replacing Col. Henry W. Harms, who is leaving to attend the Army War College.



SUPPLEMENTING the article in the previous issue of the News Letter on the Maneuvers of the GHQ Air Force on the West Coast is the following, submitted by the Hamilton Field Correspondent:

The GHQ Air Force concentration and exercises were held in California during May, 1937. Major General Frank M. Andrews flew his Douglas Transport to California and directed the exercises. Only the 1st and 2nd Wings participated directly in these maneuvers. The 63rd Coast Artillery (AA) from Fort MacArthur, Calif., commanded by Lieut. Colonel Claude M. Thiele, was attached to the 1st Wing for the period of the exercise.

The operations during the one-month period, lasting from May 1st until May 31, 1937, were designed mainly for the testing of the Air Corps tactics with full strength units and the organization and efficiency of the various groups and air bases.

An area stretching from March Field to Hamilton Field, about 100 miles inland from the sea and 400 miles up the coast, was directly involved in these exercises with a number of California towns being used as advance airdromes. These flying fields were at Bakersfield, Delano, Merced, Fresno, Stockton, Visalia and Muroc Dry Lake. The latter point, the official bombing and gunnery range of the 1st Wing stationed permanently at March Field, was chosen for actual combat and battle operations, due to its ideal location in the midst of the Mojave Desert, which permitted the use of gas and bombs without endangering civilians. In all, the number of officers, men and planes participating during the May maneuvers were figured at 425 officers, 3400 men and about 350 planes. Among the officers are included about 70 Flying Cadets.

The force was divided into two Wings (1st and 2nd). The 2nd Wing, under the command of Brigadier General Gerald C. Brant, was chosen as the attacking force (enemy), with its base of operations at Hamilton Field and with units dispersed throughout the San Joaquin Valley. The 1st Wing, commanded by Brigadier General Delos C. Emmons, was the defending force. Headquarters of the 1st Wing was at March Field, and the tactical units which were composed of the 1st Pursuit Group were stationed at Muroc Bombing and Gunnery Range.

The Concentration

Since none of the GHQ units stationed throughout the nation were operating at full strength - some groups consisting

of but one flight, others of two - it was necessary to "borrow" aircraft and personnel from all such units not in actual operation during the May Maneuvers, thereby rendering them practically inoperative during the period of the exercises. In other words, being only slightly over one-third of its authorized strength, the GHQ units were forced to use all planes and personnel to form two full strength wings. Units from Mitchel, Langley, Selfridge, Barksdale and western air bases participated with troops, materiel and equipment being moved within six days from all points to the San Joaquin Valley and Muroc Dry Lake scenes of activity. Troops were transported by trains, bus, motor convoys and airplanes. The latter phase found its first trial of that sort with 12 Douglas, two Lockheed and a number of older type transport planes involved. March Field, as the GHQ temporary headquarters, and Hamilton Field, were called upon to furnish supplies, equipment for men, general utensils and material, ammunition, repair facilities, tents and camping outfits, communication, meteorological service and hospitalization.

Several flights with sick were made, transportation for these men being furnished by ordinary aircraft or hospital transports in case of emergency. The airplane shuttle service for men to and from the West Coast before and after the concentration lasted for 16 days with some of the transport crews spending above 100 hours in the air during that short a time. A regular freight and mail service during the maneuvers was installed from March Field to "all points north" on daily schedule, planes and pilots being furnished by March Field.

Maneuver Operating Period

The two opposing forces during the operating period were stationed as follows:

1st Wing (defending force):

1st Wing Headquarters: March Field.
1st Pursuit Group: Muroc Dry Lake.
63rd Coast Artillery: Muroc Dry Lake.
March Field Air Base.

2nd Wing (attacking force):

2nd Wing Headquarters: Hamilton Field.
7th Bombardment Group Hq. with one tactical Squadron each: Fresno, Merced and Stockton.
3rd Attack Group Hq.: Bakersfield, and with one tactical squadron each at Delano and Visalia.
88th Reconnaissance Squadron: Hamilton Field.
Hamilton Field Air Base.

Attached to the defending force was the 63rd Coast Artillery with four long-range AA guns, six .50 cal. AA machine guns, sound and searchlight units.

Tactical employment of aircraft weapons was left to the individual Wing Commanders. Heavy Bombers spent a minimum

of 6 hours in the air daily, Pursuit and Attack craft not less than 4 hours. In most cases this time limit was greatly exceeded.

Targets were located at Muroc Dry Lake and Salt Lake, simulating aircraft factories, docks, warehouses and oil reservoirs. Muroc itself feigned to be the city of Los Angeles. Anti-aircraft units covered an area of several miles around the main camp at Muroc, and war-time camouflage was successfully employed by all units.

Beginning May 10th, the 24-hour periods were divided into two intervals, each lasting from four to six hours. All combat operations took place during these hours. Lack of personnel and equipment prevented alerting crews for 24-hour periods. In accordance with plans, the defending force was not permitted to follow the invaders and counter-attack, but were allowed to engage the enemy as soon as he entered the defended area.

Another important phase in the exercise was the civilian intelligence net provided by the Southern California Edison Company and employed successfully by the Muroc anti-aircraft units. Having secured full cooperation on the part of the company's employees, reports on enemy movements were phoned in sometimes within 3-seconds after a flight had passed the hidden observers' outpost, and counter measures could be taken in time. The response on the part of the civilians employed was whole-heartedly, and gave proof of how much such information could be depended on in case of war.

Besides the actual testing of fighting equipment, GHQ authorities tested a new invention, the throat microphone, an instrument which enables a pilot to "talk" to other ships in spite of the oxygen equipment carried on high altitude flights. Such practice was given by a long range bombing mission at the Salt Lake targets at an altitude of 21,000 feet. Tests were considered completely satisfactory.

All combat operations included day and night flying. During night operations, parachute flares were used to light up objects to be bombed. Smoke screens were used on several occasions, largely depending on weather conditions. The following subjects were taken into consideration and tested during the maneuvers: Tactical employment of Bombardment, coordination of Attack and Bombing Aviation, coordination between Pursuit and anti-aircraft action, bombing efficiency, aerial gunnery (camera guns), Pursuit interception, employment of smoke and chemicals by Attack Aviation, interception of invading aircraft by anti-aircraft units, effects of gas (morale), effect of gas with adequate protection (gas masks), gas alarm, airdrome defense, intelligence by ground and air.

De-Concentration

"Halt" to all war activities was called midnight, May 21st. Until midnight, however, everyone was still on the alert and raids by enemy aircraft came as late as 10 minutes before the enforcement of the "armistice" order.

May 22nd was classified as "maintenance" day, with equipment being made ready for evaluation. The first flight of 28 Boeing Pursuit ships from Barksdale Field left Muroc Sunday morning, May 23rd.

The shuttle service between the East and West Coasts once more came into operation, and individual units returned to their home bases. The whole GHQ Air Force, that is, all units which were involved in the maneuvers, were expected to be back at their own stations by midnight, May 31st. Considering the efficiency with which the whole exercise was handled, special mention ought to be given to March and Hamilton Fields as the "bases" of operations.

Both of these Air Bases fully came up to demands, in spite of the fact that all maintenance, service and supply sections were taxed to the limit. So, for instance, the supply service established by March Field during the GHQ maneuvers (and prior during the 1st Wing exercises) involved ten airplanes and twelve trucks. The planes carried a total weight of 110,606 lbs. and flew 17,171 miles, carrying over 130 men as personnel. The trucks transported a total weight of 177,650 lbs., traveled 10,094 miles, with a personnel of 121. In all, transport planes made 87 flights; and trucks, 58 trips. These figures are up to and including May 22, 1937. The arrangements, which were in the hands of Major F.F. Christine, Air Corps, were such that an officer and some enlisted personnel were stationed at the various operating bases under direct control of the Air Base Commander, Colonel John H. Pirie, of March Field, for the purpose of handling all supplies at railheads, procurement and distribution. Requests for needed supplies were made by radio, and transportation was kept at all times available. In some cases special containers for transportation was used to prevent spoiling. In the case of extended exercises, ground efficiency was as important as air efficiency, for without material and mechanics to handle ships and necessary supplies no war can be fought successfully.

Purpose and Critique.

Newspapers have brought the "defense angle" so much into play in connection with the GHQ Maneuvers that this impression has apparently carried all votes. According to General Andrews, these exercises were designed mainly as an efficiency test for the GHQ Air Force, test of mobilization facilities of Hamilton

(Continued on Page 16)

CHANGES IN AIR CORPS ORGANIZATIONS

Under orders of the War Department, effective June 1, 1937, a number of changes were effected in Air Corps organizations, which involved the demobilization of some units, the creation of new units, and the transfer of personnel to other stations.

The 21st Photo Section, which had been stationed at Scott Field, Belleville, Ill., was rendered inactive and allotted to the 6th Corps Area.

The 9th Airship Squadron, Scott Field, was redesignated as the 1st Observation Squadron and transferred to Marshall Field, Fort Riley, Kansas, with personnel as follows: 2 Master Sergeants, 2 Technical Sergeants, 7 Staff Sergeants, 7 Sergeants, 7 Corporals, 22 Privates 1st Class, and 23 Privates, total 70. The allotment of grades to the 1st Observation Squadron, as of June 1, 1937, is as follows: 2 Master Sergeants, 1 First Sergeant, 3 Technical Sergeants, 11 Staff Sergeants, 10 Sergeants, 10 Corporals, 33 Privates 1st Class, and 60 Privates, total 130.

Flight A, 16th Observation Squadron, Langley Field, Va., without personnel or equipment, was transferred to Pope Field, Fort Bragg, N.C.

The Headquarters, 16th Observation Squadron, which has been inactive in the 3th Corps Area, was rendered active, with station at Fort Bragg, N.C.

The 12th Observation Squadron, Brooks Field, Texas, less Flight C, with personnel, including 3 Regular Officers, one Master Sergeant, one First Sergeant, two Technical Sergeants, eight Staff Sergeants, four Sergeants, four Corporals, twenty Privates 1st Class and thirty Privates, total 70, was transferred to Fort Knox, Ky. Effective June 1, 1937, the strength of the 12th Observation Squadron, less Flight C, is increased by 25 Privates, or a total personnel of 95.

Flight C, 12th Observation Squadron, is transferred from Brooks Field to Post Field, Fort Sill, Okla., without personnel or equipment.

Headquarters and Headquarters Squadron, 12th Observation Group, is rendered inactive, with allotment to the 8th Corps Area, transferring personnel, grades and ratings to Moffett Field, Calif., for assignment to the 82nd Observation Squadron, which is to be constituted at that station. The personnel transferred comprise 4 Regular Army officers, 1 Master Sergeant, 2 Technical Sergeants, 7 Staff Sergeants, 10 Sergeants, 12 Corporals, 26 Privates 1st Class, 17 Privates, total 75.

The 1st Photo Section, Brooks Field, Texas, redesignated as the 3rd Observation Squadron, and transferred to Langley Field, Va., with one officer, 3 Technical Sergeants, 8 Staff Sergeants, 1 Corporal,

11 Privates, 1st Class, and 27 Privates. Transferred from Scott Field, Ill., to Langley Field, for assignment to the 3rd Observation Squadron: 1 Master Sergeant, 7 Sergeants, 6 Corporals, 11 Privates, 1st Class, and 5 Privates, total 30.

Flight E, 16th Observation Squadron, Fort Sill, Oklahoma, is demobilized, all personnel, equipment and records to be incorporated in Flight C, 12th Observation Squadron, transferred to that station from Brooks Field, Texas.

The 19th Airship Squadron, Moffett Field, Calif., is redesignated and consolidated with the 3rd Balloon Squadron, heretofore inactive in the 8th Corps Area, as an active unit, with station at Fort Lewis, Wash., enlisted strength as follows: 1 Master Sergeant, 1 First Sergeant, 1 Technical Sergeant, 9 Staff Sergeants, 10 Sergeants, 10 Corporals, 33 Privates, 1st Class, and 65 Privates, total 130.

Enlisted strength of 91st Observation Squadron, Fort Lewis, Wash.: 2 Master Sergeants, 3 Technical Sergeants, 11 Staff Sergeants, 10 Sergeants, 10 Corporals, 33 Privates 1st Class, 66 Privates, total 134.

The 15th Photo Section, Fort Lewis, Wash., is rendered inactive, with allotment to the 9th Corps Area.

The 82nd Observation Squadron constituted as an active unit at Moffett Field, Calif., with an enlisted strength of 130, comprising 2 Master Sergeants, 3 Technical Sergeants, 11 Staff Sergeants, 10 Sergeants, 10 Corporals, 33 Privates, 1st Class, and 61 Privates.

Enlisted strength of Base Headquarters and 9th Air Base Squadron, Moffett Field, Calif., 155, comprising 3 Master Sergeants, 1 First Sergeant, 2 Technical Sergeants, 12 Staff Sergeants, 11 Sergeants, 12 Corporals, 38 Privates, 1st Class, and 76 Privates.

Transferred from Scott Field, Ill., to Mitchel Field, N.Y., enlisted personnel as follows: 2 Corporals, 4 Privates, 1st Class, 3 Privates, and 1 Sergeant, total 10.

Flight D, 16th Observation Squadron, Fort Riley, Kansas, demobilized, all personnel, equipment and records incorporated in 1st Observation Squadron (organized from the 9th Airship Squadron, Scott Field, and transferred to Marshall Field, Fort Riley, Kansas.

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Effective June 1, 1937, Technical Sergeants Brainard D. Booth (Randolph Field) and Neal Bray (March Field) were appointed to the grade of Master Sergeant, while Staff Sergeants Frank J. Birk and John C. Dodd, of March Field, Calif., and Louis T. Silva, of Hamilton Field, Calif. were appointed to the grade of Technical Sergeant.

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THE CHANUTE FIELD
GLEE CLUB



In mid-summer of 1936, there began a movement among the enlisted men of Chanute Field to organize a men's glee club. Step by step the organization developed into a capable singing group and is now composed of

over fifty voices. Its director is Chaplain Wallace I. Wolverton. The men chose as a name, "The Wing Chorus." A male quartet selected from the organization has the name, "The Ailerons." The organization insignia is a winged sixteenth note drawn in such fashion as to suggest a Pursuit ship in flight.

The Wing Chorus is one of the most active organizations of an extra curricular nature at the Air Corps Technical School. It has sponsored and taken a prominent part in three entertainments at Chanute Field during the past year. The most recent was a first annual spring concert given in Rantoul. This performance was the first in a spring series which took the men to Decatur and Bloomington, Ill. The Chorus has given fifteen performances in central Illinois during the past year. Return engagements and other invitations promise a very full program for the coming year.

The organization is more than just a men's glee club. In its membership are to be found a tap dancer, a soft shoe dancer, two pianists, comedians and a master of ceremonies. The program is, therefore, enlivened by specialty numbers. The music repertoire of the Chorus would compare favorably with that of the average college glee club. Everywhere the organization has been enthusiastically received. There is something unique in hearing a smart-looking group of soldiers sing a fast-moving program of men's music. The public is both surprised and delighted.

Most people have no such notion of soldiers. But why should not the soldier get a thrill out of singing, and singing well, good rousing music?

Every Air Corps man who is sent to Chanute Field for school should, if he has some singing ability, join the Wing Chorus. His stay at this station will be made most pleasant if he becomes a member of the organization. In addition to the pleasure of going on trips and being entertained royally by civilian groups, the outfit very frequently entertains itself with Dutch suppers and banquets. A ramshackle house in the country, properly dubbed "The Broken Wing Inn," has been the scene of some of these parties.

Recently in a restaurant in a nearby

city, when the chorus was having some refreshments before taking the trip home, they broke out into song. They were not thrown out. The patronage called for more and the management called for encores.

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"CHINESE ARE "UP TO SNUFF."

Touching on the participation of the 35th Pursuit Squadron, Langley Field, Va., in the maneuvers of the GHQ Air Force on the West Coast, the Correspondent of that outfit reports that the week end side trips to Los Angeles and San Francisco offered a welcome diversion from the monotony of camp life. One of the 35th pilots, while in Frisco's Chinatown, bought a Chinese newspaper as a souvenir. Upon opening the paper he discovered to his amazement a picture of the Squadron's own planes, including himself and two other pilots. Clever people, these Chinese.

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AIRMEN DO NOT TAKE KINDLY TO HORSES

Two members of the 36th Pursuit Squadron, returning to Langley Field from participation in the maneuvers of the GHQ Air Force on the West Coast, were forced down by inclement weather near Mitchell Station, Alabama. The News Letter Correspondent states that Lieut. Glenn Thompson and Sergeant Baker rounded out their Army knowledge by taking full advantage of an opportunity to "service test" the basic means of transportation of the Cavalry. Comandeering two horses, they rode five miles to the nearest telegraph station. This trip was prolonged due to a rough motor and excessive head temperature on Sergeant Baker's fiery steed. The Sergeant asserts that henceforth he will have nothing to do with foul plugs. Lieut. Thompson gives it as his fixed opinion that helmets, goggles and flying boots are even more necessary on horseback than when in the air.

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AIR RESERVE PILOTS "GO COMMERCIAL."

Four Air Reserve pilots, on extended active duty at Langley Field, Va., recently terminated their active connection with the Air Corps to accept positions with commercial airlines. Second Lieuts. Mathias F. Junger, Robert R. Reed and Lowell F. Johnson, who were on duty with the 96th Bombardment Squadron, have accepted employment as pilots with the Eastern Air Lines. Second Lieut. A. LePenske accepted a position with the

(Continued on Page 9)

V-7369, A.C.

TRAINING AT THE AIR CORPS TECHNICAL SCHOOL

The importance of the Air Corps Technical School, Chanute Field, Rantoul, Ill., is now being realized by the Air Corps at large, judging from the great amount of correspondence received from GHQ Air Force units and Air Corps stations, with reference to enlarging and shortening the various courses taught at this school, in order to furnish the service with the demand for trained personnel.

Reports received indicate a serious shortage of trained specialists, and that the number of replacements being furnished are far from adequate, notwithstanding the fact that approximately twice the number of students were trained during the school year 1936-37 than in the preceding year.

Provision during the year has been made for five additional enlisted specialist courses, namely, Bomb Sight Maintenance; Electrical Specialists; Instrument Specialists; Propeller Specialists, and Carburetor Specialists. The courses are from six to eight weeks in length, training six men in each class. The students must be especially qualified and recommended for training in the specialized subjects.

The proposed schedule of instruction for the next school year (1937-1938) calls for the training of 1250 enlisted men. Nine hundred of these students will be men selected from the various Air Corps stations, and who will not be required to pursue the course in basic instruction as heretofore. The remaining 350 will be men especially qualified, and who are enlisted for Air Corps, Chanute Field (unassigned) for the express purpose of pursuing a course of instruction at this school. They will be required to undergo a course in basic instruction.

The Commanding Officers of Squadrons and Detachments throughout the Air Corps make special trips to Chanute Field to interview these unassigned students in school with a view to securing their assignment to their station upon graduation. Also numerous communications are received weekly requesting information on the number of students graduating from various courses, who are available for transfer. One month prior to graduation, a report is rendered to the Chief of the Air Corps, stating course and date of graduation of each unassigned student. The Office of the Chief of the Air Corps then assigns these unassigned students, upon graduation, to stations where their services, as trained specialists, are in demand.

The program of instruction for the next school year is being revised in accordance with the needs of the service.

Most courses are being shortened by several months, and the assigned students (those from other stations) will be entered in classes separate from the Air Corps, Chanute Field (unassigned) students. In shortening the courses, it will permit the training of the increased number of students during the next school year, with the present housing facilities, and the addition of a number of tents, some of which are in use at the present time.

No material changes are being made in the courses for Regular Army Air Corps officers, or National Guard and Reserve officers.

A catalogue, consisting of 107 pages, including sixty illustrations, and giving the history, function and program of instruction of the Air Corps Technical School, was distributed to the Service during the last month. Additional copies of this publication may be secured by applying to the Secretary, the Air Corps Technical School, at a cost of 25 cents per copy.

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Air Reserve Pilots "Go Commercial." (Continued from Page 8).

United Air Lines, with base at Salt Lake City.

The Correspondent of the 96th bemoans the fact that, as a result of the departure of the three young Reserve officers, the Squadron is faced with an acute shortage of Reserve pilots.

The 49th Bombardment Squadron Correspondent says that his outfit is sorry to see "Eddie" LePenske leave, but wishes him luck in his new venture.

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LANGLEY SQUADRON MOVES TO NEW LOCATION

Headquarters and Headquarters Squadron, 2nd Bombardment Group, Langley Field, Va., was moved to the first floor of Building No. 116, which was formerly occupied by the Post Exchange Restaurant. On May 12th, nearly the entire squadron was moved to this new location, with the exception of the enlisted men who are quartered on the third floor of the 20th Bombardment Squadron barracks. These men will remain in their present quarters until the space they are to occupy in Building No. 116 is ready for occupancy. Details of the Squadron personnel will be busy for a few weeks cleaning and painting the new barracks. Plans are in progress for beautifying the grounds in front of the barracks by planting shrubbery and flowers.

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GEN. DRUM INSPECTS 5th COMPOSITE GROUP

Fully recovered from their strenuous exercises with the U.S. Fleet now anchored at their doorstep, the 5th Composite Group, Luke Field, T.H., turned out for the annual inspection of its equipment and personnel by the Department Commander, Major General Hugh A. Drum, on May 12th.

Accompanied by Colonel Wm. W. McCammon, Inspector General's Department; Colonel Thomas Osborne, G-3, Hawaiian Department, and 1st Lieut. Christian A. Clark, aide-de-camp, General Drum arrived at Ford Island at 8:00 a.m. Brigadier General Barton K. Yount, commanding the 18th Composite Wing, and his S-3, Colonel Hume Peabody, also accompanied the inspection party.

Immediately upon landing, General Drum was tendered a 13-gun salute. This was in the nature of an Aloha to the General, since he is leaving the Hawaiian Department in June.

Colonel Millard F. Harmon reported Luke Field in readiness for the inspection as he conducted General Drum and his party to the reviewing stand on the flying field. Closely massed behind him he found the khaki-clad ranks of the personnel of the Group, while behind them in a long line shimmering in the early morning sun were the giant Bombers just recently emerged from their drab camouflage of mimic warfare.

Five officers and 46 enlisted men were called from the ranks and cited in orders read by 1st Lieut. Chester P. Gilger, Group Adjutant, for meritorious duty performed during the year. General Drum then added his verbal commendation. Said he in part:

"The enlisted man normally gets very little credit for exceptional attention to duty. It was with this in mind that I initiated this citation procedure. I congratulate you, all of you."

"Pass in Review," came the command from the troop commander, Major Idwal H. Edwards, and the line of khaki swung into moving ranks. Drums and bugles furnished sprightly music for the marching troops. Platoon after platoon swung past the reviewing stand after the colors.

The ceremony was terminated by an aerial review, the planes passing overhead in close formation as a final Aloha to the Commanding General.

The personnel cited in orders for commendable performance of duty were:

Lieut. Colonel Milton O. Beebe, Chaplains Corps.

Major Phillips Melville, Air Corps.
Second Lieuts. Norman L. Callish, Cady R. Bullock and Fred C. Johnson, Air Reserve.

Master Sergeants Charles F. Gravlin, Harvey H. Hewitt, Ernest Brown, Hal F. Hays, Otto M. Rector.

Technical Sergeants John Dozier, Dan L. Brian, and John A. Vidal.

First Sergeant Everett M. Tilton;
Staff Sergeants Anton Hansen, Lloyd W. Thacker, Peter L. Milliard, Edward S. Dodson, James Robinson, Robert N. Peckham, Jean Nielsen and John J. McCarthy.

Sergeants Stanford D. Peters, Truman F. Taylor, George O. Helle (Sig. Corps), Jesse H. Howard, Eric Wagstaff, Thaddeus D. Sadler, Joseph Howard,

Corporals Walter E. Peterson, French C. Duncan, Charles E. Ralph, Edmund J. Borowski, Myles E. Houseberg and Donald C. Worley.

Privates, 1st Class, Ray A. Oliver, Paul H. Loudon, Adolar R. Buntjer, Harold L. Lemmon, Anthony S. Balent, Kenneth N. Smith, August H. Tamm and Michael Theiss.

Privates Frederick C. Back, Norman J. Kingston, Jefferson D. Johnson, Cordell C. Jones, Kenneth M. Connell, Omar F. Naugle and Robert W. Ray.

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SILENCING THE TORQUE STANDS By the Wright Field Correspondent

Your Power Plant Correspondent sometime ago mentioned the fact that an effort was being made to silence our torque stands. One stand has been completed, and preliminary tests indicate that energy and money expended have been well worth while. At a distance of some thousand yards, ordinary field noises of birds, crickets, wind, rustle of leaves, etc., drown out any torque stand noises. To date tests are not completed, since we need information on the treacherous skip distances that have put grey hairs in the head of the man who answers the letters from the public.

And why all this trouble? Well, it is primarily to enable us to operate our test engines straight through the 24 hours in a day. With perfection, the plan undoubtedly will be extended to our depots which run in our overhauled engines on their test stands.

We hope the money expended will pay for the cost of paper now used to answer complaints registered throughout the United States because propeller noises have disturbed the tranquility of the afternoon siesta at the old maids' home, aggravated the hangover of the town's local playboy, caused the hens to quit laying on Good Friday, or caused Lady Plushbottom's prized Pekingese "Tootsie" to have the jitters.

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Colonel Walter R. Weaver, Air Corps, on duty as Commanding Officer of Langley Field, Va., was promoted to the permanent rank of Colonel, to date from May 7th, 1937.

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NEW AIRPLANES FOR THE ARMY AIR CORPS

Two contracts for new airplanes, involving a total expenditure of \$13,024,203.10, were recently entered into by the War Department with aircraft manufacturers for 262 combat type.

On June 2nd, the Hon. Harry H. Woodring, Secretary of War, announced the award of a contract to the North American Aviation, Inc., Inglewood, Calif., for 85 Basic Combat airplanes and the equivalent of ten additional airplanes as spares, at a total cost of \$1,372,255. This type of airplane was recommended for procurement by the Chief of the Air Corps some time ago, for the reasons below stated, and this is the first quantity procurement of same.

With the advent of the large all-metal airplane which, although much more efficient, costs considerably more than the earlier types, an urgent need was felt in the Air Corps for an airplane with which such auxiliary training as instrument flying, aerobatics, etc., could be conducted, leaving the tactical combat airplanes free for the performance of purely tactical missions.

In addition, there are, of necessity, a considerable number of Air Corps pilots on duty away from tactical units who must maintain their flying proficiency. The Basic Combat airplane is designed to fill these needs.

Another use to which the Basic Combat airplane may be put is that of observation, it being equipped with all the necessary auxiliary equipment for that purpose. It would therefore form a reserve of observation aircraft in an emergency.

It should be understood that the incorporation of basic combat airplanes into the procurement program of the Air Corps is not with the view to curtailing either the numbers or the activities of the combat airplanes already planned for use by the General Headquarters Air Force. This type will supplement the larger and more expensive types, and since same is equipped with retractable landing gear, flaps, controllable pitch propellers, modern instruments and safety devices, the experience gained by pilots in its use will go far toward familiarizing them with the problems inherent in the handling of larger airplanes.

The North American Basic Combat airplane fills the need of this type of airplane to a very high degree and was selected after competition with other entrants in a competition conducted at the Air Corps Materiel Division, Wright Field, Dayton, Ohio.

The desired characteristics of an airplane of this type are of interest. It should attain a high speed of 190 m.p.h., or more. It should have an endurance of $3\frac{1}{2}$ hours or more, service ceiling of 18,000 feet. It should be capable of

operating from small unimproved fields and should be able to cruise at low speed for observation purposes.

The winner of the competition meets the above requirements satisfactorily. It carries a crew of two, two-way radio, all necessary instruments, landing lights, and provisions for mounting an aerial camera. It is a low wing cabin monoplane with tubular steel fabric covered fuselage, metal wings and stabilizers. It has a retractable landing gear, automatic controllable pitch propeller and flaps, and is powered by a Pratt and Whitney single row radial engine of 450 horsepower.

On June 10th, the Secretary of War announced the award to the Douglas Aircraft Company, Inc., of Santa Monica, Calif., of a contract in the sum of \$11,651,948.10 covering the purchase for use by the Army Air Corps of 177 two-engine Bombardment airplanes, together with necessary spare parts for same.

This contract is, in money value, the largest one for airplanes ever placed by the Government during a time of peace. The magnitude of the procurement is such that the Government secures a considerable price advantage, so far as the unit cost per airplane is concerned, over that obtainable under the old method of making frequent, but comparatively small, purchases.

The new Bomber contracted for was recently demonstrated to the Government at Wright Field, Dayton, Ohio, and has been found to embody distinct advances in aircraft design and engineering. While capable of carrying a substantially larger useful load than the Bombardment airplanes with which the General Headquarters Air Force is now equipped, its efficiency is not thereby diminished and it attains a high speed in excess of 225 miles per hour. Each airplane is to be equipped with two of the latest type Wright "Cyclone" aeronautical engines.

The acquisition of these Bombardment airplanes by the combat units of the Army Air Corps will necessarily result in a materially strengthened National Air Defense.

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Master Sergeant Mortimer O'Sullivan, of the 64th School Squadron, Kelly Field, Texas, retired on May 31, 1937. He entered the Service on April 30, 1908, and was assigned to the 55th Co., Coast Artillery Corps, Fort Kamehameha, Hawaii. He has ten honorable discharges with the notation, "Character: Excellent."

Master Sergeant O'Sullivan has served in the Cavalry, Quartermaster Corps, and the Air Corps.

Biographies

LIEUT. COLONEL GERALD E. BROWER

Lieut. Colonel Gerald E. Brower, Air Corps, now on duty in the Supply Division, Office of the Chief of the Air Corps, was born at Brooklyn, N.Y., August 25, 1893. He attended the Boys' High School in Brooklyn, N.Y., and after graduating from the College of Engineering, Cornell University, Ithaca, New York, in 1916, he received a commission as a second lieutenant of Field Artillery on December 1st of that year. He was promoted to 1st Lieutenant, January 26, 1917; to Captain (temporary) August 5, 1917; to Captain, April 15, 1918; to Major, August 17, 1928, and to Lieut. Colonel (temporary) June 16, 1936.

During the World War, Colonel Brower saw service in the Toul Sector and in the St. Mihiel and Meuse-Argonne offensives. He served with the Field Artillery until October, 1918, and was then detailed to the Air Corps. He was on duty as a student observer at the 2nd Corps Aeronautical School in France until January 30, 1919; was attached to the 20th Company, 4th Regiment Motor Mechanics during the month of February, 1919, and was on duty on the school staff of the 2nd Corps Aeronautical School to May 9, 1919, when he was assigned to the 1st Aero Squadron, Wiessenthurm, Germany, as aerial observer.

Upon his return to the United States, Colonel Brower, on August 29, 1919, was assigned as commanding officer of the 20th Aero Squadron at Ellington Field, Houston, Texas. On September 25, 1919, he was transferred with the 166th Aero Squadron to Kelly Field, Texas. He was Operations Officer of this organization from September 12 to October 13, 1919, and Operations Officer of the 1st Day Bombardment Group from September 30, 1919, until June of the following year.

Returning to the Field Artillery, he served as Commanding Officer of Battery A, 3rd Field Artillery, at Camp Grant, Ill., from July 1 to 16, 1920, when he rejoined the Air Service and began flying training at the Air Service Pilot School at Carlstrom Field, Arcadia, Fla. Upon the completion of his training, November 12, 1920, he was assigned to duty at Langley Field, Va., where until January 1, 1921, he served as Executive Officer of the Field Officers' School, and as Adjutant of this School from November 22, 1920, to August 18, 1921. He also served as Chief, G-1 Section, 1st Provisional Air Brigade, from May 6 to August 18, 1921. Assigned as a student at the Field Officers' School, he graduated therefrom on June 15, 1922. During the summer months of that year he

was on duty at the summer training camp at Camp Custer, Mich.

From August 12, 1922, to August 15, 1923, Colonel Brower was a student at the Air Service Engineering School at McCook Field, Dayton, Ohio. Upon his graduation from this school he remained at McCook Field as Chief of the Airplane Maintenance Section of the Engineering Division until June 30, 1926. He also served as President of the Inventions Board. Following duty as a student at the Massachusetts Institute of Technology, Cambridge, Mass., from June 26, 1926, to June 9, 1927, and temporary duty at the Boston Airport for several months, he returned to Dayton in September, 1927, for duty at the Materiel Division, Wright Field, where he served as Acting Assistant Chief Engineer to November 14, 1927; as Chief of the Special Assignments Unit to September, 1928, and as Chief of the Airplane Branch to March 28, 1930.

After commanding the 1st Pursuit Group at Selfridge Field, Mt. Clemens, Mich., from May 15, 1930, to July 9, 1932, Col. Brower was transferred to duty in the Philippines, assuming command of Clark Field and the 3rd Pursuit Squadron on October 17th. Upon the completion of his tour of duty in the Philippines, he pursued a one-year course of instruction at the Command and General Staff School at Fort Leavenworth, Kansas. His graduation from this School in June, 1936, was followed by his assignment to the Supply Division, Office of the Chief of the Air Corps.

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LIEUT. COLONEL WILLIAM H. CROM

After a lapse of 21 years, Lieut. Colonel William H. Crom, Air Corps, is slated to return soon to the Philippines for a tour of foreign service. He served in the Philippines from June, 1914, to November, 1916, as a lieutenant with the Philippine Constabulary.

Born in Gainesville, Fla., July 31, 1892, Colonel Crom attended the public schools of Florida and in 1914 graduated from the University of Florida with the degrees of Bachelor of Science in Electrical Engineering and in Mechanical Engineering. He was appointed a second lieutenant, U.S. Army, November 27, 1916, assigned to the 13th Infantry, and from December 1, 1916, to February 28, 1917, he was stationed at the Infantry School at Fort William McKinley, P.I. From March 1, 1917, to August 2, 1920, he was on duty with his regiment as company commander and garrison adjutant. He served in the Philippines from December 1, 1916, to August 13, 1918, and from April 18, 1920, to August 23, 1920. From August 14, 1918,

to April 8, 1920, he was stationed in Siberia, near Vladivostok.

Upon his return to the United States, Colonel Crom was detailed to the Air Service, and after undergoing primary flying training at March Field, Riverside, Calif., from October 12, 1920, to April 9, 1921, he was transferred to the Air Service Observation School at Post Field, Fort Sill, Okla., for advanced training. He received the rating of "Airplane Pilot," effective October 14, 1921. He also took the course of instruction at the School of Fire for Field Artillery, and upon completion of same remained at Fort Sill on duty as an instructor at the Air Service Observation School until June 16, 1922, when he was transferred to the Advanced Flying School at Kelly Field, Texas, and assigned as Senior Instructor of the Observation Department. On August 1, 1923, he assumed command of the 42nd School Squadron, in addition to his other duties. From October 11, 1923, to April 10, 1924, he performed the duties of Director of Observation, Advanced Flying School.

Transferred to Washington, D.C., Col. Crom was on duty as Assistant Chief of the Information Division, Office of the Chief of the Air Corps, to August 6, 1925. From September 1, 1925, to February 1, 1926, he was on duty as a student at the Army Industrial College, and thereafter, until July 28, 1926, he was on duty in the Industrial War Plans Division, Office of the Chief of the Air Corps, as Chief of the Requirements Section and Chief of the Facilities Section.

At Bolling Field, D.C., his next station, Colonel Crom performed at various times the duties of Commanding Officer of the 99th Observation Squadron; Commanding Officer of the 8th Division, Air Corps; Executive Officer and Commanding Officer of the field. On September 23, 1927, he was transferred to the Materiel Division, Wright Field, Dayton, Ohio, for duty in the Industrial War Plans Section. He was appointed Chief of that Section on July 1, 1928.

From September 5, 1931, to June 12, 1932, Colonel Crom was a student at the Air Corps Tactical School at Maxwell Field, Ala., and, following his graduation from this School, he remained at Maxwell Field, commanding the Air Corps Tactical School Detachment, until September 5, 1932, when he was transferred to Washington, D.C., for duty in the Office of the Assistant Secretary of War as Assistant Chief of the Commodities Division, Planning Branch. In August, 1936, he began the one-year course of instruction at the Command and General Staff School, Fort Leavenworth, Kansas, and he is slated to enter upon a tour of foreign service in the Philippines upon his graduation from this School in June, 1937.

GRADUATION AT ADVANCED FLYING SCHOOL

In connection with the graduation of the class of the class the Advanced Flying School, Kelly Field, Texas, which started training at the Primary Flying School, Randolph Field, Texas, on July 1, 1936, the first event on the program was an aerial review staged at 9:30 a.m. by the graduating students, followed by the graduating exercises at 10:45 a.m., Wednesday, June 9, 1937, in the War Department Theatre at Kelly Field. Major General James K. Parsons, U.S. Army, Commanding General of the Second Division, Fort Sam Houston, Texas; Brigadier General James E. Chaney, Commanding General of the Air Corps Training Center, and his staff, as well as the faculty of the Primary and Advanced Flying Schools, were among those expected to attend the exercises. The students from Randolph Field were scheduled to be in formation in front of the Post Operations Office to witness the review.

The program called for the delivery of the Invocation and Benediction by Major George J. McMurray, Chaplain of Randolph Field; introductory remarks by General Chaney, and the graduation address by General Parsons.

This is the 29th class to be graduated from the Air Corps Training Center under Plan B. The class reported for advanced training at Kelly Field on February 25th and actually began work on March 1, 1937. Three members of this class, Flying Cadets James B. Baker, Francis J. Black, Jr., and Victor M. Heath, will be held over for training with the next class. All of them lost time from training while absent sick, necessitating their being held over to make up this time.

The graduates are listed on page 14 of this issue of the News Letter.

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NAVIGATION TRAINING AT LANGLEY FIELD

The 2nd Bombardment Group Navigation School, operated by the 21st Reconnaissance Squadron, Langley Field, Va., started the class working on Celestial Navigation on May 6th, using both ground and practical aerial problems in the course. The class now has approximately two-thirds of their work completed. They are looking forward to one or two long flights in order to put into practice the theory learned during their course of instruction.

Captain A.Y. Smith, Air Corps, was relieved from his duties as Group Navigation Officer and Senior Instructor in the School on April 26th to participate in the Pacific Coast Maneuvers with the 49th Bombardment Squadron. First Lieut. John W. Egan, Air Corps, who recently joined the 21st Reconnaissance Squadron, was detailed as Group Navigation Officer and Senior Instructor to replace Captain Smith.

NEW PILOTS FOR THE ARMY AIR CORPS

Of the class of 132 students (15 officers and 117 Flying Cadets) entering the Air Corps Training Center on July 1, 1936, 62 students (10 officers and 52 Flying Cadets) comprising 47% of the original entering class, successfully completed the Primary and Basic courses at the Primary Flying School at Randolph Field, Texas, and the advanced course at the Advanced Flying School at Kelly Field, Texas, and graduated on June 9, 1937.

Three Flying Cadets of this class who, because of illness or other reasons, were unable to complete the course, were held over for the next class at the Advanced Flying School.

An officer from the Mexican Navy, Lieut. Lorenzo Egurrola, and a member of the Philippine Constabulary, Jesus A. Villamor, were additional members of the class, both graduating, the first named specializing in Attack Aviation and the last named in Pursuit Aviation.

The members of the graduating class are listed below, as follows:

AIR CORPS OFFICERS

Lieut. Colonels

Raymond E. O'Neill San Francisco, Calif.
Laurence F. Stone Pocatello, Idaho

Majors

Warner B. Gates Evanston, Ill.
George G. Lundberg Olean, N.Y.
Walter J. Reed Scarsdale, N. Y.

Captains

Howard H. Couch Monrovia, Calif.
James F. Early Worcester, Mass.
John P. Kirkendall Dallas, Pa.

OFFICERS OF OTHER BRANCHES

1st Lt. Chas. E. Wheatley, Cav. Portland, Me.
2nd Lt. Chas. B. Winkle, Inf. Seaside, Oregon

FLYING CADETS

Allison, John R.	P	Gainesville, Fla.
Aynesworth, Horace D.	A	Alpine, Texas
Baker, Ancil D.	P	Moscow, Idaho
Bastin, Henley V., Jr.	O	Anchorage, Ky.
Bayse, William E.	P	Independence, Mo.
Blakey, George A.	P	San Antonio, Texas
Bradley, Follett, Jr.	A	Langley Field, Va.
Brown, Thomas D.	O	Spokane, Wash.
Butner, Thomas L.	P	Roanoke, Va.
Bywater, Murray A.	A	Salt Lake City, Utah
Carr, George R.	O	Pocatello, Idaho
Chickering, Edwin S.	A	Temple, Texas
Clancy, Charles A.	A	San Diego, Calif.
Cobb, Raymond L.	A	Brownwood, Texas
Countway, Lewis E.	O	Quincy, Mass.
Crowder, Murray W., Jr.	O	Joshua, Texas
Culbertson, Allman T.	A	Dansville, M.Y.
Curtice, Raymond L.	A	Concord, N.H.
Davis, Waymond A.	A	Lubbock, Texas
Fallows, Ronald F.	P	Mason City, Iowa
Fiegel, Leland G.	P	Rochester, Minn.
Freeman, Julien W.	A	Clinton, S.C.
Godman, Henry C.	P	Palo Alto, Calif.
Greening, Charles R.	P	Tacoma, Wash.
Hardeman, Milton L.	P	Athens, Ga.
Hudson, Guy L.	O	Los Angeles, Calif.
Kaufman, Donald H.	P	Los Angeles, Calif.
Kegelman, Charles C.	A	El Reno, Okla.
Kellond, Arthur W.	A	San Antonio, Texas

Lorenz, Richard F.	A	Chicago, Ill.
MacKey, Homer M.	P	Lansing, Mich.
Marshall, John R.	O	Montgomery, Ala.
Means, Howard M.	O	Kane, Pa.
Montgomery, Guilford R.	P	Sidney, Neb.
Moore, Frederick L.	A	Fillmore, Calif.
Morris, Joseph A.	P	Alva, Wyo.
Payne, John H.	A	Austin, Texas
Rau, Harold J.	P	Shavertown, Pa.
Reed, James O.	P	Eugene, Ore.
Robinson, George L.	A	Corona, Calif.
Russell, Barton M.	P	San Diego, Calif.
Sewart, Harold Y.	O	Murfreesboro, Tenn.
Sprague, Wilbur B.	P	Manhasset, N.Y.
Stark, William R.	A	Starkville, Miss.
Stunkard, McClellan F., Jr.	O	Governors Is., N.Y.
Suiter, Theodore A.	A	Spearfish, S.D.
Thomas, Morris E.	O	St. Petersburg, Fla.
Thompson, Frank K.	P	Columbus, Ohio
Tikofski, Adolph E.	O	Walpole, Mass.
Viccellio, Henry	A	Chatham, Va.
Watson, Ansley	P	New Ycrk, N.Y.
Wilson, Delmer E.	A	Ephrata, Wash.

Note: All of the officer graduates specialized in Observation Aviation, while the Flying Cadets specialized in the branch of Combat Aviation as indicated by the letter opposite their names, viz: A-Attack; O-Observation and P-Pursuit.

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ARMY AIR CORPS DEPOT AT SACRAMENTO

The Hon. Harry H. Woodring, Secretary of War, announced on June 8th that contracts had been let for over half of the work required to complete the new Air Corps Depot at Sacramento, Calif. This Air Corps Depot is being constructed to replace the temporary war time structure, which is now in use by the Army at Rockwell Field, San Diego, Calif. The Sacramento Air Depot will be completed and in operation by December, 1938. Rockwell Field has been turned over to the Navy by Executive Order, and it is necessary for the Army to evacuate the buildings at an early date, in order that the development of that station by the Navy may proceed.

The runway at the new depot is approximately one mile in length, and the large shop building covers some 17 acres. This depot will be sufficient to provide maintenance facilities for the Air Corps now on the West Coast and also for organizations in overseas territory. As constructed, it is susceptible of considerable expansion in the event that necessary Air Corps organizations on the West Coast are increased.

The completion of this project will materially enhance the National Defense by providing a permanent base in the middle of the Pacific Coast area.

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First Sergeant Otto Steblein, of the 64th School Squadron, Kelly Field, Texas, retired on May 31st. He entered the service September 12, 1899, and was assigned to the 73th Infantry Volunteers, Philippine Dept. He has ten honorable discharges with the notation, "Character: Excellent."

RESERVE COMMISSIONS FOR FLYING CADETS

The following-named Flying Cadets, members of Class No. 25-B, who graduated from the Advanced Flying School, Kelly Field, Texas, on June 17, 1936, and who completed their year of training with an Air Corps tactical unit, have been recommended by the Chief of the Air Corps for commission as second lieutenants in the Air Reserve:

Barksdale Field, Shreveport, La.
 Buller, Howard Leavelle Stanford Univ, Calif.
 Cullerton, Edward Francis Butte, Mont.
 Ferguson, James Whittier, Calif.
 Griffith, Willard Dudley Spokane, Wash.
 Osborn, Roy William Sanborn, N.D.
 Whitfield, Harvey F. Houston, Texas
 Brooks Field, San Antonio, Texas
 Flolo, Russell LeRoy Aberdeen, S.D.
 Martin, Ray Hamilton Austin, Texas
 Pechuls, John Allison Pullman, Wash.
 Schultz, Herbert Donald, Jr. Alameda, Calif.
 Thomas, Jack Lubbock, Texas
 Zehrunge, Paul Wietzel Dayton, Ohio
 March Field, Riverside, Calif.
 Converse, Lawrence Floyd Glendora, Calif.
 Hardy, Robert Franklin Flint, Mich.
 Ketcham, Edward William Madison, S.D.
 Mears, Frank Henry, Jr. Monrovia, Calif.
 Nevitt, William Renwick Houston, Texas
 Reynolds, John Norton, Jr. Los Angeles, Calif.
 Miller, William Warren San Diego, Calif.
 Langley Field, Hampton, Va.
 Bledsoe, James Lee Los Angeles, Calif.
 Curry, William Lewis Raleigh, N.C.
 Eyre, Lloyd Los Angeles, Calif.
 Jones, James Marion Temple, Texas
 Russell, Clyde Raymond Chandler, Ariz.
 Sluder, Chester Lee San Antonio, Texas
 Hamilton Field, San Rafael, Calif.
 Bronson, Howard Franklin, Jr. Harrisburg, Pa.
 Faulkner, Ted Sinclair Seattle, Wash.
 Powers, Robert Becke Seattle, Wash.
 Ridings, Donald Ellis Moscow, Idaho
 Warner, Jo Kyle Berkeley, Calif.
 Sandegren, Thomas Eastman Tacoma, Wash.
 Mitchel Field, L.I., New York
 Beardsley, Melville W. Kansas City, Mo.
 Catlin, Ralph W. Bay City, Mich.
 Chapman, Charles T., Jr. Corpus Christi, Texas
 Hampton, Thomas K. San Marino, Calif.
 Osher, Norman C. Graettinger, Iowa
 Peterson, Homer F. Moscow, Idaho
 Rethorst, William Piedmont, Calif.
 Selfridge Field, Mt. Clemens, Mich.
 Burke, Kevin Buffalo, N.Y.
 Fausel, Robert Wilton Louisville, Ky.
 Haws, Jesse William Provo, Utah
 Helmick, Paul Franklin Corvallis, Ore.
 McCloskey, Richard Dale Lancaster, Pa.
 Moore, Andrew Dale Worthington, Minn.
 Saehlenou, Hadley Vincent Hollywood, Calif.

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KELLY FIELD HOST TO RESERVE OFFICERS

Reserve officers attending the National Convention of Reserve Officers Association were given a demonstration of night flying at 8:00 p.m., on Monday, May 23rd. The program was as follows:
 8:00- Pursuit Demonstration - 12 P-12's.
 8:20 Formation take-off, 8:00 p.m.

Formation over airdrome 8:05 - 8:15.
 Landings by elements 8:15 - 8:20.

8:15- Attack Demonstration, 6 A-12's.
 8:40 Formation take-off, 8:15.
 Formation over airdrome, 8:20-8:25.
 Landing of one element in formation, 8:27.
 Individual flare landings by three airplanes, 8:27-8:40.
 8:40- Bombardment and Observation Demonstration, 9 B-4's and 6 O-25's.
 9:25 Formation take-offs, 8:40 - 8:45.
 Observation airplane locates target on airdrome at 8:45 and signals with signal flares. Six Observation airplanes then keep target illuminated for eight minutes.
 Bombardment flights of 3 airplanes each simulate attack on target.
 Individual landings by Observation airplanes, using wing lights only, 9:05 - 9:15.
 Formation landings by elements of Bombardment airplanes, 9:15 - 9:25.

A public address system was installed in front of Post Operations Office. A demonstration of radio control of airplanes in the air from the ground was given, and this system was used to explain maneuvers to spectators. An airplane of each type was parked near the Operations Office in the area lighted by floodlights. A demonstration of the use of signal light gun was given.

The following letter of appreciation from Mr. J.H. Lapham, an official of the San Antonio Chapter of the Reserve Officers Association, is quoted.

May 27, 1937.

Brigadier General J.E. Chaney,
 Randolph Field, Texas.
 Dear General Chaney:

It is almost needless to tell you that the demonstration which was accorded by the Air Corps Training Center to the visiting members of the Reserve Officers Association was deeply appreciated.

I feel that very few of them had ever witnessed the type of night flying that was exhibited by your Kelly Field students, and I feel sure that the demonstration of training and facilities at Randolph were an eye-opener to all of us.

One thing that impressed me, and I am sure must have likewise impressed everyone else, was the high type of personnel under your command. Seldom have I met a group of officers so kind, courteous and considerate to strangers within their gates.

While the visits made to both Kelly and Randolph were naturally rather short, I am sure that everyone has gone away with a very lasting, definite impression of the efficiency of the Training Center and the keen type of individuals who are turning out our Army pilots.

Many thanks again for your kindness.

Sincerely yours,
 J.H. Lapham."

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THE PHILIPPINE ARMY AIR CORPS

On May 1, 1937, the Philippine Army Air Corps completed its first year of operation, its activities being mainly confined to student flying training. First Lieut. W. L. Lee, Air Corps, Chief of the Philippine Army Air Corps, recently submitted a brief report covering the operations of this one-year-old infant, and it discloses some very interesting statistics.

Equipped with only three PT-1 Training planes and one C-1 Transport, the total flying time of these four planes for the year's training was 1869:50 hours (7,797 landings). The C-1 Transport is credited with 200:05 hours and 178 landings; one PT-1 with 590:10 hours and 3,349 landings; another with 573 hours and 2,427 landings, and the third with 506:35 hours and 1,843 landings. There were flying operations on 288 of the 365 days of the year, and of the 77 days when the planes were idle, Old Jupiter Pluvius halted proceedings on eighteen different occasions, one entire day was devoted to maintenance, and Sundays and holidays were responsible for a closed shop on 58 days.

Of the 245 applicants for flying training (47 officers, 7 enlisted men and 191 civilians) who were called for physical examination, a total of 170 responded (46 officers, 7 enlisted men and 116 civilians), and of these 59 qualified, namely, 32 officers and 27 civilians. Of those found physically qualified, 41 actually started flying training, the remaining 18 being held in reserve for classes which will be started in the near future. Before the end of the year the original class of 41 students dwindled to but 13, the lack of flying ability being the cause for the elimination of 24 of the students. One student was eliminated because of physical defects, two resigned and one was appointed a Flying Cadet in the Air Corps who, by the way, graduated from the Air Corps Advanced Flying School, Kelly Field, on June 9th, specializing in Pursuit Aviation.

The 13 students who remained in training throughout the year accumulated a total dual flying time of 631:10 hours; a total solo flying time of 780 hours and a grand total of 1411:10 hours.

During the year's training there was one semi-major crash and one of a minor nature. There were no fatalities or serious injuries, and the worst that could be said in this connection is that one student received a few cuts.

Included in the tabulation of flying time by personnel of the Philippine Army Air Corps are the names of Lieut. Lee with 403 hours, and Lieut. H.A. Parker, with 667:40 hours. It is presumed that

these two young Air Corps officers, among their other duties, served in the capacity of flying instructor, although it is not so stated in the report.

If one were to express the opinion that these two Army airmen performed a pretty fine job in their first year of endeavor to place the Philippine Army Air Corps on its feet, there would be a nod of approval from all sides.

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BIG SHIPS COVER LOTS OF TERRITORY

In a routine introductory cruise over the industrial heart of the nation, on May 16th, last, the Langley Field Correspondent reports that four gigantic "flying fortresses," led by Lieut. Colonel Robert Olds, Commanding the 2nd Bombardment Group of the GHQ Air Force, from Langley Field, Va., covered fifteen States in eleven hours.

The flight departed from Langley Field at 6:30 a.m., and flew over Washington, D.C.; Baltimore, Md.; Philadelphia, Pa.; Trenton, N.J.; New York City; Hartford, Conn.; Providence, R.I.; Boston, Mass.; Concord, N.H.; Portland, Maine; Augusta, Maine; Montpelier, Vermont; Albany, Syracuse, Rochester and Buffalo, New York; Erie, Pa.; Cleveland, Ohio; Pittsburgh, Pa.; Richmond, Va., and returned to Langley Field at 5:30 p.m.

The planes were commanded by Lieut. Colonel Olds, Major Meloy, Captain O'Connor and 1st Lieut. Travis. The copilots were Major Giles, Captain McReynolds, 1st Lieut. Lauer and 2nd Lieut. Cochrane. The navigators were 1st Lieuts. Miller, Higgins, LeMay and Glantzberg.

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GRADUATIONS FROM RANDOLPH FIELD

The Air Corps Primary Flying School at Randolph Field, Texas, will graduate ninety students on June 18th. These students will start their advanced training at Kelly Field, Texas, the first week in July. Comprising this class is one Air Corps officer (Major Lester T. Miller), two officers from other arms of the service, 37 graduates from the class of 1936 of the U.S. Military Academy, and 50 Flying Cadets.

This class started training at Randolph Field in October, 1936, and actually 170 students started flying. Eleven of these students are being held over until the next class, and there has been but one fatality.

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The GHQ Air Force Maneuvers (Continued from Page 6).

and March Fields' Air Bases, to provide training for joint work between Pursuit and anti-aircraft, and thoroughly to

check up on existing weak spots in the Air Corps. And, quoting General Andrews once more, these tests have shown that every unit involved throughout the entire campaign worked like clockwork - that we are at present undermanned and under-equipped; that additional air-dromes are direly needed.

The losses during the maneuvers culminated in four planes, two transports and two Pursuit, but no lives. This is another proof of the high standard maintained by the Air Corps.

Major General George S. Simonds acted as official observer and personal representative of the Secretary of War, with Major General Oscar Westover and Brigadier General Walter Krueger acting as official observers for the War Department. In command of the GHQ exercises was Major General Frank M. Andrews. Official visitors and observers during the exercises were the following:

Colonel H.J. Knerr, Chief of Staff;
Colonel Follette Bradley, Assistant Chief of Staff, GHQ Air Force;
Colonel Herbert A. Dargue, Assistant Commandant, Air Corps Tactical School;
Colonel Jacob E. Fickel, Air Officer of the 9th Corps Area;
Lieut. Colonel Charles T. Phillips, Asst. G-4, War Department;
Major St. Clair Streett, War Plans Division, War Department Gen. Staff;
Major L.P. Hickey, Assistant Chief of Staff, G-1;
Major J.P. Hodges, Assistant Chief of Staff, G-2;
Major C.C. Chauncey, Assistant Chief of Staff, G-3;
Lieut. Colonel J.T. McNarney, Assistant Chief of Staff, G-4;
Lieut. Colonel Edward Montgomery, CWS, Chemical Officer;
Colonel W.G. Kilner, Inspector;
Major W.W. Dick, AGD, Adjutant General;
Major E.C. Whitehead, Asst. Inspector;
Lieut. Colonel R.L. Maxwell, O.D., Ordnance Officer;
Lieut. Colonel C.C. Drake, QMC, Quartermaster;
Lieut. Colonel C.W. Lewis, SC, Signal Officer;
Colonel W.E. Cooper, MC, Surgeon.
Captain Luke Smith, Asst. Executive, Office Chief of the Air Corps, and many others.

March Field was glad to see these officers and hopes to be able to play host again to them sometime in the near future.

It is understood that the exercises were considered a complete success.

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ECHOES FROM THE WEST COAST MANEUVERS

35th Pursuit Squadron: After three weeks of basking under California's sun-

ny skies, the 35th Pursuit desert rats returned to their home range (Langley Field) with saddle warts and hairy ears. As the outer layer of Mojave dust gradually washes away we begin to see, here and there, traces of some pretty good sun tan.

In spite of the tedious hours of sitting, tooling the old PB covered wagons across the continent and back proved to be a highly interesting and educational experience. The ships performed beautifully, and provided little difficulty of maintenance while in the field.

The defense of that portion of the dry lake bed designated as the Los Angeles area turned out to be a tough assignment for the Pursuit. The Bombers poured in from all directions and dribbled their eggs on the target, whether or not they were intercepted and "shot down" by the Pursuit. And as if that wasn't enough, - "Gas! Here comes the damattack again. Phew! That's the real thing this time. The gas masks made poor bed fellows, but were certainly convenient to have within reach.

36th Pursuit Squadron: Early this week our flight returned from the siege at Muroc Dry Lake. Reports on our solitary confinement in the wastelands of sunny California vary greatly, but the daily routine definitely included individual parboiling under a desert sun, unit freezing under an Arctic moon, and passive group submission to lingering attacks of tear gas at all hours of the day and night.

Both the trip out from Langley Field and the trip back were enjoyed by all, and the weather confronted rendered much valuable experience to the newer members of the Squadron.

Hq. and Hq. Squadron, 8th Pursuit Group: The wind-blown, dust-laden, tear-gassed personnel and airplanes of this organization returned to the "fold" (Langley Field) from the GHQ Concentration on Monday, the 24th, after spending three weeks enroute to and from, and engaging in the GHQ Air Force Concentration and Maneuvers. It has been reported that a good time was had by all. As one man expressed it, he "gassed" everyone enjoyed the trip and was one maneuver nearer "M" day. A period of inspection and engine changing following the maneuvers will keep the hangar crew out of mischief for a while.

37th Attack Squadron: At 7:00 a.m., Monday morning, May 3rd, the seven A-17 airplanes comprising the 37th Attack Squadron took off from Langley Field for Barksdale Field, where they were attached to the 13th Attack Squadron to participate in the annual GHQ Maneuvers at Delano, Calif. At 3:00 a.m. Tuesday, the Squadron left Barksdale Field for the West Coast, arriving at Delano at 3:45 that afternoon, after stopping at

V-7369, A.C.

Midland, Texas, and Tucson, Arizona, for gas. The well organized camp at Delano was a welcome sight to the combat crews after their tedious 1500-mile trip across the country.

The period from May 5th to 9th was devoted to practice and orientation flights within a 200-mile radius of Delano. On these flights some of the pilots saw for the first time the beautiful valley of San Joaquin and the snow-covered peaks of the Sierra Nevada Mountains.

On May 10th, the GHQ war games started in earnest. The 13th Attack Squadron, to which the 37th was attached, was assigned the chemical missions, which consisted of contaminating the Pursuit airdrome and the anti-aircraft emplacements at Muroc Dry Lake, about 100 miles east of Delano.

After the war games were officially over on Friday afternoon, May 21st, Lieut. Berquist, who played a prominent part in "winning the war" for the 3rd Attack Group, engaged himself in a private and more permanent war by forfeiting his bachelor freedom forever to Miss Alice Porterfield, of Berkeley, Calif. The ceremony was performed by Chaplain Martin, of March Field, in the officers' mess tent at Delano. The bride was attended by Miss Mildred Blake and Mrs. Porterfield.

Leaving Delano on Sunday morning, May 23rd, the 37th Squadron started the long journey home, stopping overnight at El Paso, Texas, and Maxwell Field, Ala., and arriving at Langley Field at 2:00 p.m., May 25th.

2nd Bombardment Group: All airplanes of this Group returned to Langley Field from the West Coast Concentration Exercises with the exception of 2nd Lieut. J.B. Stanley, who had motor trouble at Winslow, Arizona, necessitating his delay at that city to change engines.

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Graduations from A.C. Tactical School

Graduation exercises at the Air Corps Tactical School, Maxwell Field, Ala., were held on June 1st.

Following the invocation, Brigadier General Henry C. Pratt, U.S. Army, the Commandant of the Tactical School, introduced Major General Oscar Westover, Chief of the Air Corps, who delivered an address and presented the certificates. The benediction was said by Chaplain Wm. L. Cooper.

Following is the list of graduates:

Lieut. Colonels

Wm. N. Porter, Chemical Warfare Service
Lloyd N. Keesling, Air Corps
David N.W. Grant, Medical Corps.

Majors

Wm. E. Chambers, Infantry
Tom C. Rivers, Signal Corps
Morril Ross, Field Artillery
John E. Dahlquist, Infantry

Hugh N. Merrick, Coast Artillery Corps
Alden H. Waitt, Chemical Warfare Service

Majors, Air Corps

Clyde V. Pinter	Robert V. Ignico
Shiras A. Blair	Malcolm S. Lawton
Ray A. Dunn	James M. Gillespie
Harold H. George	Fred'k M. Hopkins, Jr.
Harlan W. Holden	George P. Tourtellot
Frank D. Hackett	Orvil A. Anderson
Ulysses G. Jones	Wallace G. Smith
Edward D. Jones	Paul L. Williams
Bob E. Nowland	George W. Polk, Jr.
Bernard T. Castor	John W. Monahan
James D. Givens	John A. Laird, Jr.
Wm. W. Welsh	Harold A. Bartron
Robert T. Zane	

Captains, Air Corps

David G. Lingle	David M. Schlatter
Charles Backes	Earle E. Partridge
Lawrence J. Carr	Joe L. Loutzenheiser
John F. McBlain	Robert W. Harper
James M. Bevans	W.R. Wolfenbarger
Donald F. Fritch	Joseph Smith
Edmund C. Lynch	John K. Nissley
Wallace E. Whitson	Uzal G. Ent
John R. Hawkins	James S. Stowell
Kirtley J. Gregg	Earl W. Barnes
Alva L. Harvey	Yantis H. Taylor
Clinton W. Davies	

Officers, other branches

Capt. Henry L. Kinnison, Jr., Cavalry
Hayne D. Boyden, Marine Corps (Capt)
Capt. William O. Brice, Marine Corps
Capt. Vernon E. Megee, Marine Corps
Lieut. Elton C. Parker, U.S. Navy

1st Lieuts. Air Corps

Fay O. Dice	George McCoy, Jr.
Bud J. Peaslee	Joseph C. Hopkins
Russell E. Wilson	Frank H. Robinson
Frank F. Everest, Jr.	Wm. A.R. Robertson

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PROMOTION OF 2ND LIEUTENANTS

The following-named 2nd Lieutenants of the Air Corps were promoted to 1st Lieutenants, with rank from June 12, 1937:

John B. Gary	Hudson H. Upham
Paul C. Ashworth	Frank C. Norvell
Curtis D. Sluman	Paul Burlingame, Jr.
Byron E. Brugge	Wilson H. Neal
William S. Stone	Elvin S. Ligon, Jr.
George B. Dany	Charles B. Winkle
L.S. Moseley, Jr.	Herbert M. Baker, Jr.
Wm. J. Holzappel, Jr.	John M. Hutchison
Gene H. Tibbets	Arno H. Luehman
Paul T. Hanley	Raymond J. Reeves
Jack E. Shuck	William H. Wise
John deP. T. Hills	Richard A. Legg
Wm. M. Canterbury	Harvey T. Alness
Jerome E. Blair, 2d	Albert T. Wilson, Jr.
Edward Flanck	John W. White
William M. Gross	Stanley J. Donovan
Dale O. Smith	

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Major Eugen G. Reinartz, Medical Corps, on duty as Flight Surgeon at Chanute Field, Rantoul, Ill., is under orders to proceed about October 20th, next, for duty in Hawaiian Department.

NOTES FROM THE WASHINGTON OFFICE

General Westover, Chief of the Air Corps, visited Randolph Field, Texas, enroute to Washington from the Maneuvers at Maroc Dry Lake, Calif. On June 1st he attended the graduation exercises at the Air Corps Tactical School and addressed the graduating class, following which he made a trip to Milwaukee, Wis.

On June 12th he attended the graduation exercises at the U.S. Military Academy, West Point, N.Y., his son, Charles E. Westover, being a member of the graduating class.

Brigadier General Henry H. Arnold, Assistant Chief of the Air Corps, attended the recent graduation exercises at West Point, where, incidentally, the 30th Reunion of his class was held.

Recent visitors to the Chief's Office were Lieut. Colonel Junius W. Jones, Commanding Officer of Chanute Field, Ill., during the course of a training flight; Major Austin W. Martenstein, from Maxwell Field, Ala.; Major Merrick G. Estabrook, Jr., from Wright Field, while on a navigation flight to Bolling Field; Major Ray A. Dunn, from Maxwell Field, while on leave; Lieut. Colonel Carl Spatz, from Langley Field, during the course of a navigation flight; 1st Lieut. George W. Mundy, from Barksdale Field, La., while on a navigation flight; 1st Lieut. Floyd B. Wood, student at the Massachusetts Institute of Technology, Cambridge, Mass., while on a navigation flight; Brigadier General Henry C. Pratt and 1st Lieut. Dwight B. Schanney from Maxwell Field, for conference; 1st Lieuts. Robert D. Johnston and George W. Hansen, the former from March Field and the latter from Maxwell Field.

Colonel William C. McChord returned June 10th from leave of absence.

Captain Francis H. Vanderwerker, of the Judge Advocate General's Department, stationed at Wright Field, Ohio, arrived June 7th for temporary duty.

Lieut. Colonel Michael F. Davis returned June 2nd from leave of absence, as did Captain Donald F. Stace the following day.

Major William B. Souza returned June 7th from a navigation flight to Mitchel Field, N.Y.

Major Karl S. Axtater departed June 7th on a navigation flight to Salt Lake City, Utah.

Lieut. Colonel William E. Lynd returned from a navigation flight to the West Coast on June 5th and left on the 7th on leave of absence prior to reporting for duty as a student at the Naval War College, Newport, R.I.

Captain James B. Jordan returned May 30th from a navigation flight to Augusta, Maine.

Captain James W. Spry returned May 31st from a technical inspection trip.

Major James A. Mollison departed June 11th on a navigation flight to Maxwell Field, Ala.

Major Edward M. Powers, from Wright Field, Ohio, reported on June 1st for temporary duty in the Chief's Office.

Captain Evers Abbey returned from five days' leave of absence, during the course of which he visited the U.S. Military Academy, West Point, N.Y., where his son just concluded his plebe year with a high standing.

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WAR DEPARTMENT ORDERS
Changes of Station

To Washington, D.C.: 1st Lieut. Robert M. Losay, for duty in Office of the Chief of the Air Corps, upon completion of present course of instruction at California Institute of Technology, Pasadena, Calif.

To Wright Field, Ohio: Major John P. Richter from San Antonio Air Depot, Duncan Field, Texas; Captain Edward H. White, upon completion of present course of instruction at Harvard School of Business Administration, Cambridge, Mass.

To San Antonio, Texas: Captain Nathan F. Twining, upon completion of present course of instruction at Command and General Staff School, Fort Leavenworth, Kansas, for duty as Air Corps Technical Supervisor. Previous orders in his case revoked.

To Panama Canal Department: Major Leonidas Koontz, from duty as Executive Officer, Primary Flying School, Randolph Field, Texas.

To Hawaiian Department: 1st Lieut. John J. Keough, from Chanute Field, Ill.

To Randolph Field, Texas: 1st Lieut. Thomas C. Morgan, from Brooks Field, Texas.

To Chanute Field, Ill.: 1st Lieut. James Mck. Thompson, from Fort Riley, Kansas, for duty as student in 1937-1938 Communications Course at Air Corps Technical School.

Orders Revoked

Assignment of 1st Lieut. Hilbert F. Muentner, Randolph Field, Texas, to duty as student at California Institute of Technology, Pasadena, Calif.

Extended Active Duty for Reserve Officers

2nd Lieut. Leonard Erickson, San Francisco, Calif., to Fort Lewis, Wash., to June 14, 1940.

2nd Lieut. Irvine Alfred Rendle, Rawlins, Wyo., to March Field, Calif., to June 14, 1940.

2nd Lieut. John Franklin Biggerstaff, Wabash, Ind., to Langley Field, Va., to June 15, 1939.

2nd Lieut. Lawrence Karl Welch, Belleville, Ill., to Post Field, Okla., to May 4, 1940.

2nd Lieut. Richard Powers Schumacher, Los Angeles, now on duty in Hawaii, duty extended to June 30, 1939.

Transfers

1st Lieut. Charles F. Wheatley, Jr., Cavalry, to the Air Corps, April 3, 1937, and to proceed from Advanced Flying School, Kelly Field, to Hawaiian Department, for duty with Air Corps.

2nd Lieut. Charles E. Winkle, Infantry, to the Air Corps, April 10, 1937, and to proceed from Advanced Flying School, Kelly Field, to Panama Canal Department for duty with Air Corps.

2nd Lieut. John G. Benner, Air Corps, from Selfridge Field, Mich., to the Field Artillery, April 21, 1937, and to station at Fort Knox, Ky., with 68th Field Artillery (Mechanized).

PROGRESS ON CONSTRUCTION OF HICKAM FIELD

An article by Lieut. J.H. Veal, Quartermaster Corps, in a recent issue of the Honolulu ADVERTISER, states that approximately one year has elapsed since construction activities were started at Hickam Field, during which the village of Watertown and Puuloa camp have been salvaged, the cane fields destroyed, and a great many of the algaroba trees have been cut and burned. The area as a whole bears little resemblance to its former self.

Contracts amounting to \$2,412,829 have been let, covering the following important projects: clearing of site, making core borings, installation of 71,000 feet of water line, two and one-half miles of railroad, 15 miles of roads, four double hangars, dock and boat house, magazines, 267,000 square yards, or 55 acres of paved landing mat, eight miles of sewer line, wing operation building, gate house and fence, and a radio building. In addition to these projects, the Army Signal Corps is installing a complete telephone system at a cost of approximately \$100,000.

Proposals have been asked for the installation of an electric distribution system, the construction of additional railroad and roads, and the sealing of artesian wells, and contracts on these proposals will be let within the next 30 days.

The nursery, which was developed to furnish the material for landscaping, has established approximately 200,000 trees and shrubs, of which about 1,750 have been planted along the streets and in parks.

To date \$4,300,000 has been allotted for this project, and it is expected that approximately \$3,250,000 more will be available on July 1st of this year.

With this money it is planned to complete that portion of the field which will accommodate an Air Corps Group, which is one-half of the field's ultimate capacity.

In order to accommodate a Group, the following projects, in addition to those already mentioned, must be completed: a gas distribution system, paved aprons and additional landing mat, sewage disposal plant, night lighting system, gasoline storage system, five barracks buildings, quartermaster warehouse, six field officers' quarters, 33 company officers' quarters, 42 noncommissioned officers' quarters, additional grading and the top surface on all roads. Plans and specifications for many of these projects have already been prepared and will be advertised as soon as the money is available.

It is difficult to estimate the benefits a community derives from a large construction project of this nature. However, an idea of the large quantity of materials needed, most of which will be purchased through local dealers, may be obtained from the following estimate:

Concrete, 200,000 cubic yards; roads, 20 miles; sidewalks, 30 miles; roofing, sufficient to cover 25 city blocks; pipe line for water, 55,000 feet; underground electric cable, 90 wire miles; lumber, 8,000,000 feet; sewer line, 75,800 feet.

Several hundred local men have had steady employment for the past year, and at the present

time there are about 400 directly employed, with a monthly payroll of over \$30,000. At the peak of construction, it is expected that some 2,000 men will be directly employed, and the monthly payroll will be close to \$200,000.

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FLYING TRAINING FOR FILIPINO OFFICERS

Four young Filipino officers recently left on the U.S. Army Transport GRANT for the United States, where they will report at Randolph Field, Texas, for flying training beginning with the July class, viz: Lieuts. Eustacio D. Orobia, Isidro J. Paredes, Andres O. Cruz and Ramon M. Zosa.

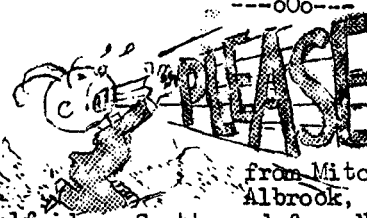
These officers have had considerable flying training in Manila, and it is the belief of the U.S. Army Air Corps officers on duty with the Philippine Army Air Corps, who have instructed these boys, that they have a very good chance of completing the course at Randolph Field. All four have over 100 hours of flying time, all of which is on the PT-1's.

This makes a total of six Philippine Army Air Corps officers now on duty in the States. One graduated from Kelly Field last October in Observation Aviation and is now at Chanute Field pursuing the course in Communications at the Air Corps Technical School. He will graduate this June and return to Manila to assist in the development of the Philippine Army Air Corps. Another one is now at Kelly Field, taking Pursuit Aviation, and will graduate in June, following which he will be sent to Selfridge Field, Mich., for two months' temporary duty, and then go to Chanute Field for a course in Aerial Photography.

Authority has been obtained from the U.S. War Department to send four student fliers to Randolph Field in March, 1938, and four in March, 1939. Authority has also been obtained to send eight enlisted men to Chanute Field this fall; eight in the fall of 1938 and eight in the fall of 1939. Eight enlisted men have already been graduated from Chanute Field and are now on duty with the Philippine Army Air Corps.

If all men sent to the States successfully complete the courses, the Philippine Army Air Corps will have 32 enlisted graduates from Chanute Field and 14 officer graduates from the flying schools. The Chief of the Philippine Army Air Corps, 1st Lieut. W.L. Lee, Air Corps, expresses the hope that authority may be obtained to send all the flying school graduates to Chanute Field to pursue courses thereat after their graduation from Kelly Field.

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We should like to hear from Wheeler, Patterson and Pope Fields, and more often from Mitchel, March, France, Albrook, Clark, Nichols, Selfridge, Scott, and from National Guard Aviation activities, as well as Air Corps Reserve activities.

NOTES FROM AIR CORPS FIELDS

Langley Field, Va., June 5th.

2nd Bombardment Group: Lieut. Colonel Robert Olds, Major Barney M. Giles, 1st Lieut. Edwin L. Tucker and a crew of three enlisted men departed for the Boeing Aircraft Factory, Seattle, Wash., to secure and ferry another type Y1B-17 airplane to this Group.

20th Bombardment Squadron: 1st Lieut. Neil B. Harding, Air Corps, reported to the Squadron on May 17th from France Field, Canal Zone. 1st Lieut. John R. Sutherland departed May 15th. He is under orders for duty at Mitchel Field and the Hawaiian Department.

49th Bombardment Squadron: Enlisted men recently promoted were Staff Sgt. Walter D. Harris to 1st Sgt.; Sgt. Sanford C. Stroop to Staff Sgt.; Corporal Lewis Harnevious to Sgt.; Pvt. Garfield T. Sticknell to Corp.; Pvt. Harry H. Itnyer to AM, 2nd Cl.; Corp. Lewis D. Smith to AM, 2nd Cl.; Sgt. William D. Hombeck to AM, 1st Cl.; Pvt. Joseph T. Little to AM, 1st Cl.

21st Reconnaissance Squadron: Several celestial navigation missions were completed during the month by the Navigation Unit of this organization, using precomputed altitude curves to determine position also for landfalls.

The present class of four officers will complete their course about June 15th. Six more officers will be assigned to the new class.

Major Hugh C. Downey made one trip as navigator, with 1st Lieut. Robert F. Travis in a Y1B-17 to Jacksonville and Atlanta and return. Several fixes were made during the night with a mean error of some 15 miles, which is considered sufficiently close for aerial celestial navigation.

Captain James M. Fitzmaurice reported for duty on May 24th from Kelly Field, Texas.

Hq. and Hq. Squadron, 8th Pursuit Group: Corporal Edward Eyster and Private, 1st Class, Specialist 2nd Class Lawrence Kennedy were discharged from this Squadron in May to reenlist for foreign service in the grade of private, thus leaving the boys back home a Corporalcy and a 1st and 2nd. The best wishes of the Squadron go with them to their new stations.

36th Pursuit Squadron: During the absence of other members of the Squadron, the Cadets at Langley Field put in much time in the P-6's and distinguished themselves on the early morning gunnery missions.

San Antonio Air Depot, Duncan Field, Texas.

Recent visitors at the Depot included the following: Lieut. Colonel Robert LeG. Walsh, of the Office of the Chief of the Air Corps, May 25-26, conferring with the Commanding Officer on personnel matters, while on a navigation flight to Randolph Field; Major V.D. Stone and Captain Royal Irwin, 45th Division Aviation, Colorado National Guard, Denver, on May 23rd, and Major C.H. Donnelly and Capt. Chellis as passengers, also Captains M.C. Robinson and W.E. Nicols, of the 32nd Division Aviation, Michigan National Guard, Detroit, on May 24th, all on navigation flights to San Antonio to attend the recent National Convention of the Reserve Officers Association; Majors P.E. Skanse and R.V. Ignico, of the Air Corps Tactical

School, Maxwell Field, Ala., June 2-3, on a training flight; Mr. E.H. Jennings, District Manager of the 10th Civil Service District, New Orleans, May 25th, conferring on Civil Service matters; Mr. R.G. Norris, Property and Supply Clerk, Air Corps Materiel Division, Wright Field, Ohio, May 28th, for a few days' temporary duty, conferring on the maintenance and supply of aircraft equipment and accessories.

Major E.D. Perrin, Operations Officer of the Depot, and Commanding Officer of the 3rd Transport Squadron, with Staff Sgt. P.S. Blair, copilot, and Staff Sergeant G.L. McCollum, mechanic, flying the Depot's C-33 Transport, returned June 3rd from temporary duty, ferrying the personnel returning from the recent GHQ Air Force Exercises in California.

Recent gains by the 3rd Transport Squadron, all by transfer, were Pvt. Eddie Dupre from the 12th Air Base Squadron, Kelly Field, May 20th; Sam K. Bourne and Harvey H. Williford, from Hq. and Hq. Squadron, Kelly Field, May 21st, and Johnie W. Jones, Hq. and Hq. Squadron, 12th Observation Group, Brooks Field, June 1st.

Mr. V.J. Myers, Shop Superintendent, and Mr. J.M. Hill, General Foreman, of the Engineering Department of this Depot, departed June 1st for several days' temporary duty at the Rockwell Air Depot, Coronado, Calif.; the Douglas Aircraft Company, Santa Monica, Calif., and North American Aviation, Inc., Inglewood, Calif., studying the construction of and repair and maintenance methods on late all-metal type airplanes for the Air Corps.

On May 22nd, a group of about 20 young men, aeronautical students of the Department of Engineering, North Texas Agricultural College, Arlington, visited this Depot in charge of Mr. F.L. Snavely, Instructor in Aeronautics of that institution. These visits are made annually to the various air fields in San Antonio, and on this occasion the students appeared intensively interested in viewing the workings of the Depot Engineering Department.

Second Lieut. J. Will Campbell, Air Reserve, of Dalhart, Texas, formerly a pilot with the United Air Lines, joined this Depot on June 1st for a 3-year active duty tour, and was assigned to the 3rd Transport Squadron. He previously had a 14-day training tour at this Depot in November, 1935, and so is busy renewing old friendships here. This is the first occasion on which a Reserve officer has been placed on extended active duty at this Depot, and Lieut. and Mrs. Campbell are welcome additions to the station's official family.

Kelly Field, Texas, June 5th.

First Lieut. Samuel E. Anderson has been transferred to Hawaii and will sail from San Francisco on or about October 1, 1937.

Master Sergeant Thomas Danie, formerly 1st Sergeant of the 12th Air Base Squadron, has been transferred to the GHQ Air Force, Langley Field, May 20th. He has been attached to the 12th Air Base Squadron and was Acting 1st Sgt.

Lieut. R.F.C. Vance and Pvt. 1st Cl. R.A. Brouillard recently returned from an extended navigation flight to Boston, flying a new BF-8.

any man's league. Baseball, softball, tennis, golf and swimming have kept all except the "old folks" athletic-conscious.

Hors. and Hors. Squadron: The Kitten Ball (soft ball) inter-squadron league was officially opened here for the spring play-off on April 19th. In the beginning there were two separate leagues, one for the married men and one for the single men, but after a series of play the "Old Folks" from our opposing squadrons, namely, the 13th Air Base and 91st School Squadron, pleaded for mercy and, after due consideration of the stiff joints and skinned knees, this particular league was discontinued. However, Headquarters Squadron team, ably managed by Tech. Sgt. Higbie, was leading the league at the time of discontinuance of same, so if there is any pennant or cup forthcoming for this event we are on the receiving end.

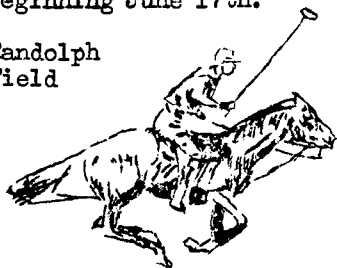
Our single men's Kitten Ball team, piloted throughout the season by our School Sergeant Major, Sergeant Vereen, was handled in a very excellent manner. The entire team stuck by him and played magnificent ball throughout the season, "bringing home the bacon" with seven wins and only two losses. The cup was won through good clean sportsmanship, hard work and skillful playing by the team.

Our regular inter-squadron baseball season was officially opened on May 5th, at which time Staff Sergeant Heim, our manager, had an excellent team in wonderful condition to meet our foes. The team battled from the opening game to the climax, which was held on June 2nd, and came through with flying colors to win the Post Championship with five victories and only one defeat. The defeat was the 11-inning contest to our rivals, the 91st School Squadron, by the score of 1 to 0. Our entire team, from the manager to the bat boy, worked hard during the season and well deserved the honors bestowed upon them for their success.

Randolph Field On May 22nd, Captain J.W. Andrew won the Eighth Corps Area Tennis Championship at the San Antonio Country Club by defeating Lieut. Harold Brooks of Fort Sill, Okla. Captain Andrew won the long singles final by a score of 5-7, 6-4 and 3-6. He is now eligible and is planning to compete in the Army Championship Tournament in Washington, beginning June 17th.



Randolph Field



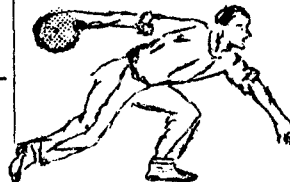
Since the return of Lieut. Colonel T. W. Hasty to the Air Corps Training Center from foreign service, a revival of an Air Corps polo team is under way. A field has been laid out on the

east side of Randolph Field near the Riding Club. The field was officially dedicated at 3:00 o'clock, Wednesday, May 19th. After the dedication ceremonies, a game was played between

the Air Corps team and the San Antonio Polo Club, which the Air Corps lost, 6 to 1. The Air Corps team, headed by Lieut. Colonel "Tom" Hasty, is made up of players from Brooks, Kelly and Randolph Fields. A return game was played the week following, and this time the Air Corps won by the decisive score of 9 to 4.

Maxwell 91st School Squadron: Field

Of the Squadron's two enlisted entrants in the Post Golf Tournament, 1st Sergeant "Red" Lawrence, Atlantic Sector Champion and runner-up for the Panama Department Championship in 1936, after posting a 75 for second high qualifying round over the par 73 course, reached the finals by eliminating Major Bartron 3 and 2 and Major Lotha Smith 2 up. In the final 36-hole match against Lieut. Storrie, Sgt. Lawrence's putter went sour, and Lieut. Storrie had easy sledding, winning the Post Championship, 8 and 7. Staff Sergeant "Lefty" Hrivnak, after being eliminated in his first match in the second flight, finally hit his stride and won the consolation prize for that flight. Lieut. Euggans, entering his first tournament, distinguished himself by winning the consolation prize in the 8th Flight.



Luke Field The Luke Field Bowlers carried away seven out of nine gold medals in the recent Schofield Competition. The team took first place among all the teams in the

Islands by toppling over 2919 pins. The members of the team are T. Wood (Captain), H. Meure, R. Neander, W. Gerton, M. Corgan and J. Swendowski. That the team has fared so well is made remarkable by the fact that there is no bowling alley at Luke Field. It is hoped to remedy this situation in the near future.

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WOMEN'S CLUB OF MAXWELL FIELD

The Women's Club of Maxwell Field, Ala., is just bringing to a close another successful year of its existence. The Club was organized several years ago by Mrs. John Curry, during the time Colonel Curry was in command at Maxwell Field, and has become one of the outstanding features of the social life of the post.

A regular monthly program is given on the first Monday of each month, followed by tea. Wives and mothers of officers stationed at or near Maxwell Field are considered as members. The programs introduce talent, both from the field and the City of Montgomery, and covers a wide range of subjects. Some of the programs during the past year were: Talk on Child Psychology by a member of the Educational Board of Montgomery; Christmas Carols by the Women's Chorus of Maxwell Field; "The Stratosphere," by Captain Orvil Anderson; group of poems read by the author, Mrs. Wm. Saffold, a very charming

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lady from Montgomery; reading by Ethal Kuter, of Maxwell Field, of the play "Idiot's Delight"; book review of "Gone with the Wind," by Mrs. A.J. McLemore, of Montgomery.

Then, too, the Women's Club sponsors the following groups, which are open to membership of all those who care to join: Bridge Club, Reading Club, Music Club, Garden Club, Tennis Club, Riding classes, Golf Club, Sunday School, Parent-Teacher's Association, Dramatic Club and Girl Scouts. With all these various activities open for membership, every woman can find enough recreation to keep her busy while her husband (if he is a student officer) is busy with his maps and problems. Maxwell Field has very aptly been dubbed the "Country Club of the Air Corps," for at very few Air Corps stations can so many and varied a number of sports be enjoyed during as large a part of the year.

Golf activities at this post interest a large part of the personnel, and the various tournaments, both for men and women, help to keep the golfers on their toes. A new Golf Club House has been completed during the last year, and this puts a fitting touch to the already excellent course.

The Girl Scouts take great pride in their organization and are very fortunate in having a leader like Mrs. C.D. McAllister, who devotes a great deal of time and energy to this work. The girls have their own Scout Hut, where they hold their meetings and carry on their work for the many badges they earn during the year. The last meeting of the year is always a Tea for the mothers and friends. Then as a final gesture they have a week-end camping trip to some nearby camp, to which all the girls look forward with pleasant anticipation.

Another annual event at Maxwell Field, which seems to be growing in popularity and brings out crowds of people, both from the Field and from Montgomery, is the Spring Flower Show. When one stops to consider that Maxwell Field is a comparatively new station and, from what one can gather from rumor, covers the site of what once was part of a negro burying ground and the rest a brick yard, it is most remarkable to see the lovely display of flowers and vegetables grown on the Field. Every flower that is grown in this part of the country can be found in the collection, and some that are considered hard to grow.

The Show was held at the Officers' Club. In the main lounge were the tables of flowers arranged according to various classifications. One table was filled with flowers arranged in pairs of vases, another with bouquets of all one kind of flower, others of mixed flowers in pottery, brass, cloisonne, etc., grouped in large arrangements, medium and small. Then there was a table for the children, on which there were many pretty and original ideas introduced. One little girl, Margie Hackett, conceived the idea of making a crown and covering it with flowers, which was both unique and apropos of the coronation season. The men's table caused much amusement. General Pratt contributed a small airplane covered with blue flowers and lighted in the fuselage. Another officer added a container of "Spitumias" which created a lot of amusement. There were many other clever and

attractive entries on this table, but Captain A.Y. Culton took first place with his garlic plant, which was as large as a small tree. A prize of \$3.00 was awarded to Mrs. W.H. Lawton for having the highest number of points for her total entries.

The Flower Show was under the direction of Mrs. Julian Haddon, assisted by Mrs. E.E. Hildreth and the members of the Garden Club. Mrs. Haddon has been at the head of the Garden Club for the past two years and has been an untiring worker. Due to her endeavors, a large number of trees have been planted at Maxwell Field, and in a few years' time the post will undoubtedly present a more attractive appearance.

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TECHNICAL INFORMATION AND ENGINEERING NEWS Air Corps Materiel Division

Containers for Attachable Parachutes.

A quantity of round and square type attachable parachute containers, to supplement the brackets for stowing of parachutes, has been fabricated for use in airplanes of restricted storage space. Indications are that the cylindrical type container is the most satisfactory for installations where use of the bracket type holder does not provide a readily accessible means of stowage. The attachable parachute containers for the Types A-1 and A-2 parachutes are constructed of .080-inch aluminum alloy, cylindrical in shape and closed at the bottom. The top is open for stowing the parachute and contains a slot for admission of the male attachment fitting and flanged edges for ease in admitting the parachute pack. Two different size containers are required for the Types A-1 and A-2 parachutes, due to the difference in size of the packs.

Wind Direction Tower, Type B-1

An Engineering Section Memorandum Report recommends the standardization of wind direction indicator tower, Type B-1, as a result of service test. This tower is constructed of structural steel. A winch is so designed that the tower with a B-5 indicator installed thereon may be raised and lowered. It is intended for use where it is desirable to place the indicator along the hangar line. Its advantages are as follows: (1) The indicator is installed above the hangar roof level and subject to a truer indication. (2) The indicator is readily accessible for maintenance. (3) No modification of hangar or building roofs is necessary, as the tower eliminates installations on such buildings.

★ AIR CORPS ★
NEWS LETTER



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JULY 1, 1937

NO. 13

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Information Division
Air Corps

July 1, 1937

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.

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TRANSFER OF ARMY METEOROLOGICAL SERVICE TO AIR CORPS

METEOROLOGICAL service for the Army, which has heretofore been the responsibility of the Signal Corps, was on July 1st transferred to the branches of the Army utilizing this service. These include the Air Corps, the Field Artillery, the Coast Artillery Corps, the Ordnance Department and the Chemical Warfare Service.

The Air Corps, which is by far the most interested user of meteorological data, plans to establish an Air Corps School of Meteorology for enlisted forecasters at Patterson Field, Fairfield, Ohio, at which two courses of instruction, each of five months' duration, will be conducted each year. The number of students accepted for each course will not exceed thirty-five. An enlisted complement of not to exceed ten men will be assigned as assistants at school headquarters.

In the establishing of this organization, the present School of Meteorology, located at Fort Monmouth, New Jersey, under Signal Corps jurisdiction, will be discontinued in July, and the school property and personnel transferred to Patterson Field, where it is expected classes will be started not later than September 1st.

Since the Air Corps has become the prime user of the meteorological service, the transfer of this responsibility is a logical step. The development, procurement, storage and supply of meteorological equipment remains a function of the Signal Corps.

In view of this transfer, it is desired to develop at Patterson and Wright Fields meteorological stations which will be models of modern operation. In line with these plans, the number of enlisted meteorologists assigned to Patterson Field will be increased from 10 to 15, and those at Wright Field from 2 to 5.

Captain Don McNeal, Signal Corps, at present in charge of the Meteorological School at Fort Monmouth, will assume like duties with the Patterson Field School.

Captain Benjamin Stern, Signal Corps, who recently received orders transferring him to Maxwell Field, will be re-

placed by an Air Corps officer who will be in charge of meteorological activities at the two fields.

Various assignments will bring the additional men to be enrolled at the two fields to a total of approximately 55.

Classes will be conducted in rooms and laboratories on the ground floor of the present headquarters building at Patterson Field. For the present no additional buildings for schools or barracks are contemplated.

The Field Artillery will organize meteorological units at the following posts: Fort Hoyle, Maryland; Fort Sam Houston, Texas; Fort Lewis, Washington; Fort Sill, Oklahoma; Fort Sheridan, Ill.; Schofield Barracks, Territory of Hawaii; Fort Riley, Kansas, and Fort Bragg, N.C. These units will furnish necessary meteorological data to Field Artillery organizations located within their service areas.

The Coast Artillery will continue to operate meteorological units which are now active and will, in addition, organize units at each Coast Artillery harbor defense and at stations of anti-aircraft regiments.

The Ordnance Department will establish one meteorological unit at Aberdeen Proving Ground, and the Chemical Warfare Service, one unit at Edgewood Arsenal, both stations in Maryland.

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INDUSTRIAL COLLEGE STUDENTS GRADUATE

A total of 58 officers graduated on June 22nd from the 1936-1937 class of the Army Industrial College, Washington, D.C., the exercises being held at 10:00 a.m., in the auditorium of the Public Health Service Building.

The graduation exercises consisted of a short introductory speech by the Director, Colonel Harry B. Jordan, Ordnance Department. The principal address of the day was delivered by Admiral William D. Leahy, Chief of Naval Operations, and the diplomas were presented by Major General Stanley D. Embick, Deputy Chief of Staff, War Department.

Among the 58 graduates were 9 officers each from the Air Corps, Quartermaster Corps and Ordnance Department; 4 from the Corps of Engineers; 3 each from the

Infantry and Coast Artillery Corps, 2 each from the Signal Corps, Cavalry, Field Artillery, Finance Department and Medical Corps; one each from the Judge-Advocate General's Department and the Chemical Warfare Service; 7 from the U.S. Navy, and 2 from the U.S. Marine Corps.

Air Corps officers who graduated were Lieut. Colonel Harrison W. Flickinger, Majors Alonzo M. Drake, Alfred J. Lyon, Richard H. Magee, Russell L. Maughan, John I. Moore, Max F. Schneider, Myron R. Wood and Captain Edmund C. Langmead.

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MORE TROPHIES FOR LIEUT. DENSFORD

Lieut. Charles F. Densford, Air Corps, stationed at Kelly Field, Texas, climaxed a successful year of pistol competition by winning the San Antonio Mid-Summer Championship on June 13th, winning two first places, two seconds and two thirds. Lieut. Densford wound up the season with a collection of thirteen trophies and about a hundred medals which are now on display at the Kelly Field Officers' Mess. The trophies must start revolving again when the Texas State Championship Matches are fired at Laredo, July 17th and 18th.

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RADIO MAINTENANCE MEN BEWARE!

Elsewhere in this issue of the News Letter is the obituary of Technical Sergeant Archie L. Ferguson, Air Corps, who met instant death when he came in contact with the high voltage leads of a radio transmitter.

Sergeant Ferguson was a very valuable noncommissioned officer, highly experienced in the maintenance and operation of radio equipment. He left a vacancy in the ranks of enlisted radio specialists which will be very difficult, indeed, to fill. His untimely death is greatly deplored, but the manner in which he lost his life should be a lesson and a warning to other personnel engaged in similar work.

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COMMISSIONS FOR FLYING CADETS

The following-named Flying Cadets of the Air Corps, who graduated from the Advanced Flying School on October 7, 1936, and who since that time were on active duty under their cadet status with Air Corps Tactical organizations at various fields, were commissioned second lieutenants in the Air Reserve on June 10, 1937, and placed on extended active duty at the stations indicated.

BOMBARDMENT PILOTS

Hamilton Field, Calif.:

Anderson, George R.
Kent, Billy W.

Worcester, Mass.
Braddyville, Iowa.

Hamilton Field, Calif.:

Leber, Harry P., Jr.
Ogden, Alban B., Jr.

Philadelphia, Pa.
Des Moines, Iowa

March Field, Calif.:

Anderson, James W., Jr.
Boyd, Robert
Childre, Cecil H.
Couch, Alexander P.
Ferris, John M.
Gray, Howard W.
Kennedy, William J.
Kilgore, John R.
McIntyre, Patrick W.
Schmitt, Arthur W., Jr.

Kansas City, Mo.
Asheville, N.C.
Westaco, Texas
El Centro, Calif.
Detroit, Mich.
St. Paul, Minn.
Oklahoma City, Okla.
Nashville, Tenn.
Chicago, Ill.
Cranville, Mich.
Madison, N.J.

Mitchel Field, N.Y.:

Nelson, Charles K., Jr.

Hamonton, N.J.

ATTACK PILOTS

Barksdale Field, La.:

Averill, James C.
Kunze, Royce G.
Ohlke, Harold W.
Pharr, Marion N.
Scott, Churchill L., Jr.
Todd, Jack F.
Wangeman, Herbert O.

Brattleboro, Vt.
Detroit, Oregon
Kansas City, Mo.
Gainesville, Ga.
Brownsville, Texas
Visalia, Calif.
Moorpark, Calif.

March Field, Calif.:

Adkison, Bourne
Coffield, Michael J.
Funk, Ben I.

Compton, Calif.
Los Angeles, Calif.
Denver, Colo.

OBSERVATION PILOTS

Fort Knox, Ky.

Huish, Frederick G.

Portland, Oregon

Langley Field, Va.

Barrett, Henry G.
Bradshaw, John O.

Little Rock, Ark.
Highland, Ind.

Mitchel Field, N.Y.

Anderson, Arthur R.

Crafton, Pa.

Scott Field, Ill.

Orth, Robert C.
Thompson, Milton E.

Los Angeles, Calif.
Portland, Oregon

PURSUIT PILOTS

Barksdale Field, La.

Gardner, Raymond H., Jr.
Keith, Troy
Learned, Park R., Jr.
Rohrbough, Leonard M.
Stetson, Loring F., Jr.

Albion, Mich.
Little Rock, Ark.
St. Paul, Minn.
Tacoma, Wash.
Lilliweup, Wash.

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BARKSDALE PURSUITERS BECOME FLYING INSTRUCTORS

Orders were recently received by eight officers of the 20th Pursuit Group, Barksdale Field, Shreveport, La., to leave immediately for Randolph Field, Texas, for duty as flying instructors, namely, 2nd Lieuts. Bordelon, Kleine and Scott, of the 79th Pursuit Squadron; Eades, Edwinson and Shepard, of the 55th Pursuit Squadron, and Wilson and Wood of the 77th Pursuit Squadron.

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Captain Guy Kirksey, Air Corps, has been relieved from duty at Hamilton Field, Calif., and assigned to station at Fort Bliss, El Paso, Texas, for duty as Commanding Officer of Biggs Field.

TURNOVER OF PERSONNEL IN PANAMA

During the past four months there has been a considerable turnover of personnel of the Air Corps in the Panama Canal Department. Starting in February, each transport has been the exodus of a large group of officers who completed their two years' tour of duty in Panama. The Transport REPUBLIC, sailing from Panama for San Francisco on May 28th, carried away only one Air Corps officer from Panama and marked the finish of the general exodus. During the period of turnover, Albrook Field lost 25 officers, while France Field saw ten off for the States, thus leaving at the present time only a mere handful of old timers who have been in the Canal Zone over six months.

Incidentally, there has also been a general influx of new officers until at the present time a total of 26 new officers arrived in the last four months and, should the last six months be included, an additional twenty newcomers could be listed.

"This turnover in personnel has necessarily caused considerable changes of command," says the News Letter Correspondent, "but under the able guidance of Brigadier General George H. Brett, the 19th Composite Wing is sailing serenely along, manned by a new crew being steadied by the sprinkling of old timers. The officer personnel is now practically fixed for the next two years, and while it was difficult to bid the old gang good bye the newcomers have been welcomed with open arms."

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PHOTOGRAPHS OF CONCHAS DAM

First Lieut. Charles F. Densford, Air Corps, pilot, accompanied by Staff Sergeant Herman L. Chestnutt, photographer, recently made another trip to Conchas Dam, New Mexico, upon the urgent request of the District Engineer at that locality, because of unusual flood conditions.

After leaving Kelly Field, Lieut. Densford was forced to fly by instruments for about an hour before clear weather was encountered. With a stop at Midland, Texas, for refueling, the airmen arrived at the new engineer town at about 5:00 p.m. A half hour later the damage to the half-completed works was photographically recorded.

During the next two days aerial surveys were made of the flooded regions from the headwaters of the Canadian River near Raton Pass downstream to a point about 30 miles east of Amarillo.

Returning to Kelly Field, the photographic team flew down the Pecos River from Santa Rosa, New Mexico, to Carlsbad, photographing flood conditions along the

way. The new Almogorda Dam, a few miles upstream from Fort Sumner, was not yet completed, but appeared to be holding up satisfactorily under the record influx of water from the flooded river valleys. Lake Millet at Roswell and Lake Avalon at Carlsbad both were full, but damage to the surrounding territory appeared slight.

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A PROMOTION AND A RETIREMENT

Master Sergeant Charles Budoff, Air Corps, stationed at Langley Field, Va., was appointed a Warrant Officer, U.S. Army, effective July 1, 1937.

A native of Tuskhy, Russia, Sergeant Budoff, who, at the time of his enlistment, lived in Jersey City, N.J., entered the military service on July 22, 1911, and served with the Coast Artillery Corps until December 9, 1919, holding the grade of Radio Sergeant in his last two enlistments. The remainder of his service has been with the Air Corps, and during a considerable part of this time he was stationed at Langley Field. He served a tour of duty in Panama, and in January, 1936, graduated from the Air Corps Technical School, Chanute Field, Rantoul, Ill., as Technical Clerk. He was promoted to Staff Sergeant on December 1, 1920; to Technical Sergeant, April 15, 1922, and to Master Sergeant, September 10, 1924. The newly appointed Warrant Officer is a radio specialist.

Master Sergeant William F. Hokurst, a member of the 2nd Balloon Company, Fort Bragg, N.C., was placed on the retired list, effective June 30, 1937, after 30 years' service. He was born in Brooklyn, N.Y., October 20, 1875, and at the time of his original enlistment in the Corps of Engineers, February 10, 1902, lived in Monrovia, Calif. He reenlisted February 16, 1905, in the Signal Corps, and the remainder of his service in the Army, following the organization of the Aviation Section of the Signal Corps, has been connected with aviation. His duties were mostly associated with the Lighter-than-Air Branch of the Air Corps, and he saw service at Ross Field, Arcadia, Fla.; Lakehurst, N.J.; Langley Field, Va.; Barksdale Field, La.; France Field, Panama, and Fort Bragg, N.C. His appointment as Master Sergeant dates from September 24, 1932.

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Major Albert C. Foulk, Air Corps, has been relieved from duty at March Field, Riverside, Calif., and transferred to the Air Corps Training Center, with assignment to Kelly Field, Texas.

NOTHING TO DO UNTIL TOMORROW ✓

One of the foremost cartoonists of the country who, when he was in the land of the living, caused millions of newspaper readers momentarily to forget their troubles and to indulge in many a hearty laugh over his comical caricatures and the witty sallies that went with them, at one time ran a lengthy series of cartoons depicting various characters engaged in drudgerous occupations who were always in a happy frame of mind.

These happy individuals were depicted reciting to an interested bystander a long list of chores which fell to their lot and which kept them busy all day and far into the night. Then the bystander would exclaim:

"Gee, you're a happy guy!"

"Yep," would come the reply, "nothing to do until tomorrow."

This series of cartoons came to mind upon noting an item sent in by the Maxwell Field News Letter Correspondent, touching on the activities of the Headquarters and Headquarters Squadron of the Air Corps Tactical School.

After making mention of the fact that the Squadron Commander, Major E.E. Hildreth, had departed on a leave of absence, the Correspondent goes on to say that 1st Lieut. Edward J. Hale, Air Corps, assumed command of the squadron, in addition to his other duties, which are: Squadron Mess Officer, Squadron Supply Officer, Squadron Gas Officer, Squadron Athletic Officer and, in addition to the above duties, he is also Secretary at the Officers' Club, Post Ordnance Officer, Commanding Officer of the Ordnance Detachment, Post Recruiting Officer and Post Education and Recreation Officer.

"It may also be stated," continues our Correspondent, "that he performs his regular tour of O.D. and flying of the weather ship frequently. Other than the above duties he spends all of his leisure time in making preparations for his scheduled departure from this station for a period of leave, upon the expiration of which he complies with War Department Orders in reporting to Chanute Field for a course of instruction thereat."

No mention is made by the News Letter Correspondent of Lieut. Hale's frame of mind these days.

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DEFINITION OF AN AERONAUTICAL ENGINEER ✓

One who passes as an exacting expert on the strength of being able to turn out, with prolific fortitude, strings of incomprehensible formulae calculated with micrometric precision from extremely vague assumptions which are based on debatable figures acquired from inconclusive and quite incomplete experiments

carried out with instruments of problematic accuracy by persons of doubtful reliability and of rather dubious mentality with the particular anticipation of disconcerting and annoying a group of hopelessly chimerical fanatics described altogether too frequently as airplane designers.

- Contributed.

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POSSIBILITY OF A NEW ACROBATIC TEAM ✓

According to the News Letter Correspondent from Maxwell Field, Ala., one who has had his ears to the ground predicts that an excellent acrobatic team will emerge from the Tactical School personnel and attend the National Air Races in September.

Speaking of an acrobatic team reminds one of the old invincibles, Maxwell Field's own - the "Three Men on a Flying Trapeze." Major Claire L. Chennault, leader of that famous team, which for several years thrilled spectators at aviation meets with its spectacular acrobatic maneuvers in close formation, left Maxwell Field for station at Barksdale Field, La., and was recently ordered to proceed to his home to await retirement. His two wingmen are in China, where we hear they are doing splendidly with their positions. Sergeants "Jo" MacDonald and "Luke" Williamson left many friends at Maxwell Field, as did Major Chennault, and they are constantly being remembered in the well known hangar gossip.

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PURCHASE OF NEW AIRPLANE ENGINES ✓

Hon. Harry H. Woodring, Secretary of War, announced on June 24th the award to the Wright Aeronautical Corporation, of Patterson, N.J., of a contract for 531 Wright "Cyclone" engines, Model R-1820-45 and with spare parts, totaling the sum of \$5,315,310.00. These engines are for installation in the Douglas B-18A bombardment planes for which a contract was recently awarded to the Douglas Aircraft Company, as mentioned in the previous issue of the News Letter.

The Wright "Cyclone" is a 9-cylinder air-cooled single-row radial engine, and is the result of ten years of development work involving an expenditure of several million dollars. It is one of the most powerful single-row radial engines in the world. It is likewise one of the lowest weight per horsepower engines, producing one horse power for every 1.08 pounds.

Including the present order, the United States Army Air Corps has more than 1600 of these engines under order or installed in standard equipment, including the 4-engine Boeing "Flying Fortress."

NEW LANDING FIELD PAYS IMMEDIATE DIVIDEND.



Just four days after the new emergency landing field near Gamboa, Panama Canal Zone, was opened, it fully justified the outlay of \$900. incident to its construction when Lieut. Donicht, in a P-12 Pursuit plane, who was

caught in a cloudburst between Albrook and France Fields, made the first emergency landing there. He discovered that both of the airdromes on the Atlantic and Pacific ends of the Canal were closed and zero zero.

In 1913, the rock and dirt from Culebra Cut was removed from between Gold and Contractors Hills and was carried by rail and dumped as a fill about a mile west of Gamboa. This fill was directly on the Panama Canal and is exactly half way between Albrook and France Field. In the twenty-four years that have passed since the fill was deposited at Gamboa, the gigantic rocks taken from the cut have settled and, with the exception of lateral ridges running the length of the fill, it has become more or less level. For many years now, since the Army has constructed airdromes at the ends of the Canal, it has seemed important that the 35-mile run from France to Albrook Field should be safeguarded with an emergency field somewhere along the Canal.

Recently, due to the cooperation of the Governor of the Canal Zone and the Panama Canal Department, especially that of Major William D. Styer, Assistant Engineer of Maintenance for The Panama Canal, this fill has been converted into an emergency landing field that promises to be a great factor in the promotion of safer flying over the jungle that lies between the Atlantic and the Pacific.

It seems that this fill would have been leveled for a landing field long ago but for the fact that a former Canal Zone employee estimated that to construct a field at that site would involve an expenditure of about \$20,000. This figure was out of the question from available funds. However, one 14-ton "Bulldozer" with a three-ton blade moved approximately 27,000 cubic feet of earth and stone per day for nine days, and early in May the first airplane landed at Gamboa.

Of special interest during the grading was the ease with which this heavy piece of machinery cut through the jungle, even uprooting trees approaching a foot in diameter, and moving and crushing rocks that weighed well over a ton. In the years which have passed, this fill had become a sanctuary for snakes and iguanas. In one morning the "Bulldozer" ran up the world's record of 17 coral

snakes and two bushmasters (largest venomous species of snake in tropical countries of the Western Hemisphere). Numerous articles of interest were found in the fill, such as large sections of the old French dredging tools and a 36-foot length of locomotive rail from France. Disappointment rested with the workmen, for even though the material was taken from "Gold" Hill, no gold was even suggested as the heavy "gumbo" mud was shoved aside.

Strange as it seems, the last tree to be removed from the field was practically in the center of the runway. This small tree was permitted to stand until two young birds in a nest in the tree had flown away. The birds were safe, had they known it, but the two old ones didn't seem to trust the "Bulldozer" very much as it chugged away as close as ten feet from the tree.

Now at Gamboa, plainly marked, the field stands out clearly, with a fifty-foot white circle in the center and white and black markers along the runway every two hundred feet. It is a two-way field, one built into the prevailing wind. It runs east and west. Its length is 2200 feet and the width about 200 feet, the windsock being on the Canal near the center of the fill.

This field brings the number of maintained landing fields in Panama to forty-one.

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WAR COLLEGE STUDENTS VISIT LANGLEY FIELD

The students of the Army War College visited the 2nd Bombardment Group, GHQ Air Force, Langley Field, Va., on June 15th during their annual tour to the Tidewater area. After an inspection of the installation of 100-lb., 300-lb., 600-lb., 1100-lb. and 2,000-lb. demolition bombs in the Y1B-17 type airplanes and a short talk by the Group Commander, the visiting officers witnessed an outstanding bombing demonstration on Plum Tree Island.

In addition to the bombing demonstration by the 2nd Bombardment Group, the organizations of the 8th Pursuit Group (33rd, 35th and 36th Pursuit and 37th Attack Squadrons) staged an aerial gunnery demonstration. Comments heard from various sources indicate that the demonstration was quite successful.

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The fifth class of the Navigation School of the 2nd Bombardment Group, GHQ Air Force, has completed the required instructions and are now preparing the YOA-5 Amphibian airplane for a graduation flight.

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SCHOOL FACILITIES NEAR SITE OF SACRAMENTO AIR DEPOT

THE Constructing Quartermaster of the new Air Corps Air Depot now in process of construction near Sacramento, Calif., recently forwarded a communication received by him from the Clerk of the Rio Linda Union School District, Rio Linda, Calif., which should prove of interest to Air Corps personnel, and which reads as follows:

"In view of the fact that the new Army Air Depot is practically all in the Rio Linda Union School District we, the directors, wish to submit to you certain facts regarding our school which, we hope, may be of interest to the department.

The Rio Linda Union School is situated in the village of Rio Linda, about three miles from the Air Depot. It is considered by the State Department of Education to be one of the best in the county and in many respects ranks higher than any of the Sacramento City Schools. It is a modern building of tile and stucco construction, ten rooms with complete shop for manual training and auditorium. It has a very strong music department and our children are taught any instrument they might wish to play, with strong emphasis on the piano.

We have an orchestra and band of such ranking as one could hope to find in a grade school. The school has a large playground and has recently acquired a complete city block of ground for more playground. All play is completely supervised. Our school is one of the cleanest in the county. The boys have been doing some very fine work in the manual training shop and the girls have been receiving some excellent instructions in sewing and hand work. We feel that we have a very fine staff of teachers, and the work in all departments has been of such outstanding nature that the county supervisors of schools have sent teachers from other schools to us for the study of our system.

We maintain a complete bus system, owned and operated by our school. Our bus drivers are yearly inspected by the State and are compelled to pass three examinations each year. The moral element is stressed very much by the State. Our busses are examined and inspected each month by the State and are required to be in first class condition. In the five years we have operated our own busses, the examination and inspection has each month shown that the busses rated 100%.

Each child has a designated station where it must each day enter the bus, and it must leave the bus at the same station each day. No child is permitted to leave the bus at any other station with-

out a written permit from the parent. No child is allowed to leave the school grounds during the day without a written permit from the parent. The child is in the care of the school from the moment it enters the bus in the morning until it leaves the bus in the evening. This makes for safety far greater than any city school can provide.

Each bus has a complete timetable and operates on a strict time card. In the five years of operation, no child has received as much as a scratch on any of our busses. The first aid kits found in each bus have never been even opened except for inspection. Our busses travel country roads (paved roads) which make for added safety, since they are not compelled to travel in congested traffic areas.

Our school is prepared to give to the Air Depot as good a service as it has maintained for the last years. Children will be picked up at a designated station at the gates or on the grounds as may seem best. If there should be a complete load of 50 children on the ground, an express bus will be operated.

We feel that the department may like to know these facts so we submit them to you with the added information that our board wishes to cooperate with the department in every way. Even if our school is not a city school, it maintains a high standard - as high as any city school, with the added advantage that our school is in a quiet section away from the noise and distraction of the city.

The laws of the State of California regarding school busses is very exacting and severe regarding inspection, drivers, safety and insurance."

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MORE Y1B-17's FOR 2ND BOMBARDMENT GROUP

Personnel from the three squadrons of the 2nd Bombardment Group, Langley Field, Va., were recently dispatched to Seattle, Wash., to take delivery for each of these organizations of a new Y1B-17 Boeing Bombardment plane.

The 20th Bombardment Squadron's ferrying crew comprised Major Vincent J. Meloy, 1st Lieut. Frederick E. Glantzberg, Ford J. Lauer, Tech. Sgt. Adam L. Wheeler, Staff Sgt. Henry West and Pvt. 1st Class John W. Yankowsky.

The ferrying crew for the 49th Bombardment Squadron were 1st Lieut. Robert F. Travis, pilot; Captain Archibald Y. Smith, navigator; 2nd Lieut. Carlos J. Cochrane, Air Res., co-pilot; Staff Sgt. Troy V. Martin, chief mechanic; Staff Sgt. Henry P. Hansen, asst. mechanic, and Pvt. 1st Class Russell E. Junior, radio operator. The personnel ordered to Seattle to

(Continued on Page 7)

BRONZE BUSTS OF WRIGHT BROTHERS

June 15th was marked at Wright Field by the placing of bronze busts of Orville and Wilbur Wright in the rotunda of the Army Aeronautical Museum. These highly prized possessions, made possible to the Museum by the Treasury Relief Art Project, are the work of the sculptor, Seth Velsey, who created the plaster cast of Wilbur Wright from photographs supplied by Orville Wright, and that of Orville Wright from personal studies. Mr. Orville Wright aided the sculptor in obtaining the excellent likeness of Wilbur Wright, who died in 1912, by offering suggestions while the work was in progress.

CASTING OF THE BRONZES WAS ACCOMPLISHED at the Antioch Bronze Foundry by Professor Amos Mazzolini, of Antioch College, an outstanding authority in such work. The result is a pair of bronzes of beauty and dignity which will represent for all time the likeness of these two great men.

The busts are mounted on walnut pedestals, 60 inches tall and 16 inches square, without carving, except for the names, which were executed by the sculptor. The wood is rubbed to a smooth dull finish.

While the project was conceived before the completion of the new Army Aeronautical Museum in 1935, work on the sculptures was not started until 1936, when Seth Velsey received the commission. It was a task that offered instant appeal to his imagination. The results of his efforts have been judged successful on many sides, but the most valued approval was that of Orville Wright himself. Likewise it was a great privilege for the artist in his creations to have suggestions and advice from the same source.

Seth Velsey was born in Logansport, Indiana, in 1903. He studied art and architecture at the John Harris Art Institute, Indianapolis, Indiana; the University of Illinois and the Art Institute of Chicago. He was also a pupil of Aldin Polasek. He worked for four years in the studio of Laredo Taft, and was a teacher at the Dayton Art Institute from 1930 to 1934. First prize awards received were the Mrs. Keith Spalding prize, Woman's Club of South Bend, Indiana, and Hoosier Salon, Chicago.

The rotunda of the Army Aeronautical Museum where the busts will have their permanent home offers in color combination and architectural design a fitting and dignified surrounding for such honored company. Walls are of dark oak veneer, with doors and frames of aluminum. A dome is centered above, extending in height the full two stories of the building. Lighting fixtures are of aluminum with frosted glass. The silver tones of doors and lighting fixtures and brown of

walls are softened by ceiling motifs blended in grays, cream, and tans. The building was opened in 1935.

The Army Aeronautical Museum, as well as the sculpture project, are under the direct supervision of Brigadier General A.W. Robins, Chief of the Materiel Division, Army Air Corps.

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BIG BOYS IN 23RD BOMBARDMENT SQUADRON

"Men grow large in the Air Corps," says the Correspondent of the 23rd Bombardment Squadron, Luke Field, T.H., and he then goes on to say: "Youngsters who quest the Hawaiian Rainbows, as they fly through the blue skies of the Paradise of the Pacific, stretch to high altitudes even when they have their feet on the ground. A survey of the enlisted personnel of the 23rd Squadron, commanded by Major H.W. Beaton, shows an actual strength of 110 men, who average 5 feet, 8 $\frac{1}{2}$ inches in height. The First Sergeant, Lloyd N. Johnson, hits exactly the average height and tips the scales at 190 pounds. The tallest man in the organization is Private Martin A. Shaw, Jr., who stands 6 feet, 4 inches. The smallest soldier is Private John C. Ney, who is an even 5 feet, 3 inches.

Thirty-five out of the 48 States of the Union are represented in the birthplaces of these 110 men. Pennsylvania heads the list as the greatest contributor of strength, with 14. Thirty-five of the airmen are southerners who hail from south of the Mason-Dixon line. Three of the Staff Sergeants have their place of birth in foreign lands. Staff Sergeant Domic Dennis registers Italy as his birthplace; Staff Sergeant Benjamin Hoffman points to Poland as the land of his nativity, and Staff Sergeant Ernest Sommer had Switzerland as his native land. Privates 1st Class Walter Eckel and Edmund Taesch were born in Germany.

But it is in athletic prowess that the 23rd Bombardment Squadron rules supreme in the 5th Composite Group. It swept aside all opposition this year to win the Mills-Atterbury Trophy, which confers upon it the athletic supremacy in the Group. Incidentally, this was the fourth winning of this trophy by the Squadron out of seven chances.

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Ferrying new Planes (Continued from P. 6)

ferry back the 96th Bomb. Squadron's third Y1B-17 were Major Jasper K. McDuffie, 1st Lieuts. William C. Bentley, Paul G. Miller, Tech. Sergeant John A. Mauro, Staff Sergeant Dwight M. Capps and Sergeant Frank B. Connor.

V-7389, A.C.

Biographies

LIEUT. COLONEL OLIVER P. ECHOLS ✓

Lieut. Colonel Oliver P. Echols, Air Corps, now on duty at the Air Corps Materiel Division, Wright Field, Dayton, Ohio, as Chief of the Engineering Section, was born March 4, 1891, at Charlottesville, Va. He attended the Virginia Polytechnic Institute (1908-10) where he studied civil engineering, and then entered the University of Virginia, where he took the academic course for two years and a law course for one year.

Commissioned a second lieutenant in the Regular Army from civil life, December 4, 1916, he was assigned to the Field Artillery. After three months of duty at the Service School at Fort Leavenworth, Kansas, he served with the 7th Field Artillery as Battery Executive Officer, Battery Commander, and then performed battalion staff duty.

Arriving in France with his regiment, August 13, 1917, he was sent to Camp Le Valdahon and later to the First Corps Aerial Observers School at Amanty, at both of which Schools he completed courses in aerial observation and balloon observation. He was then assigned to the 258 French Aero Squadron at the front for duty as aerial observer. Three months later he was assigned to the 1st American Aero Squadron on the front, remaining with that organization until August 8, 1918.

Colonel Echols was then appointed Group Operations Officer, 1st Observation Group, and he performed this duty until October 9, 1918, when he assumed command of the 1st Observation Group. On October 26, 1918, he was appointed Chief of Air Service, 1st Army Corps, A. E. F., in which capacity he served until April, 1919, when he returned to the United States.

In May, 1919, Colonel Echols assumed command of Godman Field, Camp Knox, Ky., and he served in this capacity until July 19, 1919, when he was assigned to duty as Operations Officer in the Office of the Department Air Service Officer, Southern Department, Fort Sam Houston, Texas. In August, 1920, he returned to Godman Field as Commanding Officer, serving as such until December 7, 1920, when he resumed his former duty as Operations Officer in the Office of the Air Officer, 8th Corps Area. While stationed at Fort Sam Houston, he availed himself of the opportunity to undergo flying training at Kelly Field, Texas.

The regulations requiring that he graduate from a regular pilot school to qualify for a pilot rating, Colonel Echols, on March 28, 1921, reported for duty as a student at the Primary Flying School at Carlstrom Field, Arcadia, Fla., where

he completed the course of instruction in July, 1921, following which he completed training in Bombardment Aviation at the Advanced Flying School at Kelly Field, Texas, January 13, 1922.

Assigned to duty in the Office of the Chief of Air Service, Washington, D. C., Colonel Echols was on duty in the Training and War Plans Division until June 15, 1924, when he was placed on duty with the War Department General Staff (G-3) Training Branch. In January, 1926, he was assigned as student at the Army Industrial College, Washington, D. C., and upon the completion of the course at that school in June, 1926, he continued his duties as a student, this time at the Air Corps Engineering School at McCook Field, later Wright Field, Dayton, Ohio. Upon his graduation from the Engineering School, he remained on duty at Wright Field as Chief of the Equipment Branch, Experimental Engineering Section, until July 16, 1929, when he was assigned as Assistant Chief of the Procurement Section, Materiel Division. He became Chief of that Section in December, 1929.

In September, 1931, Colonel Echols was transferred to the Air Corps Tactical School, Maxwell Field, Ala., for duty as a student and, following his graduation therefrom, he pursued a two-year course at the Command and General Staff School, Fort Leavenworth, Kansas, graduating June 15, 1934. He then returned to Wright Field for duty as Chief of the Engineering Section.

Colonel Echols was promoted to 1st Lieutenant, May 15, 1917; to Captain, April 19, 1919; to Major, November 2, 1928, and to Lieut. Colonel (temp.) March 2, 1935. He held the temporary rank of Major, Field Artillery, from April 15, 1919, to March 1, 1920, and was transferred to the Air Service, July 1, 1920. He holds the flying ratings of "Airplane Pilot" and "Airplane Observer."

In recognition of his service as Operations Officer of the 1st Aero Squadron on the Marne in July, 1918, he was recommended for the Distinguished Service Medal, it being stated that he was responsible in great measure for the success of that unit in the second battle of the Marne. His outstanding service as Operations Officer of the 1st Observation Group during the St. Mihiel and Argonne-Meuse operations was also mentioned in the citation for this decoration.

LIEUT. COLONEL ROBERT C. CANDEE

Lieut. Colonel Robert C. Candee, Air
V-7389, A. C.

Corps, now under orders for duty in the Hawaiian Department, was born at Hinsdale, Ill., June 4, 1892. He graduated from Cornell University with an A.B. degree in 1915. During the summer of 1914 he attended the military training camp at Burlington, Vermont, and the one at Plattsburg, N.Y., in the summer of the following year. He was commissioned a second lieutenant of Cavalry, U.S. Army, November 30, 1916, and was on duty with the First Divisional Class at Fort Leavenworth, Kansas, from January 1 to April 1, 1917.

While serving a tour of duty in the Philippines, Colonel Candee was Aide-de-Camp to the Governor-General of the Philippines. From September 10, 1920, to February, 1921, he was on duty with the 3rd Pursuit Squadron at Clark Field, P.I., as student officer, studying aerial observation. Returning to the United States in January, 1922, he was assigned in March of that year as a student at the Air Service Primary Flying School at Carlstrom Field, Arcadia, Fla., which in July of that year was transferred to Brooks Field, San Antonio, Texas. On May 26, 1923, he was transferred to the Advanced Flying School, Kelly Field, Texas, where he completed the course in Bombardment Aviation, December 21, 1923. He was rated "Airplane Pilot," effective January 18, 1924. After several months of detached service, studying Bombardment subjects at Langley Field, Va., McCook Field, Dayton, Ohio, and Washington, D.C., he was assigned to station at Kelly Field, where he served as Director and Senior Instructor of Bombardment training, Advanced Flying School, until September 15, 1925, and Adjutant of the 10th School Group until May 28, 1926. Thereafter he was on duty as Adjutant of the Advanced Flying School until July 13, 1926, and Assistant Executive of this School until September 25, 1926.

Transferred to Langley Field, Va., for duty as student at the Air Corps Tactical School, Colonel Candee, upon graduation, June 15, 1927, and service as commanding officer of an R.O.T.C. Summer Camp at that station, reported August 26th at Fort Leavenworth, Kansas, for duty as student at the Command and General Staff School, from which he graduated June 15, 1928. He then returned to Langley Field for duty as instructor at the Air Corps Tactical School, which in July, 1931, was transferred to Maxwell Field, Ala.

Ordered to duty in the Panama Canal Department, Colonel Candee arrived at Albrook Field, Canal Zone, July 15, 1932, and was assigned as Executive Officer of that Field. He also served as Air Officer of the Panama Canal Department in addition to his other duties from August 9, 1922, to September 3, 1933. On December 1, 1932, he was assigned as Executive of the 16th Pursuit Group at

Albrook Field. On several occasions he was in temporary command of that field and of the 16th Pursuit Group.

Completing his tour of duty in Panama in August, 1935, Colonel Candee reported for duty as a student at the Army War College, Washington, D.C., and graduated therefrom June 30, 1936. He was then assigned as student at the Naval War College, Newport, R.I., from which he graduated in May, 1937. From November, 1934, until August, 1935, he was on duty in the Office of the Chief of the Air Corps, Washington, D.C., being assigned to the Plans Division to July 10, 1935, and thereafter to the Training and Operations Division.

Colonel Candee was promoted to 1st Lieutenant, November 30, 1916; to Captain, January 11, 1919; to Major, August 26, 1928, and to Lieut. Colonel (temp.) June 16, 1936.

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OVERHAULING OIL DILUTION ENGINES

The first engines used for extensive periods of oil dilution are now beginning to make their appearance on the overhaul line at Air Depots. As expected, some minor indications of lead bromide corrosion are evident, but substantially the engines are quite satisfactory. Until such time as material specifications can alter certain metallic parts susceptible to action of the lead bromides, parts will have to be replaced, "but it is thought," says the Wright Field Correspondent, "the advantages of oil dilution far outweigh any defects or wear indicated on overhaul engines to date. Of further encouragement is the fact that our basic gasolines are improving, which call for less lead to be added and, in turn, less trouble from corrosion both in active use or storage."

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COL. MILLER TO ASSUME COMMAND OF SAAD

Under Special Orders of the War Department, recently issued, Colonel John H. Howard, at present Commanding Officer of the San Antonio Air Depot, Duncan Field, Texas, is relieved from that assignment and duty, effective on or about July 1, 1937, and is then assigned to duty with the Air Corps, Headquarters Seventh Corps Area, Omaha, Nebraska. On or about July 1, 1937, Lieut. Colonel Henry J.F. Miller, Air Corps, at present Commanding Officer of Brooks Field, San Antonio, Texas, is to assume command of the San Antonio Air Depot.

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Mrs. M.E. Merris, 85-year-old grandmother, was present at Kelly Field recently to witness the graduation of her grandson, Cadet Joseph A. Morris, from the Advanced Flying School. She made a 2,000-mile journey especially for that purpose.

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FRENCH AIRMAN VISITS KELLY FIELD



CAPTAIN Georges Fayet, of the French Air Corps, visited the Advanced Flying School, Kelly Field, Texas, on June 19th. A graduate of Saint Cyr, class of 1923, and of the French Air Corps Training School, class of 1925, Captain Fayet's service includes four years as an instructor in Observation Aviation at the French Advanced Air Training School. At present he is a staff officer with the French Air Corps, serving in Algeria, North Africa.

Captain Fayet came to the United States in May, 1937, as a liaison officer in connection with the proposed New York to Paris Air Race. When this race failed to materialize, he was given a nine months' assignment as Military Attache with the French Embassy in Washington.

The French officer's visit to Kelly Field was for the purpose of studying our methods of training, both on the ground and in the air. Having served as an Observation instructor in France, he was most interested in our Observation Section. He states that the main difference in the French and American methods is that the French teach aerial gunnery and bombing in connection with their course, while we do not. Other Observation subjects, such as Photography, Infantry Liaison, Artillery Adjustment, Radio and Reconnaissance are common to both schools, and methods of instruction are practically identical. However, much greater emphasis is placed on instrument and radio beacon flying at Kelly Field than at the French school.

Captain Fayet was greatly interested in the new miniature range rapidly being completed at Kelly Field. Miniature range work is used by the French in their instruction, but not to as great an extent as at Kelly Field. The French equipment is similar to the old Kelly Field range, familiar to all graduates of the Advanced Flying School.

From Kelly Field Captain Fayet left for Maxwell Field, Ala., to continue his inspection.

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NEW OBSERVATION MANUAL

A new Observation Manual is being written for use at the Advanced Flying School by Captain O.P. Weyland, Chief Instructor of the Observation Section, who is the author of the text previously used at the School. The new text brings Observation instruction up to date. The task will be completed within the next 30 days. Photographs and sketches are being prepared for the Manual by the 22nd Photo Section, Kelly Field, Texas.

NO MORE CADET BLUES AT AIR CORPS FIELDS

The information conveyed by the above heading pertains to the blue uniform of the Flying Cadets on extended active duty at Air Corps fields and not to their morale.

According to the Langley Field Correspondent, the streets of Shreveport, La.; the Virginia Peninsula (Langley Field); New York, Detroit; Los Angeles, San Francisco, and other cities and towns contiguous to air bases of the General Headquarters Air Force will be minus the picturesque blue uniforms of the Army's Flying Cadets after the first of July.

Girl friends of the young pilots will have the thrill of being escorted places by second lieutenants of the Air Corps Reserve after that date. It's this way:

For over three years, graduates of the Air Corps Training Center at San Antonio, Texas, have been required to retain the natty blues issued to them at the Air Corps Primary Flying School when they first became fledglings in the nation's sky army. Lack of appropriations prevented them from assuming the "shavetail" rank of former years.

But Congress, heeding the persistent recommendations of Major General Frank M. Andrews, the commander of the GHQ Air Force, remedied that this year by providing funds for the next fiscal year, which commences July 1, 1937. Henceforth, only students at the Air Corps Primary Flying School, Randolph Field, and the Air Corps Advanced Flying School at Kelly Field, will wear the cadet ensemble.

Ninety-seven flying cadets will be affected by the Appropriation Act, it was recently disclosed at GHQ Air Force Headquarters. Nineteen are at Langley Field, Va.; 5 at Mitchel Field, L.I., New York; 16 at Selfridge Field, Mt. Clemens, Mich.; 24 at March Field, Riverside, Calif.; 10 at Hamilton Field, San Rafael, Calif., and 23 at Barksdale Field, Shreveport, La.

Hereafter, graduates of the Air Corps Training Center will be commissioned in the Air Corps Reserve directly upon graduation. In accordance with other recent legislation, they will serve three years on active duty at GHQ Air Force posts or on foreign service as second lieutenants. Their active duty tour may be extended for a further period of two years in the grade of 1st Lieutenant.

The News Letter Correspondent states in conclusion that the addition of these young officers to the commissioned strength of the General Headquarters Air Force will relieve the older officers of some of the administrative details incidental to their work and that the change is a welcome one.

THE NEW CLASS AT THE PRIMARY FLYING SCHOOL

Of the 164 students selected by the Chief of the Air Corps for appointment as Flying Cadets and who will begin training at the Primary Flying School at Randolph Field, Texas, on July 1, 1937, 13 are Reserve officers from various branches of the military service, 6 are enlisted men of the Air Corps and 6 from other arms of the service, and the remaining 139 are candidates from civil life.

These students are scheduled to undergo a year of intensive flying training at the Air Corps Training Center, comprising primary and basic courses of four months each at Randolph Field and a four months' advanced course at the Advanced Flying School at Kelly Field, Texas. Those who successfully complete the one year's course will be rated Airplane Pilots, commissioned second lieutenants in the Air Reserve and placed on extended active duty with Air Corps tactical organizations.

With 24 native sons entering the July class at Randolph Field, Texas is far in the lead in the matter of the largest State representation in this class, followed by California and Oklahoma with ten students each, South Carolina with eight and Massachusetts with seven. Austin, Texas, and Lawrence, Kansas, lead the cities represented, each with three students.

The list of new students is as follows:

Reserve Officers (2nd Lieutenants)

Donlon, James D. (F.A.)	Antioch, Calif.
Abbott, Alvin S. (Inf.)	Suffield, Conn.
Fulcher, Richard P. (Inf.)	Lexington, Ky.
Dobrinic, Matthew P. (Inf.)	Taylor Springs, Ill.
Lydon, Leonard C. (Engrs.)	Dexter, Iowa
Miller, Edwin B. (Inf.)	Viola, Kans.
Reed, Elliott H. (Engrs.)	Perry Point, Md.
Trimble, Henry J., Jr. (Inf.)	Oklahoma City, Okla.
Cole, Woodrow Wilson (Inf.)	Tulsa, Okla.
McCConnell, Ihatt A. (Inf.)	Oklmulgee, Okla.
Epperly, Howell C. (F.A.)	Philadelphia, Pa.
Stockdale, Charles H. (Engrs.)	Margantown, W. Va.
Ross, William A. (Inf.)	Madison, Wis.

Civilian Candidates

Speer, William Arthur	Birmingham, Ala.
Wallace, David Woodson	Phenix City, Ala.
Rush, Richard Francis	Tucson, Ariz.
Van Sicklen, Frederick, Jr.	Alameda, Calif.
Kurtz, Frank Allen	Hollywood, Calif.
James, Frank B.	Huntington Park, Calif.
Hebert, Alvin Edward	Los Angeles, Calif.
Brewen, John Edward	San Francisco, Calif.
Enemark, William Andrew	San Francisco, Calif.
Nordwick, Norman Henry	Stockton, Calif.
Pollard, John Winston	Wasco, Calif.
Polifka, Karl Lewis	Watsonville, Calif.
Barksen, Wallace Irving	Denver, Colo.
Capasso, Alexander	Hamden, Conn.
Arnold, Richard, Jr.	Hartford, Conn.
Neuenhahn, William Charles	Washington, D.C.
Perkins, Charles Lewis	Atlanta, Ga.
Burkett, George Wilson, Jr.	Dry Branch, Ga.
Taylor, Broadus Beene	Ringgold, Ga.
Chilton, Robert Creed	Boise, Idaho
Krumes, Robert Mathias	Moscow, Idaho
Nash, Bertram Isaac	Weston, Idaho

Maloney, Robert Grace	Chicago, Ill.
Omicinski, Tad R.	Chicago, Ill.
Rademacher, Walter Frank	Harristown, Ill.
Wells, Cecil Leon	Edwardsville, Ill.
LaBow, Ralph Guy	Lincoln, Ill.
Miller, Samuel Hudson	Decker, Ind.
Stewart, Robert Reed	West Lafayette, Ind.
Stintzi, Vernon L.	Chester, Iowa
Dunham, Earl Herbert	Jefferson, Iowa
Sandvold, Winston Conrad	Moorhead, Iowa
Lewis, David L.	Waterloo, Iowa
Dresbach, Harold M.	Hutchinson, Kans.
Cummings, William J., Jr.	Lawrence, Kans.
Ramage, Edwin Miles	Lawrence, Kans.
Scoggins, James Edwin, Jr.	Lawrence, Kans.
Shannon, Gerald David	Parsons, Kans.
Brenner, Francis Eastham	Russell, Kans.
Bowie, William Allen	Baton Rouge, La.
Champagne, Wilbur Anthony	Lafayette, La.
Loe, Roy Murray	Pineville, La.
Brewster, Wendell Swanton	Dexter, Me.
Stoddard, James Merrill	Eastport, Me.
Billings, Herman	Portland, Me.
Hutton, Junius Oscar	Chevy Chase, Md.
Kahn, Theodore C.	Boston, Mass.
Higbee, Charles Ellsworth	Hyde Park, Mass.
Chalmers, Douglas	Newtonville, Mass.
White, Thomas Andrew	Norwood, Mass.
Overing, Glendon Philip	Orange, Mass.
Adams, Louis Charles, Jr.	West Newton, Mass.
Philbrick, Richard W.	Winchester, Mass.
Pemberton, Howard LaVerne	Kalamazoo, Mich.
MacNaughton, Franklin H.	Mulliken, Mich.
Swenson, Raymond T.	Chicago City, Minn.
Walseth, Marvin Ernest	Frazee, Minn.
Christopher, Garfield L.	Pine City, Minn.
Elam, William S.	Greenville, Miss.
Townsend, William A.	Kosciusko, Miss.
Ott, William Dumica	Osyka, Miss.
Brister, Kinch Exam, Jr.	Yazoo City, Miss.
Stewart, William Frederick	Kansas City, Mo.
Martin, Charles	Webster Grove, Mo.
Brown, Robert J.	Brady, Nebr.
Brennecke, Paul Thaddeus	York, Nebr.
Carr, John Kermit	Fallen, Nevada
Hampton, Edgar Wade	Margate, N.J.
Marshall, Richard Skip	Newark, N.J.
Wenrick, Stanley T.	Newark, N.J.
Dixon, Rod	Brocklyn, N.Y.
Kelly, Thomas A.	Hornell, N.Y.
Topalian, James Lamcelm	Kew Gardens, L.I., N.Y.
Alberi, Americo	Mt. Vernon, N.Y.
Tate, Nicholas L.	Yonkers, N.Y.
Griffin, James Henry	Asheville, N.C.
Shanklin, Edward Henry	Rocky Mount, N.C.
Ward, Donald Thomas	Fargo, N.D.
Van Atta, Dwight Cameron	Richwood, Ohio
Bridges, John DeGraff	Oklahoma City, Okla.
Bartlett, Frank Marion	Purcell, Okla.
Putnam, Walter B.	Tulsa, Okla.
Jones, Herman Powell	Tuskegee, Okla.
Shipley, Howard J.	Tuttle, Okla.
Sebastian, Charles A.	Wewoka, Okla.
McCauley, Verron	Dufur, Ore.
Hammers, Harold Eugene	Hood River, Ore.
Taylor, William Elton	The Dalles, Ore.
Ambrose, Joseph Richard	Danville, Pa.
Wagner, Boyd D.	Johnstown, Pa.

Darby, Richard	Beaufort, S.C.	King, Cline R.	Christiansburg, Va.
Arnold, Patrick Raymond	Clemson, S.C.	Hardisty, Dale	Olympia, Wash.
English, William Robins	Columbia, S.C.	James, Loren S.	Olympia, Wash.
Bacot, Henry Parrott	Lamar, S.C.	McDowell, Rex W.	Rockford, Wash.
Kitchens, John Glenn	Laurens, S.C.	Gay, Warren T.	Seattle, Wash.
Drafts, Lucius Griffith	Leesville, S.C.	Cross, Maxwell David	Morgantown, W.Va.
Moore, Joseph Harold	Spartanburg, S.C.	Bushman, Frederick W.	Gilman, Wis.
Hastings, Henry Stack	Wellford, S.C.	Lunde, Oswald W.	Kewaunee, Wis.
Cole, Vitalis I.	Aberdeen, S.D.	Pridemore, Fred William	Milwaukee, Wis.
Hall, Melville H.C.	Centerville, S.D.		
Hormell, Earl Lynn	Knoxville, Tenn.	King, Francis T.	Honolulu, T.H.
Madre, John Douglas	Memphis, Tenn.		
Hall, Haywood	Murfreesboro, Tenn.		
Taylor, Ozburn Early	Nashville, Tenn.		
Broadbent, Harry Hartwell	Austin, Texas		
Petri, Emil Hubert	Austin, Texas		
Starkey, Lynn Blakeley	Austin, Texas		
Glasgow, Mark Othello	Bloomington, Texas		
Griffin, Linwood, Jr.	Dallas, Texas		
Stagner, Jack	Dallas, Texas		
Skiles, Duane H.	Denton, Texas		
Crimmins, Fred T., Jr.	Fort Worth, Texas		
Brown, Ralph O.	Hico, Texas		
Keating, Ernest Wilbur	Houston, Texas		
Putnam, Claude Edwin, Jr.	Jacksboro, Texas		
Hamrick, William Ambrose	Pampa, Texas		
Baker, Clyde G.	San Antonio, Texas		
Dunn, Frank Lowry	San Antonio, Texas		
Howard, Frank G.	San Marcos, Texas		
Smith, Coalie F.	San Marcos, Texas		
Randolph, John Peyton	Schertz, Texas		
Wagner, Hale Richard	Temple, Texas		
Chick, Lewis William, Jr.	Twin Sisters, Texas		
Brown, Joel R., Jr.	Tyler, Texas		
Hogan, Eddie Walsh	Waco, Texas		
Herder, Ralph F.	Yoakum, Texas		
Droz, Paul Christian	Salt Lake City, Utah		
Lorenz, John Thomas	Salt Lake City, Utah		
Gowell, Gerald E.	Charlottesville, Va.		

Enlisted Men (Privates) Air Corps

Tindall, Porter W.	Collins, Ark.
8th Air Base Squadron, Brooks Field, Texas	
Vaughan, Paul George	Terre Haute, Ind.
3rd Air Base Sqdn., Selfridge Field, Mich.	
McNeese, George M.	Bassfield, Miss.
80th Service Squadron, Brooks Field, Texas	
Hoebet, Dean C.	Fairfield, Nebr.
Hq. and Hq. Squadron, Chanute Field, Ill.	
White, Alex Cameron	Muskogee, Okla.
53d School Squadron, Randolph Field, Texas	
Strickland, John W.	Texarkana, Texas
Base Hq. & 8th Air Base Sqdn. Brooks Field.	

Enlisted Men (Privates) Other Arms of Service

Hopwood, Homer Ward (QMC)	Sheffield, Ala.
Fort McClellan, Ala.	
Sakowski, Peter C.	Herkimer, N.Y.
Medical Department, Bellling Field, D.C.	
Meyers, Gilbert L.	Minot, N.D.
Co. G, 3rd Infantry, Fort Snelling, Minn.	
Ashkins, Milton H.	Cleveland, Ohio
Ordnance Department, France Field, Panama	
Small, James Garfield	Johnstown, Pa.
Coast Artillery School Det., Ft. Monroe, Va.	
Purinton, William R.	Clyde, Texas
Hq. Battery, 77th F.A., Ft. D.A. Russell, Tex.	

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FAIR SEX INSPECT SELFRIDGE FIELD ✓

Eleven members of the famous '99' Club, an organization of women fliers, visited Selfridge Field, Mich., for a brief inspection trip on Sunday, June 20th. This famous organization of lady pilots was founded five years ago by Miss Amelia Earhart, Miss Louise Thaden and several others of the first few women to qualify as regular licensed aircraft pilots. The figures '99' are indicative of the fact that the Club was composed of the first 99 women pilots.

Two chapters of this organization were represented at Selfridge Field on Sunday. From the Detroit Chapter were Mrs. H.B. Britton, of Ypsilanti, National President of the Club; Mrs. Faye Kirk, of Detroit, Chairman of the Detroit Chapter; Mrs. Roy Hartung, of East Detroit, and Mrs. Baker, Mrs. Waggoner and Miss Von Mauch, the latter three having flown to Selfridge Field from the airport at Plymouth. The Cleveland Chapter of the '99' Club was represented by the Misses Bell and Pease and Mrs. King, all of whom flew from Cleveland. With the exception of Mrs. Britton, whose Waco was temporarily suffering from a broken propeller, all the members flew to Selfridge Field, where they were taken on an inspection of various activities at the Air Base, including the hangars of the 27th

Pursuit Squadron, famous war-time fighting organization; the local weather bureau and radio station and the parachute department. Mrs. William Sweeley, a former charter member of the Club, had the members to luncheon at the Officers' Club following the inspection. All the lady pilots expressed great interest in what they had seen at Selfridge Field, and departed at 4:00 o'clock for their various homes.

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DUTY ASSIGNMENT OF TECHNICAL COLLEGE GRADUATES

Five Air Corps officers who have just completed a one-year course at Technical Colleges have been assigned to meteorological duties at various Air Corps stations. First Lieutenants Milton W. Arnold, Theodore M. Bolen and Sam H. Wiseman, who attended the California Institute of Technology at Pasadena, are under orders as follows: Lieut. Arnold to Kelly Field as Assistant Post Weather Officer; Lieuts. Bolen and Wiseman to Hamilton and March Fields, respectively, the former as Post Weather Officer and the latter to duty with the First Weather Squadron. First Lieuts. Ernest Moore and Rob't E.L. Eaton, who were students at the Mass.

(Continued on Page 14).

DAN CUPID IS GIVEN TACTICAL PROBLEM



Mention was made in the previous issue of the News Letter of the marriage at Delano, Calif., on Friday afternoon, May 21st. of Miss Alice Porterfield to Lieut. Kenneth Berquist, of the 37th Attack Squadron, Langley Field, Va., this organization being temporarily attached to the 13th

Attack Squadron of Barksdale Field, La., during the West Coast Maneuvers of the GHQ Air Force.

The marriage ceremony or, as some confirmed bachelors would have it, the beginning of a permanent war, took place after the war games of the GHQ Air Force were officially over. At that time an unofficial field order was given the groom by order of Major Edward M. Morris and Captain Ned Schramm, with the approval of the entire 13th Attack Squadron. This order, which was read by Lieut. Noel T. Parrish, created much amusement and was as follows:

Last Field Order

Maps: State of Wedlock:

1. a. Information of the Enemy Group Situation. Lieut. Berquist, of this squadron, having just captured a member of the opposing sex, it is expected that he will be learning things about the common enemy of man. Lieut. Berquist's capture only goes to prove that no grounds are safe from the opposing sex. All are warned that even on the uncharted sea of matrimony there may be grounds for divorce, and that all members of the opposing sex left above the ground are dangerous. Enemy anti-aircraft has brought down a number of our pilots.

Enemy Air Situation.

The enemy air situation remains unpredictable, since members of the opposing sex are up in the air about something at least half the time. While the enemy appears to live in constant fear of the attack, they are likely to assume the offensive at any time. The opposing sex is known to be supplied with huge quantities of tear gas, which is their most deadly weapon. Concerning enemy bombardment, our observers report that they are likely to blow up at any moment, and that as human bombs they make the Japanese look sick. Explosions are usually preceded and followed by tear attacks. Enemy attack may come from any direction without warning. Observation of the enemy is fairly safe, but pursuit of the enemy is extremely dangerous.

b. Information of friendly elements.

(1) Surface: In addition to Lieut. Berquist, other members of our forces have made similar captures although, according to Lieut. Berquist, none have been so noteworthy. We are making our captures according to the rules of war between the sexes, and always take the enemy alive. Since we are capturing the very heart of the enemy forces, we are constantly winning the war on the surface.

(2) Air: But in the air the situation is different. Our pilots make captures only to be thrown for a loss as far as the rest of us are concerned. Pilots who make captures often become so preoccupied in preventing their escape that they are no longer useful against the enemy. They find it necessary to give position reports by air, mail or telegraph every twenty-four hours or so, and no matter how far they fly they are still in the enemy intelligence net. If they fail to give report, they are certain to be attacked on the home air-drome. The enemy is particularly watchful of their night activities, and sometimes receive reports from surprising distances. Pilots of our squadron who have not made a capture are advised that delay may be fatal, since eventually either capture or be captured. Sometimes it's hard to tell the difference. While it is true that captures are best made at night, it is usually better to look over possible objectives in the daylight before making a final selection.

At Los Angeles the enemy has been very successful with camouflage. Maneuvers leading up to capture of the enemy are best performed at night, and it is well known that moonlight weakens the enemy defense. Radio is a great aid on the attack, which would be performed in a quiet, gliding manner with lights out, and a minimum of noise. However, some pilots have used hot air with great success. Enemy defense activities are impressive but should not be taken too seriously. In fact, some of our most successful pilots report that the enemy is more dangerous after capture than before. And it is known that pilots wounded in unsuccessful attacks become the stubbornest fighters we have.

2. Decision of the Commander.

It is the decision of Lieut. Berquist's Flight Commander, Captain Schramm, and of his Squadron Commander, Major Morris, that hostilities will cease for one hour while Lieut. Berquist's captive openly acknowledges her surrender, and that an Aerial Review (simulated) be flown in honor of Lieut. Berquist's great feat, since he made his capture single handed from coast to coast.

Our Squadron will be supported in this review by a flight of nymphs and cupids from Elysian Field.

Time of take-off: Sunrise.

Formation of review: Hearts and arrows.

Direction of review: Toward Venus.

Assembly point: At the altar.

Rallying point: Pete's Place.

3. Ammunition:

Machie guns will be loaded with rice, bomb racks with old shoes and chemical tanks with giggle water.

4. Uniform:

Each pilot will wear black goggles to prevent jealousy. Also in recognition of Lieut. Berquist's new position, each pilot will wear a noose around his neck and a ring through his nose.

5. a. Plan of Signal Communications: Radio frequency: waltz time.

b. Command Posts: Lieut. Berquist at 1750

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relinquishes command of himself and all accoutrements. Command to be vested henceforth and forevermore in Mrs. Berquist.

By order of Major Morris and Captain Schramm, with the approval of the entire 13th Attack Squadron, and the kind assistance of Father Martin:

RICHARD H. LEE,
S-3.
NOEL F. PARRIS,
S-4.

Unofficial:

FRANK C. NORVELL,
S-1.

Annexes: Who knows? They happen in the best of families.

Distribution: Coast to Coast.

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NEW ATTACK PLANE PLEASES ARMY PILOTS ✓

The Correspondent of the 90th Attack Squadron, GHQ Air Force, Barksdale Field, La., reports that when the pilots of this organization returned from the West Coast GHQ Maneuvers on May 24th they were pleasantly surprised to find six new A-17A airplanes waiting for them.

As is usually the case when new airplanes are delivered to an organization, the pilots were anxious to fly them. Before the airplanes were released for flight by the Engineering Department, however, their number had increased to nine. After local flying in the daytime in which all pilots checked off, and after one or two skull practices at which we were instructed in the art of retracting and lowering the landing gear, we went on a night schedule from 7:00 p.m. to 1:00 a.m., and flew seven A-17A airplanes in formation.

For the last ten days we have flown the A-17A airplanes at night in from seven to twelve-ship formations. All missions were from three to four hours in duration and were combat missions, either night machine gun or night bombing, or both. No difficulty has been encountered with the landing gears as yet, and we hope there will be none.

The A-17A airplanes appear to be from 15 to 20 miles per hour faster at cruising speed than the A-17's. One time schedule called for a ground speed of 170 miles per hour, which was easily maintained.

To say the least, all the pilots who have flown them are well pleased, and after a flight they invariably say: "Man, that sure is a swell airplane."

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Technical College Graduates (Continued from Page 12)

Institute of Technology, Cambridge, Mass., were assigned to Langley and Scott Fields, respectively, the former to duty with the Second Weather Squadron and the latter to duty as Post Weather Officer.

Other Air Corps officers assigned to meteorological duties were:

First Lieut. Harold H. Bassett, from Hamilton Field, Calif., to the First Weather Squadron

and duty as regional control officer, First Weather Region, with station at March Field, Calif.

First Lieut. Julius K. Lacey from duty with the GHQ Air Force, Langley Field, Va., to duty with the Second Weather Squadron as regional control officer, Second Weather Region, Langley Field, Va.

Captain Leon W. Johnson, from duty with the GHQ Air Force, Barksdale Field, Shreveport, La., to the Third Weather Squadron and duty as regional control officer, Third Weather Region, Barksdale Field, La.

First Lieut. Arthur F. Merewether from duty with the GHQ Air Force, Barksdale Field, La., to duty with the Third Weather Squadron at that station.

First Lieut. Anthony Q. Mustoe, from duty with the GHQ Air Force, Selfridge Field, Mich., to duty as post weather officer at that station.

First Lieut. Royden E. Beebe, Jr., from duty with the GHQ Air Force, Mitchel Field, L.I., New York, to duty as post weather officer at that station.

First Lieut. Torgils G. Wold, from duty with the GHQ Air Force, Langley Field, Va., to duty with the Second Weather Squadron at that station.

The above duty assignments take effect on July 1, 1937. ✓

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GAS MODEL AIRPLANE MEET AT KELLY FIELD

The International Gas Models Association of America held a State Meet at Kelly Field, Texas, on June 6th. Forty aspiring model builders entered their creations.

Mrs. James P. Patterson, of Fort Worth, was the only woman entrant. Her model made several successful flights but crashed before the final event.

The progress of the meet was announced to the large crowd of spectators over a public address system installed by the Inter-State Theaters Company by Mr. F.W. Schreiber.

First place in the Meet was taken by Mr. Morton Bourland, of Fort Worth, with a time of 5 minutes, 27 seconds. The model he entered is one of his own design. Second place was won by Mr. J.P. Cockrill, of San Antonio; third place by Mr. Jack Beckelman, of Fort Worth; fourth place by Private William Hewgley, of Kelly Field. A high wind during the afternoon delayed the competition. After the wind died down, the events proceeded and were completed shortly after dusk.

The News Letter Correspondent states that a great deal of interest is shown here in San Antonio, as well as other large cities of the State, in model building and flying, and that officials of the International Gas Models Association of America, of which there is a chapter in San Antonio, predict that State Meets which they plan to stage here will draw more entries and larger crowds of spectators as interest becomes more widespread.

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NOTES FROM THE WASHINGTON OFFICE

Brigadier General James E. Chaney, Commandant of the Air Corps Training Center, Randolph Field, Texas, was a visitor in the Chief's Office during the course of a navigation flight.

Major Ray A. Dunn, of the Middletown Air Depot, dropped into the office while on leave of absence. He says that he has in preparation a series of articles on insurance for aviators which should be of considerable interest to all Air Corps personnel. He promises to send them in for the News Letter for publication.

Officers who recently returned from leaves of absence were Colonel William C. McChord from West Point, and Lieut. Colonel Gerald E. Brower, who tried his skill as well as his luck with the rod and reel.

Officers departing on leaves of absence were Lieut. Colonel Lynwood B. Jacobs on June 14th and Major Leland W. Miller on June 18th.

Visitors to the Chief's Office during the past two weeks were Colonel John H. Howard, Commanding Officer of the San Antonio Air Depot, Duncan Field, Texas, on June 14th, while on leave; Lieut. Colonel Harrison W. Flickinger, for temporary duty; Major John F. Whiteley, of Langley Field, Va., for conference; Captain Harry H. Mills, Instructor Michigan National Guard, Detroit, Mich., during the course of a training flight; 1st Lieut. William L. Kennedy from Kelly Field, Texas; 1st Lieut. Robert D. Johnston, from March Field, Calif.; and 1st Lieut. George W. Hansen, from Maxwell Field, Ala., while enroute to Mitchel Field, N.Y.

Major Edward V. Harbeck, Jr., of the Inspection Division, departed June 12th on an inspection trip to Barksdale Field, La.; Houston, Texas, and Fort Crockett, Texas.

Captains Donald F. Stace and M.E. Gross, of the Supply Division, returned June 18th from Aberdeen Proving Ground, Md.

Majors Alvin C. Kincaid and Austin W. Martenstein returned June 16th from a navigation flight to Spartanburg, S.C.

Major Karl S. Axtater returned June 11th from a navigation flight to Salt Lake City, Utah.

Officers departing on navigation flights were Major James A. Mollison to Maxwell Field, Ala., on June 11th; Major William B. Souza to Mitchel Field, N.Y., on June 12th, and Captain James B. Jordan on June 27th.

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WAR DEPARTMENT ORDERS

Changes of Station

To March Field, Calif.: Major Warner B. Gates, upon completion of present course of instruction at Advanced Flying School, Kelly Field.

To Randolph Field, Texas: Major Lawrence A. Lawson, from Moffett Field, Calif.; 2nd Lieut. John K. Brown, Jr., from Brooks Field, Texas.

To Kelly Field, Texas: Major Albert C. Foulk, from March Field, Calif.

To Maxwell Field, Ala.: Captain David J. Ellinger, from Chanute Field, Ill., for duty as student in 1937-1938 course at the Air Corps Tactical School.

To Wright Field, Ohio: 1st Lieut. Millard I.

Haskin, for duty at Materiel Division.

Orders Revoked

Assignment of Captain Clarence F. Horton, Maxwell Field, Ala., for duty as student in 1937-1938 course at Air Corps Tactical School.

Promotions

To Captain, with rank from June 16, 1937: 1st Lieuts. Walter W. Gross, Otto C. George and John N. Jones.

Extended Active Duty

Second Lieut. Fred Delaway Stevers, Air Reserve, of Chicago, Ill., to active duty at Langley Field, Va., to June 27, 1940.

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ACCIDENT CAUSES DEATH OF TECH. SGT. FERGUSON

An unfortunate accident occurred at Kelly Field, Texas, on June 18th, which caused the death of Technical Sergeant Archie L. Ferguson, 12th Air Base Squadron. While repairing the remote control release which turns off the radio beacon transmitter, Sergeant Ferguson came in contact with a high voltage wire. Instant death resulted.

Sergeant Ferguson was born in Carroll County, Iowa, June 2, 1903. He enlisted in the Air Corps March 18, 1922; served with the 16th Observation Squadron to October 8, 1930; with the 23rd Bombardment Squadron to March 2, 1931; with the 75th Service Squadron in the Hawaiian Department, to December 2, 1933; at Chanute Field, Ill., to January 23, 1935, and since that time at Kelly Field, Texas, with the Advanced Flying School Detachment and later with the 12th Air Base Squadron. In January, 1926, he graduated from the Radio Mechanics Course at the Air Corps Technical School, Chanute Field. He was appointed to the grade of Sergeant in September, 1924; to Staff Sergeant in March, 1925; and to Technical Sergeant, June 17, 1930.

Sergeant Ferguson is survived by his widow, Mrs. Marion J. Ferguson; two daughters, Doris, 9, and Thelma, 8; and a son, Archie, Jr., 5 years of age.

Interment was in the National Cemetery at Fort Sam Houston, Texas.

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GRADUATION EXERCISES AT KELLY FIELD

Sixty-two student officers and Flying Cadets finished the course at the Air Corps Advanced Flying School, Kelly Field, Texas, and were awarded certificates of graduation on June 9th.

Airplanes piloted by the members of the graduating class passed in review at 9:30 a.m. before Major General James K. Parsons, Brigadier General James E. Chaney and a crowd of several hundred spectators.

Graduation exercises took place at 10:45 a.m. in the Post Theatre. General Parsons, commanding the Second Division and Fort Sam Houston, Texas, delivered the graduation address. He was introduced by General Chaney, commanding the Air Corps Training Center.

The class was composed of 8 Air Corps officers, two officers from other branches of the Army, two foreign officers and 52 Flying Cadets. Their names were listed in the previous issue of the Air Corps News Letter.

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THE BALLAD OF JUGHAID JAKE
(No apologies)

Jug-haid Jake is the name of a rake
Who flew an "A" Seventeen;
'Neath high tension lines and Burma-shave signs
A-rolling his wheels on the green.

From Barksport town came our low-flying clown,
To the land of the setting sun,
Where the March Field guys, sensible and wise,
Such dangerous tactics did shun.

Oh, loud laughed he, when he chanced to see
The boys from the Seventeenth Attack
Circle a week, just to clear a tall peak,
"So much in courage they lack."

With loud guffaws he cracked old saws
About fair weather pilots and such;
And raved of the thrill of clearing a hill
By an inch - or not that much.

On a morn in May, in his bunk he lay,
Dreaming of new things to do -
When the O.D. came and called his name,
"Up, Jake, take off at two."

'To Muroc Lake you must presently take
Your flight, and as you pass
O'er the luckless scamps in the pea-shooter camps
Just loosen a load of gas."

Long before day the flight was away,
over Castiac, Saugus, Tejon.
In formation tight they flew thru the night,
To Fontana and up thru Cajon.

Over Mirage Lake, just after day break,
Skimming the desert's floor.
Flying North-North-West on his warlike quest
He raised dry Muroc's shore.

Down the long slope the hedge-hopping dope
Roared to a target so clear;
Down to the flats where forty brass hats
Were aroused from their slumber so dear.

The boys from the West tried their dead-level
best
To keep him from going too low.
But the lad in the lead, thought it was a bright
deed
To stage a rousing good show.

So he got in a stew and the first thing he knew,
He was flying where free air was not.
To his utter surprise the lake bed did rise,
"What the hell, ain't this thing a yacht!"

The wing section moaned and the oleos groaned
And the landing gear gave with a scream.
He felt quite abashed that the ship had been
smashed
While he coasted along in a dream.

So at Bakersfield town he set the plane down
To see what damage he'd done.
Said the boy on his wing "I did the same thing -
Two ships to Rockwell, not one."

Back to his base with shame on his face
Went Jake, the reckless one.
With caution his motto, lest he go blotto,
And his time with the Air Corps be done.
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COMMAND AND GENERAL STAFF SCHOOL GRADUATES

Graduation exercises for the regular class of the Command and General Staff School, Fort Leavenworth, Kansas, were held on June 21st. Following the invocation by Chaplain Luther D. Miller, U.S.A., Brigadier General Charles M. Bundel, U.S.A., Commandant of the School, introduced the guest of honor, Hon. Harry H. Woodring, Secretary of War, who delivered an address. Mr. Woodring also presented the diplomas to the graduates. The exercises were concluded with the benediction by Chaplain Miller.

Of the total of 237 graduates, 38 were Air Corps officers, as follows:

Lieut. Colonels

Crom, William H. McClelland, Harold M.
Kepner, William E. Sorenson, Edgar P.

Majors

Cannon, John K. Halverson, Harry A.
Clark, Harold L. Kiel, Emil C.
Davidson, Joseph H. Larson, Westside T.
Eaker, Ira C. Toohar, Bernard J.
Gaffney, Dale V. Upston, John E.
George, Harold L. Waller, Alfred E.
Gothlin, Oliver P. Jr. Wolfe, Kenneth B.

Captains

Caldwell, Charles H. Old, William D.
Chidlaw, Benjamin W. Oliver, Robert C.
Crawford, Alden R. Quesada, Elwood R.
Cumberpatch, James T. Shea, Augustine F.
Duglass, Robert W., Jr. Snavely, Ralph A.
Dulligan, John H. Twining, Nathan F.
Ferguson, Homer W. Weikert, John M.
Ferris, Carlisle I. Whitten, Lyman P.
Mayhue, Don W. Williams, Robert B.
Moon, Ernest S.

1st Lieutenant

Fair, Ford L.

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ARMY WAR COLLEGE GRADUATES

At the graduation exercises at the Army War College, Washington, D.C., on June 23rd, the Hon. Harry H. Woodring, Secretary of War, delivered the principal address. There were a total of 95 students in the graduating class, comprising officers from the various branches of the Army, also officers from the U.S. Navy and the Marine Corps. Ten members of the graduating class were Air Corps officers, viz:

Lieut. Colonels

Connell, Carl W. Hale, Willis H.
Cousins, Ralph P. Howard, Clinton W.
Farthing, William E. Wooten, Ralph H.

Majors

Fairchild, Muir S. Vanaman, Arthur W.
Hough, Romeyn B., Jr.

Captains

Thomas, Charles E., Jr.

NOTES FROM AIR CORPS FIELDS

Langley Field, Va., June 23rd.

2nd Bombardment Group: Lieut. Colonel Robert Olds, Group Commander, arrived from the Boeing factory on June 1st with a Y1B-17 airplane for Headquarters Flight of this Group. He was accompanied by Major Barney M. Giles, co-pilot; 1st Lieut. Edwin L. Tucker, navigator; Staff Sgt. Arthur Jolly, crew chief; Private Archie R. Jester, assistant crew chief, and Private Harry O. Johnson, radio operator.

Hq. and Hq. Sqdn. On Friday, June 4th, the remainder of the personnel of this Squadron who have been quartered on the third floor of the 20th Bombardment Squadron barracks, moved to the new quarters in Building No. 116. The new barracks have been thoroughly painted and polished and are now in first class condition.

20th Bombardment Squadron: Captain Alva L. Harvey reported to this Squadron on June 10th from Maxwell Field, Ala.

The following-named Privates were promoted to the grade of Private, 1st Class: Ernest C. Adams, John Dalto, Sherwood H. Moore, Lewis Majaka, Harold W. Ragland and Vincent Bruno.

49th Bombardment Squadron: The following-named officers of this organization recently returned from the GHQ Maneuvers on the West Coast: Captain A.Y. Smith, flight commander; 1st Lieut. Douglas M. Kilpatrick, 2nd Lieut. Joseph B. Stanley, Air Corps, and 2nd Lieuts. Joe E. Barton, John B. Montgomery and Kenneth A. Cavenah, Air Reserve. These men were assigned to the 31st Bombardment Squadron, which had as its base of operations Stockton, Calif., during the maneuvers.

During the past two weeks the following-named men of this Squadron were promoted to the grades indicated, viz: Corporal A.R. Loftus to Sergeant, Privates, 1st Class, A.L. Curry and R.R. Beller to Corporal.

21st Reconnaissance Squadron: Privates 1st Class, AM 2d Class Ralph M. Brosius and George A. Kingston find encouragement in their efforts by being promoted to the grade of Corporal.

8th Pursuit Group - 33rd Pursuit Squadron: The Squadron found itself rather busy, shooting with the Group in preparation for the demonstration on May 15th before students of the Army War College and other notables scheduled to be present to witness the Pursuit, Attack and Bombardment go through various phases of tactical training.

As the end of the fiscal year draws to a close, the Squadron will be in camp at Virginia Beach, Va., performing aerial gunnery, ground gunnery and instrument flying. The Squadron was somewhat handicapped in getting in the required number of hours for instrument flying, due to the need of two airplanes to train one man to fly by instruments. However, when the last day comes around the 33rd will have completed all of Circular #69 time, as well as the GHQ training schedule.

At this writing Lieut. W.R. Robertson is in Washington getting his long legs in shape for the Army Tennis Tournament. The 33rd feels proud to have such a capable player as Robby.

35th Pursuit Squadron: Numerous changes in personnel and rank have taken place in this

organization during the past few weeks, some of which have not been mentioned in previous contributions to the News Letter. On May 1st, Corporal W.E. Fisher was promoted to Sergeant, and Pvt. 1st Class, Specialist 2nd Class E.C. Ackerman and Private 1st Class, A.M. 2nd Cl. J.A. Vidrine were advanced to Corporal.

Staff Sergeant Patton shoved off to the Middletown Air Depot to take a course in maintenance of the Automatic Pilot before transferring to Panama.

The Squadron welcomes the assignment of 1st Lieut. Griswold. This will greatly improve our tactical set-up.

Cadets Curry and Sluder received their Reserve Commissions on June 2nd. Lieut. Sluder has already left for his new station at Randolph Field. Dodo to Instructor in two years. Shades of Horatio Alger!

On June 20th, Cadets McNow, Myers and Perry were to don their shiny new bars. We hope they will stay with us. This will deplete our entire stock of Flying Cadets.

The P6-E's used in the 8th Pursuit Group in conjunction with the PB-2A's are now in process of being transferred to Selfridge Field. In return we expect to get their PB's. This will no doubt assure a PB for each pilot in the organization.

The Group has been grooming planes and equipment preparatory to a two-week Field Exercise at Virginia National Guard Airport. This movement was scheduled to start June 23rd.

36th Pursuit Squadron: On June 12th the Squadron waved farewell to four of our old friends, the P-6's. With their departure and reassignment to the 1st Pursuit Group, our pilots regretfully bid farewell to acrobatics for some time to come. No longer will we hear the whine of a churning V-1570-F as it pulls its sturdy little Curtiss Hawk thru loops and slow rolls, snap rolls and Immelmans. Rumor reaches us that in place of the P-6's we are to receive six more PB-2A's and, although we lose a fine acrobatic ship, we are gaining a ship which is among the best for gunnery, navigation and instrument flying.

After our PB's had recuperated from their sojourn out at Muroc Dry Lake, Calif., we centered our activities around familiarizing the Cadets with this type of ship and in preparing for the mass and wave firing demonstration on June 15th for the students of the Army War College.

Apparently our sailor, Staff Sergeant Baker, is much better at airplane rigging than at sail boat rigging. After having purchased a boat from Captain Clem Wheeler, Baker spent his spare time in improving it. Among his bigger and better improvements was an oversized center board, which was installed. After Sergeants Baker and Jones launched the vessel and headed with pride out into the bay, all went well until the time came to make a turn. Much to their surprise, the boat continued on the same course, regardless of the position of the sail and rudder. After an embarrassing struggle of an hour and a half, Baker suddenly remembered the oversized center board, and

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upon lifting it up into the ship he found that it maneuvered perfectly.

Besides sailors, there are several nimrods in our outfit of whom we are justly proud. Tech. Sgt. Fox reports that last week he and two friends caught three bonitos weighing 56, 42 and 40 pounds.

37th Attack Squadron: Captain Ned Schramm, Squadron Commander, left for Florida June 3rd on 20 days' leave. Every man in the Squadron wishes him a most enjoyable vacation. He was scheduled to be back with the Squadron in time to participate in the 8th Pursuit Group maneuvers at Virginia Beach from June 23rd to July 7th.

Kelly Field, Texas, June 21st.

Officers from the Fairfield Air Depot and Wright Field visited this field on Saturday, June 19th, in a Y1B-17, on an administrative flight to Air Corps in this vicinity. The big Bomber landed at 10:00 a.m. The pilot of the airplane was Captain Stanley Unstead, Chief, Flight Test Division, Fairfield Air Depot, and the co-pilot, 1st Lieut. L.F. Harman, Project Engineer for Bombardment equipment. The passengers were Major R.S. Heald, Depot Supply Officer, and Major Edwin R. Page, Chief of the Power Plane Division, Wright Field. The visitors departed from Kelly Field at 4:00 a.m. the next day for the return flight to Dayton.

A 6-plane Attack formation from Barksdale Field arrived at Kelly Field at 12:00 noon on June 12th on a combined bombing and navigation flight. The leader of the flight was 2nd Lieut. R.H. Macklin, and the other members thereof were Lieuts. E.F. Cullerton, E.S. Snavelly, J.B. Stephens, H.L. Buller and H.O. Wangeman. The formation returned to Barksdale Field the following morning.

Luke Field, T.H., June 3rd.

50th Observation Squadron: As the end of the Fiscal Year 1937 approaches, this Squadron finds its line-up of commissioned personnel considerably changed since the corresponding point in the Fiscal Year 1936.

The line-up at present is: Squadron Commander, 1st Lieut. Leland S. Stranathan; Adjutant, 2nd Lieut. Edmund T. Gorman; Operations, 2nd Lieut. James C. Cochran; Engineering, 2nd Lieut. Ben A. Mason, Jr.; Communications, 2nd Lieut. Robert M. Stillman; Supply and Mess Management, 2nd Lieut. John L. DuFrane.

Others who fly with us are 1st Lieuts. William C. Sams, Richard C. Lindsay, Harry S. Bishop, Edward D. Marshall and 2nd Lieut. John P. Stewart. It is a congenial group and, although there is a shortage of planes, we manage to get in a lot of training.

Lieut. Stewart is soon to leave us for Fort Lewis, Wash. He will be the first from this Squadron to go to duty in the great Northwest of the United States.

72nd Bombardment Squadron: 2nd Lieut. Cady R. Bullock, former Engineering Officer, returned to the mainland with the U.S. Fleet. He was a passenger on the aircraft carrier RANGER. His new station will be March Field, Calif. He was replaced by Lieut. Fred C. Johnson.

Privates Martin, Wolte, Corrigan, Rainear and

Pierce returned to the States on the U.S.A.T. GRANT.

Hawaiian Air Depot, Luke Field, T.H.

With the end of this Fiscal Year, like prosperity, just around the corner, this Depot is now rushing down the home stretch at full speed. In one week's time, three planes graduated from Final Assembly and have been transferred back to their respective squadrons. One of these, a B-4A, was converted into a cargo type plane. Those C-33's had better look to their laurels - competition is in sight.

New faces are appearing in our midst; in fact, hardly a day passes that someone doesn't report in fresh and full of mainland vigor. Slowly but surely the last of the enlisted personnel are being replaced, and by July 1st the civilianization program will be almost complete. What with fancy organization charts, fresh fiscal allotments, and ambitious newcomers, the future cannot help but look bright.

Rockwell Air Depot, Coronado, Calif., June 14.

Scheduled intra-depot freight trips from this station were completed 100% during May. Due, however, to the use of our C-33 in connection with troop movements during recent maneuvers, the resultant amounts of freight carried and miles flown were somewhat below the figures for the preceding month, being 80,332 pounds and 9,643 miles, respectively. No inter-depot trips were made during May.

Personnel at this station were afforded their first opportunity to inspect one of the new Douglas B-18 Bombers on June 7th, when Captains R.G. Harris and E.M. Robbins brought one in from the factory for a short visit.

The Depot extends a hearty welcome to 2nd Lieuts. Maurice M. Beach and Lloyd L. Sailor, former enlisted pilots at this station. Also included in this greeting is 2nd Lieut. S.H. Ecklund, Air Reserve, formerly of T.W.A., who reported for extended active duty on May 4th.

The detail to extended active duty of Staff Sergeant M.M. Beach and Private 1st Class, AM 1st Class L.L. Sailor created a string of vacancies in the Squadron whereby Sergeant Dae Hext was promoted to Staff Sergeant, Corporal C.A. Benner to Sergeant, Private 1st Class J.W. Green to Corporal, and Privates 1st Class A.G. Kolaitis and August Stackwell to Air Mechanics 2nd Class.

On May 11th Captain J.H. Hicks, Wright Field, dropped in for a three day stay during the course of a tour of inspection of the various depots.

Major L.H. Dunlap and Captain H.E. Carr departed on May 22nd for Fort Lewis, Wash., for the purpose of ferrying a BT-2B1 plane to that station.

Colonel Jacob W.S. Wuest and Major J.T. Morris departed on June 2nd on a tour of inspection of the various Air Corps activities within this Control Area. Stations visited were Moffett Field, Oakland Airport, Hamilton Field, Pearson Field, Fort Lewis, Spokane and Salt Lake City.

Among other visitors at this station during May were Colonel Follett Bradley from Langley Field and Major Copsey of the New Jersey National Guard.

Second Lieuts. D.R. Hutchinson, B.L. Boatner and T.S. Olds brought three P-26's in from Barksdale Field on June 3rd for shipment to other stations.

On May 24th, Sergeant C.C. Cunningham, Staff Sergeant E.G. Gauper and Private Michael Bittner and P.W. White flew a new engine to Winslow, Arizona, and installed same in a Langley Field B-10 which was down at that place.

On June 9th, Captain H.H. Carr, flying a C-27C airplane, departed for Albuquerque, N.M., with Master Sergeant Peter Besiot, Staff Sergeants E.G. Gauper, T.E. Stapp, Sergeant R.A. Ross and Private V.M. Byrne to repair and return to this station our C-33 which was damaged in landing on May 27th.

San Antonio Air Depot, Duncan Field, Texas.

Colonel H.B. Clagett, Commanding Officer of Selfridge Field, Mich., was a visitor at this Depot June 18-19, enroute to his home station in a C-33 Transport from the West Coast.

Lieut. Colonel Fred H. Coleman, Commanding Officer of the Panama Air Depot, France Field, after visiting the Fairfield Air Depot, arrived here for several days' stay.

Major and Mrs. Ames S. Albro and son departed June 10th on a brief leave of absence before sailing from San Francisco on or about June 19th for Major Albro's new assignment to duty with the Air Corps in the Hawaiian Department. Major Albro has been on duty as Technical Supervisor of this Supply Control Area since July, 1934. Their many friends in this vicinity greatly regret to see them go and wish them all success and happiness in their new activity.

Captain E.A. Hillery, piloting a C-33 Transport, returning to Langley Field, Va., from the recent GHQ Air Force Exercises in California, was a visitor at this Depot June 12-14. He brought back to the Depot three civilian mechanics, P.V. Stewart, J.E. Bull and F.C. D'Albini, who had been sent to repair his plane when he was forced down at Tucumcari, N.M.

Captain L.C. Craigie and Mr. Worth, of the Materiel Division, Wright Field, Ohio, arrived here by air June 17th for an inspection of the oil-cooling system in BT-9 airplanes.

Lieuts. E.J. Hale and C.E. Hughes, of Maxwell Field, Ala., were visitors at the Depot June 12-14, ferrying in two Bombers for overhaul and repair.

Lieut. V.V. Poupitch, Air Reserve, co-pilot with Master Sergeant C.F. Colby, pilot, and Sergeant H.F. Berry, mechanic, of the Middletown Air Depot, Pa., who were on an interdepot transport service trip, departed June 19th to transport Bomber ferry pilots from Randolph Field to March Field, Calif., then to return via the Rockwell Air Depot and this Depot to their home station.

Mr. L.J. Spahr, Junior Property & Supply Officer, and Mr. W.G. Leithiser, Senior Storekeeper, of the Middletown Air Depot, Pa., visited this Depot by air, June 15-16, and June 2-14, respectively, on temporary duty studying Depot Supply methods.

Mr. Frank Thurman, Senior Aircraft Engine Mechanic, Wright Field, Ohio, was on several days' temporary duty at this Depot, beginning June 11th, to observe engine overhaul methods

and systems used at this Depot.

The regular Control Area Supply and Engineering Conference and Luncheon at this Depot was held on June 8th, and was attended by some 18 officers from Randolph, Brooks, Kelly and Barksdale Fields and this Depot.

Property and Supply Clerks E.L. Kegresse and T.J. Fern, of the Depot Supply Department, this Depot, left on June 16th for several days' temporary duty at Wright Field, Ohio, conferring with personnel of the Field Service Section on supply matters.

During May, 1937, the Engineering Department of this Depot overhauled a total of 17 airplanes and 60 engines and repaired 23 planes and 22 engines.

The 3rd Transport Squadron has gained one additional enlisted man in the enlistment on June 17th of Private Robert H. Hughes, who recently served at Kelly Field.

Barksdale Field, Shreveport, La., June 20th.

3rd Attack Group: Back to their home station, following active participation in the GHQ Air Force concentration and exercises on the West Coast, staged during the past month, finds Headquarters and Headquarters Squadron of the famed Third Attack Group completing prescribed duties for the Fiscal Year 1937 with a high degree of efficiency and without a doubt an unexcelled high for morale and good fellowship.

20th Pursuit Group: A barbecue picnic was given June 16th on the reservation for the departing officers, who were ordered to Randolph Field for duty as Instructors, by the remaining members of the Group.

All three Squadrons have been very busy picking up the odds and ends to complete the year's training schedule, and all the pilots will have completed the year's work by the first of July.

Our greatest hardship has been in having only one instrument flying ship for the Group, a BT-2, so the pilots have been flying all hours of the day and night, and it is not uncommon for the ship to be in the air eighteen hours of the day, making it necessary to have the maintenance crew of the ship doing the work after midnight.

Lieut. P.K. Morrill has just become a member of the Group from Albrook Field, Canal Zone, and is Squadron Commander of the 77th Pursuit.

Lieut. Landry, formerly of the Philippines, is now a new member of the 79th Pursuit Squadron.

The 20th Pursuit Group was consolidated into one full strength squadron, under the title of the 55th Pursuit Squadron, and participated in the West Coast Maneuvers in May with the 1st Pursuit Group. Major F. O'D. Hunter commanded the composite squadron.

Maxwell Field, Ala., June 22nd.

The hectic month of June again faced the personnel of the Air Corps Tactical School, and to prove that the month started off with the proverbial bang, the Officers' Register, located in the hall of the school building immediately in front of the Adjutant's Office, bears a sum total of 125 signatures up to and including the 20th of June. Of course, this

does not represent all departures and arrivals, as cross-country visitors do not register at Headquarters.

The Academic personnel are enjoying a rest, as are the hangar personnel except those unfortunates who drew furniture details with the Quartermaster. Due to the large turnover of officer personnel between June and September, furniture details are the world's worst worries for many prospective crew chiefs who joined the Army to learn to fly and found out differently.

The Adjutant's Office, as well as the School Secretary, are "burning midnight oil" and expect to continue through September.

Orders, orders and more orders are pouring through the mill in headquarters each day and, with keeping up with addresses on leaves, picking up the new students and dropping the old ones from the records, with one eye on the quarters situation and the other on a few days' leave for ourselves, the situation is practically what was expected from last year's experiences.

Speaking of hangar gossip, the word is out that all mechanics are to take the entrance examination for Chanute Field, and instead of sitting around discussing their golf game the boys may now be seen peering between the pages of some worth while literature refreshing their dusty memories on business problems having to do with crank shafts, carburetors and ignition systems.

Major Lewis A. Dayton, Commanding Officer of the 13th Air Base Squadron, received radio orders to proceed to Randolph Field for a refresher course in flying on Saturday, June 19th, and left bright and early Monday morning after an all-day job Sunday of turning over his Squadron to Captain George H. Sparhawk.

Lieuts. Dwight B. Schanep and Carl R. Storrie are off to the West Coast where they will get a B-18 from the Douglas Aircraft Corporation at Santa Monica, Calif.

The Quartermaster Detachment, under the able guidance of Major Kinsley W. Slauson, started off the round of organization day picnics this year with their annual fun-fest at Narrow Lane Inn on June 16th. General Pratt granted the Quartermaster Corps the entire day off duty and, together with all civilian employees and many friends, the QM certainly had a big time.

Games were enjoyed, one of the best being a Tug-O'-War in which the Finance and Ordnance Sergeants were anchor men, one on each side and, incidentally, both of them weighing well over 200. A chicken with all the trimmings followed the games, at which time prizes were presented to contest winners.

Now that the Detachment QMC has led off, the Signal Detachment was scheduled to come next with their picnic on June 26th at Harrogate Springs, near Montgomery. Lieut. R.E.L. Choate, Detachment Commander, laid some swell plans for this affair.

Headquarters Squadron, A.C. Technical School, was expected to follow the Signal Detachment with their outing on June 29th at Narrow Lane Inn. With a mean strength of well over 200, this organization looked forward to some real fun. Games of all kinds, refreshments and a

dance comprised the schedule, with dinner in the organization mess hall before the departure of the party for Narrow Lane.

The 13th Air Base and 91st School Squadron writers have failed to mention their plans yet, but certain buzzing around is being done by Captain James G. Pratt and Sergeant "Pop" Shrote, of the 4th Photo Section, and we know they are planning their's carefully. Last year the Photo Section "out-did" the field on their birthday by going to Florida and really catching some fish. They brought back pictures to prove it, so we are all looking forward to their plans for this year.

91st School Squadron: Captain S.F. Landers, who has been this Squadron's commanding officer since its constitution on September 1, 1936, is now on leave, at the expiration of which he will enter the Air Corps Tactical School. He goes from this Squadron with the best wishes of every man in it. Captain C.D. McAllister, organizer and leader of the "Skylarks" (acrobatic team) has taken over the Squadron.

Hq. and Hq. Squadron, A.C. Tactical School: First Lieut. Hale ferried a B-6A airplane from this station to Duncan Field, San Antonio, Texas, on June 11th, for an overhaul job, and returned to his station June 15th. Major Hildreth, our Squadron Commander, departed on June 21st for a leave of absence of a month and 15 days.

Corporal Stotz returned to us on June 5th, having completed a course of instruction on the "Link Trainer" at Randolph Field, Texas, (without wings). He seems much elated over the course of instruction he received, and it is hoped he will be able to impart his knowledge on the above at the proper time to the designated personnel at this station.

Private Patterson's hopes of making West Point this year has begun to fade in the distance, due to his being unable to diet sufficiently to reduce his weight to meet the physical requirements (overweight) - his only drawback to an appointment.

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KEEPING FIT

Maxwell
Field

Headquarters Squadron base ball team, under the able guidance of Staff Sergeant Charley Heim, captured the Inter-Squadron baseball trophy this year. Immediately after the conclusion of the Inter-Squadron Series, the Post Baseball Team was formed, using



nearly all of Headquarters Squadron team.

Gus Folix, genial Gas Man at the field and a former big league player, again assumed the piloting duties for the team through what we expect will turn out to be their best ball season. We have excellent material and expect to see some real ball games throughout the summer.

Lefty Pulliam, our star pitcher from the 91st School Squadron, will be with us until July 6th, when he resigns and leaves for some well

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earned furlough, and Lamson Warren, Hqrs. Sqdn., is expected to be in shape to fill Pulliam's shoes by then, as is Henry Soeder, also of Headquarters Squadron.

Old timers well known in Maxwell Field baseball, still in there racing the bases even though they are a little slower, include Toby Olszanowicz; Mike Barnes (now Corporal Barnes, 91st School Squadron); Whitey Lyon, still in the Photo Section; Stinkey Davis, who says he will be here in 1950; Speed Funderburg, now in Hqrs. Squadron and bossing the whole team from left field when they pay attention to him, but still a wicked threat at bat; Felix Fudge, a lot slower but still in the running, and Lefty Hrivnak. Lefty finally gave up baseball for the galloping game of pasture pool and is said to be pretty good on the runways when he can stay on them.

Gus Felix piloted the squad through their first game against the Coco Cola Team from Montgomery when it scored a 16 to 4 victory. The second game against Clanton, Ala., ended almost as good for the home team. A game was scheduled with the Lay Dam Team on June 22nd and a return game with Clanton on June 24th.

The big games were scheduled to start on June 26th, with the Naval Air Station moving up from Pensacola to lay siege to Maxwell Field with full baseball equipment. The Navy always furnished plenty of competition.

Headquarters Squadron seemed to have the edge on athletics at the field this year. Their men won the Inter-Squadron Married Men's Kittenball, Single Men's Kittenball, Individual Tennis Tournament and Inter-Squadron Baseball League so far, and the year is just half over. Major Hildreth, Squadron Commander, plans on enlarging his organization day room to handle the many incoming trophies this year.

Barksdale Field Extensive flying and administrative training have taken up much time which ordinarily might have been devoted to inter-post athletic activities. The various maneuvers, gunnery and bombing practice and the general absence of personnel from their home station have played havoc insofar as attempting to fill in a recreation program among the Barksdale Field personnel. However, enthusiastic and determined athletes of Headquarters and Headquarters Squadron of the 3rd Attack Group have sacrificed whatever leisure time that could be eked out to form without a doubt one of the finest Squadron baseball teams it has been the privilege of your correspondent to witness.

Given the cooperation of Major Lloyd C. Blackburn, organization commander, and urged on by the splendid leadership of 2nd Lieut. Craven C. Rogers, Air Reserve, Squadron Adjutant, the Hqrs. and Hqrs. Squadron Indians staged a two-week training period and, with mid-season form reached, went about their business of hanging up the impressive record of 14 wins and 2 losses. Some of the classiest twirling performances were turned in by "Rosy Bill" Morris, of the Indians, who scored over all rival nines during the past two months. This Squadron's warriors found a few leisure hours during the West Coast mythical war to perform before large California

audiences and to emerge on the winning side with each engagement. A few other outstanding luminaries on the Indians comprised "Daredevil" Ferrier, 200-pound terror, who created havoc against opposing hurlers, his devastating war club sounding out to hang up an even dozen "round the world cruises," to cop homerun honors. Bill Wherry, gallant little backstopper for Headquarters, did yeoman duty. The roster of the Indians included Wherry, Morris, Tom Sawyers, "Bonnie" Fulton, "Red" Bush, "Cabby" Neeley, "Sparky" Webb, "Horsy" Bankston, "Katy" Coil, "Herby" King, "Dynamite" Ferrier, "Light Horse" Reagen and "Johnny" Finch. Upon completion of their schedule, athletic authorities announced that tryouts for the Barksdale Field Post Baseball Squad would start immediately, which merely meant that the entire Headquarters Squadron squad turned out en masse to add their prowess to the success of what appears to be a banner year for the airmen.

Barksdale Field's Baseball Team (By Germaine) The completion of a week's training period for Barksdale Field's Gold and Blue Airmen finds prospects for

a banner year in the offing for the baseball warriors at Uncle Sam's largest air field.

Under the spirited and able leadership of Captain Warren M. Scott, genial flight surgeon, who will rule the destinies of the Flyers for the 1937 season, a squad of 26 veterans and youngsters has been enthusiastically at work in an effort to again establish Barksdale Field as one of the power-houses of the diamond in North Louisiana and the surrounding area of the Tri-State district.

Perhaps the most important phase of this national pastime, the pitching duty, is the cause for "Doctor" Scott's winning smile, with no less than half a dozen of the finest slab artists in this section primed to perform toil on the hill against opposing nines of Louisiana, Arkansas and Texas. The names of "Big Boy" Heath, "Snake" Ellis, "Honey" Bell, "Lefty" Felton, "Rosy Bill" Morris and "Slim" Hughes, who will comprise the pitching staff of the Flyers, are by-words among baseball fans in this vicinity, and, with such a wealth of capable hurlers on hand, hopes for a big season never appeared brighter.

With DeFord, Wherry, Johns and Farrow as catchers, that position is expected to be taken care of in a very acceptable manner. Eight able infielders have demonstrated ability in the fielding phase, but the stickwork is yet to be exhibited. Neely and Finch are dividing the initial sack; Brown and Ingram are a couple of fine looking second sackers; Bannerman, a very capable fielder, is again cavorting at short; while a trio, comprising Powell, Taylor and Webb, are competing for the torrid third base corner.

The candidates for outfield berths provide another reason for Mentor Scott to register deep satisfaction, what with Fulton, Connella and Graham, with such capable replacements as Bankston, Bush, King, Mosley and Ferrier. Captain Scott's Barksdale Airmen loom powerful and should be able to defend their laurels against

the many Army and civilian foes they will meet during the current season.

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Several Army Air Corps officers figured rather conspicuously in the All-Army Tennis Tournament which was recently completed at the Army and Navy Country Club, Washington, D.C., namely, Captain Elwood R. Quesada, Lieuts. Stanley K. Robinson, of Bolling Field; Lieut. William R. Robertson, of Langley Field, Va., and Lieut. Dolph Muehleisen, of March Field, Calif. The latter came to defend the title he won last year when he defeated Major Robert C. Van Vliet.

The All-Army Tennis Competition was for the eleventh award of the Sheridan Cup, valued at \$1,200, and which was again won by Lieut.

Muehleisen, who defeated his fellow flier, Lieut. Robinson, in three straight sets: 6-1, 6-0 and 7-5, in the presence of about 200 members of the Army, including Major General Oscar Westover, Chief of the Air Corps, who presented the Trophy to Lieut. Muehleisen.

After Lieut. Robinson had held his service to win the first game of the opening set, Lieut. Muehleisen gave a demonstration of nearly every shot in the book to win the next six games and that set, 6-1, and then sweep through the second set without dropping a single game, to win 6-0. The fourth game, the best played in the match, rocked back and forth, before the champion won on the sixteenth point. In the last set, Lieut. Robinson offered strong competition. He built up a 2-1 lead in games before his opponent took the next two to lead, 3-2. Then Lieut. Robinson played his best tennis of the afternoon. His baseline drives began to find their marks and, coupled with a sudden lapse in the champion's game, led him into a 5-3 lead. Lieut. Muehleisen held his own service to make it 5-4, and then Lieut. Robinson tied it all five all. Lieut. Muehleisen then gave another great demonstration of consistent tennis to win the eleventh game and then break his opponent's service for the second straight time to win the set, 7-5, and the match and championship.

Lieut. Robinson climbed into the final round of the singles by virtue of a lengthy victory over Captain James Andrew, who was making a desperate bid for the title. The scores were 8-6, 3-6, 7-5 and 6-3.

Lieut. Robertson, in the semi-final round, firing away with booming long range drives to the base lines, upset the fourth ranking Army tennis player, Captain James Drake, 7-5, 6-4.

Lieut. Muehleisen, however, romped past Lieut. Robertson in the semi final match, even though the latter was playing a steady game. Lieut. Muehleisen kept the pressure on throughout the match to win, 6-0, 6-1, 6-2.

Lieut. Muehleisen blanked Staff Sergeant S.M. Lapsley with two 6-0 sets.

Lieut. Robinson defeated Lieut. Gilbert Bell, the scores being 6-2, 7-5.

In the doubles results, the team of Muehleisen and Robertson defeated the team of Wooleridge and Lange, 6-0, 6-1.

Captain Quesada teamed up with Cadet Newcomer to defeat the team of Hawkins and Collins, 6-1, 6-3. Later, Captain Quesada and Cadet Newcomer lost to Captain Drake and Staff Sergeant Lapsley, 6-4, 6-2.

Lieut. Muehleisen, teamed up with Lieut. Robertson, defeated the team of Powell and Guiney, 6-1, 6-0.

Teamed up with the man whom he had defeated in the singles, Lieut. Gilbert Bell, Lieut. Robinson and his partner marched past all opposition to win the doubles championship. They vanquished the team of Lieuts. Stone and Morrill, 4-6, 6-2, 7-5 and the team of Newman and Bayer, 6-2, 6-3. Then came the final round of the doubles, and in one of the longest and best played matches in the eleven years of the All-Army Tournament, Lieuts. Robinson and Bell battled their way to victory by defeating Lieuts. Muehleisen and Robertson, 6-4, 4-6, 7-5, 3-6, 15-13.

Maxwell Private, 1st Class, Charles H. Weese, Field Headquarters Squadron, pulled a surprise on the boys entered into the Spring Individual Tennis Tournament, recently completed. Weese defeated two favorites whom everyone had picked to win easily, and is an up and coming tennis star for the Headquarters Squadron. Private Rosenbaum was the runner-up in the tournament, while Private, 1st Class, Wilbur V. Brown, chubby Photo Section tennis enthusiast, carried off consolation honors and a nice prize.

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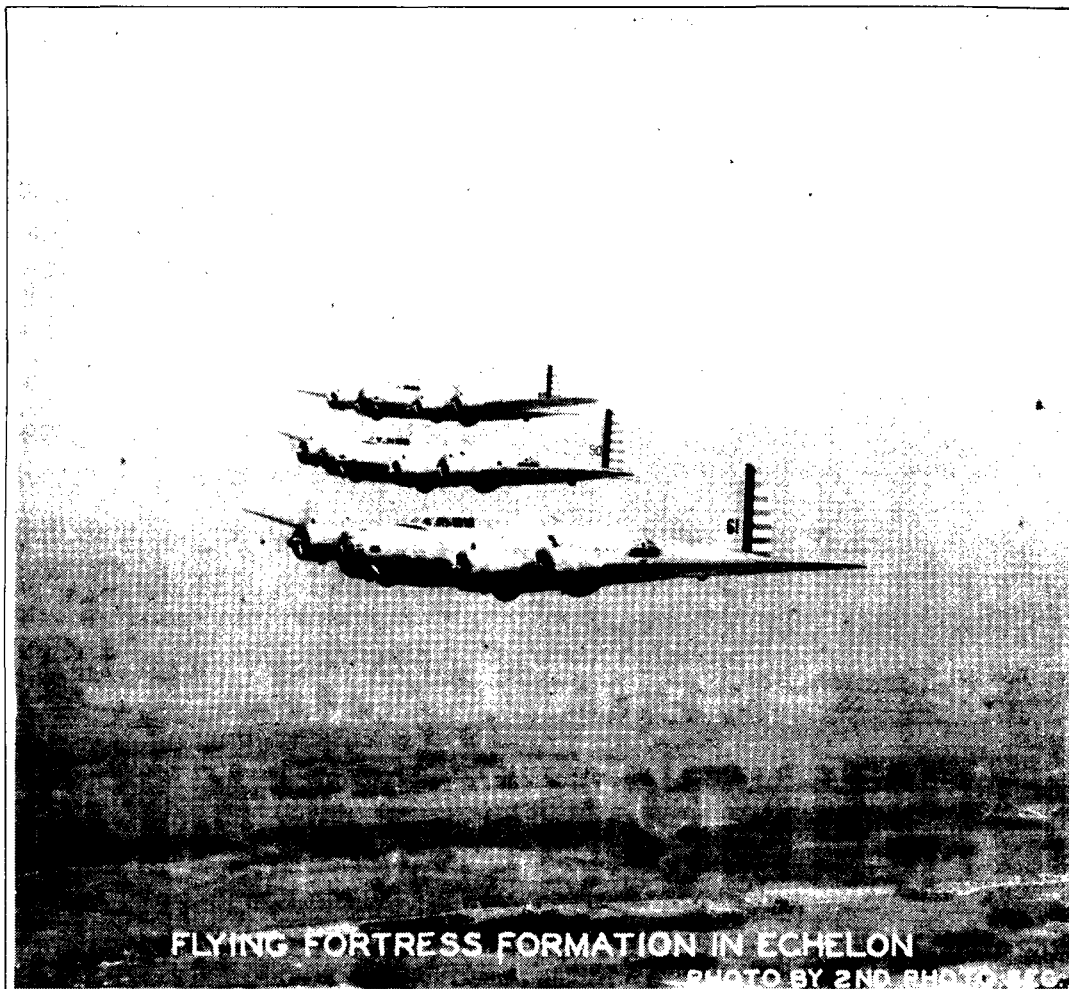
THE NEWS LETTER COVER

The man with the camera, pictured on the cover of this issue of the Air Corps News Letter, belongs to that group of Air Corps personnel who have been producing the various pictures of formation flights, some of which have been reproduced on the cover pages of this publication.

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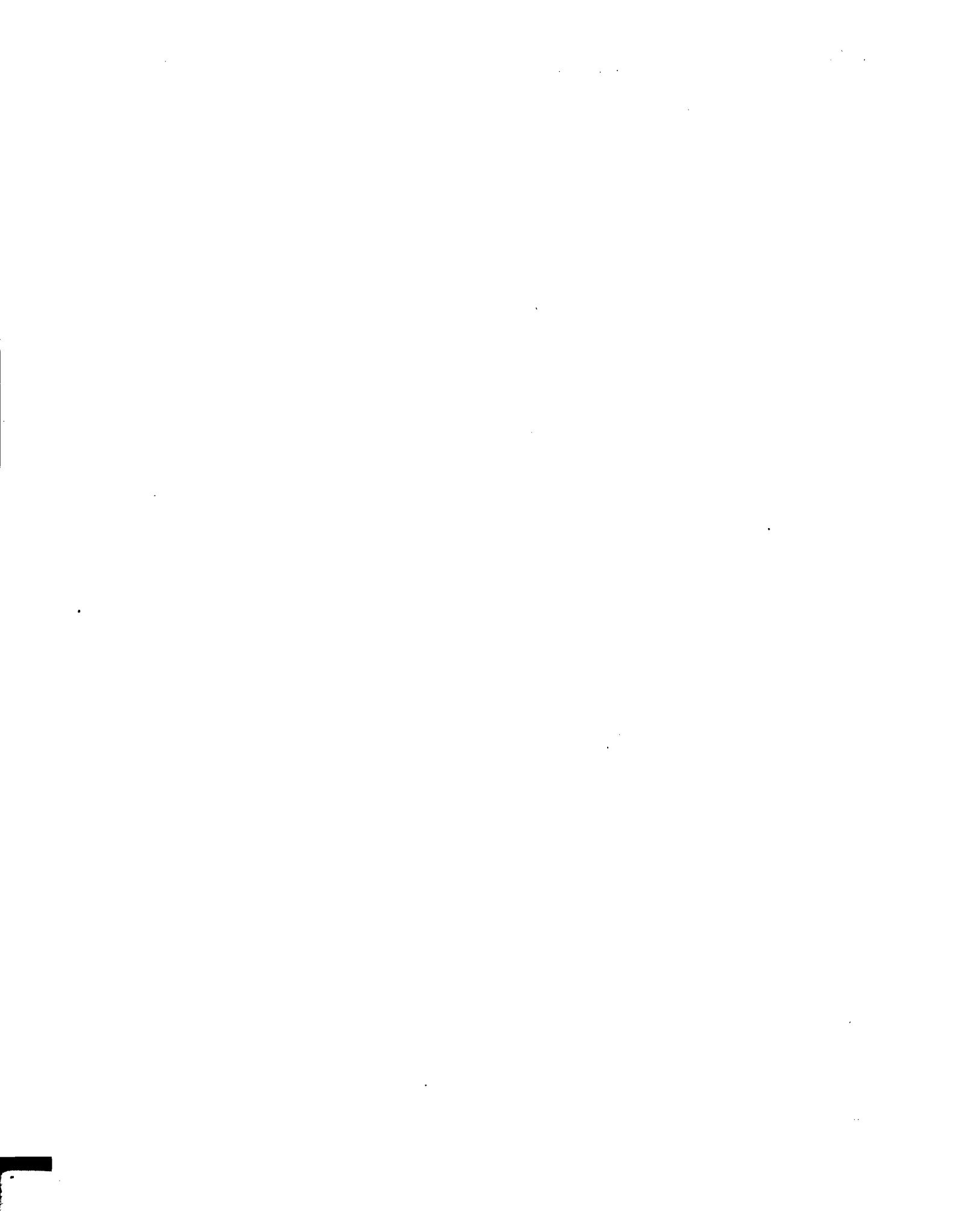
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The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

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N O W I T C A N ' T B E T O L D ✓

By Major Ira C. Eaker, Air Corps
(Being a little-finger nail sketch of a year at the C & GSS)

At long last - last June 21st - I escaped from the Little House at Leavenworth, as students affectionately call the Command and General Staff School, perhaps in contra-distinction to its next door neighbor "The Big House," Federal Penitentiary.

Since steering my diploma across the old bridge over the Missouri at a high rate of speed 20 minutes after graduation, headed East, prospective students have asked me about the year spent there.

No student can evaluate adequately his school, its course and what it has done for him one month after graduation. The heart-burnings and hardships, which in the long pull in the years to come are really of little consequence, are too fresh in mind, while the late graduate has not yet had a chance to try out the tools which so recently have been placed in his horny hands. With this apology and warning, and by request, a few loosely connected observations remembered about the past year follow.

A word about the setting. The Post, Fort Leavenworth, is located on high banks overlooking the Missouri River. It is an old post, having been established early in the 19th century by Major Leavenworth as an Indian outpost and a jumping off place for the long trek to the far West. It is filled with great old trees and presents a pleasing appearance. Unfortunately, some of the quarters, built about the time of the War between the States, still serve inadequately. The new quarters and those which have been renovated and revised are excellent and perhaps half of the students can be accommodated in these. The other half live in what is kindly called the "bee-hive." It is a long, rambling, three-story structure, a former barracks, cut up into myriads of small, very hot and very noisy apartments. Students of lower rank are gathered here.

The post authorities have done all they can to give the students adequate accommodations, and every set is equipped with a study, an isolation ward where maps can be hung on walls and texts can be stored against the day of need. I believe that

every graduate will agree that the authorities there have spared no pains to make the year at Leavenworth as compatible with the study life as lies within their power.

The class rooms are very good and very bad; Grant Hall, a large assembly room where the opening lectures occur, is very hot and poorly ventilated, especially when motion pictures or slides are used for illustration. The two group lecture halls, where the majority of the lectures are given, are air conditioned and well lighted, quite livable. The map problem rooms, where the luckless student spends each Friday afternoon from one until five, are past all understanding; nothing lies between the bewildered student and the Kansas sun, save a pane of glass, as these rooms are on the top floor of the school building, and glass has been substituted for the roof in order to provide light for map reading.

The post exchange is excellent, the commissary is adequate, the golf course, swimming pools and tennis courts are highly satisfactory. There is but one poor squash court, but more are promised. Riding facilities abound, but more, much more, of that later. The library in the school building is probably one of the best military libraries in this country, where the student with inclination toward the best in military literature will find many volumes, old and new, to gladden his heavy heart. This reading will have to be done on his own time, as the present one-year course cannot provide reading assignments or library periods.

Now about the course of instruction. The early stages of the course are filled for the most part with lectures by representatives of each of the branches, Field Artillery, Cavalry, Infantry, etc., to acquaint the student with the equipment, organization and tactics of that particular arm. The afternoons during this period are spent a-horse on staff rides and terrain exercises.

At this period the school-boy meets his mount. He learns the significance of the great sign at the gate: "Horses

Have Right of Way." A squadron of the 10th Cavalry is stationed at Leavenworth to insure plenty of mounts and to provide care for horses and equestrian instruction. Rainy days will not save you, for there are two indoor riding halls for such emergencies. These halls have mirrors so that the rider can see his "seat" as he gallops past. This is the only inquisitional relic left over from another day. Many of the Air Corps officers are not well adapted to horsemanship at best, but to be compelled to see themselves in the cockpit puts the high lights in an unpleasant picture.

Many of the mounts have served for a long time. The first day of riding Bill Kepner walked up to the horse which had been assigned him, stopped, looked puzzled and finally turned to the groom with a query: "Sergeant, what is the title of this horse?"

"Resurrection, Sir," came back the prompt reply.

"I thought so," Bill said. "He is the mount they gave me when I came here in 1917 as a shave-tail Cavalryman."

As the decades have slipped by these old quadrupeds have grown very wise in their work. Some students have affirmed that their mounts have helped them through some of their worst GTE's (General Terrain Exercises). "Abbie" Waller was wont to work his GTE's sitting on the ground, holding his horse's reins, while the beast looked over his shoulder. Abbie would put down a solution on his map, then look up. If the horse shook his head, Major Waller promptly changed his set-up. It worked. At last rumor he was without a "U" on the problems held on the prairies.

After the shake-down lectures and five-cent terrain exercises, come illustrative problems concluded each week by the map problems on Friday afternoons. For example, we would fight for a week all over the Gettysburg map, following a division through every phase of an attack; then, on Friday afternoon, they would give us a map problem to see how much we had learned; but the map problem would be on a French map, concerning a luckless Corps in defense. This peculiar system may have been devised to discourage the G-2 experts.

The monotony of illustrative problems and map problems is broken frequently by historical illustrations, some on the biblical wars, some on the Civil War and many on the Great War. These were well done, highly instructive and interesting. Major Koenig's lectures on the battles of Gumbinnen and Tannenberg are classics, both as to method and manner of presentation and from the historical point of view.

The last two weeks of the school year are spent in the field at a tent camp

some ten miles from the post. The first week of this period is devoted to ten GTE's; the last week with a CPX (Command Post Exercise). The ten GTE's carry much pay dirt, are the last marked problems, and really conclude the course. The CPX finds two armies in a death struggle, handicapped by students filling all staff and command positions.

Now for advice to prospective students. The one thing all graduates are filled with is a burning desire to tell the freshman how he should shape his student career. But the missionaries' zeal to save the Heathen must find vent. High on my list of "don't's" stands this: don't be afraid of U's. I believe the best luck a student can have is to get a "U" on his first pay problem; it breaks the ice, relieves the tension, and otherwise has a very desirable cathartic effect. General Bundel, the present Commandant, said in his opening address that he got a U on his first problem. I think that remark did more to ease the tautness in the class than anything which could have occurred.

My next advice is a "do" not a "don't." Develop a sense of humor; if you haven't that superlative humor which will permit you to laugh at yourself, then laugh at your fellow students or at the school; they don't seem to mind. One time when a number of "U's" came out of a particular map problem there was great indignation, when suddenly a little Chinese student came up with this one:

"Well," said he, "It's a funny school, it asks you more than it tell you."

Near the close of the school there was much speculation as to which of the students were still virgins - that being the term applied to those who had no unsatisfactory marks. One student was proclaiming to all comers that he was one of that lucky number. Finally it got on the nerves of a friend of his who had not been so fortunate, and he cut back with:

"Virgin, hell, you're a gold star mother!"

One student got a paper back on which there were many cuts "in part." That school boy was heard muttering to himself indignantly: "If this school ever hears of The Sermon on the Mount they'll approve of it in part; they'll say the Lord should have had eight disciples instead of twelve and the sermon should have been delivered in the valley under cover of darkness." Such safety valve blasts demonstrate my point; most of the seeming indignities can be laughed off.

The next "don't" applies with particular emphasis to Air Corps officers: don't ruin your eyes. That is easy to do but is not necessary. One can read all the assignments in two hours every night. That period of study spent conscientiously is all that is required to

get what the course has to offer; the authorities tell you so themselves and urge all students to be abed by 10:00 p.m. That will not get you first place in the class; it may not land you among the first ten; but, there is no pay-off for top standing. What the student should do is "get the big picture," the large wind on the prairies, as it has been paraphrased. That can be done without ruining your health or eyesight. To me the saddest experience there was to see Air Corps officers under forty years of age blossom out with glasses.

The next and last don't is: don't fight the course. If you don't agree with the school on a particular solution or doctrine, just make a mental note of it; keep your opinion to yourself. The school authorities don't seem to relish it when some student explodes with a contrary opinion, thought up on the spur of the moment, when some twenty or thirty instructors have spent several thousand hours getting up a solution. Who could blame them? Students fresh from the branch schools are frequently more up-to-date on some points in technique and tactics than the instructors, who have been some years out of those same schools. That can't be helped. Students who inject personal observations too frequently generally find themselves bereft of sympathy from their fellow students.

Should an Air Corps officer take the course at the Command and General Staff School or should he go to the Industrial War College? I have not had the latter course; I hope to get it; reports have it as one of the best schools in the military service. But this I believe: if you are one of that number who elects to stick with the troop or command side and who hopes eventually to staff or command large organizations, by all means take the course at the C & GSS. It will teach you more about staff than command, but it will help you a lot on the latter score; if in no other way it will show you by historical example what not to do.

A course at the C & GSS will not teach you which shell the pea is under in this shell game called the art of war; but it will teach you what is probably more important, that it doesn't make any difference.

Some years ago Colonel Kilner was taking a course at the Air Corps Engineering School. A friend, remembering that he had but recently commanded six thousand men during the War and had been a Colonel at twenty-eight, asked him:

"What are you doing here? This school is for youngsters."

Colonel Kilner sagely replied: "Well, for years every time I have asked one of these engineers a simple question, he

has looked mysterious, pulled out a slide rule and started slipping it up and down. When I get through here and one of them starts that I can say to him: 'Don't do that, I can do that too.'"

Therein lies perhaps the crux of all education. You may not know the answers but you know where to find them or who does know them. At any rate, you learn your own limitations.

One other fine thing the course at the Command and General Staff School will do. It will teach one not to be afraid of those mighty military words - technique, tactics and strategy; it will show that much of the material which has paraded under those mysterious terms for years is, when shorn of its Smith Brothers beard, in reality abracadabra, hocus-pocus and petty piffle.

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SMOOTH CONTOUR WHEELS ✓

The Materiel Division, Wright Field, Ohio, reports that a new line-up of wheels, tires, and brakes to replace the present standard "Streamline" series has been advanced to the stage of issuing procurement specifications. The new series will be known as the "Smooth Contour" type. Units have been produced to date for airplanes having gross weights of 24,000 to 60,000 pounds, and specifications for much greater weights of airplanes are available.

The "Smooth Contour" wheel and tire assemblies will have tires mounted flush as did the streamline series, but will be wider in proportion to their diameters, will have better soft ground characteristics, and the tires will be easier to mount and service.

The Seversky P-35's, the Curtiss Y1A-18's, and the North American O-47A's will be the first airplanes to reach the service with "Smooth Contour" wheels.

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A Post Signal School was started at Maxwell Field, Ala., on July 8th, to train men in radio and meteorological work. Sergeant Borders, Headquarters Squadron, was appointed as instructor, under the supervision of 1st Lieut. Choate, Officer in Charge of that Department. Six members of Headquarters Squadron, Pvts. 1st Cl. Biggs, Waters and Weese, Pvts. O.L. Evans, E.D. Walker and Rushing have been selected to attend this school. A number of enlisted men from other Squadrons at Maxwell Field have also been designated to attend this school.

ARMY TRAINS HALF OF AIRLINE PILOTS

"Where do the air lines get their pilots?"

"How can I train myself for an air line pilot's career?"

If you were director of personnel for one of the major air lines these two questions, through constant repetition, would become extremely familiar. Fortunately, according to Victor Vernon, director of personnel for American Airlines, Inc., the answers are easy. In fact, one answer will serve both questions:

"Join the Army!"

The youngster whose heart is fixed on a pilot's career will find his greatest opportunity in the Army Air Corps, according to Vernon, for 63 per cent of all the pilots on American Airlines' nation-wide system are service trained with nearly 56 per cent from the Army alone.

The reason for this, he explained, is two-fold. First, Army trained pilots have proved ideal material for air line work. Trained in discipline and thoroughly versed in the fundamentals of flying, Air Corps officers are usually quick to get in step with transport requirements. Too, the air lines provide an ideal opportunity for the army pilot whose term with the services is ended but who wants to keep active his flight training.

Second is the almost prohibitive cost of private pilot training. No pilot can qualify for a second pilot's position with an air line until he has amassed a minimum of 1,000 hours actual flying experience, and the cost of buying this much time can be conservatively estimated at \$10,000, or \$10 per hour. Of course, it is not always necessary for the student pilot to actually expend this amount, but unless he is fortunate in obtaining a private flying job soon after he gets his license the only way he can build up his time is to buy or beg it.

Thus, the logical answer is the Air Corps, and the way this has worked out is shown in a survey of personnel records covering the 260 first, second, chief and reserve pilots in American's corps - the largest in the world. This survey analyzes preliminary training of pilots as follows:

Army	145	55.8 per cent
Navy	12	4.6 per cent
Marine	7	2.7 per cent
Private	96	36.9 per cent

Preliminary training is specified because the pilot who comes to the air line is given a thorough course of advanced training, including at least two years' service as a second pilot, before he is placed in command of his own plane.

It can be safely said that more time

and money is necessary to train a student pilot from the time of his solo flight until he assumes his own command of a transport plane than it does to train a medical student from his pre-medic days until he hangs out his own shingle and starts practice as a licensed physician.

- From "Contact Magazine."

Touching on the departure of one of the members of his organization, a Reserve officer, to accept a position with a commercial air line company, the News Letter Correspondent of the 37th Attack Squadron, Langley Field, Va., states:

"It was a very sorrowful day for the entire 37th when they had to bid good-bye to Lieut. Russell, who departed on June 29th to accept a position with Eastern Air Lines. He was a veteran member of the 37th, having served with the organization as an enlisted man, a Flying Cadet and a Reserve officer. This red-headed Arizona lad is certainly a great loss to the Air Corps, for a better officer and pilot could not be found. To Eastern Air Lines we offer our congratulations for obtaining a man who will undoubtedly prove to be an invaluable asset to the Air Line. The entire personnel of the 37th Attack Squadron bids a fond 'adieu' and 'happy landings' to our smiling 'Red' Russell."

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A RECORD LOW JUMP ✓

"Those Caterpillars in the United States who point with a degree of pride to the fact that they have enjoyed the rather rare experience of a successful 'chute jump from an altitude of 200 feet or less are sissies!"

The above is the assertion of the News Letter Correspondent of the 36th Pursuit Squadron, Langley Field, Va., who goes on further to say:

"It remained for Lieutenant Musgrave, whose name I intended to omit in the interest of self-preservation, to jump the acme of jumps. He had far less than a hundred feet of air between him and a pulpy death. In fact, there were only five feet of it, for he had completed a landing, apparently without benefit of drama, and had taxied up to the line, when he came face to face with - a situation. The climax! Suddenly a sheet of flame enveloped the motor and threatened to engulf the cockpit and its perturbed occupant in one full swoop.

But our subject is not to fill a martyr's grave. Remarkably cool - considering all the Fahrenheit ensuing from the motor - he turned to his rear gunner and yelled, 'Bail out.' Suiting the action to the word, Musgrave poured himself nimbly over the side, leaving behind him, instead of the flaming torch you may have expected, a comparatively

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innocent airplane with a motor which had simply executed any self-respecting motor's prerogative of backfiring through the exhaust and belching out flames and smoke on occasion, and without apology. Property was unscratched and personnel were unscathed.

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INTRODUCING FORT KNOX, KY. ✓

The first contribution to the News Letter received from Fort Knox, Ky., is written in a more or less wistful vein. The Correspondent states that the 12th Squadron moved by train, official car convoy, private car convoy, and private cars individually from Brooks Field, Texas, to Godman Field, Fort Knox, Ky., on June 20th. The Squadron had just been reorganized, and between the uncertainty of the movement (train, air or horseback) until just a few days before departure and the reorganization, the Squadron made a good record. Every car, including the gas truck, came through without delay or irregular incident of any kind.

"We are here helping the mechanized Cavalry with promises and guarding Uncle Sam's gold with our lives and one borrowed PT," says the Correspondent, and he then adds: "We hope some more fortunate individuals will drop in and see us on their journeys east and west and north and south. We are right in the center of everything, - 35 miles from Louisville, 150 miles from Nashville, 300 miles from St. Louis and 335 miles from Chicago. Please drop in and let us see what an airplane looks like. If we should ground you because we are hungry for a flight, don't be surprised. That is normal procedure and the only way we have to get any flying at all.

As to the facilities, we have an open air hangar and plenty of ground to make a flying field. At present we have two landing strips, 1500 feet and 1800 feet, marked with airplane silhouettes at the ends of each strip.

We almost forgot to tell you we also have a wind sock and two tent frames, but we don't own the frames."

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TRANSFER OF RESERVE OFFICERS

The following-named Air Corps Reserve officers (second lieutenants) have been relieved from assignment and duty at Brooks Field, Texas, and assigned to duty at the stations indicated:

To Moffett Field, Calif.: 2nd Lieuts. Russell LeRoy Floo, John A. Pechuls. and Herbert Donald Schultz, Jr.
To Mitchel Field, N.Y.: 2nd Lieut. Ray Hamilton Martin.
To Scott Field, Ill.: 2nd Lieuts. Jack

Thomas and Paul Wietzel Zehring.
To Hawaiian Department: 2nd Lieut. George Sutton Brewer.

Each of the following-named second lieutenants of the Air Reserve were relieved from assignment and duty at Barksdale Field, La., and assigned to Brooks Field, Texas, for duty with a tactical unit of the Air Corps, viz:

Henry Ovide Bordelon
Howard Leavelle Buller
Edward Francis Cullerton
William Eades
Clarence Theodore Edwinson
Willard Dudley Griffith
Bingham Trigg Kleine
Roy William Osborn
Frank Beard Scott
Horace Armor Shepard
Cy Wilson
Robert Carroll Wood

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NEW MOTOR TEST BLOCK AT FAIRFIELD DEPOT ✓

Under the direction of Major Ralph B. Walker, Chief Engineer, Fairfield Air Depot, a new motor test block has been completed and is now partially in operation. Many new and interesting features are incorporated in the design of this block which lend for speed and accessibility in engine overhaul. The block test building itself is so constructed that it is easily possible to increase the number of test stands, depending on the requirements. The present eight stands are fully capable of handling all of both the air-cooled and liquid-cooled engines which the Depot turns out under the present arrangement.

One of the interesting features included in this installation is an exhaust silencing device. This has proven entirely satisfactory and has been a great relief to Depot personnel and the surrounding community. Heretofore, the noise of the old test block was very objectionable, and this was a welcome improvement.

With this present installation and rearrangement in the Motor Assembly Line, the Fairfield Air Depot is now able to handle in the neighborhood of ninety engines per month, a considerable increase over the old set-up.

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AIR CORPS OFFICERS TO STUDY METEOROLOGY

First Lieuts. Marcellus Duffy, William O. Senter and Edwin G. Simenson, Air Corps, have been relieved from assignment and duty at Langley Field, Va., and detailed to take the summer course of instruction in mathematics at the Mass. Institute of Technology, followed by the regular course of instruction in meteorology, commencing on or about September 20, 1937.

PURCHASE OF PURSUIT PLANES

The award of a contract for 210 monoplace Pursuit airplanes to the Curtiss Airplane Division of the Curtiss Wright Corporation, Buffalo, N.Y., was announced on July 6th by the Hon. Harry H. Woodring, Secretary of War. These new planes, including an adequate complement of spares, will involve an expenditure of \$4,113,550.

Powered with one Pratt and Whitney two-row, radial, air-cooled engine, which develops 1100 horsepower for take-off, this low-wing all-metal cabin monoplane has a retractable landing gear and tail wheel, which adds materially to its high speed. Landing flaps reduce landing speed and space in which this airplane can be landed and the length of roll upon landing. It is also equipped with a constant speed controllable pitch propeller which allows quicker take-off and more efficient operation in flight. The award of this contract, the largest for single place Pursuit for several years, was made after exhaustive test of the airplane in competition with airplanes of other manufacturers at the Air Corps Materiel Division, Wright Field, Dayton, Ohio. The delivery of these airplanes to the Pursuit units of the GHQ Air Force will fill a long felt need for modern Pursuit airplanes in those units.

The function of the Pursuit airplane is the destruction of hostile aircraft in flight by the use of machine gun fire and time-fused or instantaneous fused bombs. It will be an important adjunct to National Defense in the protection of strategic areas and centers of population against hostile air attack in time of emergency.

These airplanes will be capable of a speed in excess of 300 miles per hour and will out-perform any airplane of their type now in our service.

Many features of this airplane add to its general efficiency of operation. Special attention has been given, in its design, to the ease with which the component parts of the airplane may be inspected, maintained and repaired.

Special attention has been given to avoid multiplicity of sizes and gages of tubes, bolts, rivets, etc., as well as general simplicity of design. The fuselage and wings were designed to facilitate the removal and replacement of damaged sections. Flotation gear has been provided in case the airplane is forced to land in the water.

It is readily convertible from a closed to an open-cockpit airplane. The bottom of the fuselage is so constructed that in case of emergency landing with landing gear retracted a minimum of damage to the airplane will result. This adds to the safety of operation of the airplane in that it may be landed in restricted areas with less danger of col-

lision with other objects on the ground.

This order combines two years' requirements, which will mean a substantial saving in the unit cost of this type of airplane.

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NEW SWIMMING POOL AT PATTERSON FIELD

Patterson Field, Fairfield, Ohio, was the recipient of an unusual and elaborate gift during the past month.

On June 18th, Mrs. H.G. Carnell formally presented General A.W. Robins, on behalf of the officers of Patterson Field, a magnificent swimming pool, which is located directly in front of the new Officers' Club. This gift was presented in memory of her son, Frank Stuart Patterson, one of the first Army test pilots, who was killed near the field which now bears his name.

"It is needless to say," says the Patterson Field Correspondent, "the pool, as an addition to the already beautiful Club House at Patterson Field, is greatly appreciated by the post personnel, and these warm summer days have seen it in constant use."

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A CORRECTION

Maybe it was the heat, or perhaps the editor was thinking about the additional tax burdens on residents of the District of Columbia contemplated during the present session of Congress. Be that as it may, an error was made in crediting the article "The GHQ Air Force Maneuvers on the West Coast," which appeared in the issue of the News Letter of June 15th, to the Hamilton Field Correspondent. As a matter of fact, this article was sent in by the Public Relations Officer of March Field, Riverside, Calif.

The error is very much regretted, and we promise to be more careful in future.

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NEW CAPTAINS FOR THE AIR CORPS

Special Orders of the War Department, recently issued, announce the promotion of the following-named first lieutenants of the Air Corps to Captain, with rank from June 14, 1937:

George W. McGregor	Milton M. Towner, Jr.
Charles A. Harrington	Fay R. Upthegrove
Maurice F. Daly	Chas. B. Stone, 3d.
Lawrence S. Kuter	John W. Kirby
George McCoy, Jr.	Marion Hugins
Julius T. Flock	Neil B. Harding
John M. Sterling	Robert L. Easton
Mark K. Lewis, Jr.	Henry M. Bailey
Orrin L. Grover	

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Lieut. Colonel Junius H. Houghton, Air Corps, has been designated as Commandant of the Air Corps Weather School at Patterson Field, Ohio, July 1, 1937.

V-7404, A.C.

RADIO RANGE AND BEACON FOR 3D AIR BASE

Authorities at Selfridge Field, Mt. Clemens, Mich., the 3rd Air Base of the GHQ Air Force, announced today that plans have been virtually completed for the installation of a new and completely modern radio transmitting station, together with a new radio range and traffic control system. A parcel of about 25 acres of land near the junction of Henry B. Joy Boulevard and the Sugar Bush Road, approximately three-fourths of a mile due west of the Air Base, is being acquired by the Government as a site for part of the new installations. On this site will be erected five radio towers, including a central pole ninety feet high, and the ground building which is to house the radio range. This range sets up four invisible radio beams which are used by pilots at Selfridge Field in training for instrument flying, and by any pilot who wishes to locate himself or reach Selfridge Field during bad flying weather.

An additional concrete and brick building about 32 x 48 feet will be erected on the same plot of land to house a 400 watt transmitter.

This installation is being made because of the fact that present equipment now installed at Selfridge Field is not only becoming obsolete through lack of power, but also constitutes definite flying hazards for airplanes flying in the vicinity of the field during hours of darkness or in bad weather. The two present 150-foot towers directly north of the north-south runway are to be dismantled and replaced by lower 60-foot towers.

Plans call for the replacement of the present traffic control system by a new and modernized installation which will be housed in a glass-enclosed booth on top of the present Headquarters building. From this point, the Traffic Control Officer will not only be able to see and speak to all aircraft either on the ground or approaching the field, but will also be able to talk by remote control to any aircraft having equipment which will permit them to contact Selfridge Field.

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ARE CONTROL TOWERS USEFUL? YES!!!

With the following incident, the Control Tower at Mitchel Field, L.I., New York, has more than paid for its installation.

On June 14th, a pilot in an O-43 airplane on a navigation flight from West Point, N.Y., to Mitchel Field, attempted to land with wheels up. The operator on duty in the Control Tower, noticing the plane about 50 feet from the ground on the approach for landing, called the pilot by radio, advising him of his predicament in sufficient time to enable

him to pull up and circle the field for another landing.

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STILL MORE CAPTAINS FOR THE AIR CORPS

Special Orders of the War Department, recently issued, announce the promotion to Captain of the following-named first lieutenants of the Air Corps, with rank from June 30, 1937:

Leo W. De Rosier	George R. Acheson
Gordon P. Saville	Frank H. Robinson
Charles B. Overacker, Jr.	Waldine W. Messmore
George H. Macnair	Herbert M. Newstrom
James A. Ellison	Allen R. Springer
Hoyt L. Prindle	Franklin C. Wolfe
James F. Walsh	Ford L. Fair
George R. Geer	Ivan M. Palmer
Donald W. Benner	Joseph G. Hopkins
Lawrence H. Douthit	

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LIEUT. WILSON RETURNS TO WEST POINT

First Lieut. R.C. Wilson, Air Corps, who has been a member of the staff of the Aircraft Branch at the Materiel Division, Wright Field, Dayton, Ohio, since August, 1932, left on June 25th for the U.S. Military Academy, West Point, N.Y., where he is to serve as an instructor.

The Materiel Division Correspondent states: "This is, in a sense, a return home for Lieut. Wilson, who is a graduate of the Academy of the class of 1928. He is also a graduate of the Primary and Advanced Flying Schools and of the Air Corps Engineering School of the class of 1933.

Lieut. Wilson's special assignment at Wright Field has been that of Director of the Special Research Laboratory and of the Accessory Design and Test Laboratory. His outstanding knowledge of the technical phases of aeronautics led to his selection for his new position.

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The following-named Air Corps officers, who have been designated as students to attend the 1937-1938 course of instruction at the schools indicated, were attached to Bolling Field, Anacostia, D.C., for flying duty only:

Army War College - Colonel Henry W. Harms, Lieut. Colonel Hubert R. Harner, Majors John DeF. Barker, Warren R. Carter, Idwal H. Edwards, Lawrence P. Hickey, Harry A. Johnson, Alfred J. Lynn, Austin W. Martenstein and John Y. York, Jr.
Army Industrial College - Majors Shiras A. Blair, Don L. Hutchins, Clarence P. Kane, John A. Laird, Jr., Malcolm S. Lawton, Edward M. Powers, Robert T. Zane, Captains Julian B. Haddon and Harry H. Mills.

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ARMY FLIERS STUDY NAVIGATION EQUIPMENT

A group of five Air Corps officers, Lieuts. E.P. Musset, R.E. Koon, J.W. Egan, Wm. A. Matheny and C.H. Rees, of Langley Field, Va., recently concluded a three-day study at the Materiel Division, Wright Field, Dayton, Ohio, of new instrument developments in use in aerial navigation. Lieut. Egan, in charge of the group, is an instructor in the Air Corps Navigation School at Langley Field.

Flights in the airplane assigned to the Instrument Navigation Laboratory of the Equipment Branch of the Materiel Division, for the purpose of testing navigation instruments, were made by all the officers. Among the instruments under special study were new types of sextants especially designed for air work, a new ground speed and drift meter recently developed at the Materiel Division, and two types of automatic navigation computers which completely revolutionize the practice of air navigation as it has existed in the past.

The group returned to Langley Field on June 26th in two amphibian airplanes, which are being used at the General Headquarters Air Force Navigation School, Langley Field, for the purpose of air navigation study in both over-land and over-water flying. The amphibian type of airplane is being used for this purpose at various stations where such training is being carried on.

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GUNNERY EXERCISES AT VIRGINIA BEACH

A total of 45 officers and 332 enlisted men, transported in 31 PB-2A, 6 A-17 and one B-10B airplanes, 37 trucks and reconnaissance cars, and 60 privately owned conveyances, departed at 5:15 a.m. on June 24th from the Langley Field Air Base for the National Guard Airport on the State Rifle Range at Virginia Beach, Va. Camp was established and operations carried on at 10:30 a.m. The program called for Gunnery Exercises, involving aerial and ground targets, to be carried on during the two-week period to end July 8th.

35th Pursuit Squadron

After two weeks of grooming, preparation, and qualifying newly assigned pilots in the art of flying a PB-2A airplane with the greatest of ease, the 35th Pursuit Squadron moved into the field at Virginia National Guard Airport, Virginia Beach, Va., for a period of two weeks' gunnery and combat exercises to complete the training program of the 8th Pursuit Group for 1936-1937.

The camp to date has operated very smoothly, flying starting at 5:00 a.m. for the pilots firing on ground targets. For those more fortunate pilots who have already qualified, flying began at 7:30 a.m., and generally terminated around

10:00 a.m., so as to give the maintenance crews an opportunity to get their work completed by noon. The rest of the day was devoted to recreation, such as swimming, etc. According to the News Letter Correspondent, however, this was mainly an opportunity for the "Gable" and "Taylor" types of the camp to toss their charms at the fair sex and, he says, "they seem to be very plentiful here. We have to concede the boys a moral victory, as they seem to be doing quite well in that respect and we do hope nothing serious develops out of the summer romances of our heroes of the air."

For tactical training, the job of qualifying rear-seat drivers is at present the main activity, with instrument flying and individual combat running a close second. We are quite sure the 35th will come through with all 'Experts' as heretofore.

By the time the next issue becomes due, your correspondent will in all probability be thoroughly sun-burned and safely back at dear old 'Langley' which after all is not such a bad place to be sometimes."

36th Pursuit Squadron

At the present writing, we are going into the second week of maneuvers at Virginia Beach, with everything under control. Perhaps no part of the training program is looked forward to more eagerly by all concerned than this two-weeks' camp, which has become an annual feature of the summer periods.

37th Attack Squadron

The 37th Attack Squadron has again been in the field, this time with the 8th Pursuit Group at that famous summer resort - Virginia Beach. The dates of the field exercises were June 24th to July 7th, and the time was spent flying chemical and gunnery missions. "Beach Fatigue" seemed to be the favorite recreation for all personnel after recall.

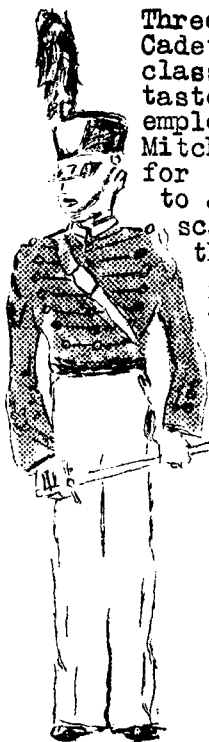
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NAVIGATION FLIGHT FOR LANGLEY AIRMEN

A unit navigation flight, involving 12 PB-2A and 6 A-17 airplanes of the 8th Pursuit Group, Langley Field, Va., took off at 7:30 a.m., June 28th, from Virginia Beach, Va., for Patterson Field, Fairfield, Ohio, via Langley Field and Buffalo, N.Y. Adverse weather conditions held the flight up at Langley Field until 12:00 noon, at which time they proceeded to Buffalo, arriving there at 3:30 p.m.

After observing aeronautical activities at Buffalo, the flight took off at 9:30 a.m., June 29th, for Patterson Field, arriving there at 12:00 noon, and going on to Wright Field later in the day. A night unit navigation flight was then accomplished, the flight taking off at 2:00 a.m., June 30th, and arriving at Virginia Beach at 6:00 a.m.

WEST POINT CADETS AT MITCHEL FIELD



Three hundred West Point Cadets of the new (Senior) class received a practical taste of the way Uncle Sam employs his Air Forces at Mitchel Field, L.I., New York, for the period from June 12th to July 3rd. Because of the scarcity of airplanes and the lack of ample housing facilities at Mitchel Field, the cadets received their training in three echelons, each echelon remaining at the field for the period of one week.

Enlisted men of the 9th Bombardment Group stationed at Mitchel Field very graciously turned over their barracks to the cadets and moved into the 2nd Air Base Hangar, where temporary facilities were installed for their accommodation.

Mornings were devoted to various phases of flying, such as Orientation, Observation navigation, including a demonstration of the manner in which Bombardment squadrons practice against a target towed by boat. Each cadet received approximately seven hours of flying. The afternoons were devoted to lectures and interesting excursions to the various activities about the post.

The cadets demonstrated a keen interest in military aviation. In addition to scheduled flights, they devoted their leisure time to flying with the 9th Bombardment Group and the 97th Observation Squadron on regular scheduled training flights, both night and day.

On Wednesday afternoon of each week, a picnic was held at Jones Beach, New York State's largest bathing beach, where all privileges of the beach were at the disposal of the cadets as guests of the State. Each Thursday evening a Tea Dance was given at the Officers' Club, from 6:00 to 11:00 p.m., in honor of the cadets and their guests.

The tennis courts, bowling alleys and swimming pool were also available for their use during off duty hours.

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SUMMER NAVIGATION SCHOOL AT LUKE FIELD

The 5th Composite Group, Luke Field, T.H., organized a navigation school for the benefit of the 18th Wing, to continue through the months of July, August and September. Three officers, Lieuts. Davis, Knowles and Dennison, are attending from the 18th Pursuit Group, and

eight officers are assigned to the class from the 5th Composite Group, viz: 1st Lieuts. Paul E. Ruestow, Herbert B. Thatcher, 2nd Lieuts. Abraham D. Olson, Samuel C. Mitchell, Louis W. Proper, Pelham D. Glassford, Jr., Willis F. Chapman and Joseph A. Thomas.

First Lieut. Richard C. Lindsay, Air Corps, Assistant Operations Officer and Group Navigation Officer, 5th Composite Group, is the instructor of the class, and hopes to turn out eleven expert aerial navigators. All phases of dead reckoning and celestial navigation are being pursued. Air training is starting in Amphibians, with advanced work being performed in Martin Bombers.

First Lieut. Robert W. Warren was assigned to function as Operations and Engineering Officer for the School.

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BIG GASOLINE SHORTAGE A FALSE ALARM

"One of the greatest hunts of all history is slowly dragging to an inglorious conclusion," says the News Letter Correspondent of the Hawaiian Air Depot, and he then goes on to say:

"About three weeks ago, rumors started circulating that the Supply Officer was short a mere fourteen thousand gallons of aviation gasoline. Action was immediately initiated to check all records for possible miscalculation and, in the meantime, the entire gasoline system was systematically investigated. Now let it be known that the base supply of gasoline located at Luke Field is not contained in one tank with a single nozzle. Actually there are seven ten-thousand and two two hundred and twenty-five thousand gallon tanks with some ten thousand feet of connecting pipes, not to mention sundry and varied expansion joints, all of this being the means to an end - six servicing points.

After much digging, a leak and a half was discovered, the half allowing gasoline to escape at the rate of about ten gallons a year. This damage was repaired, and about this time the Navy kindly offered us the use of a leak detector, complete, with skilled attendant. Said maestro threw up his hands in horror when shown the expanse of pipe to be checked, and promptly went home muttering strange naval epithets aimed more or less at our poor sick pipelines.

Believe it or not, there is a moral to this saga of misfortune - never start something you cannot finish, especially when there is no need to commence in the first place. With the official annual audit under way, your scribe has just been informed that the gasoline account shows a variance of but eight hundred gallons, and that the auditor can hardly believe his own figures. For your information, roughly 800,000 gallons have been used this past year, and that good old two percent won't have to be taxed after all!

APPOINTMENT OF ADDITIONAL FLYING CADETS

Since the announcement in the previous issue of the News Letter of the selection of 164 students for appointment as Flying Cadets to begin training with the July 1st class at the Primary Flying School at Randolph Field, Texas, 21 additional candidates received Flying Cadet appointments, and were assigned to this class. Altogether, a total of 203 men were selected for the July 1st class, of which 27 have, for various reasons, declined appointment.

Among the 164 students listed in the July 1st issue of the News Letter, six declined appointment, viz:

Civilian Candidates

Speer, William Arthur	Birmingham, Ala.
Ott, William Dunnica	Osyka, Miss.
Marshall, Richard Skip	Newark, N.J.
Alberi, Americo	Mt. Vernon, N.Y.
Taylor, Ozburn Early	Nashville, Tenn.
Dunn, Frank Lowry	San Antonio, Texas

Deducting the above named six students and adding the 21 new candidates, as above mentioned, makes the student body of the July 1st Class total 179.

These 21 candidates are made up of seven Reserve officers of various branches of the service who were on active duty, 13 civilian candidates, and one enlisted man from the Infantry. They are listed below, as follows:

Reserve Officers (2nd Lieutenants)

Jones, David Mudgett (Cav.)	Phoenix, Ariz.
Yancey, William Rufus (Inf.)	Fayetteville, Ark.
Wall, Frederick (Inf.)	Los Angeles, Calif.
Shoemaker, Francis D. (Inf.)	Bethesda, Md.
Northcutt, Robert E. (Inf.)	Cement, Okla.
McCaskill, Tillman (Inf.)	Idabel, Okla.
Fulbright, Thomas F. (F.A.)	Texarkana, Texas

Enlisted Man (Private)

Bryans, Francis Alford	Jamaica Plains, N.Y.
Hqrs. Co., 5th Infantry, Ft. Williams, Me.	

Civilian Candidates

Marett, Samuel H.	Little Rock, Ark.
White, Herbert G.	Long Beach, Calif.
Hart, William A.	Washington, D.C.
Loveless, John Remond	Washington, D.C.
Fagan, Joseph William, Jr.	Chicago, Ill.
Woolams, Jack	Chicago, Ill.
Boyer, Lowell Wilson	Mt. Vernon, Iowa
Bagby, Robert Clyde	Fishburg, Ky.
Hood, Edward Earl	New Bloomfield, Pa.
Fulghum, Harold	Terrell, Texas
Gilbert, Huntington Kerr	Dorset, Vt.
Nelson, Fred A., Jr.	Arlington, Va.
Payne, Irvin Lloyd	Bradshaw, W. Va.

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The report covering the recent activities of the 33rd Pursuit Squadron was a little delayed and hence was not included with the activities of the other squadrons of the 8th Pursuit Group published elsewhere in this issue. The Correspondent of the 33rd states that ground gunnery, aerial gunnery, instrument flying, training and qualification of rear seat gunners, plenty of sunshine and swimming was the daily schedule for the squadron during the two weeks' stay at Virginia Beach. He adds that Virginia Beach is an ideal gunnery camp and several trips a year would suit all concerned very much.

COMMISSIONS FOR FLYING CADETS

The following-named Flying Cadets of the Air Corps, who graduated from the Advanced Flying School, Kelly Field, Texas, on February 17, 1937, and who since that time were on active duty under their Cadet status with Air Corps tactical organizations at various fields, were commissioned second lieutenants in the Air Reserve on June 20, 1937, and placed on extended active duty as Reserve officers at the stations indicated, viz:

BOMBARDMENT PILOTS

<u>Langley Field, Va.:</u>	
Cochran, Philip G.	Erie, Pa.
Hillery, Edward G.	Boonton, N.J.
MacDonald, Donald W.	San Francisco, Calif.
McNown, William K.	Lawrence, Kans.
Myers, Thornton K.	Lafayette, Ind.
Perry, Norris	Sedro-Woolley, Wash.
Tate, David A.	Asheville, N.C.
Watson, Harold E.	West Hartford, Conn.
Young, Earl B.	Sidney, Nebr.

Barksdale Field, La.:

Snavely, Eugene H.	Harlingen, Texas
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Selfridge Field, Mich.:

Eleyer, Julian M.	Tulsa, Okla.
Dalton, Lloyd H., Jr.	Ottawa, Kans.
Margrave, Thomas E.	Gordon, Nebr.
Phelps, James W., Jr.	Berwyn, Pa.
Schoch, Jack L.	New Ulm, Minn.
Theobald, Robert A.	Portland, Ore.
Triffy, Sam P.	Detroit, Mich.

ATTACK PILOTS

<u>Barksdale Field, La.:</u>	
DuBose, James R., Jr.	Aiken, S.C.
Eubank, William E., Jr.	Bluefield, W. Va.
Helton, Elbert	Clifton, Texas

March Field, Calif.:

Box, Clyde	Denton, Texas
Nau, Wallace E.	Pasadena, Calif.

OBSERVATION PILOTS

Harvey, Sterling G.	Bloomsburg, Pa.
Hoffeditz, Aaron H.	Greencastle, Pa.
(Assigned to Brooks Field, Texas).	

PURSUIT PILOTS

<u>Langley Field, Va.:</u>	
Brogger, Jacob J.	Butterfield, Minn.
Hunker, Joseph F.	San Diego, Calif.
Zemke, Hubert	Missoula, Mont.

March Field, Calif.:

Dillingham, Walter H.	Honolulu, Hawaii
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Selfridge Field, Mich.:

Patterson, Steele R.	Seneca, S.C.
Thorne, Henry G., Jr.	Fort McPherson, Ga.

Note: In the case of the two Observation pilots, Lieuts. Harvey and Hoffeditz, stationed at Brooks Field, Texas, Special Orders of the War Department, recently issued, assigns the first named officer to duty at Mitchel Field, N.Y., July 21, 1937, and the last named officer to Post Field, Fort Sill, Okla., effective July 10, 1937.

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Second Lieut. Willard Wright Lazarus, Air Reserve, was appointed a second lieutenant in the Air Corps, Regular Army, with rank from July 3, 1937. He is relieved from his present assignment and duty at Brooks Field, Texas, and assigned to duty at Moffett Field, Calif.

Among the many interesting articles in the July issue of "National Aeronautics," the official organ of the National Aeronautic Association, Washington, D.C., is one under the above caption, wherein the great importance of aircraft having a highly polished wing surface is proven by facts and figures.

The editor of "National Aeronautics," that enterprising and highly interesting aviation magazine, which seems to be growing better and better with each succeeding issue - if that is possible - has given the News Letter permission to reprint the above mentioned article, so here goes:

The year is 1940. You are reclining luxuriously in the lounge chair of a 1940 Skyliner as it taxis smoothly toward the center of the airport. There the plane rolls onto a turntable where, with speed and efficiency, attendants make certain adjustments. Slowly the turntable swings the big ship into the wind. . . then a not unpleasant surge forward and after an amazingly brief run for such a huge plane you are in the air . . . aided by catapult launching 1940 style.

Fantastic . . . not at all, per no less an authority than the N.A.C.A.

Thus Dr. George W. Lewis, Director of Research of the N.A.C.A. is speaking: "Airplanes are increasing in size and wing loading, and one of the important problems confronting both airplane designers and airplane operators is that of providing a reasonably short take-off distance for modern and future airplanes. The take-off distance required for some of our current airplanes in fact taxes many of our commercial airports. With definite trends toward larger air transports, with higher wing loadings and corresponding increase in take-off distance, the problem has reached a critical stage."

For an airplane of the future with a wing loading of 35 pounds per square foot and a power loading of 10 pounds per horse power, at a speed of 250 miles per hour without flaps and without a controllable pitch propeller, a distance of 4000 feet would be necessary for take-off. Even with a constant speed propeller and a good flap or high lift device, the take-off distance is still excessive."

So . . . N.A.C.A. researchers have been busy investigating catapulting devices for use at large airports. They report that with a catapult producing an acceleration of $\frac{1}{2}$ g., which is held not excessive for passenger comfort, the take-off distance of our large airliners of the near future can be reduced to a reasonable figure.

And they are not theorizing either.

They report that with an airplane of the size of the new DC-4 with a high wing loading of 30 pounds per square foot and a weight of 30 tons, to take-off in a distance of 1150 feet the catapult must provide a thrust of 15,000 pounds. Obtained directly, this would require a catapult motor of 3,250 horse power which would be quite a motor to say the least. But N.A.C.A. engineers provide the practical solution of storing energy in a flywheel. Ergo . . . allowing five minutes to bring the flywheel up to speed, the 15,000 pound thrust is obtained with an electric motor of relatively low horsepower and cost.

But to get back to our 1940 sky excursion . . . the few minutes our airliner was on the passenger loading ramp for that particular stop, a crew of polishers were busily at work on the wings. And with system and dispatch the already shining and mirror smooth wing surfaces were brought to a super sheen.

Reason . . . N.A.C.A. researches report that with modern streamlining and retractable gear 50% of the drag of the complete airplane is caused by the wing. But the modern airplane wing is covered with sheets of aluminum alloy riveted to the main wing structure. Tests show that with a 20,000 pound transport having a wing area of 1000 square feet and flying at 225 miles per hour, the added resistance of present day conventional rivets and lapped joints necessitates the expenditure of 182 horse power over what would be required if the wing were smooth.

Even the addition of paint to a smooth metal surface, it was found, required 91 horse power more. Thus N.A.C.A.ers logically deduce that a smooth, highly polished wing surface is of such importance in high performance modern aircraft that it may be found economical to have service crews wipe off the accumulated dirt and dust on wing surfaces at every stop!

Pulling Out the Rabbits

The above cites but two of the many scientifically bewhiskered white rabbits the impressarios of N.A.C.A. Aircraft Engineering Research Staff are pulling out of the commodious N.A.C.A. hat.

Today's preview of tomorrow's flying is a pat and honest label of what N.A.C.A. has to exhibit. And if you doubt for a moment that they are not producing plenty of white rabbits listen to this list which, believe it or not, names but a few.

The New N.A.C.A. Two Control Nose Slot Cowling for Radial Air Cooled Engine.

The N.A.C.A. Trim Angle Indicator for Large Seaplanes.

Elimination of Shimmy in the forward wheel of a tricycle type landing gear.

The New Free Flight Wind Tunnel for the study of balance, stability, riding and control characteristics of an airplane model in free flight.

The Ultra High Speed "Shock" Wave and when it occurs.

The Effect of Wing Plan Form and Airfoil Section on recovery from a spin.

The New N.A.C.A. Gust Tunnel for the study of the motion that is assumed by the airplane in passing through a gust, the acceleration imposed and the flight path taken.

The new Stall Control Flap.

The nose slot cowling was born from the problem of cowling and cooling the modern radial air cooled engine. In recent years the horse power output of radial engines has increased from 400 to 1500 horse power. With high compression ratios and 100 octane fuel, a limiting factor in the power that can be obtained is the ability of the cylinder and cylinder head to dissipate heat.

The standard fixed N.A.C.A. Cowling has the disadvantage of providing an excess of cooling at high speed and insufficient cooling at low speed. With the new two position nose slot cowling, the pilot can set the nose slot for satisfactory cooling for take-off and climb. When the climb has been completed, by pushing a lever the pilot can shift to the high speed or cruising range where the aerodynamic efficiency of the cowling is greatly increased.

With the spanning of the Pacific and the proposed spanning of the Atlantic by air, the development of large seaplanes has assumed an important place in our transport system. Some of the large seaplanes now being constructed are equipped with four engines having a total of approximately 6,000 horse power. This power is required by the take-off, characteristics of the seaplane, since for cruising only approximately one-half or 3,000 horsepower is used.

Scanning the Trim Angle

N.A.C.A. tests have shown that the trim angle . . . the angle that the boat hull assumes with the horizon . . . has important influence on the time necessary for take-off. By using the best trim angle for the particular design of hull, take-off time is materially reduced.

Outcome . . . the N.A.C.A. trim angle indicator. The pilot has before him a small glass in which is reflected the horizon. This glass is graduated in degrees, so that if the optimum trim angle for take-off happens to be 4 degrees, the pilot can accurately trim the hull so that the horizon line is on the 4 degree graduation line of the instrument. As simple as that.

WEATHER SQUADRON AT BOLLING FIELD

Effective July 1st, the Air Corps acquired a new department in its list of activities, and took another step toward a more complete and modern organization. The department consists of the newly formed Weather Squadrons, whose duties were previously performed by the Meteorological Department of the Signal Corps. The personnel of the new Weather Squadrons is made up chiefly of the trained and experienced men of the old Meteorological Departments, so the weather services continue as smoothly as ever.

At Bolling Field, six men from the Signal Corps Meteorological Department were transferred to the 2nd Weather Squadron, the headquarters of which are at Langley Field, Va. These men are attached to Base Headquarters and 14th Air Base Squadron for administrative purposes. This detachment will be supplemented by additional men from the Air Corps, forming an efficient weather department.

The Signal Corps men in the Weather Detachment at Bolling Field have been well trained by the conscientious efforts of Captain William H. Wenstrom, Signal Corps, who has been at this station since the summer of 1934, and who has contributed much toward the improvement of weather service for the Army Air Corps by constant experiments and the gathering of important data. Captain Wenstrom will retire from the service, effective July 31, 1937, with the rank of Major, Signal Corps, and spend his time in civil life writing and teaching. The loss of his services will be keenly felt, not only by the Signal Corps, but also by the new Weather Squadrons.

The duties of Meteorological Officer at Bolling Field have been taken over by 1st Lieut. Floyd B. Wood, Air Corps. He has been assigned to this station after completing a course of instruction at the Massachusetts Institute of Technology, Cambridge, Mass., and the Weather Department will be under his watchful supervision.

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BOMBING TRAINING BY 20TH SQUADRON

The month of June was devoted to intensive bombing training by the 20th Bombardment Squadron, Langley Field, Va. The bombing day, starting at 5:00 a.m. with the take-off of the first mission, continued at the rate of one mission of two bombing teams every two hours throughout the daylight period. Both Y1B-17 and B-10B type airplanes have been used on these missions. The results of this pressure training have been gratifying.

V-7404, A.C.

The other day a visitor to March Field was seen entering a hangar, where some aerial repair work was under way. He emerged a few minutes later with a red face and a hopeless expression in his eyes. Stammered: "Good grief! What's the matter with those fellows in there? I listened to their talk for five minutes and still don't know what it is all about - they must be nuts."

According to the March Field Correspondent, here is what the visitor heard: (Translation follows each sentence).

1st Mechanic: "I hear the 19th got two B-10's for overhaul."

(I hear the 19th Bombardment Group has two Martin Bombers for overhaul.)

2nd Mechanic: "Yeah, some shave-tail belly-flopped and washed out the gears, I suppose? But even so, better than those darned OA-4's, our good old ducks."

(Yeah, some 2nd Lieutenant belly-flopped - landing a ship on the belly for various reasons, bad landing - and damaged the landing gears, I suppose? But even so, better than those darned Douglas Amphibians, our good old ducks. "Ducks" general term for Amphibians used in the Army).

1st Mechanic: "Ever switched props on the old C-14 or C-4A? No? You're lucky. Them fins' something awkward to mess around with, even worse than the C-8A's."

(Ever exchanged propellers on the old Fokker or tri-motored Ford planes? No? You are lucky. Those ships are something awkward to mess around with - to handle - even worse than the Fairchilds.)

2nd Mechanic: "The top-kick whispered something about some Y1B-17's for us, them and the B-18's now on their way - oh, boy, will we sweat! Hey, get a load of that C-27 side-slipping in! Boy, they sure handle like a PB-2A."

(The 1st Sergeant said something about some Boeing Flying Fortresses for March Field. Those and the new Douglas bombers on their way. Oh, boy, what work that will be. Hey, look at that Bellanca gliding in sideways with the wind! They sure handle like a Consolidated Pursuit plane.)

The visitor intervened here: "Errh, ah, pardon me, but what are those silver ships over there?" (meaning a Northrop plane).

1st and 2nd Mechanics: "Oh, those? Them's our new A-17A's. You know, same as the A-17's, only retractable gears, a few more hp's and rpm's. But, Mister, have a peep at those babies out there - P-26's - what d'ya think of them? Grease-monkeys' delight they are - ain't they?"

(Oh, those? Those are our new Northrop attack planes. You know, the same as the last model Northrops, only retractable wheel units, more horsepower and revolutions per minute - speed and power. But, Mister, have a look at those

babies out there - Boeing pursuits - what do you think of them - the delight of any mechanic - aren't they?)

Visitor: "Errh, why do you always quote letters and numbers? And what do they mean?"

Mechanics: "Oh, the letters? Well, you've seen commercial planes carry letters on their wings, haven't you? NC, for instance, stands for NATIONAL COMMERCIAL; N just for NATIONAL, etc. In the Air Corps, A stands for ATTACK; B for BOMBER; C for TRANSPORT; P for PURSUIT; O for OBSERVATION; OA for OBSERVATION AMPHIBIAN; BT for BASIC TRAINER, etc. Get it now?"

Visitor: "HMMMM - - !"

Other mechanic: "Me, Mister, I take the C-33 for good old joy riding, or mebbe the old man's new C-36, swell job that too. I sweated a hop the other night in a BT-2 and nearly left the upholstery behind when we hedge-hopped in that old crate. But then, of course, the C-24's, O-46A's, B-6's, B-12's or even TC-13 - hahaha - ain't.....ehh, what's the matter, Mister, you aren't going already, Mister....hey!"

(I, Mister, take the Douglas transport for a nice trip on the controls, or maybe the Commander's new Lockheed, swell job that, too. I managed to go along for a short flight the other night and nearly fell out when we did some ground strafing in that old plane. But then, of course, the Fairchilds, Douglas Observations, Douglas or Martin bombers or even the Army Air Corps blimp - hahaha - are not...)

And here is where the visitor said: "They must be nuts!"

P.S. We agree.

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COLONEL HARMON LEAVES MARCH FIELD

Lieut. Colonel Hubert R. Harmon, Air Corps, accompanied by Mrs. Harmon, left March Field on July 5th for his new duties at the Army War College, Washington, D.C.

Colonel Harmon, a native of Chester, Pa., and his wife came to March Field on July 12, 1935. From then until August 17, 1936, he was connected with the 1st Wing, GHQ Air Force, and later became Commanding Officer of the 19th Bombardment Group, March Field. Colonel Harmon, a graduate of the U.S. Military Academy, the Air Corps Engineering School, the Air Corps Tactical School and the Command and General Staff School, has done much during his stay at March Field to further the aims of military aviation and impressed all with his fine military and personal abilities. March Field extends its best wishes for his future welfare.

B I O G R A P H I E S

LIEUT. COLONEL LLOYD N. KEESLING

Lieut. Colonel Lloyd N. Keesling, Air Corps, who graduated from the Air Corps Tactical School, Maxwell Field, Ala., on June 1, 1937, and is now under orders for duty at Chanute Field, Ill., upon the expiration of leave, was born at Cedar Springs, Va., September 3, 1889.

After attending elementary schools and high school for 12 years, and the Emory and Henry College, Emory, Va., for two years, he graduated in 1912 from the Virginia Polytechnic Institute, Blacksburg, Va., and then took a post graduate course for a year, receiving the degree of Electrical Engineer.

Commissioned a provisional second lieutenant of Infantry, November 30, 1916, he was assigned to the 39th Infantry, and during the War was stationed at Camp Greene, Charlotte, N.C.

Detailed to the Aviation Section, Signal Corps, Colonel Keesling graduated from the School of Military Aeronautics, Austin, Texas, March 23, 1918, whereupon he was ordered to Kelly Field, San Antonio, Texas, for flying training, which he completed in August, 1918. He was then ordered to duty in Washington, D.C., in the Training Section, Office of the Director of Military Aeronautics. He was rated as Reserve Military Aviator from July 18, 1918, and re-rated as Airplane Pilot, October 16, 1919. While assigned to the Training Section, he served as Assistant Executive Officer from March, 1919, to April, 1919, and as Assistant to the Assistant Chief of that Division, also as Assistant to the Chief, Training Division, until April 27, 1921. During October, 1919, he participated in the New York to San Francisco Reliability and Endurance Flight Contest. On various occasions he served as Acting Chief of the Training Division.

Transferred to foreign service, Col. Keesling was assigned to duty as Commanding Officer of Clark Field, Pampanga, P.I., and served as such until September 2, 1921. After duty as Adjutant and Personnel Adjutant, Clark Field, to October 9, 1921, he assumed command of the 3rd Pursuit Squadron, Clark Field, and performed this duty until January 3, 1922, when he was assigned as Supply Officer of this Squadron. In September, 1922, he became Provisional Flight Company Commander, in addition to which he performed various other duties, including those of Commanding Officer of Clark Field and the 3rd Pursuit Squadron, until May 17, 1923. He was then assigned to the command of the 28th Bombardment Squadron until the expiration of his tour of foreign service.

Assigned to duty at Mitchel Field, L.I., New York, Colonel Keesling served as Adjutant of the Post and of the 9th Observation Group, in addition to various other duties, including temporary commanding officer, until December 10, 1924. From that date until June, 1926, he performed the duties of Personnel Adjutant and Recruiting Officer.

After a long period of illness which necessitated hospitalization, Colonel Keesling, in July, 1927, was assigned to duty at March Field, Riverside, Calif., where he assumed command of the 53rd School Squadron, in addition to performing other duties. On May 15, 1929, he was assigned to the 13th School Group as Post Engineer Officer. At various times he assumed temporary command of the post. On August 20, 1930, he was transferred to the 70th Service Squadron, and he commanded this organization until April, 1931, when he was assigned to the 1st Bombardment Wing Headquarters, serving at different periods as Post Engineering Officer and as Post Operations Officer. He was appointed Post Executive Officer, November 14, 1932, and served as such until May 29, 1933. For a number of months thereafter he served as Executive Officer of the March Field District, Civilian Conservation Corps.

From June 1, 1934, to August 19, 1936, Colonel Keesling was stationed at Randolph Field, Texas, serving as Assistant Commandant and later as Assistant Executive Officer of the Primary Flying School. He reported for duty as student at the Air Corps Tactical School, Maxwell Field, Ala., August 21, 1936, and, as before stated, graduated from this school on June 1, 1937.

Colonel Keesling received his promotion to 1st Lieutenant, November 30, 1916; to Captain (temp.) August 5, 1917; to Captain, September 18, 1917; to Major, March 11, 1929, and to Lieut. Colonel (temp.) March 16, 1935.

LIEUT. COLONEL VINCENT B. DIXON

Lieut. Colonel Vincent B. Dixon, Air Corps, now on duty in the Office of the Chief of the Air Corps, Washington, D.C., as Assistant Executive, was born on November 12, 1894, at Rip Raps, Va.

Following his graduation from the Virginia Polytechnic Institute, Blacksburg, Virginia, in 1916, he received an appointment on November 30th of that year as a 2nd Lieutenant, Coast Artillery Corps, U.S. Army. He served with this branch of the Army to July 1, 1920, his duties for the most part being those

of company commander. He graduated in 1918 from the Coast Artillery School, Fort Monroe, Va.

While on duty in the Panama Canal Zone Colonel Dixon was detailed to the Air Service for flying training, and upon completing the course of instruction at the Air Corps Primary Flying School at Carlstrom Field, Arcadia, Fla., in March, 1921, he was transferred to Kelly Field, Texas, for training as a Pursuit pilot. In July, 1921, he was transferred to Ellington Field, Houston, Texas. Upon the completion of his advanced training he was rated as Airplane Pilot, effective August 10, 1921.

Colonel Dixon remained at Ellington Field, serving as Post Adjutant and Personnel Adjutant until November 22, 1921; as Commanding Officer of Air Park No. 2 and Transportation Officer, 1st Pursuit Group, until January, 1923. He moved to Selfridge Field, Mich., in June, 1922, when the activities at Ellington Field were transferred to that northern station. From January, 1923, to August, 1924, he commanded the 57th Service Squadron, in addition to performing various other duties.

Transferred to McCook Field, Dayton, Ohio, Colonel Dixon completed the course of instruction at the Engineering School at that station on August 15, 1925. He remained on duty at McCook Field until November 30, 1925, when he returned to Selfridge Field and again assumed command of the 57th Service Squadron. From February 4th to June 25, 1926, he was in temporary command of Selfridge Field and the 1st Pursuit Group.

From August 18, 1928, to June, 1929, Colonel Dixon was on duty as a student at the Air Corps Tactical School, Langley Field, Va., and thereafter he was assigned to duty at the Tactical School until August, 1930, when he was assigned as student at the Command and General Staff School, Fort Leavenworth, Kansas. Following the completion of the two year course at this school, he served for nearly two months with the 2nd Bombardment Group at Langley Field, and was then transferred to duty in the Hawaiian Department, assuming command of Luke Field and of the 5th Composite Group on September 23, 1932. He continued on this assignment until October 26, 1934.

On January 8, 1935, Colonel Dixon reported for duty in the Office of the Chief of the Air Corps, Washington, D. C., and was assigned to the Executive Division as Assistant Executive.

Colonel Dixon received his promotion to 1st Lieut., November 30, 1916; to Captain, August 1, 1919; to Major, January 22, 1929, and to Lieut. Colonel (temp.) June 22, 1936.

MARCH FIELD ACTIVITIES

Bringing to a close a very successful training year under the inspiring leadership of Lieut. Colonel Hubert R. Harmon, the 19th Bombardment Group qualified twelve expert aerial bombers during June. Of these, six were members of the 30th Squadron and six of the 32nd Squadron. The best score was made by Lieut. A. T. Wilson, of the 30th Squadron.

"These qualifications," remarks the News Letter Correspondent, "considered together with the qualification of 24 officers and 33 enlisted men as expert aerial gunners, mark a definite turning point in the history and progress of this group. We have now completed our transition from a school group to a tactical group. We are proud of our accomplishments in the fields of dead reckoning and celestial navigation as a school group; we are proud of our adjustment and change from a school group to a tactical group; and we are confident that under Lieut. Colonel Harvey B. Burwell, our new Commanding Officer, assisted by a newly organized staff, including Majors John K. Cannon, Walter R. Peck, and Harry A. Halverson, we shall set a high mark as an M-day unit.

The 38th Reconnaissance Squadron, commanded by Major William S. Gravely and attached to this Group, is nearing its first birthday. Despite numerous changes in personnel and equipment, this squadron qualified two officers and four enlisted men as expert aerial gunners, in addition to performing routine missions of navigation, search, patrol and photography.

Though we are pleased with our progress, we are not content with our achievements, and during the new training year shall attempt to increase our efficiency so as to attain a complete preparedness for any emergency."

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METEOROLOGICAL STATION FOR KELLY FIELD

The meteorological station formerly located at Fort Sam Houston, Texas, has been transferred to Kelly Field. A new office and laboratory has been constructed, adjoining the Post Operations Office, for this vitally important activity.

Lieut. Elmo Mathews, who is in charge of the station, has been associated with Dr. Robert Millikan, internationally famous scientist in cosmic ray experiments. Lieut. Mathews recently completed a one-year course in meteorology at the California Institute of Technology.

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MERRILL AND LAMBIE VISIT SAN ANTONIO

Dick Merrill and Jack Lambie, famous round-trip trans-Atlantic flyers, visited San Antonio, Texas, on June 22nd, remaining at Stinson Field from 10:30 a.m. to noon. Among the senior officers of the posts in the vicinity of San Antonio who greeted the visiting pilots was Colonel Arnold N. Krogstad, Commandant of the Air Corps Advanced Flying School, Kelly Field. Colonel Krogstad made a few remarks over the public address system installed and used for the occasion.

Jack Lambie, junior member of the distinguished team, was a student flyer at Randolph and Kelly Fields, being graduated from the Air Corps Advanced Flying School in October, 1933.

Both Merrill and Lambie now fly for the Eastern Air Lines.

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AIR INFLATED CHAIR FOR SOLID COMFORT

Out at Wright Field, Dayton, Ohio, a new type of chair has created considerable interest. Mr. F.G. Manson, of the Equipment Branch of the Materiel Division, is the inventor of what appears at first glance to be a grandfather's arm chair covered with cretonne, of conventional structure and appearance. In reality, however, this piece of furniture is constructed of rubberized fabric. Inflated with air it is strong enough to support the weight of the stoutest tired man, although its own weight is but six pounds. Upon the removal of a small cap, the chair can be completely deflated, packed in a small bag, and tucked under the arm for removal to any spot desired.

Not merely a novelty, this type of chair, in the opinion of the Materiel Division Correspondent, may have practical application in commercial transport airplanes where it would act as a shock absorber in case of forced landings, and in crashes would not prove a source of injury to passengers. In a landing on water, a number of these chairs contained in an airplane would be sufficient to keep the airplane afloat for an indefinite period of time.

The chair may also prove of interest to owners of trailers. Patents have been obtained by Mr. Manson upon his invention. However, rights have been extended for its manufacture in the commercial field. But recently received, the rubberized fabric chair has been an object of interest to Materiel Division personnel and to visitors.

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MAJOR VANAMAN VISITS WRIGHT FIELD

Major A.W. Vanaman, a recent graduate of the Army War College, arrived at the

Materiel Division, Wright Field, Ohio, on June 25th, to obtain certain technical information and data in preparation for his new assignment as Assistant Military Attache for Air in Berlin, Germany. He remained at the Division until June 28th.

Major Vanaman is a graduate of the Air Corps Engineering School of the class of 1930.

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PRIMARY STUDENTS BEGIN ADVANCED TRAINING

Class 29-B at the Air Corps Advanced Flying School, Kelly Field, Texas, began flying and ground school work on Thursday, July 1, 1937. Of the 92 students in the present class which completed the course at the Primary Flying School, Randolph Field, just recently, 40 are student officers and 52 are flying cadets.

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PLENTY OF SPLASHING NOW AT MITCHEL FIELD

A new and modern swimming pool, located at the Officers' Club, Mitchel Field, N.Y., was formally opened to officers, their families and guests, on the evening of June 17th by Colonel Walter H. Frank, Air Base Commander, Mitchel Field, assisted by Lieut. Colonel Thomas F. Hanley, who acted as Master of Ceremonies. The speakers were Colonel Walter H. Frank; Major John N. Douglas, Base Quartermaster, and Captain Ralph G. Richards, Construction Quartermaster.

Colonel Frank paid high tribute to the cooperation, planning and execution of the work by Major Douglas and Captain Richards in the construction of the pool, and commended highly the work of the local C.C.C. Company and the personnel of the Works Progress Administration for their untiring efforts in finishing the construction in the shortest possible of time.

An added attraction on this occasion was an excellent exhibition of aquatic skill by a group of expert swimmers and divers from Jones Beach, who gave a gay and entertaining touch to the affair. The first official splash by a bonafide resident of Mitchel Field was made in the chilly H₂O by Cadet Crandall, a member of the crack West Point Swimming Team, son of Major Walter M. Crandall, Air Base Surgeon, Mitchel Field.

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On June 26th, four Y1B-17 type airplanes, under the command of Lieut. Col. Robert Olds, commander of the 2nd Bomb. Group, Langley Field, Va., made a mass flight to Miami, Fla. The return flight to Langley Field was made in five hours.

THE FLOWER SHOW AT LANGLEY FIELD
By Mrs. Walter Lloyd Bender

The Flower Show, held under the auspices of the Woman's Club of Langley Field, was well attended by visitors from Norfolk and the lower Peninsula. There were many displays of outstanding and unusual beauty.

The luncheon was attended by about a hundred guests. Mrs. Frank M. Andrews gave a welcoming address. Mrs. Walter Lloyd Bender, the Executive Chairman, gave an informal talk on the objectives of the Woman's Club and outlined the activities for the coming year. She emphasized the beauty of the crepe myrtle, the post flower. Three hundred of these bushes has already been planted, and it has been planned to plant about one thousand more in the fall. She drew an imaginary picture of Langley Field twenty years hence, when the daughters of the Garden Club members would walk through rows of beautiful myrtle trees that their mothers had been instrumental in planting. Her talk was followed by reports from the various chairmen of sections, as follows:

<u>President:</u>	<u>Art:</u>
Mrs. F.M. Andrews	Mrs. C.V. Haynes
<u>Vice Presidents:</u>	<u>Books:</u>
Mrs. G.C. Brant	Mrs. R.L. Maxwell
Mrs. W.R. Weaver	<u>Home Economics:</u>
<u>Secretary:</u>	Mrs. J.B. Stanley
Mrs. R.L. Maxwell	<u>Bridge:</u>
<u>Treasurer:</u>	Mrs. March
Mrs. S.G. McLennan	<u>Athletics:</u>
<u>Executive Chairman:</u>	Mrs. Robert Olds
Mrs. W.L. Bender	<u>Golf:</u>
<u>Dramatics:</u>	Mrs. E.E. Glenn
Mrs. C. Spatz	<u>Swimming:</u>
<u>Garden:</u>	Mrs. W.J. Calvert
Mrs. W.L. Bender	<u>Tennis:</u>
<u>Music:</u>	Mrs. W.C. Bentley
Mrs. H.C.K. Muhlenberg	

After the luncheon the guests were delightfully entertained by the Sub-Debs, with Miss Truth Cornelia Bender, who is the organizer and sponsor, and the following:

Edith Davies	Judy Carey
Beckey Spatz	Ann McDuffie
Jean Craig	Dorothy Salisbury
Betsy Davies	Margaret Whitehead
Patsy Carey	Mary Cecile Wynn
Eileen Carter	Jeanne Andrews
Mary LeBrou	Jackie McDuffie

They gave two very beautiful tableaus in the club lounge - The Old Spinning Wheel in the Corner, in which the young ladies wore original costumes of their grandmothers' days, and Little Old Lady, which was sung by Miss Joan Trunk and the chorus. Joan was dressed in lavender lace and was a charming little old lady.

There were about four hundred exhibits. The judges were Mrs. W.L. Weller, of Norfolk; Mrs. Crosby, Norfolk Federation of Garden Clubs; Mrs. Parks, Hampton Roads Garden Club, and Mrs. Page, Willoughby Spit. The flowers were outstanding for their arrangement and quality. The awards were as follows:

Blue Containers - Comp. Colors
1. Mrs. Bowen; 2. Mrs. Gibbs; 3. Mrs. Glantzberg

Miniatures

1. Mrs. Alan Jones, 2. Mrs. Maxwell, 3. Mrs. Knerr.

Formal Dinners

1. Mrs. Trunk, 2. Mrs. Calvert, 3. Mrs. Hale.

Breakfast Trays

1. Mrs. Buxton, 2. Miss Bender, 3. Mrs. Gibbs.

Arr. in Pitchers

1. Mrs. Alan Jones, 2. Mrs. McLennan, 3. Mrs. Carey.

Wild Flowers

1. Mrs. Carey, 2. Mrs. Skinner, 3. Mrs. Knerr.

Arr. under 10 inches

1. Mrs. C.S. Diggs, 2. Mrs. McLennan,
3. Mrs. Geo. Parker.

Bubble Bouquets

1. Mrs. Trunk, 2. Mrs. Kilpatrick

Informal Lunch Tables

1. Mrs. Gibbs, 2. Mrs. Calvert, 3. Mrs. Milpatrick.

Arr. of Petunias

1. Mrs. Carey, 2. Mrs. McLennan, 3. Mrs. Skimmer

Snaps

1. Mrs. Salisbury

Rose

1. Mrs. Carey, 2. Mrs. Griffin.

Miscellaneous

1. Mrs. Bender, 2. Mrs. Muhlenberg,
3. Mrs. Powers.

All White

1. Mrs. McLennan, 2. Mrs. Heard, 3. Mrs. Alan Jones.

Men's Arr.

1. Col. Bender, 2. Major Steele, 3. Major Trunk

1. Hon. Mention - Major Hutchison.

2. Hon. Mention - Col. Calvert.

Pairs.

1. Mrs. Carey, 2. Mrs. Trunk, 3. Mrs. Odom.

Japanese Manner

1. Mrs. Carey, 2. Mrs. McLennan, 3. Mrs. Bender.

Pastels in Silver

1. Mrs. Andrews, 2. Mrs. Muhlenberg,
3. Mrs. Maxwell.

Spec. Gladiolas

1. Mrs. Hale, 2. Mrs. Trunk, 3. Mrs. Griffin.

Spec. Zinnias

1. Mrs. Blackiston, 2. Mrs. Craig,
3. Mrs. Griffin.

Sweepstakes

First Prize: Mrs. Edwin F. Carey.

Second Prize: Mrs. Otto Trunk.

Third Prize: Mrs. Stewart G. McLennan.

Most distinctive Exhibit in the Show

Mrs. Carey - (Wild Onion Bloom)

Special Award

Mrs. Hale (For nose-gays in finger bowls).

The activities of the Woman's Club will be resumed in September, but a number of the sections will continue their activities through the summer.

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Second Lieuts. John Thomas Cox, Dallas, Tex., and James Edwin Roberts, Pettus, Texas, both of the Air Reserve, have been placed on extended active duty at Barksdale Field, La., for a period of three years from July 15, 1937.

NOTES FROM AIR CORPS FIELDS

Langley Field, Va., July 6, 1937.

Hq. and Hq. Sqdn. 8th Pursuit Group: The Army Industrial College and Maxwell Field contributed one officer each to the strength of this Group in the persons of Majors Russell L. Maughan and William C. Goldsborough, respectively. The latter officer reported for duty on June 11th, and Major Maughan on June 22nd.

On June 15th, the Eighth Pursuit Group was called upon to demonstrate to graduates of the Army War College what they can expect from Pursuit Aviation on "M" Day, in the way of blasting the enemy from the skies. High and low altitude attacks were made on ground targets set upon Langley's Bombing Range at Plum Tree Island. Tracer ammunition was used in order to enable the visitors actually to see the curtain of fire the Pursuiters laid down on the targets.

On June 21st, twelve Flying Cadets of the Cadet Detachment, 8th Pursuit Group, became second lieutenants, Air Reserve, thus "washing out" the Detachment.

35th Pursuit Squadron: The annual outing in celebration of Organization Day (June 25, 1932) was held on June 18th, this date being set up because of the fact that on the 25th we would be in the field at Virginia Beach.

The outing was at Yorktown Beach, with all the trimmings, such as liquid refreshments, fried chicken and barbecue. The day was devoted to swimming and softball, with everyone emerging from the affair with a few stiff joints which had not been exercised since the outing of the year before. The only casualty that was observed by your correspondent was the bailing out of the kayak by Fee Wee Stoner. We do not know whether the little boat was too much for him. Anyway, he was back in a jiffy and proceeded to paddle all over the river.

36th Pursuit Squadron: The officers and enlisted men of the Squadron regret the transfer of 1st Lieut. A.R. Springer to the 33rd Pursuit Squadron on June 16th. Springer has been with this outfit since early in 1935, and in his capacity as Flight Commander for the past seven months has proved highly efficient. Here's the best of luck to you with your new outfit, Al.

33rd Pursuit Squadron: The Squadron welcomes Lieut. A.L. Springer into its fold. He was formerly with the 36th, but has been transferred to the 33rd as Flight Commander. Experience and personality makes Al a very capable leader.

The Eighth Pursuit Group sent 12 PB-2A's and 6 A-17's on a navigation training flight on June 28th, via Buffalo, N.Y., and Wright Field, returning from Wright at 2:00 a.m. on the morning of the 30th. Much interest was shown by both officers and enlisted men on their visit through the Curtiss factory and the Materiel Division at Wright Field.

Second Bombardment Group: Captain Robert B. Williams reported to Group Headquarters and will assume the duties of Group Operations Officer.

Captain Charles E. Caldwell, another new arrival, was appointed Personnel Officer for the Group.

Major Barney M. Giles, former Group Opera-

tions Officer, departed from this station on June 23rd for the Command and General Staff School, where he will be a student this fall.

Hqrs. and Hqrs. Squadron, 2nd Bomb. Group. During the past two weeks, the following-named men of this organization were promoted to the grades indicated: Sergeant Frank Ritz to Staff Sergeant; Corporals Daniel C. Murdock and Thomas G. Holmes to Sergeant; Pvts. 1st Class Benjamin F. Budris and Samuel D. Watson to Corporal.

Staff Sgt. Jacob E. McDonald was transferred to this Squadron from the 21st Reconnaissance Squadron on June 19th.

20th Bombardment Squadron: The Squadron is proud of its new rank as Captain Neil B. Harding donned his double bars.

Second Lieut. John F. Biggerstaff, Air Res., was transferred to Patterson Field, Ohio, for duty with a Transport Squadron.

Captain William D. Old reported for duty from the Command and General Staff School, Fort Leavenworth, Kansas.

49th Bombardment Squadron: Two recent arrivals in this Squadron were Captain Darr H. Alkire on June 7th from the Basic Stage at Randolph Field, and 1st Lieut. Thomas L. Mosley from the 24th Pursuit Squadron, Albrook Field, Canal Zone.

Second Lieut. Kenneth A. Cavenah was transferred to Middletown Air Depot for transport pilot duty on June 20th. The Squadron personnel regret this loss of an excellent pilot and a good officer, but wish him an enjoyable tour of duty.

First Lieut. John S. Mills was transferred to the 2nd Bombardment Group Headquarters on June 4th to take over the duties of Assistant Operations Officer.

96th Bombardment Squadron: Due to recent losses of Reserve officers who terminated their tours of active duty to accept positions with Commercial airlines, this Squadron has had attached to it the following-named officers from the Squadrons as indicated: 2nd Lieuts. Joe E. Barton and Kenneth H. Gibson from the 49th Bombardment Squadron, and Claude B. Adair and James H. Patrick, Jr., from the 20th Bombardment Squadron.

Another addition to this organization is Captain Carl B. McDaniel from Randolph Field.

21st Reconnaissance Squadron: The 2nd Bombardment Group Navigation School was on temporary duty at Wright Field, Ohio, from June 22d to the 26th, during which time a demonstration flight was performed in the Division Navigation Test plane, C-33. The School had an opportunity to use the new navigation equipment. High overcast skies prevented additional flights for celestial observations.

During the week of June 28th, several missions at sea were scheduled to be flown in the YOA-5 type airplane for the purpose of checking the students off in celestial navigation. These flights were intended to serve in place of a graduation flight, which could not be completed prior to July 1st. First Lieuts. Ralph E. Koon, William A. Matheny, Clifford H. Rees and Eugene P. Mussett are the officers completing the course.

Advanced Flying School, Kelly Field, July 6th.

The retirement of Master Sergeant Andrew J. Pool, Ordnance Department, was announced on June 30th. Sergeant Pool served in the Coast Artillery Corps and the Ordnance Department since 1906. For the past 14 years he has been in charge of the Ordnance Office at Kelly Field. He retired to his home at Brentwood, Arkansas.

Kelly Field received a visit on June 26th from two officers who were formerly stationed here, namely, Majors Lewis A. Dayton and John W. Monahan. Major Dayton was formerly Adjutant of Kelly Field, while Major Monahan was Chief Instructor of Bombardment Aviation.

Fairfield Air Depot, Patterson Field, July 2nd.

The First Transport Squadron, commanded by Captain S.A. Gilkey, added to its roster during the past two months the following-named Reserve officers: Lieuts. R.B. Stopplet, John F. Biggerstaff, Herman E. Hurst, T.S. Davis, Jr., James M. Treweek and Charles E. Lancaster.

San Antonio Air Depot, Duncan Field, Texas, 7/7.

Major John P. Richter, Chief Engineering Officer of this Depot, who has been on duty here since June, 1935, was transferred to the Materiel Division, Wright Field, Ohio, and with Mrs. Richter departed June 24th by auto for their new station. Captain George A. Whatley, on duty at this Depot since March 26, 1937, as Assistant Depot Supply Officer, Assistant Operations Officer, and Supply Officer of the 3rd Transport Squadron, was transferred to Maxwell Field, Ala., for duty, and he and Mrs. Whatley departed by auto on June 21st for that station. The loss of these members of the Depot's official family is greatly regretted by their many friends in this vicinity, whose every good wish accompanies them to their new activities.

Major Elmer D. Perrin was relieved as Operations Officer of the Depot and from the command of the 3rd Transport Squadron and appointed Chief Engineering Officer. Lieut. Max H. Warren was appointed Operations Officer of the Depot and assigned to the command of the 3rd Transport Squadron on June 24th.

Several new arrivals were recently welcomed at the post. Captain Wesley T. Guest, Signal Corps, and Mrs. Guest and their young daughter, arrived June 30th from Wright Field, Ohio. Captain Guest was formerly on duty in the Aircraft Radio Laboratory at Wright Field, and was assigned to this Depot as Signal Corps Radio Maintenance and Repair Officer. Captain Nathan F. Twining, having completed the course of instruction at the Command and General Staff School, Fort Leavenworth, Kansas, was assigned to duty as Air Corps Technical Supervisor for this Control Area, under the Chief of the Air Corps, with station at San Antonio. Captain and Mrs. Twining and their three children arrived June 28th at this station, where they will occupy quarters and where Captain Twining will maintain his office.

Second Lieuts. Leonard P. Kleinoeder and Claire B. Collier, Air Reserve, and their families, came to this Depot June 21st for extended active duty with the 3rd Transport Squadron. These officers were transferred from Brooks

Field.

Major L.A. Dayton, recently a student at the Air Corps Tactical School, Maxwell Field, Ala., and now taking a refresher course at Randolph Field, visited the Depot on June 26th, viewing new developments in engineering shop work and greeting old friends. He served here as Adjutant several years ago.

Recent visitors at the Depot were Major J.E. Duke, Jr., of Chanute Field; Captain R.W.C. Wimsatt, of the Middletown Air Depot, Pa.; Major W.R. Carter, of Langley Field, enroute on a navigation training flight; and Lieut. J.L. Jackson, of the Field Service Section, Wright Field, Ohio, who while on a flight to Brooks Field, called at the Depot June 24th to confer on Air Corps supply matters.

Captain E.E. Partridge, Lieut. D.L. Moler, Staff Sgt. Hall and Private O'Regan, of Maxwell Field, Ala., ferried in a B-6A to the Depot for overhaul on June 30th, and returned in another plane with Lieuts. D.F. Meyer and C.E. Hughes of that station.

Mr. Richard T. Harrison, Principal Property and Supply Clerk in the Field Service Section, Materiel Division, Wright Field, and who was formerly on duty here for several years, was on temporary duty at this Depot and at other Air Corps stations in this vicinity, June 17-26, to study various Air Corps supply matters.

Mr. R.L. Collins, Senior Commodity Supervisor with the Materiel Division, arrived at the Depot June 23rd for a brief period of temporary duty, conferring on the maintenance and supply of Air Corps clothing and parachutes.

Luke Field, T.H., June 17th.

5th Composite Group: The problems of shortage of personnel are staring this Group in the face. With the loss of Majors Idwal E. Edwards and Phillips Melville, Captain Fay R. Upthegrove (shiny new double bars), 1st Lieuts. Thomas R. Starratt, Chester P. Gilger, David N. Crickette, Harry S. Bishop, 2nd Lieuts. Dale E. Altman and John P. Stewart on the June-July boats, we are suffering what we hope to be the near end of a major turnover of officer personnel. Reconciling the loss of these ten officers with the arrival of only eight on the June boats is puzzling our Commanding Officer, Colonel Millard F. Harmon, no end.

The eight arrivals are Major Newman R. Laughinghouse, Captains Dale D. Fisher and Charles B. Stone II (also shiny new double bars), 1st Lieuts. Richard I. Dugan, William Ball, Dean C. Strother, John P. McConnell and Charles E. Wheatley.

Then, too, there is the problem of the shortage of enlisted men. The following men were to depart on the June 24th boat and, of course, the number of replacements to arrive is a mystery as ever: Pvts. 1st Cl. William S. Brackeen, 5th Composite Group Hqrs. and George P. Fitzpatrick, Q.M. Detachment; Master Sgt. Thomas Shakespeare, Staff Sgt. John J. Hoffman and Corporal Edmund J. Borowski, of the 4th Observation Squadron; 1st Sgt. Lloyd N. Johnson, Staff Sgt. Dominic Dennis, Corporal Jack Sexton, Pvt. 1st Cl. Walter L. Murphy, Pvts. Frank Bibin, Michail Bibin, James P. Lowe, of the 23rd Bombardment Squadron; Pvts. George W. Jones,

Edward R. Morel, Fredric Hermy, of the 50th Observation Squadron; Pvt. Harry Bisgier, Albert J. Dudzic, Neen R. Fike, of the 9th Signal Company; Staff Sgt. Floy L. Ashley, Pvts. 1st Cl. Henry M. Wilson, Stanley A. DuBois, Pvts. George W. Ball, Ernest J. Maye of the 65th Service Squadron; Pvt. 1st Cl. Roy Ballard, 19th Pursuit Squadron; Pvt. 1st Cl. Alfred F. Harger, 6th Pursuit Squadron; Master Sgt. William J. Rich, Pvts. 1st Cl. Alfred S. Fitzgerald and Clarence E. Stout, 72nd Bombardment Squadron.

If the future continues to approach us in the same manner as in the past, we'll soon have just nobody left at all. Each boat takes more from us than it brings. My math is pretty poor but almost anybody can see that a lot of such measures added together will eventually make zero. However, we're struggling along and carrying on with the good old Air Corps spirit navigating us to our objective.

Materiel Division, Wright Field, Ohio.

The most recent addition to officer personnel in the Power Plant Branch is Lieut. E. S. Perrin. He comes to us fresh from a year at the Air Corps Engineering School and a year at the University of Michigan. Having been thoroughly "educated," he is expected to give us snappy answers to some of the deep questions involved in answering the troubles encountered on pieces that come in here with little red tags tied to them.

Maxwell Field, Ala., July 9th.

Hqrs. Squadron, A.C. Tactical School: June, the month of Annual Outings, finally came around, and in the absence of Major Edward E. Hildreth, Commanding Officer of Headquarters Squadron, who is on leave of absence, 1st Lieut. Edward J. Hale, Acting Squadron Commander, selected June 29th as the day, and the Narrow Lane Inn, a few miles out of Montgomery, as the place for our annual get-together.

Arrangements were all completed early in the day for the outing, and the trucks loaded with the two hundred odd members of the organization began arriving. Swimming, dancing, and just plain resting up was the program of the day, with everyone enjoying the fine summer afternoon under the trees at Narrow Lane.

Sergeant Charles C. Lyon, as usual, handled the refreshment situation in his inimitable way and saw to it that everyone was thoroughly refreshed. He was assisted most ably by Pvts. Alton C. Pilster and William H. Bailey.

Sergeant K. M. Rannels appeared on the scene promptly at 5:00 o'clock, p.m., and with his corps of cooks proceeded to lay out one of the Headquarters Squadron's famous chicken suppers, with all that's good alongside.

The Harlem Swing Band appeared on the scene shortly after supper, and the single members of the "outfit" were seen disappearing fast for home, where a change of clothes was made and a quick trip for their girl friends. The dance started about 9:00 p.m., and lasted until 12:00, and everyone needed a pass to rest up after the "outing."

13th Air Base Squadron: Major Lewis A. Dayton,

Skipper of this organization, is at present on D.S. at Randolph Field, pursuing a refresher course in flying at the Primary Flying School. The Major is expected to rejoin the Squadron the latter part of July.

Lieut. Wm. J. Holzappel, Jr., was promoted to 1st Lieutenant on June 12th. He is at present commanding this Squadron.

Captain Charles D. McAllister was relieved from duty and assignment to this squadron and transferred to the 91st School Squadron on June 1st. He is now commanding that organization.

Staff Sergeant Delmar F. Wolf was transferred to the Philippines and was scheduled to leave on furlough on July 10th. His replacement, Staff Sergeant James M. Giganti, is at present enroute from the Islands and on furlough.

Hqrs. and Hqrs. Squadron: Captain John F. McBlain was assigned to the Squadron on July 1st and assumed command thereof on that date, relieving 1st Lieut. Hale, who went on leave of absence for two months and 18 days, at the expiration of which he is to report to the Air Corps Technical School, Chanute Field, Ill., for a course of instruction in Communications.

Effective July 1st, the Squadron was increased in Staff Sergeant grades by two. Staff Sergeant Langston, on duty at the Bombing and Gunnery Base, Valparaiso, Fla., from the 13th Air Base Squadron, was transferred to our Squadron to fill one of the vacancies, and Sergeant Walker, of this Squadron, by virtue of seniority on the post, was promoted to Staff Sergeant to fill the other vacancy.

Seven enlisted men of the 3rd Weather Squadron, Barksdale Field, La., on duty at this station, were assigned to Headquarters Squadron for quarters, ration and administration, effective July 1st.

Hawaiian Air Depot, Luke Field, T.H., July 6.

When an Army officer goes Navy, that's news. When the Depot Commander suddenly capitalized on a chance to go on leave back to the mainland, the little item of water transportation loomed up with sudden possibilities. The ever-obliging Navy won this particular bid with a formidable array of aqueous vehicles, ranging from harbor tugs to battleships. With his characteristic snap judgment, the Commanding Officer selected an oil tanker, much to our present amusement and his future comfort, we hope. May his crossing be smooth and his well earned vacation replete with fun and relaxation.

Once again new blood has been injected into the official custodians of this Depot. Major William J. Hanlon forsook Dayton to take over Depot Supply and its contingent duties, while Major Ames S. Albro left sunny San Antonio to come over and manage our Engineering Section. Lieut. Bonner, who up until recently, has been Depot Adjutant, has left us for duty at Randolph Field, Texas.

Mitchell The Softball League
Field terminated a very
interesting inter-

squadron season on June 21st when the "Colonel Walter H. Frank Trophy" was presented to Staff Sergeant Kelly, the "Fighting Irishman" pilot of the 97th Observation Squadron team. Before a gathering of all personnel, Colonel Frank, Commanding Officer, made the presentation. The 97th displayed superb form throughout the season, winning all games in which they participated.

The Officers Team which chiseled into the league (it was led or maybe captained by 1st Lieut. Arthur Meehan) was runner-up, winning 8 out of its 9 games.

Immediately after the presentation, Sergeant Kelly challenged any team who disputed the supremacy of the 97th on the diamond. The Officers Team accepted the challenge.

P.S. The officers won, 4-3.

Maxwell One of the most spectacular events
Field annually during the Post baseball
season is the competition with the
Navy, with two games played at home and two at Pensacola, Fla.

On Saturday morning, June 26th, several carloads of sailors appeared on the horizon approaching Maxwell Field for the first tilt this season, scheduled for 2:00 p.m. that afternoon. After giving the pass word and being admitted to the very exclusive Tactical School grounds, where they received a hearty welcome at the portals of the 13th Air Base Squadron, the sailors proceeded to look the place over and then started unlimbering for the afternoon's session of baseball. But ye old weather stepped in and dealt a smashing blow with lots of rain, so the game was postponed and plans made for a double-header on the excellent diamond at Maxwell Field on Sunday afternoon.

The party scheduled by the E. & R. Officer at Reynold's Mill for Saturday evening also received a dampening, as there was no cover at the Mill for the teams to gather under, so everyone got together and decided Headquarters Squadron Mess Hall would be an ideal place for the gathering. Under the watchful eye of Sergeant K.M. Rummels, Mess Sergeant, an excellent picnic supper was spread over the mess tables and the Navy and Maxwell Field baseball teams, Headquarters Squadron Soft Ball Champions, Headquarters Squadron Baseball Champions of the Inter-Squadron League, and the Individual Champs in the Tennis Tournament gathered for a quiet evening at home. Good chow and refreshments kept the fifty odd merry-makers contented until around nine o'clock, when all decided to turn in and get some much needed rest before the double-header on Sunday.

One o'clock Sunday afternoon saw the stands full of enthusiastic baseball fans and the Army-Navy contingent of players lining up for the fray. The first game found Maxwell Field totally off balance, and the "Gobs" scored an



easy victory. The second game, however, was different. Everyone of the Tactical School players seemed to make up for previous deficiencies, and an excellent game followed, with Maxwell Field winning the decision, 2 to 1.

The return games were scheduled for July 7th and 8th at Pensacola. History repeated itself, and Maxwell Field lost the first game. On the following day, however, with Henry Soeder pitching an excellent game, the Tactical School won a close contest, 8 to 7. This left both teams right where they started from, and plans are already under way for a series of return games to decide the age old argument between these two teams.

As they always do, the Navy planned a very nice party for the Tactical School ball club on Thursday evening, and the Maxwell Field crowd returned home Friday morning.

Nichols Your Correspondent is by no means a Field, qualified sports reporter, but more P.I. than half a month having passed since

the past epochal Department Series, with no luck in his efforts to secure a good report, it seems high time that some word be sent back to the States of the really remarkable games that were played, and of one in particular - that between the Air Corps and the 31st Infantry.

To begin with, the setting was ideal. The games were played in the beautiful Rizal Memorial Stadium, and you can't beat it, - fine concrete stands with a cantilever roof similar to the balconies of modern theatres (there are no posts to interfere with the vision of the spectators) and a smooth, green field. The fences are also of concrete, painted green. They have no advertising on them, but big white baseballs are painted at each point where a homerun had been driven over, with the date and name of the party doing the driving. There are seven of those circular white spots, bearing such names as Babe Ruth, Lou Gehrig, etc.

The 31st Infantry Band played whenever their team was on the field, and this lent a little of the old football atmosphere to brighten up the games. Any sort of baseball would seem better than ordinary in this setting, but this particular game we are trying to get around to was every bit as fine as the conditions under which it was played, and the net result was that you couldn't have surpassed the afternoon's entertainment at a World's Series game.

The Air Corps, first at the bat, went down in one, two, three order. That put our boys on the defensive, but they were equal to it and they retired their opponents in the same order. This sort of thing went on for eight innings, with the exception of three scattered hits given up by our pitcher and a couple of walks. One or two of our men made first on walks, but both teams were playing errorless ball and, in spite of the numerous times that bats connected with balls for good hard drives, there was always a beautiful play for an out, and no one could get by first base.

By the first of the ninth, everyone was thoroughly on edge waiting for the break that would have to come, and wondering when it would come. It was in favor of the Air Corps. An

error for the 31st - their only one in the whole game - a sacrifice, and a hit (the only one of the game for the Air Corps) brought in one run. Now we had to hold them for half an inning. The first man up for the 31st hit safely. An error put another man on base. Following an out, one of the 31st boys sent one sailing for the left center field wall. It was labeled for a double or triple - if there ever was one - and all the runners began flying around the base paths. It looked like a sure thing for a tied score with a strong possibility of the winning run coming over, but our center fielder, Private Harold R. McBride, was flying too, and at the end of a regular flying tackle he had his glove on the ball about a foot off the ground. He rolled over and over, and it didn't seem possible that he could have held the ball, but when he finally came up there it was, safe and sound. By this time the leading runner was about on third, so that doubling him up was easy.

While the 31st collected four hits, credit must be given to Private, 1st Cl. Herman G. Miller, for his effectiveness in the pinches, and the whole team for backing him up. When all is said and done, that is what we can call one swell ball game.

The 59th Coast Artillery won the series with three straight victories, one of which was 1-0 in eleven innings against the unlucky 31st - another fine game. But we annexed two out of three and didn't feel so badly. Not in that kind of league.

Bouquets to Lieut. Dick Legg, who coached the Air Corps team and played with them.

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WAR DEPARTMENT SPECIAL ORDERS Changes of Station

To Chanute Field, Ill.: Major Roy W. Camblin, from Barksdale Field; Captain Edgar T. Noyes, from Hamilton Field; Captain Ralph E. Holmes, from Kelly Field.

To Bolling Field, D.C.: 1st Lieut. Harold W. Grant, from Brooks Field, Texas.

To Maxwell Field, Ala.: 1st Lieut. Forrest G. Allen, from Chanute Field, Ill.

To Hawaiian Department: Colonel H.C. Kress Muhlenberg, from Langley Field, Va.

To Fort Sill, Okla.: Lieut. Colonel Dudley B. Howard, from Wright Field, Ohio.

To Wright Field, Ohio: Lieut. Colonel Morris Berman, from San Antonio Air Depot.

To the Philippines: Major Lloyd C. Blackburn from Barksdale Field, La.; Major Guy L. McNeil, from Fort Lewis, Wash.

To Washington, D.C.: 1st Lieut. Jesse Auton, from Bolling Field, for duty in the Office of the Assistant Secretary of War.

To Randolph Field, Texas: Captain Arthur J. Lehman, from Mitchel Field, for duty at Air Corps Training Center.

Active Duty for Reserve Second Lieutenants
George Oscar Bond, Arlington, Va., to Langley Field, Va., to July 18, 1940 - Vernon Merritt Byrne, Saunemin, Ill., to Rockwell Air Depot, Calif., to July 14, 1940 - Hamish McLelland, University, Va., to Middletown, Pa., Air Depot to July 14, 1940.

TECHNICAL INFORMATION AND ENGINEERING NEWS Air Corps Materiel Division

Developing and Fixing Powders: Two hundred sets of ready-prepared developing and fixing powders have been received from the Eastman Kodak Company, Rochester, New York. Ten sets are being sent to six Air Corps photographic activities for service test to determine if there is any advantage in having the processing solutions prepared in a ready-mixed form instead of having to weigh out the separate chemicals for each formula, which is the present practice.

Refractometer:

One Hilger Pulfrich refractometer, complete with hydrogen tube and Davis heater, has been received from Adam Hilger, Ltd., London, Eng. It will be used to measure the dispersion and refracted index of optical glass.

Tow Targets for Long Range Firing:

Three towing tests of a large size tow target for long range gun firing have been conducted with a 6-foot diameter by 60-foot long sleeve type target. The results obtained proved that the frictional drag of a target of this size was excessive, resulting in a reduction of 24 m.p.h. of the indicated air speed of the airplane at 4,000 feet altitude, with full throttle. It appears that a 4-foot diameter by 60-foot long target of the sleeve type is as large a size as can be made practicable for service use.

It may be possible from data obtained on these tests to develop a combination flag and sleeve type with a larger effective area than obtained with a 4-foot by 60-foot straight sleeve type.

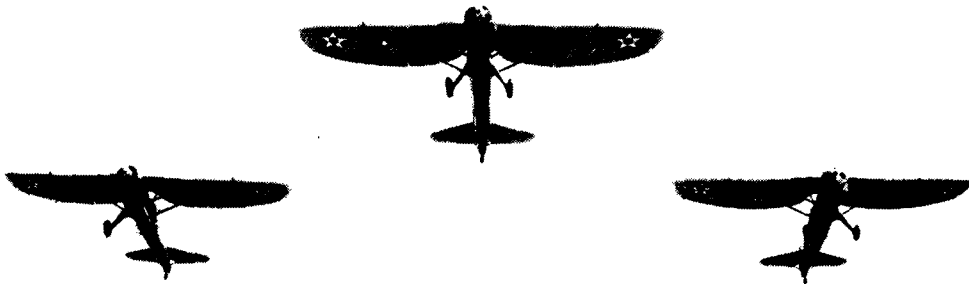
Further experimental tests with different design targets will be made as soon as a Type 3-10 airplane is available, in order to determine the essential basic characteristics of low drag with stability at high speed.

Type A-3 Aerial Roll Film Dryer.

The Type A-3 aerial roll film dryer, as a result of service tests, will be classified as a standard item of equipment. It consists of a light-weight metal drum approximately 28 inches in diameter, having around its periphery approximately 100 air jets $3/32$ inch wide by $9\frac{1}{2}$ inches long through which air is projected against the emulsion side of the film. The air blast is provided by an air scoop driven by a one-horsepower electric motor operating at 1,750 r.p.m. The film is suspended and driven around the drum by wooden rollers around the outside drum. The speed of travel of the film can be varied from one to 10 feet per minute, depending on the rate of drying. Brackets for holding the wet spool of film and for receiving the dried film are provided on the dryers. A thin stainless steel hobbin is also provided for attachment to the starting end of the film to guide it around the drum.

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AIR CORPS
NEWS LETTER



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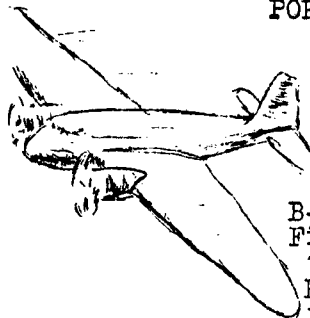
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The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

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PORTO RICAN FLIGHT BY NINTH GROUP BOMBERS
By the Mitchel Field Correspondent



Perhaps the most remarkable thing about the recent flight of Martin B-10B's from Mitchel Field, Long Island, to San Juan, Puerto Rico, was the matter of fact manner in which the flight

was planned and executed. The accomplishment of the flight was just another silent salute to the progress of modern airplane and engine development and to the progress of training within the Air Corps.

In mid-June, the Commanding Officer of the 9th Bombardment Group received orders to dispatch three B-10B's to San Juan, via Miami, and return. Not so many years ago, the reception of such an order would have created quite a furor. A mad search for competent navigators would have been instigated - telegraphic requisitions for aperiodic compasses, drift sights and malted milk tablets would have gone out to Air Corps depots - in short, all activities at the Base would have been directed toward making adequate preparations for the forthcoming flight.

Preparations for this flight could not have been more in contrast to the mad frenzy associated with bygone days. Three Martins, which had been engaged in the routine instruction of West Point cadets, were diverted from normal operations, given 40-hour inspections, and were ready to go. Any of the combat crews of the Group would have been competent to accomplish the flight, so those who were selected to man the airplanes considered themselves "lucky" to get this opportunity to make a flight just a little different from the ordinary run of cross-country flying.

The flight took off from Mitchel Field for Miami, Fla., shortly after daybreak on June 24th, under the command of Capt. F.B. Valentine. The course from Mitchel Field to Tybee Island Light House, near Savannah, Ga., was principally overland. From Tybee Island Light House to Miami Municipal Airport, the course lay mainly over the Atlantic. The first day's flight of 1,000 nautical miles was accomplished in $7\frac{1}{4}$ hours. The Wright

"Cyclones" perked along beautifully at 1525 RPM and 28" of mercury.

The City of Miami lived up to its reputation for hospitality, when officials of the Air Chamber of Commerce took the officers and men in tow until "taps" which, in view of the long hop scheduled for the following day, was not long after dinner.

With bomb bay tanks loaded to the gills, the planes departed from the Miami Municipal Airport on June 25th. Fowey Rocks Light House was the initial point, and the first turning point of the course was off Cayo Romano, Cuba.

Midway between Miami and Cayo Romano, the oil pressure on the right engine of Captain Valentine's airplane fell off to the danger point and, after instructing the other two airplane commanders to continue the flight, he swung around and returned to Miami, where he remained until the other two ships returned from San Juan.

From Cayo Romano the course led past the southwestern tip of Great Inagua Island to a point off Cape Monte Cristi, Dominican Republic, thence approximately paralleled the north coast of Hispaniola to Cape Viejo Francis. From here the course lay generally SSE to San Juan. The distance of 956 nautical miles from Miami to San Juan was covered in eight hours against moderate head winds, at the same RPM and manifold pressure as had been maintained on the previous day's flight.

Dead reckoning navigation was used throughout. At no time was there any question as to position. Ample check on the accuracy of dead reckoning calculations was provided by the existence of three or four good check points enroute, from which bearings were taken.

June 25th and 26th were spent in Puerto Rico preparing the airplanes for the return flight and enjoying the sights of San Juan and vicinity. Pan-American servicing facilities were made available. Gas was pumped by hand from drums and proved to be a long drawn out process. The twenty-hour inspection made at San Juan might very well have been omitted, for the engines were in perfect shape.

The officers at El Morro, Headquarters of the 65th Infantry, took upon themselves the task of educating the visit-

ing airmen to Puerto Rico in two days and, needless to say, they did a very thorough job of it. Historically, San Juan is fascinating with its 16th Century Spanish forts. One could not help but gaze in astonishment at the thick walled embattlements and wonder at the huge amount of labor and materials necessary to their construction. Legend has it that the King of Spain once strolled down to the beach bordering the Bay of Biscay and, shading his eyes so as to get a better view eastward, exclaimed: "I have poured so much gold into the fortifications of Puerto Rico that I should be able to see it from here."

The city is a queer combination of the modern and the antique. Strolling down a granite paved street scarcely wide enough to accommodate the passage of two autos, you encounter Sammy Goldstein's Dress Shoppe sandwiched between old Spanish edifices.

All of the U.S. Army troops, except the officers, are native Puerto Ricans. Immediately noticeable to the casual visitor is their trimness and the high degree of morale and discipline which pervades the entire regiment. Rumor has it that the enlisted personnel of the command average five children per man.

It was with regret that early on June 27th the flight left San Juan. The heavily loaded B-10B's used every foot of field on the take-off, although there was a moderately brisk wind blowing. Upon completion of a 3,000-foot runway which is now under construction, hazards incident to take-off will be considerably lessened. The route to Miami lay over the same course as had been followed on the 25th and was uneventful - never, however, to the point of boredom, for there was always enough water beneath the planes to keep everyone on the alert. The elapsed time of the day's flight was $6\frac{3}{4}$ hours.

After spending the night in Miami, the flight took off on the morning of the 28th for Mitchel Field and arrived there at in $7\frac{1}{2}$ hours. The total flying hours from Mitchel Field to Puerto Rico and return, a distance of some 3812 nautical miles (4395 land miles) was $29\frac{3}{4}$ hours.

In closing, it might be well to give a few of the conclusions reached by members of the flight as a result of the trip. First of all, from the point of view of comfort, the Martins leave much to be desired during an extended flight. After four or five hours with eyes glued upon the lubber line of a gyro, the pilot begins to see pink elephants - with no relief in sight until a landing is made. Secondly, the navigators are in sore need of room in which to spread out the charts and other paraphernalia which are his stock in trade. A drift sight capable of reading drift at relatively high altitudes is a necessity.

Another crying need is an emergency ration kit, buoyant and easily opened.

Radio communication between the planes and ground stations was highly successful. Position reports were sent out at every turning point and every half hour thereafter. In every instance they were promptly acknowledged. Illustrative of the efficiency of the radio set-up was the fact that when the planes were landing at San Juan, Station NYOC at Miami intercepted the inter-plane landing instructions.

The Naval Air Station at Lakehurst, N.J., took radio bearings on the flight after each position report. On the trip from San Juan to Miami, radio compass indications were picked up as the flight passed Great Inagua Island, some 500 miles out.

As went the radio, so went the entire flight - not exciting, not hair raising, but a quiet tribute to modern Air Corps equipment and training.

Ed. Note:

It is interesting to recall that over 14 years ago, April 3, 1923, to be exact, the Army Air Corps completed within the period of one month what was then considered one of the most remarkable pioneering ventures in the history of American aviation, namely, the flight of six DeHaviland airplanes from Kelly Field, Texas, to San Juan, Porto Rico, and return to Bolling Field, D.C.

The flight from Miami, Fla., over water for the most part, to San Juan, involved stops at Key West, Fla.; Havana, Santa Clara and Guantanamo, Cuba; Port Au Prince, Haiti, and San Domingo City, San Domingo. The departure from Miami was made on the morning of March 13, 1923, and San Juan was reached at noon on March 19th. The return flight over the same route was started on March 23rd, and Miami was reached on March 29th. The flight involved a total distance of approximately 6,000 miles.

In the report which was made on that flight, one particular sentence should provoke a smile - "The Porto Rican flight demonstrated the ease with which aerial communications may be established with the insular possessions of our country, such as Porto Rico."

Two of the twelve pilots who participated in this flight, Lieuts. C.B. Austin and Ivan G. Moorman, have since died from natural causes. The leader of the flight, Thomas G. Lanphier, then a Captain, and Erik H. Nelson, then a 1st Lieutenant, resigned from the Air Corps a number of years ago. The remaining eight members of the flight are still affiliated with the Air Corps, viz: Majors Caleb V. Haynes, James A. Woodruff, George C. McDonald, Rex K. Stoner, D.H. Dunton, Newton Longfellow, Captains Guy Kirksey and Edgar T. Selzer.

SOVIET FLYERS ARRIVE AT MARCH FIELD
By the March Field Correspondent

Major Victor H. Strahm and Technical Sergeant Gregory A. Mitchell, Air Corps, both from March Field, Calif., were the first U.S. Government officials to welcome the now famous Russian flyers - Gromov, Yumasheff and Danilin - on American soil.

The fact that that soil happened to be part of Southern California and only 30 miles from March Field was rather a coincidence, since the Soviet flyers had flown all the way to the United States - Mexican border, near Caliente, but had been forced back north due to heavy fog banks along the Pacific shores.

Major Strahm, in answer to an excited telephone call from some farmer in San Jacinto, practically leaped into the nearest A-17A, and later managed to borrow a car in which he brought the tired but happy airmen back to the post. They arrived at March Field at 8:40 a.m.

Technical Sergeant Mitchell remained with the plane as official government representative. Knowing through news dispatches that the flyers were unable to speak English, an interpreter was held in readiness at March Field, but in his excitement he took a car to where the flyers had landed and missed them on their way in.

Word to the world was flashed at 8:05 a.m. that the Russians descended safely in a rough cow pasture two miles north of San Jacinto, 30 miles from the Air Corps Base, March Field. According to the first man who spoke (or rather tried to speak) to the foreign aviators, they kept repeating the one English word they knew: Army - Army - and wouldn't budge an inch until someone in authority arrived.

When this Correspondent on the way back towards March Field asked in four languages (neither of them Russian) why they had missed March Field, they said: "Malinki - Malinki," which means "small." They meant to imply that the field was but a small place on their maps and therefore hard to find - not that the field itself was too small, as newspapers erroneously stated. The huge bat-winged ANT-25-I, which made history throughout the world after its epoch-making flight, is at present being guarded by March Field soldiers. Civilians in the vicinity do not create a problem, however, and within a few days it is expected that the plane will either be flown here or dismantled on the spot for shipment back to Russia.

Upon arrival at the field here, the flyers expressed their admiration for

the neatness and cleanliness of the quarters, and made use of the toilet facilities offered to them by officers of the local Officers' Club. Colonel Carlyle H. Wash welcomed them, in the name of the Government and the Army Air Corps, to March Field, acting in charge during the absence of Colonel John H. Pirie.

In general, the huge mat in front of the Headquarters Building enjoys quite a bit of traffic, since March Field serves to many Los Angeles flyers as a short and convenient stop-over to and from Palmdale, Imperial Valley and other places of interest. But it appears as if all records were broken that Wednesday, with 18 private planes, including a chartered United Air liner, on the field by 9:00 a.m. And they kept on coming in throughout the day.

The Officers' Club was besieged practically from the moment word was flashed to the outside world, and newsmen found the Russians willing enough to pose for a few photos, but they did not get much satisfaction from their conversation. The flyers were practically taken charge of by their government's representatives here.

The Russian aviators retired by 11:00 a.m., having had a light ham and egg breakfast (American style) at the Club's mess room, and slept until 6:00 p.m. In the meantime, plans were made by the N.B.C. Broadcasting network to have the flyers speak over the microphone in a national hook-up, and with direct contact to Moscow. They spoke in their native tongue. The broadcast lasted from 6:45 until 7:00 p.m.

In the meantime, March Field officials had taken over the permanent guarding of the unique aircraft which had carried three daring aviators to fame, posting several men from the 4th Air Base Squadron there and having the plane roped in, so that too-well wishers could not damage the craft in their enthusiasm.

After the broadcast, the March Field guests had a light supper, and left about 9:00 p.m. with Acting Consul General Grigori Gokhman for San Diego. During the broadcast they gave word to their praise in connection with the rousing welcome afforded them and the hospitality offered them by the Air Corps representatives. Colonel Mikhail Gromov, in thanking Brigadier General Delos C. Emmons, for his well wishes, expressed the hope that the flight made by them would help create better understanding between the United States and the Soviet Union. It has been given to understand that the plane will be dismantled as it stands, with Air Corps mechanics giving a helping hand.

DOUGLAS B-18 ARRIVES AT HAMILTON FIELD
By the News Letter Correspondent

The first of the newest defense weapon of the Army Air Corps - the Douglas B-18 Bombardment airplane - arrived recently at Hamilton Field, Calif.

This airplane is a forerunner of the type with which all units of Hamilton Field will be equipped within a very few months. The Douglas Bomber is one further advancement of the research carried on within the last two years by the Douglas Aircraft Company during the development of the radical Douglas Transport which is now in use throughout the entire civilized world.

Although the B-18 is designed solely for military use, and thus differs in most respects from the commercial type transport, the basic problem of wing and fuselage design to carry great weights at high speeds was solved by further refinement of its commercial sister plane.

While no formal performance test has been conducted on this newest airplane, it is known that it is capable of carrying a substantially larger load than the present Martin B-10B type airplane with which the units at Hamilton Field are now equipped and, in spite of this larger load, its efficiency is not diminished. It attains a high speed in excess of 225 miles an hour, with a sufficiently large radius of action adequately to protect the entire Pacific Coast.

The airplane is an all-metal, low-wing monoplane, powered with two of the latest type Wright "Cyclone" radial engines. It is one of the first combat planes to diverge from the traditional Army coloring of yellow wings and blue fuselage, being left in its natural state of gleaming aluminum. However, the customary Army identification on wings and rudder surfaces remains.

This new Douglas Bombardment airplane is one of the first of 177 of its type purchased by the Air Corps for the use of the GHQ Air Force, of which Hamilton Field is a part. When the units of Hamilton Field are entirely equipped with this new airplane, they will be able to provide a defense for the Pacific Coast, especially of the Bay Area, second to none.

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On June 22nd, Lieut. Colonel Harvey S. Burwell, Air Corps, took over the responsible position of Commanding Officer of the 19th Bombardment Group at March Field, Calif. He relieved Lieut. Col. Hubert R. Harmon, who was assigned to duty as a student at the Army War College, Washington, D.C.

Colonel Burwell was accompanied to his new station by Mrs. Burwell and their son.

NAVIGATION TRAINING AT HAMILTON FIELD
By the News Letter Correspondent

The course of instruction in Navigation conducted by the Navigation School of the 88th Reconnaissance Squadron at Hamilton Field, Calif., was completed on July 1st. Nine officers were rated qualified navigators, and the Squadron now has all but one of its officers qualified. The problems and missions in the course were designed to carry out every type of problem in dead reckoning navigation. The last month of the course was devoted solely to test problems of the most difficult type, and each student was required to perform successfully these problems in order to pass the course.

The 88th Reconnaissance Squadron has four junior officers who have partially completed a course in celestial navigation. These officers have frequent opportunities to practice Celestial Navigation in the air, and will be well qualified to take the Group Celestial Navigation course when it is started.

The Squadron is conducting an Advanced Dead Reckoning Navigation School for the 7th Bombardment Group. The School began on July 14th, with ten officers from the Bombardment Squadrons and three officers from the 88th Squadron as students, all of whom are qualified navigators. The course deals solely with long range interception and search and patrol missions over sea to a maximum distance of 300 miles.

Two OA-4A airplanes are used for flying the missions. The students who had not previously flown this type of airplane (amphibian), were taken to Clear Lake for transition and water landings. The water landings proved to be good sport and brought the comment from some that they would enjoy being forced down at sea just to land on water again.

The over-water flying in this course, as in all other over-sea flying at Hamilton Field, is quite safe, every available means of safety precaution being employed.

One of the combat crews has an interesting mission during the first part of July. The mission terminated at Modesto, Calif., in the afternoon. Upon landing, two local civilian flyers presented themselves and proceeded to entertain the Army airmen with a varied assortment of refreshments. Modesto has a warm place in its heart for Army flyers. The crew took off at sundown on a celestial navigation mission which ended at Hamilton Field.

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Major Isaiah Davies, Air Corps, who returned from duty in the Philippines and reported at the Advanced Flying School at Kelly Field, Tex., on July 6th, was assigned to duty as Secretary, Public Relations Officer, Director of Ground Training and Post School Officer.

AERIAL WARFARE IN SPAIN

Extracts from an article which appeared in a recent issue of the French aviation magazine "Revue de l'Armée de l'Air", which touches on aerial operations in the Spanish conflict, are quoted below as of possible interest to readers of the News Letter, viz:

"On July 18 (1936) Spanish aviation, with machines in the number of 160 to 180, was essentially made up in equal parts of Nieuport 52 single-seater pursuit planes and Breguet 19 two-seaters.

During the first days of the conflict at least three fourths of the aviation effectives went over to the side of the Rebels, but the actual combat equipment was soon composed of highly effective German and Italian machines, provided with German and Italian crews.

German and Italian Materiels

During the weeks of September and October, when the aerial superiority of the Rebels was manifest, their aviation always collaborated in the same manner during the frontal attacks. These were most frequently conducted over fronts of five to six kilometers on either side of a road, which permitted of massing and moving more easily batteries of 155's and 105's and 75's, tanks, and armored cars. Before the infantry attack was released, aviation came into action with the bomb (10 kilograms) and then with the machine gun, and frequently brought about the rapid demoralization of improvised, poorly sheltered and poorly armed infantrymen.

It was estimated that at the middle of October, General Franco's staff had at its disposal about 200 airplanes, two-thirds of which were pursuit planes (Heinkel, Arado and Fiat) and one-third bombers (Savoia-Marchetti and Junkers). This number seems to have been maintained to mid-January in spite of serious losses, evidently thanks to constant re-supply or to the setting up on the spot of numerous reserve machines brought into Spain at the beginning of the Civil War.

The Junkers Ju. 52, derived from a civilian type, are poorly defended; no turret in front, two turrets in the rear, the one above firing only toward the tail and on the sides, the one below firing only toward the front. The Savoia-Marchetti S. 81, while better armed, seems to have turrets which are very hard to maneuver. Bombers of these types, if isolated and attacked by two or three pursuit planes, are lost.

The fire power of the Heinkels and Arados (two machine guns with accelerated fire) is very great. The Fiats C.R. 32 have proved to be very vulnerable to-

ward the front, where the water and oil radiators are easily struck. Their gasoline tank is uncovered under the fuselage, and almost all the airplanes of this type which have been brought down have caught fire before touching the ground.

The German pursuit planes, always operating in patrols of three with remarkable flexibility, attack the bombing planes in the rear and from below while concealing themselves from the sight of the machine gunner of the lower turret behind the stabilizer and the tail wheel. They attack in turn in a line and make only one pass, breaking off the combat in order to form and patrol again at once. For lack of such tactics the Italian pursuit planes, though individually adroit, have suffered serious losses.

Among the aerial bombardments of Madrid, that of December 17 seems to have been the one in which so far the greatest number of machines were engaged: 25 Junker trimotors protected by 23 Heinkels are said to have taken part in it.

In the Balearic Islands, intervention of Italian airplanes some ten days after the landing of the Government forces was decisive. Some 20 land machines, which had probably come from Sardinia for the occasion, bombarded and machine-gunned until the situation of the landed troops had been rendered untenable; these latter were too poorly armed to reply to the attack. * * * *

French and Russian Materiels

On the government side the old Breguets and Nieuports available had a brief career. Heterogeneous materiel without military value, acquired in haste, did no more than clutter up the hangars. A small number of modern French military airplanes, purchased without armament and equipped in Spain with second-hand Vickers and bomb launchers, constituted in fact to the end of October the aviation of the Madrid Government. At this latter date, as is now known, a large number of Russian bombing planes and pursuit planes intervened in the aerial combat. It seems that their number quickly became equal to that of the Rebel aviation and that this numerical equilibrium has been maintained since that time. But the quality of the Soviet machines, of which this was the first external manifestation and without doubt the first military intervention, must be made more precise at this point.

Of the Russian airplanes also, two-thirds are pursuit planes of the types I. 15 and I. 16.

The I. 15 is a small biplane of the Boeing type, with the lower wing set

back toward the rear, a short fuselage provided with a Wright 'Cyclone' engine of 650 to 730 h.p. (without compressor), constructed on permit in Russia and with a 2-blade metal propeller. Four synchronized machine guns, breeches readily accessible to the pilot. Equipment for blind flying, with Sperry horizon. A fixed landing gear with very slender wheels and tires. Weight a little more than 1,000 kilograms. * * Very manageable; very simple mixed construction; 2½ hours radius of action.

The I. 16, of which the number does not appear to be very great, is a monoplane with low wings and short fuselage, with curving wing tip controllers, retractable undercarriage, and hand brakes. Wright 'Cyclone' engine (compressor operating at 2500 meters); 2-blade metal propeller. Maximum speed, over 450 kilometers (280 miles) per hour; two machine guns with accelerated fire in the wings; fixed line of sight; radius of action, over 2 hours.

The Russian bombing planes, of which some 60 soon came into action and which evidently derived in Russia from the current series construction, are remarkable bimotors of the 'S B' types, which in Spain are called the 'Katioukas.'

The 'S B' is a monoplane with traversing wing; * * It is an extremely manageable fighting and bombing three-seater, whose maximum speed exceeds 425 kilometers per hour; * * The radius of action with 600 kilograms of bombs is said to be as much as 5 hours. * * *

The Russian crews, on board airplanes of good and high performance, with which they seem to be familiar, are distinguished by strict observance of very precise rules of group flight and of action in combat.

For the first time in war operations in which two air forces faced each other, the crews were systematically provided with parachutes. These latter seem to have functioned very well on the whole. But every time that a pilot or a machine gunner has opened his parachute immediately after leaping, he has been killed by the adversary's machine gun fire. Mention is made of the case of a pursuit flyer who was saved in these conditions because his two patrol comrades protected him all the way to the ground by interrupting their mission. It has become established that one must let himself fall to 150 or 200 meters from the ground before opening the parachute.

The aerial operations in Spain have revealed the great importance of camouflage against the attack of bombing planes. In particular, camouflage of the flying fields is an essential and delicate operation, properly entrusted

to specialists who have undergone a long period of training. * * *

The quantities of bombing planes which have been observed since September 28 traveled in a number of as many as eight per mission, and the pursuit planes which escorted them were in the number of six, eight and sometimes twelve. The mean altitude of the day bombing raids was 2500 meters. The first protection patrol flew at approximately the same altitude, the second 1000 meters higher, and the third between 4,000 and 5,000 meters, never beyond 5,500 meters.

The pilots of single-seater machines who have been found by the Government forces seemed to be very well trained in group flying and aircraft fire. Being as a rule good maneuverers, they have avoided isolated engagements in which they have been outclassed several times by adversaries having at their disposal airplanes whose climbing abilities enabled the pilot in a short turn to take advantage of the height and then dive down onto the Fiat or the Heinkel. This superiority naturally became more and more pronounced as the altitude of combat increased. Conversely, the compressor with which the engines of the Government airplanes were equipped, made combat at a low altitude much less favorable to them.

It proves to be very difficult for a bombing multi-seater to get away by day from the attacks of a single-seater pursuit plane; the only effective protection is then in the escorting single-seater. In no circumstance has one seen bombing machines attacked by the enemy pursuit until this latter has endeavored to get rid of these escorting planes, whether by engaging them in combat or by waiting until the escort single-seaters and bombing planes have separated. The effective attacks have always taken place on the return from the raids; the aggressor had then slipped through the pursuit planes and had attacked the bomber, most frequently after a flight at low altitude very far under it in order to take advantage of the camouflage of its upper planes. It would then reascend and practice its attack at a level with the bombing plane by firing upon it from the rear in the axis of the tail. Only the machine gunner of the upper rear turret (or the machine gunner of the lower rear turret) had occasion to fire a few shots; but the volume of fire of the weapons at his disposal being very restricted, he received from the adversary a quantity of projectiles that was overwhelming.

Since the vulnerability of the multi-seaters is great, especially when they are equipped with water cooled engines, it is very risky to send them off on a day mission without an escort of five or six single-seaters for each bombing

plane, the number of escort planes increasing by two per bomber in case of massive raids. It is then necessary that one pursuit plane remain permanently near each bombing plane so as to be able to protect it at any moment and especially at the moment when it sets out on the return journey. * * *

The destruction brought about by the steel-core perforating bullets is considerable. Such projectiles have several times pierced the length of the fuselage of multi-seaters, tearing off metal parts and transforming these parts into projectiles capable of superficially wounding the occupants of the airplane. The rents occasioned at exit by these projectiles, on sheet metal coverings, had a diameter up to 20 centimeters.

The most rapid multi-seaters were by far the least vulnerable. It was possible for them, in fact, to get away from the attacks rapidly while the escort planes kept the enemy pursuit forces engaged. * * *

The Government multi-seaters have proved very vulnerable when they were attacked at a right angle on the side, on a level with the two engines. The objection frequently made that in the Spanish warfare there was a deficiency of qualified crews need not be considered here; for when skillfully attacked on the two sides by enemy pursuit planes the present multi-seater succumbs to its adversary. The comparison of an airplane to a flying fortress is possible only in the mind of theoreticians. The bringing down of attacking pursuit planes was possible of accomplishment only in case the crew had sufficient coolness to let the enemy plane approach to within 50 meters; in this case the firer of the rear machine gun could be certain of the result. In the attack upon a Potez by three Heinkel 52 pursuit planes, where from the very beginning the front pilot and the bomber were put out of action by wounds, the firer of the rear machine gun was able to defend himself at a distance of 50 meters in such manner that he brought down one Heinkel and was able to compel the other two to break off the fighting.

Until November the pursuit planes equipped with a compressor rendered very little service on the Spanish front. The reason is that the fighting there always took place between 100 and 3,000 meters of altitude, whereas these single-seaters are made to fight at altitudes of from 4,000 to 10,000 meters (13,123 to 32,810 feet). The Heinkel 52 and the Arado 68 are superior at altitudes of 100 to 3000 meters to the compressor machines as regards handiness and are equal to them as regards fighting qualities. The only advantage of the compressor machines was that of being able to take refuge at greater altitudes by switching on the

compressor in order to climb very rapidly from 3,000 to 4,000 meters to 6,000 or 7,000 meters. Up to 4,000 meters the speed of climb was equal for the two categories of machines; from 4,000 meters up the superiority of the compressor single-seaters was such that the adversary could not follow them. As concerns armament, practice has demonstrated that the setting up of the machine guns in the wings of single-seaters is not satisfactory, for these distance-controlled arms cannot be reached by the pilot in case of need. The synchronized machine guns firing through the field of the propeller and placed in front of the pilot are preferable.

The method of the Rebels * * is that of full collaboration with the land forces, which makes it necessary to fly at altitudes of 100 to 2,000 meters. The tactics employed at present is the following: 10 to 20 airplanes, Heinkels or others, attack at a certain point with the machine gun and the small bomb. During this aerial attack the enemy infantry is preparing for the assault. When it is thought that the demoralizing effect has been attained which is expected of aviation, the enemy releases the attack protected by its air force. This demoralization is often obtained, especially in the absence of any anti-aircraft defense. I have had occasion to converse with former French or German combatants who were in command of Government units of the first line; all of them have assured me that it was impossible to induce the machine gunners to fire upon enemy airplanes flying at a low altitude and attacking the troops with the machine gun and the grenade. From this experience one may draw the conclusion that it is necessary to organize a tactics of strict collaboration between the air force and the ground troops, whether for the defensive or for the offensive. These formations must in so far as possible be numerically superior to those of the enemy, for the enemy judges the air forces not in accordance with the speed and quality of the machines but in accordance with their number.

In my opinion, experience has shown that the excessive complication of the modern pursuit plane is leading into a blind alley. In time of war it is impossible to count upon great numbers of specialized pilots capable of managing special types of machines. It is necessary to take account only of the average of the pilots utilized, and it is this medium personnel, it is these reserves, which alone are determining. In my opinion, the instruction of a pilot for modern pursuit planes should cover at least six months. Moreover, the attention required by the very maneuvering of these machines quite prevents the pilot from ex-

exploiting the flying and military qualities of the machine. In combat the pilot is obliged to concentrate all his attention upon the enemy and not upon the maneuvering of his machine; but the pilot of the most recent single-seaters has not only to conduct a combat against the enemy but in the first place against his airplane itself. * * *

As concerns metal airplanes, practice seems to demonstrate that they do not stand comparison with the machines of mixed construction. If a metal airplane is damaged, it is obliged to undergo a general overhauling, while a machine of mixed construction can usually be repaired on the spot. In my opinion, the pursuit plane with wooden coverings and steel frame is preferable, not only because repair is easier but because their manufacture in series is more rapid and less onerous.

Retractable landing gears should be proscribed as regard pursuit planes. The reason is very simple; after one or two aerial combats the pilot is exhausted and he cannot still be expected to concentrate all his attention upon landing. Furthermore, practice has demonstrated that one bullet suffices to prevent the functioning of the mechanism, whether it be electrical, pneumatic or operated by hand. Too often, therefore, the pilot is obliged to land without the gear, and it follows that even if he is not wounded the machine is nevertheless put out of commission. * * *

I believe that the present task of military aviation is that of producing a great number of airplanes of light types and of instructing for them all the pilots required in order to be ever ready both for the defense of the troops and for the defense of the cities.

The complicated pursuit planes of 1,000 h.p. and over can render great service at altitudes of 6,000 to 10,000 meters; but what is the use of that if the enemy action unfolds between the ground and 3,000 meters? Moreover, for the price of one of these pursuit planes such as are now being manufactured in France and Great Britain it is possible to construct five or six light single-seaters, whose value in combat, at the lower altitudes, is certainly equal if not superior to that of the powerful single-seaters. Today it is not the quality of the materiel which plays the decisive role but it is especially the quality of the pilot and the number of airplanes engaged. Numbers are indispensable, for aviation is obliged to cooperate with the troops engaged on the ground; and these latter will have no confidence in their own aviation unless it is present in the battle in great numbers."

RECREATIONAL FACILITIES IN FLORIDA

For a nominal outlay of funds, Air Corps officers and their families are afforded the opportunity of availing themselves of a two-weeks' vacation period at a locality which offers such attractions as excellent climate, a splendid and difficult golf course, surf bathing, fishing, hunting, dancing and boating.

Quarters have been provided at White Point, Valparaiso, Fla., for the use of officers on duty with the Air Corps Tactical School and such other officers as may be so detailed at the Valparaiso Bombing and Gunnery Base. The quarters consist of ten 2-room cottages and five 3-room cottages, all modern and comfortable. When not in use by officers on duty at the Base, their use has been authorized for recreational purposes.

Valparaiso is located 50 miles east of Pensacola, Fla., on the Choctawhatchee Bay and adjacent to the Choctawhatchee National Forest. Paved highways lead in from the North-East and West. Fort Walton, a resort town, is located ten miles west and provides excellent Gulf swimming and other recreational facilities.

A splendid mess for officers and members of their families is operated by the officers' mess and the bombing and gunnery base at White Point. Meals are \$1.25 per day or \$8.00 per week, with half rate for children 12 years of age and under).

The charge for 2-room cottages is \$1.25 per day and \$5.00 per week, and for 3-room cottages \$1.75 per day and \$7.00 per week. Extra beds are 25¢ per day and \$1.00 per week. Ice and bed linen are included in the above charges.

The cottages have two beds per room and are equipped with essential furniture, bedding and linen, towels excepted. It is desirable to bring camp chairs and such other equipment as the individual may desire.

Limited accommodations are available for the quartering of servants. Servants are not available locally, but arrangements for the care of children during evenings can be made with the wives of the caretakers.

Medical service may be had from the local contract surgeon on duty with the Civilian Conservation Corps, and at the Fort Barrancas Hospital at Pensacola. The railhead is at Crestview, Fla., 20 miles north on paved highway.

There is a sub-exchange of Maxwell Field at the base, carrying such items as tobacco, soft drinks, toilet articles, gasoline, oil, etc.

Priority in granting reservations is in the order set forth below:

1. Officers on duty with the Air Corps

Tactical School when on a duty status at the Valparaiso Bombing and Gunnery Base.

2. Officers of the Regular Army other than those mentioned in (1) above when on a duty status at the Valparaiso Bombing and Gunnery Base.

3. Officers on duty with the Air Corps Tactical School when absent with authority to visit Valparaiso, Fla., and vicinity.

4. Officers of the Regular Army, absent with authority to visit Valparaiso, Fla. and vicinity not covered by (3) above.

5. Such other individuals as may be authorized by the Commanding General, Maxwell Field, Ala.

Applications for reservations should be submitted to The Commanding Officer, Valparaiso Bombing and Gunnery Base, Valparaiso, Fla. Should it be impossible to grant reservations for period requested, optional dates will be recommended. Reservations are normally for a 14-day period.

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NEW CLASS AT SCHOOL OF AVIATION MEDICINE

Another routine course of instruction to qualify medical officers for duty as Flight Surgeons was commenced at the School of Aviation Medicine, Randolph Field, Texas, on July 15th, and will continue for four months. Eleven student officers are enrolled, five from the Medical Corps, U. S. Army, five from the Medical Corps, U. S. Navy, and one from the Medical Corps of the Mexican Army - Major Julio Cesar Aguilera, of Mexico City.

The Army medical officers are Captains John R. Copenhaver, Randolph Field, Tex. Burt Held, Barksdale Field, Shreveport, La. Paul H. Jenkins, Maxwell Field, Ala. Frank H. Lane, Langley Field, Va., and Donald D. Flickinger, March Field, Calif.

The medical officers of the Navy are Lieuts. Thomas L. Allman, Marine Barracks, Quantico, Va., and Alfred W. Eyer, Naval Hospital, Washington, D. C., and Lieuts. (jg) James C. Fleming, William O. Fowler and Dermot Lohr, all of the Naval Hospital, Washington, D. C.

Two basic courses are conducted annually at the School of Aviation Medicine, starting in July and December of each calendar year.

In addition to the resident courses, the School conducts throughout the year extension (correspondence) courses of considerable magnitude.

The School of Aviation Medicine is an activity of the Air Corps Training Center.

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THE NAVIGATION SCHOOL AT MITCHEL FIELD

The sixth class of the 9th Bombardment Navigation School at Mitchel Field, L. I., New York, started to work on July 6th. This very successful course of instruction has been running since August, 1935.

The Air Corps officers comprising the present class are Majors Ulysses G. Jones, Clarence H. Welch, Captains Joseph Smith, Milton M. Towner, 1st Lieuts. Emery S. Wetzel, Dwight Divine, II, Millard C. Young and Milton F. Summerfelt.

For the next three months the above officers will pursue a course in Dead Reckoning and Celestial Navigation, chart construction and allied subjects under the instruction of Captain John P. Doyle, Jr., and 1st Lieut. David P. Laubach, Air Corps, the latter having been recently appointed as Assistant Instructor in the School.

An outstanding feature of this course are the 63 hours of Meteorological instruction given by 1st Lieut. Royden E. Beebe, Air Corps. In this connection, the News Letter Correspondent states that this course in Meteorology is the most complete one given in the Air Corps to officers from a non-specialist point of view.

At present, practical navigation instruction at Mitchel Field is being conducted with two O-44 type amphibian airplanes and such Martin Bombers as are necessary. Approximately 60% of the flying is being done in the latter type aircraft. A new Sikorsky Amphibian type airplane, which is to be delivered in the near future, will aid materially in carrying out the practical problems of this type of training.

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COLLEGE STUDENTS VISIT AIR DEPOT

A group of about thirty advanced students in the summer session class in manufacturing policies and practices of the School of Business Administration, University of Texas, Austin, conducted by Dr. Chester F. Lay, Professor of Accounting and Management in that University, made a tour of observation through the Engineering Department of the San Antonio Air Depot on July 12th.

The students expressed themselves as being greatly pleased with and benefited by the opportunity of viewing the Depot's methods and practices.

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During the month of June, the Engineering Department of the San Antonio Air Depot, Duncan Field, Texas, overhauled a total of 17 airplanes and 58 engines and repaired 55 airplanes and 26 engines.

THE ARMY'S NEW MULTI-SEATER FIGHTER

Hon. Harry H. Woodring, Secretary of War, recently announced that the Army's new, experimental, multi-seater fighter was delivered from factory to flying field for final assembly and initial flight test.

This new type was designed and built by the Bell Aircraft Corporation, Buffalo, N.Y., to fill an imperative need by the Air Corps, in view of the present trend toward giant bombing planes of the Flying Fortress type now flying in the leading nations of the world.

This experimental fighter, technically called the XFM-1, meaning: Experimental Fighter, multi-seater, has been pronounced by flying men, who secretly have watched it grow from drawing board and mock-up to a completed article ready for flight, as a formidable fighting machine which should prove itself capable of coping with these Bombers.

The plane contains some radical departures from conventional military design. To begin with, it is a pusher - its propellers are behind the wings. The builder declares that this gives increased propeller efficiency. Equally important, however, is the fact that this arrangement permits the wing gunners, one on either wing, to have a free field of fire and observation to the front, uninterrupted by engine or propeller. This change in design also frees the gunners from having to work in the propeller blast, formerly a tremendous handicap to gun maneuver and accuracy.

To be a successful fighter, a flying machine must be much faster than its target. It is believed that this plane can overhaul any air targets. Another essential quality in an air destroyer is the ability to strike with power when it has engaged its prey. This plane answers with six guns, more powerful armament than ever before carried on a fighter. It also carries light bombs.

The new fighter is not a little airplane, as have been the Pursuit airplanes of the past. It accommodates a crew of five - pilot, co-pilot-navigator, radio operator-gunner, and two outboard wing gunners. It is powered by two engines recently developed by the Allison Engineering Corporation in conjunction with Air Corps engineers. No gasoline is carried in fuselage or engine nacelles, all being carried in liquid tight compartments in its giant wings. It is claimed that this method materially reduces the fire hazard.

The XFM-1 is a low wing, all-metal, monoplane, embodying all the latest design devices to increase its speed and air-worthiness. Its landing gear and tail wheel are electrically retractible.

It carries flaps to reduce its landing speed. It provides heated compartments for all members of its crew, which will be much in demand at its fighting ceiling, over thirty thousand feet.

The builder of this plane points to the fact that it contains some new and radical departures which will have far-reaching significance for the civil air industry as well as the military. The first of these is its power plant location and its pusher propellers; next is the auxiliary power plant aboard for retracting landing gear, for lights, radio and starters. This auxiliary plant drives nine electric motors, taking this load off the two engines which drive the propellers. This new fighter can continue to transmit after forced landing when its main power plants are dead.

An innovation in this plane, on which military men look with great favor, is the complete interchangeability of any or all members of the crew. The wing gunners can travel between their stations and the main fuselage while in flight; the co-pilot can change places with the pilot, the radio operator can man the guns; all stations have inter-communication. The advantageous location of the wing gunners in front of the engines permits them to see the pilot, and he them; this makes visual signals practicable between all members of the crew. In addition, complete telephone inter-communication is provided.

After its initial shake-down flights at Buffalo, the plane is scheduled for flight to the Materiel Division, Wright Field, Dayton, Ohio, for completion of its experimental tests. When thoroughly tested for mechanical and technical details, the Chief of the Air Corps, General Westover, plans to send the fighter to the General Headquarters Air Force at Langley Field, Va., where new tactics will be devised to fit this new military type.

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ANOTHER "FLYING FORTRESS" FOR THE 49TH

Delivery of a Y1B-17 Boeing Bomber was made to the 49th Bombardment Squadron, Langley Field, Va., from the Boeing factory at Seattle, Wash., on July 3rd. The ferry crew included Captain Archibald Y. Smith, 1st Lieut. Robert F. Travis, 2nd Lieut. Carlos J. Cochran, Staff Sergeant Troy V. Martin, Staff Sergeant Henry P. Hansen and Private 1st Cl. Russell E. Junior. With delivery of this plane, the Squadron has at present three of these new Boeing Bombers. Squadron operation and tactical efficiency have been greatly advanced by the acquisition of these new Bombers.

WEST POINT GRADUATES ASSIGNED TO UNDERGO FLYING TRAINING

Recent orders of the War Department detailed to the Army Air Corps for flying training a total of 106 second lieutenants of the Regular Army, who graduated from the U.S. Military Academy, West Point, N.Y., June 12, 1937. Constituting 36% of the entire graduating class, this is the largest number of West Pointers to choose the Air Corps as their branch of the service since the year 1929, when 110 members out of a graduating class of 297, or 37%, were detailed to the Air Corps for flying training.

The 106 young officers, above mentioned, are under orders to proceed upon the expiration of their graduation leave to Randolph Field, Texas, and report to the Commanding General of the Air Corps Training Center for duty and flying training.

The following tabulation shows the number of West Point graduates who were commissioned in the various branches of the Army, and the number from each of these branches assigned to the Air Corps for flying training, viz:

Branch of Service in which Commissioned	Assigned to Air Corps for flying training	Per Cent-age
Engineers	14	31
Q.M. Corps	3	50
Signal Corps	4	44
Field Artillery	17	34
Coast Artillery	10	28
Cavalry	1	62
Infantry	40	34
Total	106	36.6

A year of intensive flying training is ahead of these West Point graduates to whom aviation presents a special appeal, i.e., eight months of primary and basic training at the Primary Flying School at Randolph Field, Texas, and four months of advanced training at the Advanced Flying School at Kelly Field, Texas. Those who succeed in completing the year's course will be awarded the rating of "Airplane Pilot" and transferred to the Air Corps, while those failing to make the grade will return to the branch of the Army in which they were commissioned upon their graduation from the Military Academy.

It is now 16 years since the policy was inaugurated of assigning West Point graduates to the Air Corps for flying training. During the period from 1922 to 1936, inclusive, 911 West Pointers were accepted for flying training, of which number 403 graduated from the Advanced Flying School up to and including the year 1935. In addition, approximately 38 members of the 1936 Military Academy graduating class are scheduled to graduate from the Advanced Flying School next October, making the grand total of graduated flyers 441, or 48% of the number who commenced training. It would appear from this that slightly less than one-half of the young men who are mentally and physically qualified to undergo the course of flying training at the Air Corps Training Center are able to complete the course successfully.

The following tabulation covering a 15-year period of flying training given West Point

graduates may be of interest:

Year	Total No. of Graduates	Assigned to the Air Corps	Pct.	Number graduating from the Advanced Flying School	Pct.
1922	102	16	15.6	8	50.00
1923	261	51	19.5	25	49.21
1924	406	61	15.0	20	32.78
1925	244	42	17.2	9	21.43
1926	152	18	11.8	7	38.88
1927	203	30	14.7	16	53.33
1928	260	77	29.0	53	68.83
1929	297	110	37.0	41	32.27
1930	235	85	36.1	45	48.33
1931	296	92	31.0	43	46.74
1932	258	69	26.7	38	56.52
1933	346	92	26.6	43	46.74
1934	247	60	24.3	30	50.00
1935	277	47	17.0	28	59.57
1936	276	61	22.8	38*	60.31
Total	3860	911	23.6	441	48.40

* Scheduled to graduate in October, 1937.

The West Point graduates of the June, 1937, Class, who will soon report at Randolph Field to learn the intricacies of piloting military airplanes, are enumerated below, as follows:

Class Standing	Name	Home
<u>Corps of Engineers</u>		
8	Campbell H. Snyder	Winnsboro, La.
6	Jack N. Donohew	Slater, Mo.
9	Charles F. Mitchim	Inverness, Miss.
10	Frederick M. Thompson	Los Angeles, Calif.
12	Charles M. McAfee, Jr.	Knoxville, Tenn.
15	John D. Stevenson	Tie Siding, Wyo.
18	Nils O. Ohman	E. Dedham, Mass.
19	George L. Holcomb	Kemp, Texas
23	William R. Klingerman, Jr.	Terre Haute, Ind.
29	John M. Cromelin	Orange, N.J.
34	Walter Eckman	Houston, Texas
40	Richard P. Klocko	Dunkirk, N.Y.
46	Noel H. Ellis	Cisne, Ill.
50	Harold B. Wright	Calvin, Okla.
<u>Signal Corps</u>		
63	Kenneth S. Wade	San Diego, Calif.
76	Gale E. Ellis	Beaver Falls, Pa.
77	Richard R. Barden	Penn Yan, N.Y.
92	Whiteford C. Mauldin	Lockesburg, Ark.
<u>Quartermaster Corps</u>		
61	Thomas A. Holdiman	Marshalltown, Iowa
65	Donald B. Brummel	Chicago, Ill.
102	LeRoy H. Rook	Brooklyn, N.Y.
<u>Field Artillery</u>		
28	Asher B. Robbins, Jr.	Elsmere, Del.
37	Druglass P. Quandt	Benicia, Calif.
59	John F. Batjer	Houston, Texas
67	John G. Eriksen	Milwaukee, Wis.
75	Harry F. Van Leuven	Minneapolis, Minn.
96	Elmer C. Blaha	Camden, N.J.
112	Ivan W. McElroy	Austin, Texas
113	William K. Horrigan	Fort Thomas, Ky.
140	Robert F. Lesser	Lincolnton, Me.
149	Sam W. Agee	Silver City, N.H.
164	Harold E. Marr, Jr.	Searport, Me.

Field Artillery (Continued)

173 Coy L. Curtis Globe, Ariz.
 178 Harry E. Hammond Pine Bluff, Ark.
 183 Charles B. Westover Washington, D.C.
 200 Conrad H. Diehl, Jr. Washington, D.C.
 203 Harry W. Elkins Macon, Ga.
 204 John W. Browning Gainesville, Fla.

Coast Artillery Corps

58 Walter C. DeBill Coeur d'Alene, Idaho
 82 Charles L. Robbins Elkhart, Ind.
 95 Edward M. Lee Carbondale, Pa.
 103 Alford Rutherford Washington, D.C.
 118 Alan D. Clark Washington, D.C.
 121 Robert H. Herman Middletown, Ohio
 150 Robert Taylor, 3rd Baltimore, Md.
 167 Curtis R. Low Needham Heights, Mass.
 174 Richard H. Hackford Gardenville, N.Y.

Cavalry

86 Wilbur H. Stratton Seattle, Wash.
 98 John B. Nance Seattle, Wash.
 99 Bruce K. Holloway Knoxville, Tenn.
 108 Maurice A. Preston Tulare, Calif.
 125 Edward C.D. Scherrer Anna, Ill.
 132 Don R. Ostrander Stockbridge, Mich.
 136 Floyd J. Pell Ogden, Utah
 185 Carl L. Lindquist Fort Hayes, Ohio
 190 Samuel C. Gurney, Jr. Ridgewood, N.J.
 192 Harvey C. Dorney Olney, Ill.
 201 Paul W. Scheidecker West New York, N.J.
 205 James J. Cosgrove Lancaster, Pa.
 215 William E. McDonald Urich, Mo.
 220 John R. Ulicson Milford, N.H.
 222 Lawrence A. Spilman Ottumwa, Iowa
 224 William G. Hipps Curwensville, Pa.
 88 Richard W. Fellows Algoma, Wis.

Infantry

64 John G. Zierdt Grantville, Pa.
 87 John F. Foy Mount Airy, N.C.
 142 Robert H. Stumpf Barberton, Ohio
 180 Jack E. Caldwell Searcy, Ark.
 184 James S. Hatfield Orlando, Fla.
 186 Horace Greeley Jackson Heights, N.Y.
 188 Richard G. Williams Citronelle, Ala.
 189 Joseph A. Miller, Jr. Brevard, N.C.
 196 George M. Maliszewski Lowell, Mass.
 219 Jasper N. Durham Salem, Mo.
 228 Joseph G. Focht Reading, Pa.
 229 Marshall R. Gray Newton Center, Mass.
 233 Augustin M. Prentiss, Jr. Edgewood, Md.
 239 Robert B. Hubbard New York, N.Y.
 241 Philip D. Brant New York, N.Y.
 246 Winfield L. Martin Weehawken, N.J.
 248 Colin P. Kelly, Jr. Madison, Fla.
 251 Woodrow W. Dunlop Manville, R.I.
 254 Gilbert F. Bell Augusta, Ga.
 256 Kenneth O. Sanborn Potter Place, N.H.
 258 George B. Sloan Franklin, N.C.
 261 Carl F. Lyons, Jr. Maplewood, N.J.
 262 Olen J. Seaman, Jr. Bronx, N.Y.
 268 James H. Skeldon Toledo, Ohio
 270 William J. Cain, Jr. Bayonne, N.J.
 273 Malcolm Green, Jr. Sausalito, Calif.
 274 Thomas E. Powell San Francisco, Calif.
 275 Ephraim F. Graham, Jr. San Antonio, Texas
 276 Charles W. Stark, Jr. Trenton, N.J.
 278 George M. Simmons Point Pleasant, W.Va.
 279 George R. Cole Jersey City, N.J.
 280 Frank W. Andrews Glendale, Calif.
 283 Gordon C. Leland San Jose, Calif.

Infantry (Continued)

284 Morton D. Magoffin Deerwood, Minn.
 286 William R. Maxwell Langley Field, Va.
 287 James T. Posey Henderson, Ky.
 291 Wesley S. Calverley Philadelphia, Pa.
 294 Render D. Denson Birmingham, Ala.
 296 John F. Polk Fort Bliss, Texas
 297 John P. Connor Pelham Manor, N.Y.

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STATION ASSIGNMENT OF RESERVE OFFICERS

The following-named second lieutenants of the Air Reserve, who graduated from the Advanced Flying School, Kelly Field, Texas,* were on July 15th assigned to various Air Corps stations, as follows:

To Barksdale Field, La.

Horace Daniel Aynesworth
 Ancil David Baker
 William Edwin Bayse
 George Addison Blakey
 Edwin Shepard Chickering
 Raymond Leonard Cobb
 Murray William Crowder, Jr.
 Aliman Tenney Culbertson
 Raymond Leavitt Curtice
 Ronald Frederic Fallows
 Julien Walker Freeman
 Charles Ross Greening
 Charles Clark Kegelman
 Guilford Roland Montgomery
 Joseph Albro Morris
 John Howard Payne
 James Otis Reed
 William Reynolds Stark
 Frank King Thompson
 Henry Viccellio
 Barton Morrow Russell

To Brooks Field, Texas:

George Richardson Carr

To Fort Knox, Ky.:

Howard Monroe Means

To Langley Field, Va.

John Richardson Alison
 Henry Clay Godman
 Milton LaFayette Hardeman
 Wilbur B. Sprague, Jr.
 Ansley Watson

To Fort Lewis, Wash.:

John Russell Marshall

To Fort Lewis, Wash.:

Adolph Edward Tikofski

To March Field, Calif.:

Thomas Danville Brown

To March Field, Calif.:

Murray Alston Bywater

To March Field, Calif.:

Charles Alfred Clancy

To March Field, Calif.:

Waymond Austin Davis

To March Field, Calif.:

Arthur William Kellond

To March Field, Calif.:

Richard Frederick Lorenz

To March Field, Calif.:

George Leroy Robinson

To March Field, Calif.:

Theodore Arnold Suiter

To March Field, Calif.:

Delmer Edward Wilson

To Marshall Field, Fort Riley, Kans.:

Harold Yorke Sewart

To Mitchel Field, N.Y.:

Morris Edwin Thomas

To Scott Field, Ill.:

McClellan Ferguson Stunkard, Jr.

To Scott Field, Ill.:

Henley Vedder Bastin

* June 9, 1937.

To Moffett Field, Calif.:

Guy Leonard Hudson, Jr.
Frederick Lawrance Moore

To Selfridge Field, Mich.:

Thomas Lee Butner
Leland Gordon Fiegel
Donald Harry Kauffman
Homer Matheson MacKay
Harold Jacob Rau

To Pope Field, Fort Bragg, N.C.:

Lewis Elliott Countway.

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RESERVE OFFICERS ASSIGNED TO RANDOLPH FIELD

Under Special Orders of the War Department, recently issued, the following-named second lieutenants of the Air Reserve have been relieved from assignment and duty at Brooks Field, Texas, July 15, 1937, and directed to report for duty at Randolph Field, Texas:

Henry Ovide Bordelon
George Stevenson Buchanan
Edward Francis Cullerton
William Edgar Davis, Jr.
William Eades
Clarence Theodore Edwinson
Dress Ellis
James Oldham Ellis
John Gebelin, Jr.
Willard Dudley Griffith
George Albert Hatcher
Robert Loughery Johnston
George Francis Keene, Jr.
Bingham Trigg Kleine
Andrew Olaf Lerche
Richard Dale McCloskey
Marion Malcolm
Donald Earl Meade
Andrew Dale Moore
Roy William Osborn
William Quenton Quearns Rankin
Frank Beard Scott
Horace Armor Shepard
Chester Lee Sluder
Cy Wilson
Robert Carroll Wood

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NEW SQUADRON COMMANDERS AT LANGLEY FIELD

Three Air Corps officers, who recently reported at Langley Field, Va., for duty, were assigned to the command of tactical organizations, as follows:

Major Harold L. George assumed command of the 96th Bombardment Squadron, relieving Major Jasper K. McDuffie, who is under orders for duty as student at the Air Corps Tactical School.

Major Russell L. Maughan, who recently graduated from the Army Industrial College, assumed command of the 33rd Pursuit Squadron, relieving Captain George F. Schulgen, who is to report with the next class at the Air Corps Tactical School.

Major William C. Goldsborough, formerly on duty at Selfridge Field, Mich., assumed command of the 37th Attack Squadron, relieving Captain Ned Schramm.

PHOTOGRAPHIC ACTIVITIES OF 88TH SQUADRON

During the GHQ Air Force Maneuvers on the West Coast in May, three K-3B and one Graflex cameras were sent out with each of the three Bombardment Squadrons in the 7th Bombardment Group. One photographer was detailed with each squadron to service the cameras in the field and forward exposed film to the laboratory at Hamilton Field. All bombing, except at night, was photographed. In addition, graflex photographs for records and for publicity purposes were made at each squadron's dispersed airdrome.

Just prior to the Maneuvers, photographs were made for the 2nd Wing Staff S-2 and S-3. These consisted of photographs of the squadron airdromes and camps at Stockton, Merced, Fresno, Visalia, Delano and Bakersfield, Calif., and a large mosaic of the area occupied by the 1st Wing at Muroc Lake.

During the Maneuvers, the photographic section performed all the photographic reconnaissance for the 2nd Wing. This required the production of the two additional mosaics of the 1st Wing area and daily flights to the enemy area for pinpoint and oblique photographs, each flight requiring about six hours flying time.

The photographic laboratory was kept open 24 hours per day by maintaining two working shifts. Considerable time was saved in making mosaics by using a stapling device instead of adhesive. Twelve copies of every photograph were required, which called for a high rate of production.

"Summing up the activities during the Maneuvers," asserts the Hamilton Field Correspondent, "it may be said that all in all the photographic section in conjunction with the squadron operations successfully completed its mission in keeping the Wing Headquarters informed at all times of the enemy's activities."

Following the Maneuvers, a test was completed on the T-1 Flashlight Bomb which had begun some time before. One bomb was dropped over Yerba Buena Island to take a night photograph of the San Francisco Bay bridge. The explosion shook houses and buildings to such an extent that it evoked the comment in a San Francisco paper that "It was undoubtedly the loudest photograph ever made." However, no damage was done by the explosion.

The photographic section of the 88th Reconnaissance Squadron is commanded by the photographic officer, 2nd Lieut. W.W. Pannis, Air Reserve. The section chief is Staff Sergeant Fredenburg. Six members of the section took the recent Air Mechanics examinations on Camera Repair and all passed - Privates, 1st Class, Greene, Atkinson, Privates Shelby, Farris, Johnston and Goodnight. Five members of the section fired and qualified as Expert Aerial Gunners, viz: Staff Sergeant Fredenburg, Private, 1st Class, Atkinson, Privates Shelby, Farris and Goodnight.

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Second Lieut. Charles A. Sprague, Cavalry, a member of the 1937 graduating class of the U.S. Military Academy, was assigned to Randolph Field, Texas, for flying training, thus making 105 graduates to be assigned to this duty.

V-7421, A.C.

B I O G R A P H I E S

Lieut. Colonel Laurence F. Stone

Lieut. Colonel Laurence F. Stone, Air Corps, who was recently assigned to duty at Selfridge Field, Mt. Clemens, Mich., following his graduation on June 9, 1937, from the Advanced Flying School, Kelly Field, Texas, was born in Idaho, February 9, 1892. Following his graduation from the University of Idaho in 1915, with the degree of Bachelor of Science, he accepted a commission as second lieutenant of Infantry, U.S. Army, December 4, 1916. He was on duty at the Army Service Schools at Fort Leavenworth, Kansas, from January 3 to March 27, 1917, and was then assigned to the 11th Infantry at Camp Harry J. Jones, Arizona, where he commanded a company and later served as regimental adjutant until January, 1918.

While on duty overseas with the A.E.F., Colonel Stone served as brigade liaison officer to April, 1918; commanded a company of the 53rd Infantry to September, 1918; commanded a company and then served as battalion, regimental operations officer to February, 1919, on the front and in training areas. He was on duty as Assistant, G-1, 6th Division, to June, 1919, and with G-5, General Headquarters, Paris, France, to August, 1919. Upon his return to the United States he successively performed such duties as battalion commander, company commander and E. & R. Officer to August, 1920, being stationed with the 3rd Infantry at Camp Eagle Pass, Texas, and later with the 19th Infantry at Camp Harry J. Jones, Arizona.

Detailed in August, 1920, to the Army Air Service, Colonel Stone was a student officer at the Army Balloon School at Ross Field, Arcadia, Calif., and, upon completion of his lighter-than-air training, he remained at the Balloon School as Instructor, as Officer in Charge of Training and as Meteorological Officer. He was rated a Balloon Observer, May 9, 1921. During his tour of duty at Ross Field, he also took primary airship training, and for a brief period commanded the post in the absence of the regular commanding officer.

On June 29, 1922, Colonel Stone reported for duty at Scott Field, Belleville, Ill., where he served as Director of the Ground Department of the Balloon and Airship School, as Instructor, as Acting Assistant Commandant and as Assistant Commandant, to March 3, 1924. He also completed the course of instruction in airship piloting.

Transferred to Brooks Field, Texas, Colonel Stone was on duty at that station to June 9, 1924, and was then transferred to the Advanced Flying School at Kelly Field, Texas, where he completed the Special Course in Airplane Observa-

tion, following which he was assigned to duty as a student at the Air Service Engineering School at McCook Field, Dayton, Ohio. Upon his graduation from this School, he remained on duty at McCook Field in the Industrial War Plans Section of the Engineering Division. Colonel Stone participated in the National Elimination Balloon Race held at Little Rock, Ark., in April, 1926, piloting the McCook Field entry, with Captain G.R. Oatman as aide.

Assigned to station at Langley Field, Va., June 24, 1926, Colonel Stone was on duty as Instructor at the Air Corps Tactical School until September, 1927; then as student at this School for one year, and then as Instructor once more until August, 1929, when he was assigned to take the two-year course at the Command and General Staff School at Fort Leavenworth, Kansas. Graduating from this School on June 16, 1931, he was assigned to the Air Corps Training Center, Duncan Field, Texas, where, in addition to other duties he commanded the 67th Service Squadron. In August, 1932, he was assigned as Post Executive Officer at Randolph Field, and while stationed there temporarily commanded the post during the absence of the regular commanding officer.

Transferred to the Hawaiian Department in March, 1933, Colonel Stone was in command of the Hawaiian Air Depot during his two-year tour of duty in the Islands. In addition, he served as Purchasing and Contracting Officer of this Depot to August, 1933.

Upon the completion of his service in the Hawaiian Department, Colonel Stone was assigned as student at the Air Corps Primary Flying School at Randolph Field, Texas, where he successfully completed the 8-months' course of instruction, also the four months' advanced course at Kelly Field, Texas, thereby receiving the rating of "Airplane Pilot" in addition to the three other flying ratings already held by him, viz: "Balloon Observer", "Airship Pilot" and "Airplane Observer."

Colonel Stone was promoted to 1st Lieutenant, December 29, 1916; to Captain, October 12, 1917; to Major, August 28, 1929, and to Lieut. Colonel, temporary, March 12, 1935.

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LIEUT. COLONEL WILLIS H. HALE

Lieut. Colonel Willis H. Hale, Air Corps, now under orders for duty in the Panama Canal Department, was born in Kansas, January 7, 1893, and is a graduate of the Kansas State Normal School. From June 26, 1913, to March 23, 1917, he was a lieutenant in the Philippine

Constabulary, and he then accepted a commission as a second lieutenant of Infantry, with which branch of the service he served in the Philippines, China, England and France, being affiliated at various times with the 8th and 15th Infantry and with the 84th and 26th Divisions. He graduated from the 84th Division Signal School in 1918, and in the same year was an honor graduate of the Infantry School of Arms. In 1920 he graduated from the Army Signal School at Fort Leavenworth, Kansas, and, prior to being detailed to the Air Corps for flying training, he was on duty as Assistant Professor of Military Science and Tactics at Yale University, in charge of the Signal Corps R.O.T.C.

Reporting for duty as student at the Primary Flying School, Brooks Field, Texas, July 1, 1922, Colonel Hale completed the course of instruction thereat on May 26, 1923, when he was transferred to the Advanced Flying School at Kelly Field, Texas, from which he graduated on December 21, 1923. He was rated "Airplane Pilot" and "Airplane Observer," effective January 18, 1924.

Transferred to Langley Field, Va., Colonel Hale served as Commanding Officer of the 20th Bombardment Squadron and as Operations Officer of the 2nd Bombardment Group until September 1, 1927. In addition, he performed various duties incident to maneuvers and anti-aircraft tests at different times, and served as a member of various boards of officers.

After serving as Post Executive Officer, Langley Field, from September 1 to 16, 1927, he was assigned as a student at the Air Corps Tactical School at that post, and upon his graduation in June, 1928, he was transferred to Washington, D.C., for duty in the Inspection Division, Office of the Chief of the Air Corps. On December 30, 1918, he was assigned as Chief of the Operations Section, Office of the Chief of the Air Corps. In addition, he served as a member of the Air Corps Procurement Board. During the period from March 20 to April 30, 1930, he participated in the Air Corps Field Exercises at Mather Field, Calif. At various times he served temporarily as Chief of the Training and Operations Division.

Assigned in August, 1932, as a student at the Command and General Staff School, Fort Leavenworth, Kansas, Colonel Hale graduated from the two-year course at this school on June 16, 1934, following which he was again assigned to station at Langley Field, where he served as Commanding Officer of the 2nd Bombardment Group and later as Executive and Operations Officer of the 2nd Wing, Headquarters GHQ Air Force, until August 13, 1936, when he was assigned as a student at the Army War College, Washington, D.C., from which he graduated in June,

1937.

Colonel Hale was promoted to 1st Lieutenant, March 20, 1917; to Captain, November 5, 1917; to Major, December 1, 1929, and to Lieut. Colonel (temporary) March 2, 1935.

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TEN MORE "FLYING FORTRESSES" PURCHASED

The award to the Boeing Aircraft Co., of Seattle, Wash., of a contract for 10 more B-17 four-engine Bombers, the type generally known as the "Flying Fortress," was recently announced by the Secretary of War, Hon. Harry H. Woodring.

The airplanes purchased under this contract will be exactly the same as those recently delivered by the Boeing Company, except for minor changes found advisable as the result of the service test. The contract also includes an option for three additional Bombers, making a total of 13 on this order, and an adequate complement of spares. The total contract, if the option is exercised, will amount to \$3,708,002.20.

Each airplane will be powered with 4 Wright "Cyclone" engines, manufactured by the Wright Aeronautical Corporation at Paterson, N.J. The Materiel Division of the Air Corps and the GHQ Air Force have been conducting an intensive service test of the "Flying Fortress" since January of this year. During this test, these airplanes have been flown thousands of hours under all conditions of heat, cold, wind and weather. They have proven to be eminently satisfactory for the purpose for which designed and are an outstanding example of the efficiency of American airplane manufacturers and designers.

These Bombers can fly at speeds in excess of 225 miles per hour, carry 5 machine guns and a crew of 7 to 9 men, including a commanding officer, pilot, copilot, navigator, engineer, bomber, radio operator, and gunners. All the members of the crew can freely change stations, and for long flights sufficient additional personnel can be carried so that the operators of the airplane may be relieved from time to time and secure the necessary rest.

This airplane can fly and maintain its altitude with a load on two engines. This safety factor practically eliminates the possibility of forced landings due to engine failure. Coupled with its long range, this makes it possible, by the use of radio communication, for this airplane to find a safe landing field somewhere, even when fog covers large areas.

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"IT'S NOT THE HEAT - IT'S THE HUMIDITY"

Here is a suggestion from the Power Plant Branch of the Materiel Division, Wright Field --

While your Power Plant personnel are suffering with the humidity ranging well above some 80 per cent, we are inclined to call your attention the phrase - "It's not the heat, it's the humidity." This is especially true in the filling of gas tanks. If gas tanks are not filled immediately after you land from a flight and the humidity is high, a small amount of cooling over night or even a portion of the daytime will cause several drops of water to accumulate in the bottom of your fuel tank. The engine will use up a portion of this water as it goes through your fuel lines to the carburetor. Please do not expect your engine to gulp it down by the tablespoon full, however, without a few nasty sputters, especially as you take off when your tail is raised to a flying position.

Please remember - it's not the heat - it's the humidity - fill your gas tanks immediately upon landing!

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NEW FLIGHT RECORDER

If the instrument invented by Dr. Samuel Spitz, creator of the famous marine depth sounder, proves successful, charting a transport's continuous progress through the skies by means of a small map in an airport office may be possible.

In the presence of Army and Navy officials, Dr. Spitz, of Burbank, Los Angeles County, conducted a 200-mile test of his "flight recorder" accurately and successfully plotting the progress of an airplane on a round trip flight between Los Angeles and Bakersfield. Another successful demonstration was conducted over the 400-mile airway from Los Angeles to Oakland.

While the plane flies toward its destination its movement is charted by means of an advancing series of lights, jumping steadily along a scale map of the airway terrain. As the ship proceeds slower or faster, the tiny lights also alter their speed. When the ship approaches the terminal, the light suddenly shifts to a localized map, more detailed. Thus a ground operator can guide the plane through treacherous mountains into the airdrome, even in zero weather.

Dr. Spitz began his experiments four years ago and has spent \$100,000 in perfecting his invention. He disclosed that his laboratory has been incorporated for \$500,000 and within two months he plans to build a factory beside his shops

on Hollywood Way, Burbank, to produce flight recorders. Official tests are being conducted with Army and Navy and Department of Commerce observers to determine definitely the value of the invention.

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CHANUTE SOLDIER WINS FIREMAN'S TROPHY

Private 1st Class John I. Butler, 10th Air Base Squadron, Chanute Field, Rantoul, Ill., was recently awarded a handsome combination siren and red light for his work, attendance and interest exhibited at the Annual Fire College of the Illinois Firemen's Association which met at the University of Illinois for a three-day period.

The college is held by the Illinois Firemen's Association for the purpose of instructing in the latest practices of fire fighting and fire prevention. Present at this year's meeting were 456 firemen, fire chiefs and fire inspectors, representing communities from every part of the State of Illinois.

The work covered both practical demonstrations and written examinations in the following subjects: ladder work, rope work, first aid, artificial respiration, gas mask drills, pumps, fire-fighting apparatus and auxiliary equipment.

The Commanding Officer of Chanute Field, Lieut. Colonel Junius W. Jones, Air Corps, commended this soldier upon his excellent work at this annual college. Private Butler is at present on duty at the Post Fire Station and in the Post Fire Department. The winning of this reward is evidence of the interest that this young soldier is taking in qualifying himself for the military duties which he is performing.

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RESERVE OFFICER JOINS PAN-AMERICAN

From time to time the News Letter has published the names of Air Reserve officers who have terminated their active duty tours in order to accept positions with commercial air lines. While these frequent separations of Air Reserve officers are regretted by the Air Corps, there has been no disposition on its part to stand in the way of a Reserve officer who had an opportunity to land a permanent berth in commercial aviation.

These officers are not lost to the Air Corps, for they maintain their reserve status, and their services are available to their country in the event of an emergency. Those who enter commercial aviation, and who thus are enabled to add to their skill and experience as airplane pilots, are naturally to be expected to be of greater value to the nation in time of need.

(Continued on page 17)

NOTES FROM HERE AND THERE

The personnel of the San Antonio Air Depot, Duncan Field, Texas, on July 8th bade a regretful good-bye to its old commander, Colonel John H. Howard, and gave a hearty welcome to the new Depot Commander, Lieut. Colonel Henry J.F. Miller. Colonel and Mrs. Howard departed on that date for a two months' leave of absence, visiting relatives in Honolulu, before joining his new assignment, the Headquarters of the 7th Corps Area, Omaha, Neb., for staff duty, after having been in command of the San Antonio Depot since June, 1934. Lieut. Colonel and Mrs. Miller are no strangers to the Depot, as he was in command of Brooks Field, San Antonio, Texas, before coming to this station.

At the present time the 2nd Bombardment Group, Langley Field, Va., has received nine Y1B-17 type airplanes, and expects that the full complement of thirteen will be filled in the near future.

Miss Martha Hickam, daughter of Mrs. Horace M. Hickam and the late Colonel Horace M. Hickam, was married to 1st Lieut. Rudolph Fink, Air Corps, in the Base Chapel at Langley Field, Va., on July 14th, Chaplain Silas E. Decker officiating. Mrs. Brooke Allen, of Mitchel Field, N.Y., was matron of honor, and Lieut. William C. Bentley, of Langley Field, was best man. A small reception at the Langley Field Officers' Club for immediate friends and relatives followed the ceremony. Among the guests were Major Generals Oscar Westover and Frank M. Andrews, Mrs. Andrews, Brigadier General and Mrs. Gerald C. Brant, Colonel Henry B. Clagett, Colonel and Mrs. Walter R. Weaver, Lieut. and Mrs. Brooke Allen, Hubert, John and Barbara Hickam.

Colonel Weaver, Commanding Officer of Langley Field, arranged to have the wedding take place there, for he was a roommate and classmate of the late Colonel Hickam in the Class of 1908 at West Point.

Following the wedding trip, the newly married couple will reside at Dayton, Ohio, where Lieut. Fink will attend the Air Corps Engineering School at Wright Field.

Reserve Officer Joins Pan-American (Continued from Page 16)

The latest Air Reserve officer to curtail his tour of extended active duty is Lieut. James L. Bledsoe who, as the Correspondent of the 33rd Pursuit Squadron, Langley Field, puts it, "is turning in his parachute this week and checking out of the Air Corps. Lieut. Bledsoe has signed up with Pan American, to be stationed at Miami, Fla. Jimmie is a very capable pilot and we feel sure he will make Pan American a good man."

On July 7th, the 8th Pursuit Group returned to Langley Field from Virginia Beach after two weeks' maneuvers, both in the air and on the popular beach. Everyone agreed that it was an ideal place for summer field work.

LIEUT. WALLACE RECEIVES THE D.F.C.

"For distinguishing himself by heroism and extraordinary achievement while participating in an aerial flight * * *," 1st Lieut. James H. Wallace, Air Corps, was awarded the Distinguished Flying Cross on Saturday, July 17th, at Hamilton Field, Calif., the entire personnel of the 7th Bombardment Group and the 5th Air Base Squadron witnessing the ceremony. The presentation was made by Colonel Davenport Johnson, Commanding Officer of Hamilton Field, and acting for the Secretary of War.

The circumstances leading up to this award to Lieut. Wallace were as follows: On November 20, 1935, Lieut. Wallace (then temporary Captain) as co-pilot, with Lieut. Frank A. Armstrong, pilot, was assigned the mission of flying Major Prescott, the Communications Engineer for the Republic of Panama, to the Panamian Penal Colony at Coiba, Panama.

On the return trip to Albrook Field, a tropical storm arose over the ocean, forcing the flyers to return over two hundred and fifty miles of impenetrable jungle which separated them from their base at Albrook Field. Even over the land they were forced to fly over a dense fog bank which completely obscured their sight of the ground. The airplane, a Douglas OA-4A bi-motored amphibian, was about 4,000 feet above the ground when the right engine, without warning, disintegrated, throwing great strain on the right wing and the remaining engine.

At this very instant, Lieut. Wallace just happened to be in contact with Albrook Field over his ship's radio. The pilot, not knowing what was in store for him beneath the clouds, ordered the three passengers and Lieut. Wallace to jump. Lieut. Wallace, however, stayed at the radio, and as each passenger jumped he very meticulously checked them off to Albrook Field; then, taking his place beside the pilot while flying blind in the clouds, he assisted in preparing the airplane to land. Finally, the pair broke through the fog bank less than 1,000 feet above the earth and almost miraculously found directly in front of them a clearing in the tropical jungle, large enough to be used for an emergency field. Displaying great skill and courage, they landed the airplane with no damage whatsoever to either the airplane or to personnel. After a new engine had replaced the faulty one in the airplane, no further repairs were necessary, and the Amphibian was flown out of the clearing and back to Albrook Field.

In the citation accompanying the award of the D.F.C. to Lieut. Wallace, after setting forth, in substance, the circumstances reported above, it is stated: "Lieutenant Wallace's courage and coolness in this emergency undoubtedly resulted in saving the lives of the passengers and preventing a crash landing."

Lieut. Wallace, now 32 years of age, attended the public schools of Washington, D.C., following that with two years at the Georgia Institute of Technology at Atlanta, Ga. After a

year of training at the Air Corps Training Center, where he specialized in Pursuit Aviation, he received a commission as a 2nd Lieutenant in the Air Reserve in February, 1929. He obtained his commission in the Regular Army on June 12, 1929. In September, 1934, he was transferred to Albrook Field, Panama Canal Zone. Prior to that time he was on duty with the 49th Bombardment Squadron at Langley Field, Va., from May 2, 1929, to September 5, 1930;

at March Field, Calif., attending Flying Instructors' School and serving as a flying instructor, from September 15, 1930, to October 5, 1931, and at the Primary Flying School at Randolph Field, Texas, from October 16, 1931, to September 4, 1934, where he performed the duties of flying instructor.

Lieut. Wallace has been stationed at Hamilton Field since January 1st of this year, and is now on duty with the 9th Bombardment Squadron.

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"AND I LEARNED ABOUT FLYING FROM THAT"

Another attempt is being made to publish in the Air Corps News Letter a series of articles under the above heading, embodying a report of some accident or near-accident, in the belief that much information of vital importance to fledgling pilots would thereby be disseminated.

Certain it is that almost every pilot in the Air Corps has on one or more occasions during his flying career experienced a close call, narrow shave, or what have you, or extricated himself from a predicament which he would have avoided in the first place had he "followed the rules." At some time or another he may have been confronted with a totally unlooked for happening, which made it absolutely necessary for him to think fast and act likewise, and some time he may have performed some foolish stunt which he mentally resolved never, never to do again, or - well, this could go on ad infinitum.

The point which it is desired to stress is that in bringing vividly to the attention of Air Corps personnel the mistakes or errors of judgment that lead to accidents many valuable lessons would be learned and retained in the memory where otherwise the lesson would be lost.

If the publication of such reports or stories would tend to influence in any way the reduction of aircraft accidents, one of the principal missions of the Air Corps News Letter would be accomplished.

And so the News Letter earnestly invites every Air Corps pilot to contribute one or more articles under the above heading for publication. The authors of such articles need not have to be accomplished feature writers to do this, and thereby perform a good turn for their fellow pilots. Just recite the facts, and the editing and added trimmings, if any are necessary, will be done in the Information Division. No names will be published if such is the wish of individual authors.

The full cooperation of every Air Corps pilot is earnestly solicited - so now, "Altogether, Boys!"

For the present there is published below an adventure which befell a Reserve officer, who recently took off on a navigation training flight in a P-26C airplane. All fuel tanks were filled, and the personal baggage in the airplane weighed about ten pounds.

After the pilot attained an altitude of 2700 feet, about one mile north of the airport, he performed the following acrobatics: double snap roll, slow roll, and snap roll. He went into

the last maneuver at about 2700 feet; speed 140 miles per hour. During the attempted recovery from the snap roll, the airplane stalled on its back, going into an inverted spin. At 1,000 feet altitude, the airplane recovered from the inverted spin, but immediately went into a normal spin. After one turn of the spin, the pilot jumped with his parachute at an estimated altitude of between 600 and 800 feet.

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Numerous accidents of a similar nature have occurred in the past. It would appear that this accident might have been averted on three counts, viz:

1. If all the tanks on the P-26C had not been filled, thereby changing the balance of the airplane in such a way as to make recovery from spins more difficult, it probably would not have been necessary for the pilot to jump.

2. Had the pilot been more familiar with the type of plane he was flying, he would probably not have inadvertently fallen into an upside down spin.

3. If the pilot had had more altitude at the time he started his acrobatics he probably would have had time in this case to recover from the eventual normal spin, making it unnecessary for him to resort to his parachute.

These are three things which at least one pilot has learned and, if they are learned and taken to heart by even one-half of the other young pilots in the Air Corps, the loss of the airplane in this case will have been a profitable investment. To derive maximum value from the experience of pilots in the Army Air Corps, it is necessary to disseminate the information acquired therefrom as widely as possible. Each Air Corps officer is therefore requested to make known to his fellow pilots, through the columns of the News Letter, what he has learned and how he learned it, in order that they may avoid the pitfalls into which he had stumbled.

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Majors Lloyd C. Blackburn, from Barksdale Field, La., and Guy L. McNeil, from Fort Lewis, Wash., have been ordered to duty in the Philippines. Major Dache M. Reeves, 1st Lieut. Homer L. Sanders and 2nd Lieut. Potter B. Paige, who have been stationed in the Hawaiian Department, were assigned to duty at Chanute, Barksdale and Moffett Fields, respectively.

Major John E. Upston has been transferred from Maxwell Field to Langley Field, and Lt. Colonel Morris Berman from the San Antonio Air Depot to Wright Field, Ohio.

NOTES FROM AIR CORPS FIELDS

Kelly Field, San Antonio, Texas, July 21st.

Improvements on the Kelly Field Enlisted Men's Service Club Building, formerly known as the Hostess House, were scheduled to be completed in time for the enlisted men's dance on July 24th. The work done on the building included the enlarging of the floor space to accommodate more people, and the installation of a new lighting system, along with numerous minor improvements.

Three noncommissioned officers at Kelly Field last week were rejoicing over their promotions. Technical Sergeant Arthur H. Adams, of the 63rd School Squadron, stepped up to a master sergeant's berth, and Staff Sergeants John S. Crocker, 12th Air Base Squadron, and Francis M. Passwaters, 63rd School Squadron, were promoted to the grade of Technical Sergeant.

Major Norman D. Brophy, of the Office of the Chief of the Air Corps, visited the field on July 16th for a conference with the Commanding Officer with reference to Air Corps matters.

Lieut. Lorenzo Egurrola, Mexican Navy, who graduated from the Air Corps Training Center on June 9, 1937, departed from Kelly Field on July 10th for his new station, Departamento de Marina, at Mexico City, Mexico.

First Lieut. Robin B. Epler, who reported for duty on July 19th, following the completion of a tour of duty in the Canal Zone, was assigned to duty with the Flying Cadet Detachment.

Second Lieuts. Edward F. Cullerton, William Eades, Willard D. Griffith, Richard D. McCloskey, Roy W. Osborn and Chester L. Sluder reported for extended active duty and were assigned as flying instructors - two with the Attack Section and four with the Pursuit Section.

Captain Otto P. Weyland departed on July 10th after a four-year tour of duty here. During all of this tour, Captain Weyland has been chief instructor of the Observation Section of the Air Corps Advanced Flying School. He has just completed a new, up-to-date text on Observation Aviation, dealing with the tactics, technique and equipment of this highly important branch of the Air Corps. The book, which will be used as a manual in the Observation Section and as a text in the ground school subjects pertaining to Observation, required more than a year of research and compilation. Figures and sketches for the book were photographed by the 22nd Photo Section at Kelly Field.

Captain Weyland has taken his family to Florida for a month's leave of absence before reporting to his next station at Maxwell Field, Ala., where he will be a student at the Air Corps Tactical School.

Captain Howard H. Couch, who graduated from the Air Corps Training Center on June 9th, departed on leave of absence for a month and 14 days before sailing for his new station in Panama.

First Lieut. Jerald W. McCoy, A.C., departed from Kelly Field on leave of absence for a month and ten days before reporting to his new station at Chamute Field, Rantoul, Ill., where he will be a student in the Photographic course at the Air Corps Technical School.

Langley Field, Va., July 17th.

20th Bombardment Squadron: Captains Alva L. Harvey, Neil B. Harding and 1st Lieut. Ford J. Lauer departed on July 4th to ferry this Squadron's third Y1B-17 airplane from Seattle. The ferry crew included Technical Sergeant Bescola Cobb, Staff Sergeant Jesse J. Barnhill and Corporal William F. Casey.

First Lieut. William O. Senter departed on July 5th for Boston, Mass., to take the Meteorological Course at the Massachusetts Institute of Technology.

First Lieut. Carl W. Carlmark reported to this Squadron from Chamute Field, Ill.

During the past two weeks, the following-named men of this organization were promoted to the grades indicated: Privates, 1st Cl. Paul W. Lemons and Paul H. Sowers to Corporal; Sergeant Albert J. Snodgrass, Corporals Charles A. Van Ostrand and William F. Casey were appointed AM 1st Cl., and Privates, 1st Cl. Robert A. Perkins and John W. Yankowsky to A.M. 2nd Cl.

49th Bombardment Squadron: The Squadron wishes to extend a cordial welcome to Captain Benjamin W. Chidlaw, who recently joined it from the Command and General Staff School at Fort Leavenworth, Kansas.

During the past fortnight the trend of squadron operations has been in the direction of raising the efficiency of bombing teams up to top-notch perfection. Stress has been placed on moving targets, and camera obscura missions have been conducted on rapidly maneuvering radio-controlled speed boats.

96th Bombardment Squadron: There have been quite a few changes in officer personnel in this organization recently. Major Harold L. George assumed command, relieving Major Jasper K. McDuffie. The latter, however, will remain in this Squadron until he leaves for duty at the Tactical School in August. Lieut. Simenson received orders and departed to report for duty at the M.I.T. to pursue a course of instruction in Meteorology. Captain McDaniel reported in, and will be a Y1B-17 airplane commander. Lieut. Higgins is recovering from an operation and is at present in the Fort Monroe Hospital. Capts. Robert B. Williams, Charles H. Caldwell and Lieut. Richard S. Freeman, of Hqrs. 2nd Bombardment Group, GHQ Air Force, have been attached to this organization for flying.

33rd Pursuit Squadron: The Squadron starts the training year off with a new squadron commander, Major R.L. Maughan, who has just completed the course of instruction at the Army Industrial College.

Captain George F. Schulgen, formerly the Squadron Commander, is leaving to report with the next class at the Tactical School at Maxwell Field, Ala. He will long be remembered as a very capable and well liked commander.

35th Pursuit Squadron: A considerably reorganized 35th Squadron started off the new fiscal year this month. The attached officers, Captain J.E. Bodle and Lieut. J.E. Barr, were relieved from flying duty with this Squadron and are now back with the Headquarters organization. Lieut. E.F. Williams, formerly Adju-

tant of the 35th, was transferred to the Headquarters Squadron, effective July 1st. Two officers from Brooks Field, Lieuts. B.A. Harcos and H.B. Barrett, were recently assigned to this squadron and are now familiarizing themselves with the PB's and local flying conditions.

Congratulations are in order for the following promotions: Sergeant C.L. Flick to Staff Sergeant, Corporal C.H. Powell to Sergeant, and Private AM, 2nd cl. M. Siko to Corporal.

36th Pursuit Squadron: Captain Walter L. Wheeler and Lieuts. Zemke and Hunker represented the 36th in the Group flight to Buffalo on June 28th. The factory of the Curtiss Aircraft Co. was inspected by all members of the flight and a very interesting and pleasant time was enjoyed.

On the following morning, the flight proceeded to Patterson and Wright Fields, where they inspected several experimental types of aircraft, including the XP-37, P-36 and the new B-18. Most of the time involved in the return flight to Virginia Beach was during hours of darkness, for they departed from Wright Field at 2:00 a.m., June 30th, and landed at 6:30 a.m.

Hqrs. and Hqrs. Squadron, 8th Pursuit Group: The 8th Pursuit Group is back home at Langley Field again after spending two weeks on maneuvers at Virginia Beach, Va. The Group departed from Virginia Beach at noon on July 7th and arrived at Langley Field about 3:30 p.m.

The weather was exceptionally fine throughout the period of maneuvers and apparently everyone enjoyed it very much. It was quite obvious that a large percentage of the Group personnel was disappointed because of not being able to remain longer. Perhaps there is no place like home, but it would be rather hard to decide between home and Virginia Beach.

The organization welcomes Captain Walter L. Wheeler who, formerly in command of the 36th Pursuit Squadron, assumed command of this organization on July 14th, relieving Captain John E. Bodle, who was assigned to the 36th Pursuit Squadron on the same date.

Captain Bodle, who was the first to command this organization after it was formed, reassumed command on March 8, 1937, and remained in command until July 14th. The best wishes of the organization go with him to his new duties.

Second Lieut. Ernest F. Williams, Air Reserve, who was assigned to this organization on July 1st as Squadron Adjutant and Flight Commander, is heartily welcomed in the "fold" by the organization personnel.

San Antonio Air Depot, Duncan Field, Tex. 7/19.

Major Norman D. Brophy, of the Office of the Chief of the Air Corps, on a flight to Randolph Field, was a visitor at this Depot July 14-16, conferring on Air Corps technical matters and greeting old friends in this vicinity.

Major E.D. Perrin, Chief Engineering Officer of the Depot, with Staff Sergeant P.S. Blair, co-pilot, and Staff Sergeant P.A. Simcoe, mechanic, of the 3rd Transport Squadron, flew to March Field, Calif., and return, July 8-9, in a C-33 Transport, transporting from Randolph Field to March Field pilots of the latter station who had ferried A-17's to Randolph Field.

Lieut. Tracy K. Dorsett, Air Reserve, reported July 15th for three years' active duty and has been placed on duty with the 3rd Transport Squadron at this Depot. As Staff Sergeant and as a pilot he had been an enlisted member of that Squadron since its organization in July, 1935, and before that date had been on detached service at this Depot since December, 1933. Lieut. and Mrs. Dorsett and their little daughter will continue to reside on the post.

Recent promotions in the 3rd Transport Squadron were Sergeant Horace R. Riley to Staff Sergeant, Corporal Fred M. Anthony to Sergeant and Private Elo Hansen to Corporal, all on July 15th.

Mr. Walter A. Collis, of the Aircraft Instrument Section, Engineering Department, this Depot, is attending a class of instruction being conducted by the Fairchild Aerial Camera Corporation of Woodside, L.I., New York, July 19 to 31, in the repair and maintenance of aerial photographic equipment manufactured for the Air Corps.

Luke Field, T.H., July 2, 1937.

4th Observation Squadron: The Squadron regrets losing its Squadron Commander, Captain Fay R. Upthegrove, who departed on the last boat. It will not only miss his efficient administration of the Squadron but his pleasing personality. An extra special Aloha Dinner was served as formal and informal good-byes took place.

The Squadron welcomes two new officers, Capt. Dele E. Fisher from Langley Field and Lieut. W.E. Wheatley from Kelly Field. Out new 1st Sergeant - Collins - arrived and has taken hold in fine style. Other new personnel are Technical Sergeants Rosser, Reno, Staff Sergeants Warren, Wright, Sergeant Taylor and two other enlisted men.

50th Observation Squadron: At first glance, the new fiscal year looks promising. The new training directive shows that we of the 50th Squadron will take training in Bombardment tactics as well as in our normal Observation routine.

With the new fiscal year comes several new faces. We have added Lieuts. Kehoe and McConnell to our assigned personnel, and Lt. Ball to our attached list.

Our new Operations Officer, Lieut. Kehoe, has already taken the situation well in hand and started us off with a bang toward a full year. The first move of major importance is to South Cape, Hawaii, for one week of field exercises, which will be experimental in nature, "proving whether this Squadron, so conceived and so dedicated, can long endure" the sand burrs and dust on the South Cape desert.

At last, after these many long years, the cigars are beginning to float around the 50th Squadron with some degree of regularity. On the 1st of June, the organization was increased from 90 men, good and true, to 130, with appropriate increase in ratings and grades of one sergeant and two privates, first class. And on the 1st of July, the air mechanics were supplemented by four, making a total of 18.

23rd Bombardment Squadron: The Squadron has just completed a highly successful year of ex-

tensive training. In addition to its Squadron missions it participated in all maneuvers ordered by the Commanding General, Hawaiian Department, as a unit of the 5th Composite Group.

One of the big improvements noted during the past year was the importation of the B-12 Martin Bombers as replacements for some of the Keystone B-5A's. With these more modern ships, our training program was given added impetus, and we increased our capacity as a defensive and offensive unit.

Perhaps the most outstanding feature of the past year was the almost one hundred percent turnover in officer strength within the Squadron. Major H.W. Beaton, arriving from Moffett Field, took command of the Squadron in December. Other new officers arriving at the same time were Lieuts. Mitchell and Glassford from Kelly Field and Lieut. Bateman from Brooks Field. New arrivals in January were Lieut. Simons from Kelly Field and Lieut. Proper from Hamilton Field. The last boat of the fiscal year brought us Lieut. R.I. Dugan from Hamilton Field. In returning to the mainland, this same boat carried with it Lieuts. Crickette and Altman, whose presence will be missed no end.

As this fiscal year was drawing to a close, the Squadron was packing up and preparing for a two weeks' camp at Waimanalo to complete its ground gunnery for the new year. With more new planes expected, we hope to make the coming year one of the best the 23rd has ever experienced.

65th Service Squadron: The Squadron is once more getting in its stride, and with no little pride the men of this organization became aware that their efforts were recognized by the Department Commander, Major General Hugh A. Drum, during his recent Tactical Garrison and Training Inspection on May 12, 1937. In all, sixteen men were commended for single accomplishments (and there are more unsung heroes - just take the roster of the Squadron and frame it as a citation) and the Squadron was commended in particular for its exceptional state at the time of General Drum's inspection. Who sez we are pineapple soldiers? Sez you!

As of June 15, 1937, 1st Lieut. Edward W. Suarez, a late arrival in the Squadron, was transferred to Wheeler Field on his own request. Being a dyed-in-the-wool bombardier, "Ed" felt the need of training in Attack. Here's hoping the horses of Schofield do not prove more attractive than the A-12's. Ed, we hope you will miss us as we will miss you. Happy landings!

A new Squadron C.O. has arrived on the REPUBLIC, and everyone is busy shining up for the first inspection. Major N.R. Laughinghouse, the new C.O., has just come from Marshall Field, so it is from marble halls to tourist huts in this big jump. Sorry we could not welcome the new C.O. in our beautiful barracks at Hickam Field. At least, we dream we are to dwell in marble halls.

After muck pilikia (trouble) the "Duck," the "Tin Goose" and the B-4 "Atmosphere Beater" have been transferred to other squadrons on the post. In event of the Air Base Principle being used at Luke Field, then where will the airplanes come from for an air base squadron?

72nd Bombardment Squadron: On July 3rd, the Squadron was to bid Aloha to its Commanding Officer, Major I.H. Edwards, who was scheduled to sail on the CHATEAU THIERRY - destination: War College. The officers of the Squadron honored Major and Mrs. Edwards with an Aloha dinner at the Royal Hawaiian Hotel on June 30th.

First Lieut. P.E. Ruestow and W.F. Chapman are attending the Navigation School at Luke Field.

Among the new arrivals at Luke Field are Captains J.R. Anderson and C.B. Stone III, both being attached to the 72nd for flying. First Lieut. D.B. Strother is assigned to the 72nd for duty.

There seems to be some dispute between Tech. Sergeant Carden, Staff Sergeant Woodling and Sergeant Dubel as to the rightful holder of the office of Mayor of Pearl City. Sergeant Dubel's rights are doubtful, though, because of his trouble in mastering the English language. The Pollock says that he can read English all right, but durned if he can pronounce it!

We all looked forward to July 19th when we were tentatively scheduled to go to Waimanalo for gunnery.

Maxwell Field, Ala., July 22nd.

Tactical School instructors, Maxwell Field officers and many visitors are finding the white sands of White Point and Valparaiso, Fla., especially inviting during the vacation season, as evidenced by the number of reservations already on hand for the cottages at the military reservation. Guests on leave during the month included Colonel Herbert A. Dargue, Assistant Commandant of the Tactical School; Majors John E. Dahlquist, Inf., Fenton G. Epling, C.A.C., Alden H. Waitt, C.W.S., James D. Givens, A.C., Captains Earl W. Barnes, James S. Stowell, James M. Bevans, Robert W. Harper, Willard R. Wolfinger, Charles Backes, Uzal G. Ent, Joe L. Loutzenheiser, John K. Nissley, Yantis H. Taylor, Lieut. Frank F. Everest, Jr., Air Corps, June graduates of the School; Captains Arnold H. Rich, Commanding Officer, Valparaiso Gunnery Base; Julian B. Haddon, School Secretary; Roland Birn, Instructor; Edward J. Tracy, M.C., Assistant Surgeon, Maxwell Field; Lieuts. Dyke F. Meyer, Armament and Asst. Engr. Officer, Maxwell Field; Clayton B. Claassen, Assistant to Captain Rich; John H. Fite, Station Supply Officer, Maxwell Field, and Dwight B. Schanep, Aide-de-Camp to General Pratt.

All officers brought their families and were unanimous in their praise for the splendid accommodations available at Valparaiso and White Point. Boating, bathing, dancing, good golf at the excellent Valparaiso Country Club course, and just plain resting up after a year of hard study and work were the order of events.

The Valparaiso Bombing and Machine Gun Base Headquarters reports almost a filled quota for next month, which will be our last chance for another year to enjoy any sort of an extended visit at Valparaiso.

Headquarters and Hqrs. Squadron: Major Frank D. Hackett assumed command of the Squadron on July 13th, during the temporary absence of Capt.

V-7421, A.C.

McBlain, on an extended cross-country to Fort Leavenworth, Kans., via Washington, Mitchel Field, Dayton, Ohio, and Scott Field, Ill. Captain McBlain again assumed command of the Squadron on July 17th.

Several promotions in the NCO grades have taken place within the Squadron during July. Sergeant Walker was promoted to Staff Sergeant, Corporal Glover to Sergeant, and Privates, 1st Cl. Milburn, Funderburg and Taaffe to Corporal. The old custom of "Have a smoke on me" seems to have escaped the memories of the majority of the men elevated in grade, as there was not enough fumes escaping from the notorious weed even to cause the pesky mosquitoes to take temporary cover. However, one member receiving a low specialist rating did remember his less fortunate friends by hanging out a bag of "makings" with papers and asked them to help themselves.

We also obtained by transfer from the 13th Air Base, after July 1st, Staff Sergeant Langston, who is assigned to duty at the Bombing and Gunnery Base at Valparaiso, Fla., as camp commander.

On the morning of the 20th, Staff Sergeant Smith came to work all smiles and whistling. When asked why all the "gaiety," he proudly announced that he was the father of a bouncing baby girl, and all's well.

Paint, Paint, everywhere you look. But talk about looks, the Headquarters Barracks is going to look like the Senate Chamber in Washington when the present paint and interior decorating job is completed. The drab old prison look has vanished from the entire barracks.

The Squadron is making preparations for its first Organization Day and planning to make it a memorable occasion. Although the 91st School Squadron has been in existence only since September 1, 1936, there is a unity of personnel and purpose that reaches back for several years and through several organizations. Our ancestry extends back to the old 54th School Squadron, and most of the men with a hitch in got their start in that organization.

When, on March 1, 1935, the 54th School Squadron was rendered inactive, four organizations were formed with the personnel from the old squadron. These four organizations, the 51st Attack Squadron, the 54th Bombardment, 86th Observation and 87th Pursuit Squadrons, all members of the GHQ Air Force, were short-lived, being rendered inactive and the personnel becoming members of the 91st School Squadron on September 1, 1936.

During all of these changes, the personnel and their duties have remained practically unchanged. Whereas the old GHQ organizations each maintained a hangar, the present 91st School Squadron maintains the four hangars from which come all of the flying activities. With no so called Special Duty, and with squadron overhead held to a minimum, the present organization is able to furnish 180 men to the hangar line out of a total of 200 men. The authorized strength has been 207 men since its founding, but has fluctuated about that number.

With the School getting under way in September, the Organization Day is being celebrated in July, following the custom of the other squadrons and detachments on the post. A good

tips for all will be the order of the day.

Nichols Field, P.I., June 15th.

Some of the fire of a hot political campaign was brought out at a meeting of the Nichols Field Officers' Association, June 14th, but it had reverse English on it. When nominations were closed for a new member of the Board of Directors, it was Norris B. Harbold vs. Mark K. Lewis, Jr., and the usual speeches were in order, though not forthcoming from the rank and file. Such being the case, it was up to the contestants to put up their own fight, and they really strove valiantly - each to prove how fine the other was. Lieut. Harbold must have been more eloquent, for he carried the election nicely, Lieut. Lewis being elected by a vote of 11 to 7. There was still no bed of roses for the victor, however, for we were now looking for a new Secretary-Treasurer, and when the smoke had cleared from these nominations it was Harbold again vs. Loren B. Hillsinger. Harbold must have been tiring by this time, although he enjoyed a few happy moments at the beginning of the tally, for he lost it by a nose. At first it was Hillsinger, Hillsinger, Hillsinger. (Smiles from Harbold). Then it was Harbold, Harbold, until the count was nine and nine. (Not so many smiles now). And then it was HARBOLD, ten to nine. Something must be "Rotten in Denmark" here, for the total is different than before, but the vote stands. Lieut. Harbold is our new public servant, while Lieut. Hillsinger gets the final laugh.

Materiel Division, Wright Field, Ohio, July 19.

Major K.B. Wolfe has assumed the duties of Air Corps Representative of the Northrop Corporation, Inglewood, Calif., vice Captain E.M. Robbins, relieved.

First Lieut. George F. Schlatter has assumed the duties of test pilot at the Stearman Aircraft Company, Wichita, Kansas, vice 1st Lt. Samuel R. Brentnall, relieved.

The Inspection Branch at the Consolidated Aircraft Corporation, San Diego, Calif., has been closed. Inspection matters at that plant will hereafter be handled by the District Manager, Western Inspection District, C/o Douglas Aircraft Company, Inc., Santa Monica, Calif.

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Major Richard H. Magee, who recently graduated from the Army Industrial College, Washington D.C., and 1st Lieut. Edwin W. Rawlings, on duty at the Materiel Division, Wright Field, Ohio, are under orders to take a course of instruction at the Harvard Graduate School of Business Administration, Cambridge, Mass., and are directed to report for duty at the above School not later than September 10, 1937.

First Lieut. Donald J. Keirn, relieved from assignment and duty as student at the Air Corps Engineering School, Wright Field, Ohio, July 31, 1937, is detailed as a student to take a course of instruction at the University of Michigan, Ann Arbor, Mich., reporting for duty on or about September 13, 1937. He will be attached to Selfridge Field for flying duty only.

KEEPING FIT

Maxwell Promptly at 7:00 o'clock on the morning of July 22nd, the Air Corps organizations at Maxwell Field appeared on the hangar line for the usual Thursday morning drill period.

Squadron Commanders marched their men into formation, with Headquarters Squadron facing the flying field and the 13th and 91st Squadrons placed one on each side facing each other, when Colonel Albert L. Sneed, Post Commander, and the Post Recreation Officer, Lieut. C.E. Hughes, appeared with shining silver in their arms.

After a short speech on the intense interest in athletics which is being shown by the Tactical School personnel, Colonel Sneed presented the beautiful Annual Baseball Championship Trophy to the Headquarters Squadron baseball squad, following which Private, 1st Cl. Charles H. Weese, also of Headquarters Squadron, was presented with the Individual Tennis Championship Trophy for the year.

The presentation of these trophies marked the conclusion of an unusually interesting Spring of athletics at Maxwell Field. Under the guidance of 1st Lieut. C.E. Hughes, each Squadron furnished a baseball team, and in the inter-squadron competition which followed the championship was won by the Headquarters aggregation. They furnished married and single men's kittenball team, swimmers, tennis players, and talk was even heard about some horseshoe pitching in back of a hangar.

With the coming of fall and a few cooler evenings, we hear plans of a volley ball league, which sport has been always popular at the field and, perhaps, an inter-squadron tennis tournament. No matter what is scheduled, it is certain to draw the attention of the many enthusiastic sport fans of the Tactical School.

Kelly Bill Klein's single, scoring Tiny Field Carter from second base in the last half of the ninth inning, gave the staff troops nine a 7 to 6 victory over the second place Kelly Field Flyers at Fort Sam Houston on July 6th in the last week of play in the Army League. Trailing 6 to 2 in the last half of the ninth, the troopers got to Ace Drobina for four consecutive hits and a walk before he was relieved and Boudreaux was rushed to the mound. Tiny Carter then smashed a single to center field, sending in two to tie. Boudreaux settled down and retired the next two batters, but Klein, with the count of three and two, singled to center, scoring Carter to win the ball game.

Chanute Private H.P. Aue, Tenth Air Base Field Squadron, Chanute Field, Ill., recently entered the Corps Area Tennis Tournament, held at Chicago. After playing three strenuous matches with the other representatives from the Corps Area, he emerged the winner and was awarded a very attractive silver statue of a tennis player, mounted on a black base, as a reward for his victories.

Private Aue then went to the Army Tennis Tournament in Washington as representative of his Corps Area. Although eliminated in the

first round of the championship matches, he reached the semi-finals in the consolation matches.

Private Aue has received the commendation of his Organization Commander, the Post Athletic and Recreation Officer and the Post Commander, Lieut. Colonel Junius W. Jones, for his splendid showing in these tournaments. His record is all the more commendable, considering that he has been playing tennis for only three years and has never received the benefit of coaching.

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TECHNICAL INFORMATION AND ENGINEERING NEWS Air Corps Materiel Division

Instrument Field Testing Set.

A Type C-1 portable instrument field testing set was delivered to Chanute Field, Rantoul, Ill., by a representative of the Materiel Division for instructional purposes in connection with the Instrument Maintenance Course at the Air Corps Technical School. He also instructed personnel at that station in the operation and maintenance of this equipment.

Test of "Fognozl"

An Engineering Section Memorandum Report has been prepared, covering results of tests to determine the effectiveness of the "Fognozl" submitted by the Fog Nozzle Company, Los Angeles, Calif., in combating airplane crash fires. It was stated that the "Fognozl" is capable of reducing the intensity of gasoline fires to a limited extent. This nozzle is more effective on gasoline fires than the ordinary fire department type of water nozzle. It is the opinion that the use of the "Fognozl" in conjunction with CO₂ would provide the most effective method of combating airplane crash fires.

Application of Aerial Photographs to Mapping.

An Engineering Section Memorandum Report touches on the study of the application of aerial photographs to mapping and tests of various methods, including the use of the T-3A and Zeiss wide angle camera photographs as used in the aerocartograph and multiplex projectors and other stereoscopic or mechanical means of obtaining secondary control for topographic information.

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Second Lieuts. Vernon Merritt Byrne, of Saunemin, Ill., and William W. Amorous, of Marietta, Ga., have been placed on extended active duty for a period of three years, the former with station at the Rockwell Air Depot to July 14, 1940, and the latter at Lawson Field, Fort Benning, Ga., to July 27, 1940.

First Lieut. Donald L. Putt, of Wright Field, is under orders to proceed for duty as a student to pursue a course of instruction in aeronautical engineering at the California Institute of Technology, Pasadena.

First Lieut. George F. McGuire is under orders for duty at March Field upon completion of his tour of duty in the Philippines, while 2nd Lieut. Wm. C. Freudenthal goes to Mitchel Field from the Panama Canal Department.



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NEWS LETTER

F. C. BARRY

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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.

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THE ARMY INDUSTRIAL COLLEGE

By Major Richard H. Magee, Air Corps*

THE sentence in Major Ira C. Eaker's excellent article on the Command and General Staff School (July 15th issue of the Air Corps News Letter) impressed me very much, viz: "Should an Air Corps officer take the course at the Command and General Staff School or should he go to the Industrial War College?"

This question cannot be answered categorically; I believe selected officers of the Air Corps should attend both schools in order to attain a balanced and broad military education better to fit them for ultimate duty with the War Department General Staff. However, this is the age of specialization, and each Air Corps officer should determine early in his career the line of specialized work for which he is best fitted. If he has demonstrated special aptitude for supply and procurement work, he should unquestionably attend the Army Industrial College, and he should attend shortly after he has completed ten years' service, in order that he may have a maximum period of time to apply this knowledge for the benefit of the Air Corps.

Success in an emergency depends as much on materiel as on military strategy, and this fact is recognized not only by our own nation but by all the first class nations of the world. Success in modern war is only assured by the fullest use of the country's economic resources.

In passing, I would strongly recommend that each Air Corps officer diligently study "The Industrial Mobilization Plan of the United States," Revised Edition, 1936. A copy of this work should be available in the library of every Air Corps post. It can also be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. The study of this book will be an education in itself, and will be not only instructive but interesting.

The Army Industrial College was created in 1924 by the Assistant Secretary of War partly to carry out the statutory provisions of the National Defense Act. The mission of the College is fully and tersely stated in A.R. 350-5, and is "to train officers with a view to insuring

(a) Adequate knowledge of war-time needs in industrial organization and mo-

bilization of materiel.

(b) Understanding of the technique of supervising war-time procurement of military supplies.

(c) Proper training for duty in the office of the Assistant Secretary of War."

In carrying out the above mission, close contact is maintained with the Planning Branch, Office of the Assistant Secretary of War; the Supply Arms and Services; the Navy Department, and the General Staff and other government agencies and departments. Outstanding lecturers in the economic and industrial fields present their views on economic and industrial problems.

The course itself consists of lectures, conferences, individual and committee problems. A brief resume of the course is listed below, in order that officers of the Air Corps may be fully informed as to the scope of the School.

Problem No. 1 - "The Fundamentals of Business" - is an individual problem and acquaints the student with the economic principles underlying the conduct of business operations. Economics, Statistics, Finance and Accounting, and Industrial Problems are studied during this problem, which requires 7-2/3 weeks.

Problem No. 2 - "Basic Industries" - consists of a committee study of ten of the basic industries of the nation, and is designed to give the student a general idea of the organization, operating methods and managerial problems of an important cross section of American industry. A resume of each committee's work is presented to the class as a whole at the conclusion of the problem, which requires three weeks to complete.

Problem No. 3 consists of an individual historical study of the procurement and industrial mobilization in the United States during the World War, paying particular attention to the Purchase, Storage and Traffic Division and emergency governmental agencies created during that period. This study requires three weeks.

Problem No. 4 - "War and Navy Department Organization and Procurement" - is a study of the organization of the War and Navy Departments and their coordinating agencies, with particular attention to their methods of procurement. It is

*Graduate, Army Industrial College, 1937.

partly an individual study and partly a committee study. Current procurement policies of the students' own arm or service are studied during the $2\frac{1}{2}$ weeks required for this problem.

The above problems are introductory studies and prepare the student for the later problems of war procurement and economic mobilization.

The remainder of the course is divided into two broad fields. The first field, that of war procurement, consists of planning in time of peace for procurement in war, and the operation of the system in war as far as it pertains to the War and Navy Departments. This field is covered generally by problems Nos. 5 to 16, requiring $3\frac{1}{2}$ weeks to complete.

These are committee problems and consist of studies of:

5. War Plans.
6. Industrial War Load and Allocations.
7. Utilization of Automotive Industry.
8. Procurement Districts and Corps Area Procurement.
9. Inspection of Materials.
10. Personnel for Procurement.
11. War Contract Procedure and Policies.
12. Early Production and Improvization.
13. Construction in War.
14. Ships and Shipping.
15. Strategic and Critical Materials.
16. Control of Procurement.

Problems 5 to 16 cover special studies in coordinate fields related to the general subject of war procurement. They do not by any means, however, cover the entire field of war procurement. Presentations at the end of the study acquaint the entire class of the different committees' work.

Problem No. 17 - "Test of Protective Mobilization Plan" - is an analysis of the War Department Mobilization Plan, to determine how well stocks on hand and estimated production will meet procurement requirements of that plan. Most of the work on this problem will be by committees, with a presentation given to the class at the end of the problem. A period of $2\frac{1}{2}$ weeks is spent on this phase of the course.

Problem No. 18 - "War Procurement" - is an individual problem lasting four weeks, in which each student makes a study of the planned war procurement system as a whole, and a determination of the problems involved in obtaining the munitions required in a major emergency, with an analysis of the peace-time planning methods and the proposed war-time management of the War and Navy Departments' procurement programs. Special situations are discussed in conference to test the students' knowledge.

Problem No. 19 - "Government" - furnishes the student with a knowledge of the current functions and potential war-time functions of the regular departments and selected executive agencies of the government, and covers a period of

$2\frac{1}{2}$ weeks.

The second field of study is one of Industrial and Economic Mobilization. Committee problems, Nos. 20 to 31, inclusive, cover in part the field of planning for, and executing war-time control of the economic resources of the nation. Studies are made of -

War Powers of the President and Congress.

Industrial Mobilization Plans.

Transition from Peace to War.

Licensing of Industry.

Public Relations.

Trade Organization and Regimentation.

Budgetary Control.

Control of Iron and Steel.

Neutrality.

War Trade.

Economic Analysis of Selected Nations.

Study of Control of Economic Resources of Selected Nations.

Presentation by committees to the class is made after $3\frac{1}{2}$ weeks' study.

Problem No. 32 - "Industrial Staff Memoranda" - consists of individual studies of pertinent problems related to procurement planning and planning for industrial mobilization, and requires one week's work.

Problems Nos. 33 to 44, inclusive, cover special studies in coordinate fields relating to Industrial and Economic Mobilization, which studies require $3\frac{1}{2}$ weeks and, as usual, presentations are given the class as a whole upon the completion of the allotted work.

These problems consist of -

War Finance.

War Labor.

Communications.

Transportation.

Power and Fuel.

Strategical Industrial Areas.

Economic Planning in case of loss of certain industrial areas.

Priorities.

Price Profit and Production Control.

Economic Readjustment following an

Emergency.

Study of National Economy of Selected Nations.

The final written problem is No. 45 - "The Utilization of War Resources of the Nation." This may properly be termed the students' thesis, and covers a summation of the problems of industrial mobilization for war, together with recommendations as to the measures to be taken to insure their successful solution. The entire second field of study prepares the student for this problem, wherein the student is given full opportunity to present his views as to the method that should be adopted for the most effective use of the nation's economic resources in war. A period of $3\frac{1}{2}$ weeks is spent on this highly worthwhile phase of the course.

The course is completed with a one week's war game, in which the principles

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of War Procurement and Mobilization of Economic Resources are applied to a definite situation.

Inspection trips are made to selected industrial plants and Army and Navy installations throughout the year. However, the most interesting and instructive trip is made to the Pittsburgh industrial area during June, just prior to graduation. Approximately four days are spent visiting -

Jones and Laughlin Steel Corporation,
Westinghouse Company,
Mesta Machine Company,
Mine Safety Appliance,
Pittsburgh Plate Glass, and the
Aluminum Company's new Kensington plant.

In this short paper it is impossible to enumerate the many interesting phases of work at the College. The course is highly instructive, interesting and worthwhile. It should be the ambition of every Air Corps officer to take advantage of the opportunity to complete the course at the Army Industrial College.

In closing, a quotation from the remarks of the Director, Colonel Harry B. Jordan, Ordnance Department, delivered during the Orientation talk last September, will do more to paint a true picture of the Aims and Policies of the College than anything else I can add, viz:

"In general, instruction here is self-instruction. There are no approved solutions or approved textbooks. You will do your own thinking and arrive at your own conclusions. When we are engaged upon some specific assignments in the service we all know that we must carry out loyally and cheerfully the policies of higher authority regardless of whether we agree with those policies or not. But this is a college and a graduate college at that; and if any officer has something on his mind that he thinks is good for the National Defense, he can present it 'without fear, partiality, favor or affection.' There are no restrictions on this whatever, except those manifest in any assemblage of gentlemen, viz: adherence to the subject; courtesy; constructive intent; and, in our conferences, parliamentary decorum."

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The Advanced Flying School, Kelly Field, Texas, gained nine additional Attack planes on August 2nd. Six were ferried from Barksdale Field by Colonel E.A. Lohman, Lieuts. Marshall Bonner, B.V.G. Scott, R.W. Osburn, E.F. Cullerton and W.D. Griffith. These officers were ferried to Barksdale Field in B-6's by Lieuts. Densford and Epler. On the same date Lieut. R.D. Butler ferried Colonel A.N. Krogstad, Majors R.N. Ott and C.C. Nutt to Maxwell Field in a C-14 where they picked up three A-12's. These planes will be used to augment the equipment of the Attack Section of the A.F.S.

NEW AIR FIGHTERS AT SELFRIDGE FIELD

Army Air Corps pilots of the GHQ Air Force at Selfridge Field, Mich., are conducting extensive tests on two brand new aerial fighting airplanes, the performance of which eclipses by far anything heretofore experienced in America.

The first of these Pursuit planes to be received, the XP-36, manufactured by the Curtiss Aeroplane Company, has already been judged valuable to the extent of an order by the War Department for 210 of its type for GHQ Air Force units; and the second, the P-35, manufactured by the Seversky Aircraft Corporation at Farmingdale, Long Island, is the forerunner of 77 like airplanes already being manufactured for the three squadrons now at Selfridge Field. These three squadrons are now equipped with the Boeing P-26 which, though badly outclassed by its brothers, was in itself a short three years ago a revolutionary design. Upon arrival of the new aircraft, it is expected that the planes now in use will be transferred to Army flying schools, other Pursuit units, or to forces in Hawaii and the Panama Canal Zone.

Both of the new fighters are single-seater low-wing monoplanes, and of much the same general appearance. Each is equipped with retractable landing gear, landing flaps, and very powerful twin-row radial engine. The familiar blue-and-yellow of the planes of the Army Air Corps is missing, as both are finished in the aluminum sheen of unpainted metal.

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NEW COMMANDING OFFICER FOR BROOKS FIELD

Major Douglas Johnston, Air Corps, recently took over the duties of Commanding Officer of Brooks Field, Texas, succeeding Lieut. Colonel Henry J.F. Miller, Air Corps, now in command of the San Antonio Air Depot, Duncan Field, Texas.

At a formation of the troops of Brooks Field, Colonel Miller formally bade the men farewell and relinquished the command to Major Johnston. The Colonel was presented the Army League football trophy, won by the Brooks team in the season just past, as a token of remembrance and thanks for his interest in sports while he was Commanding Officer.

Prior to taking over the command of the field, Major Johnston was Executive Officer of the post, and has been at Brooks Field since September 24, 1935. He is a graduate of the Air Service Balloon and Airship School, class of 1924. He completed the Advanced Course at the Coast Artillery School in 1928, and the Field Officers' Course at the Chemical Warfare School in 1936. In 1929, he graduated from the Air Corps Tactical School. He holds the flying ratings of Airship Pilot, Balloon Observer and Airplane Observer.

NEW FIRING METHODS BY PURSUIT

During the period from July 1st to 25th, last, while the 94th Pursuit Squadron, stationed at Selfridge Field, Mich., was occupying the Aerial Gunnery Range at Camp Skeel, Oscoda, Mich., the traditional method of aerial gunnery practice by Pursuit pilots was suddenly amended to include practice in mass firing on ground targets in units of three, six and twelve aircraft, all firing simultaneously. After two weeks of practice in the new method of air firing, pilots of the 94th Squadron were called upon to demonstrate this method to the Commander of the Second Wing, Brigadier General Gerald C. Brant, during his inspection of the 3rd Air Base, July 29-30.

This mass firing was performed from the tactical air formation developed at Selfridge Field during the past two years, that is, the firing was actually done with each flight of six P-26 Pursuit planes flying in elements of two ships each, with elements staggered to the rear alternately to left and right of the leading element.

This formation parallels a system of formation flying and aerial gunnery developed at Langley Field in the past several years, which is known colloquially as the "string" formation. The News Letter Correspondent believes that studies are being made by high command as to the relative effectiveness of the two differing systems of Pursuit mass firing.

The statement of the Acting Squadron Commander, 1st Lieut. Paul B. Wurtsmith, covering the period of change in gunnery methods, is as follows:

"Work began promptly on Tuesday, July 6, 1937, after the Fourth of July holidays. Pilots were up and ready to fire at 5:00 each morning. We fired right through each day until 9:00 a.m., when the air started getting too rough to fire. Some of the older pilots who had fired the course previously, started right off with a high percentage of hits, sometimes making the maximum number. The younger pilots who had never fired before were quite puzzled for a few days because they were not getting so many hits, but they soon caught on and were picking up rapidly. The attached pilots started off making such good scores that they immediately commenced their record fire. The three of them had practically finished the course when Captain Dawson went on leave and 1st Lieut. Wurtsmith assumed command.

"The next change was an order from the Group Commander, directing that all individual firing cease at once, except those shooting record, and that emphasis be placed on Mass Firing by flights and by squadron. This order, received on July 13th, caused quite a change in the

whole set-up. Those firing record, the three attached pilots, were rushed through the course - however, they came out with excellent scores. The range detail rapidly started work on the new 12 by 60-foot target for mass firing. Within three days our new range had been set up, all guns were bore-sighted at 1500 feet, and sufficient individual long range practice phases had been carried out to warrant the beginning of flight firing. Our time in camp had been extended from July 21st to the 25th, to allow sufficient time for try runs to train those pilots who had never fired in formation.

The 94th two-ship element formation was used and tested exclusively to a great advantage. The flights started right off getting a high percentage of hits, much sooner than was expected. The two flights ran neck and neck for high score - the average of both flights being about 37% hits per number of rounds fired. Sometimes a flight would shoot as high as 43% hits. This flight practice was carried out for a couple of days, and then squadron practice began. Not much difference in firing was noted, except more care and precision had to be executed in formation work. The squadron did exceptionally well in this phase.

On the whole, the new type gunnery training was very enjoyable and successful at Oscoda. Both the men and officers showed a mighty fine spirit throughout the entire course. Swimming, boating, fishing, tennis and ball playing were the major sports enjoyed by everyone. The fishing stories are by far too numerous and erratic to relate. However, on July 24th the whole command returned to Selfridge Field with the feeling of a job well done."

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FISH STORIES FROM ALBROOK FIELD

"Fishing has been extremely good around the Pearlas Islands for the last six weeks," says the News Letter Correspondent, "and all of Albrook's intrepid fishermen have been having their day.

Recently a party, including Major General David L. Stone, Commanding General of the Panama Canal Department; Brigadier General George H. Brett, our own Commanding General; Colonel W.B. Meister; Major W.H. Styer and Captain F.N. Leakey spent several enjoyable days in the Pearlas Islands group and had real fisherman's luck. After the party had hooked several 100-lb. sailfish, General Stone had the thrill of a fisherman's lifetime when he hooked a 250-lb. marlin. After a two-hour battle, the game fish was finally brought to gaff. At this point, while perched precariously on the rail to take a candid shot with his camera, General Brett lost his

(Continued on Page 5)

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COMMENCEMENT EXERCISES OF AIR CORPS ENGINEERING SCHOOL

THE annual commencement exercises of the Air Corps Engineering School were held at the Wright Field Auditorium at 11:00 a.m., July 30th. This was the seventeenth commencement of the organization, and ten student officers received certificates of graduation. The usual brief ceremony marked the occasion.

Brigadier General A.W. Robins, Chief of the Air Corps Materiel Division, and Commandant of the Engineering School, delivered the only address and distributed the certificates to the graduates.

General Robins pointed out that the Air Corps Engineering School is the smallest in number of students of any of the Air Corps schools. As a result, student officers for this School were among the most carefully selected groups in the Air Corps. Records of all applicants were examined, and only those believed to be especially adapted to the engineering work were given consideration. Under this condition, there is small question as to the ability of the student to pass the examinations, as all are bound to come out well. In the present class the grades were found to be high, with a very small range between the various students. Leaders of the class, therefore, are privileged to feel especially proud of their records. Each officer graduates with the rating of Aeronautical Engineer.

"Nowadays," said General Robins, "there is some question as to just what the term engineer includes, as in a broad sense it might be applied to almost every trade or profession. It is well for the modern aeronautical engineer to be a specialist in some line. He must not allow his viewpoint to become narrowed for that reason, but should maintain a broad interest in all the branches of aeronautics.

As to the future of aviation, there is no question. If the advance is as rapid in the next ten years as it has been in the last five, we may even be flying to the moon. The role of aeronautical engineer, therefore, is becoming more and more important. Formerly, the 'hot pilot' was the person most in demand, especially in the tactical units. The present needs of the tactical units, however, include a knowledge of radio, of mechanisms, and of structures.

In the present class, the majority of the officers are receiving assignments at the Materiel Division. These officers are peculiarly fortunate in that they have an opportunity to fly the most advanced equipment received by the Air Corps."

In concluding his remarks, General Robins congratulated the wives of the graduates, giving them credit for the

excellent grades received by their husbands in this course. "No officer could achieve such grades," said General Robins, "with a wife who was continually nagging him or finding it necessary to be perpetually amused." He warned the officers to regard their graduation as a beginning rather than as the end of learning, as experience must be added to study for complete success.

Of the ten Air Corps officers who graduated from the Engineering School, six were assigned to duty at the Materiel Division, viz: Lieuts. E.H. Beebe, H.G. Bunker and L.E. Massie with the Aircraft Branch; Captain J.G. Moore with the Engineering Section, Lieut. S.O. Redetzke with the Power Plant Branch, and Lieut. H.H. Tellman with the Equipment Branch.

Captain R.E. Culbertson was assigned to the Fairfield Air Depot and Lieut. T.B. McDonald to the San Antonio Air Depot.

Lieuts. D.J. Keirn and Donald L. Putt have another year of study ahead of them on the subject of Aeronautical Engineering, the former being under orders to pursue the course of instruction at the University of Michigan and the latter at the California Institute of Technology at Pasadena.

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Fish Stories from Albrook Field (Continued from Page 4.)

balance and in he fell. Being quickly hauled out of the shark-infested water, General Brett was none the worse for wear save being drenched from head to foot. Other fishermen who have been having the time of their lives are Lieut. Goodrich, from France Field, who with a 150-lb. sailfish to his credit has the record catch of the season; Lieut. Edgar Sirmyer, who also marked up his first sailfish, and Lieuts. Algert and Long, who have been giving the Tarpon at Madden Dam an awful run for their money."

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ANOTHER RESERVE PILOT JOINS PAN-AMERICAN

Albrook Field, Panama Canal Zone, lost one of its popular young bachelor Reserve officers recently when Lieut. Allen Sewart accepted a position with Pan-American Airways.

"While on a recent flight," says the News Letter Correspondent, "we saw Sewart busy at work in Brownsville and enjoying his new position very much. We hate to lose him, but wish him the best of luck in his new position."

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An announcement made several days ago by Harvard University reveals a new discovery by Major Albert W. Stevens, Air Corps, as member of the Hayden Planetarium-Grace Eclipse Expedition. At a conference of astronomers at Harvard University disclosure was made of the first definite proof that the solar corona is not made up chiefly of flaming coronal streamers alone, as has been supposed, but is an even, globular blanket covering the sun more than a million miles deep.

Photographs leading to this finding were taken from an airplane in the stratosphere off the coast of Peru during the eclipse of the sun on June 8th, last, under the direction of Major Stevens.

All of Major Stevens' plates clearly show a perfectly even corona surrounding the sun, at a depth considerably greater than the diameter of the body. His photographs include eleven pictures with a 24-inch camera, four pictures with an 8½-inch camera, and 150 feet of motion picture film made with a 6-inch lens.

The usual familiar coronal streamers, which have completely dominated eclipse photographs taken from the ground, and which have absorbed most of the scientific attention up to now, appear on the new plates as relatively insignificant bright tracery in the immense globular envelope.

While the great altitude of 25,000 feet at which Major Stevens worked made his observations very difficult from the point of physical discomfort, it was largely because of this height that he made his finding, according to Dr. Harlow Shapley, of the Harvard Observatory. In the stratosphere he had the advantage of being above about two-thirds of the earth's atmosphere, where dust particles and air molecules give relatively small trouble in photographing difficult subjects like the solar corona.

It is probable that the finding will affect the traditional method of eclipse observations, leading astronomers to make more use of airplanes to carry their instruments up into the stratosphere. Further analysis of the structure of the globular corona must wait until the next favorable eclipse in 1940 over South America and South Africa, when scientists can study the phenomenon through ultra-violet lens systems and the spectroscope.

Dr. Donald H. Menzel, Harvard's authority on solar phenomena, and leader of the Harvard-Massachusetts Institute of Technology eclipse expedition to Siberia last year, voiced the belief of the conference that Major Stevens' finding is "of great importance and will have an

immediate bearing on the interpretation of the structure of the Sun's upper atmosphere."

Guided by their knowledge of the globular corona, the astronomers checked back and found that the phenomena was recorded on the Harvard totality photographs of last year, although by no means as clearly as on the stratosphere photographs. Earlier indications of the globular form of the corona has been obtained by the European astronomers Bergstrand and von Klueber, but the full appreciation of the nature of the corona was not reached until Major Stevens' photographs brought out the phenomenon more clearly than heretofore.

A possibility that the spectacular appearance on Major Stevens' plates was caused by photographic or optical defects or by the action of minute ice particles in the stratosphere has been ruled out by rigid tests at the Eastman Kodak Company and the Institute of Optics of the University of Rochester, N.Y.

Reports of examinations of the Stevens negatives were presented to the Harvard conference by Dr. Kenneth Mees and Dr. Walter Clark, of the Eastman laboratories, and by Dr. Brian O'Brien, of the Institute of Optics, a summer lecturer at Harvard. Their experiments were accepted as conclusive that Major Stevens had photographed a natural phenomenon. The astronomers considering the evidence numbered fifty scientists from a dozen different American observatories.

Major Stevens flew to Harvard last week from Wright Field, Dayton, Ohio, where he is stationed, to confer with the astronomers, assembled there for the annual summer "hollow square" discussions sponsored by the Observatory.

Harvard scientists commented on the fact that two of the most significant observations of the 1937 eclipse were the work of amateur astronomers. Their reference was to Major Stevens, who is one of the Army's best known experts in stratosphere flight and aerial photography; and to Sr. Fernando de Romana, a Peruvian amateur astronomer, who utilized Harvard equipment in June to obtain the best photographs of the corona ever made in polarized light.

As a highlight of the scientific announcement, the astronomers pointed out that Major Stevens' important results were unexpected and essentially accidental. As one of the many field workers in the Hayden Planetarium-Grace Expedition, directed by Dr. Clyde Fisher, of the Hayden Planetarium, N.Y., Major Stevens was primarily interested in

(Continued on Page 8).

THE "deadly tailspin," cause of many training crashes and deaths during the feverish training for flying over the lines during the World War days is still with us. Sired by Old Man Gravity out of Stall, conception and gestation are remarkably brief, and the malignant Imp is born with almost no warning of impending labor.

Thus it was over Galax, Virginia, on July 6, 1937, in one of the GHQ Air Force's newest YB-17's. On this occasion the flier's best friends, Altitude, Presence of Mind and Skill robbed the Imp of its evil intent, and the incident passed off with one successful parachute jump, a few bruises, some relieved feelings and numerous valuable lessons.

On the day in question, one of the YB-17's procured for service test and piloted by 1st Lieut. William C. Bentley, Air Corps, was securing performance data at 14,000 feet, under conditions of high loading and low speed. The airplane was flying above an overcast and through broken clouds on the automatic pilot when suddenly, with no warning whatsoever, the airplane did a snap half roll to the left and continued into a left spin. During the half roll, Lieut. Bentley turned off the automatic pilot and took the controls. The wheel and rudder were both in the full right position, showing that the automatic pilot had reacted to the roll and was endeavoring to level off the airplane.

Let us continue with the words of various members of the crew. Lieut. Bentley states:

"The throttles were immediately closed and after an estimated turn and a half spin, level flight was resumed by utilizing turn and bank indicator, airspeed, rate of climb and altimeter. The gyro flight instrument was out, having hit the limiting pegs. Level flight was resumed at 11,000 feet and held for a few minutes until an open spot was encountered and, in this, the ship was tested for stability, flying qualities, etc. The airplane handled normally in every respect from 90 MPH to 140 MPH, and the gyro pilot was found to function perfectly."

Captain McDaniel states:

"On the flight described, I was seated in the co-pilot's seat performing the duties assigned to the co-pilot. Just prior to the spin there was no loss of altitude, no change in the airspeed, no indication of 'mush' on any of the instruments or by feel, no vibration, or indication of motors laboring, no airplane or control or wing flutter and no indication or warning of any kind of an approaching stall. The

plane simply started a rapid bank and then turned to the left without the nose dropping first and continued on into the left spin. As the wings approached vertical, the nose started down and continued to fall at such a rate as to prevent my being thrown against the safety belt. At no time did I feel any pressure on the belt. I did nothing to the controls until the pilot had closed the throttle and then I changed the propellers to high pitch, to help prevent racing the motors. The controls responded perfectly and smoothly and without delay when the pilot applied them to stop the spin, and the pull out of the dive was very smooth and gradual so that there was practically no 'heavy' feeling or very little tendency to be pushed deeper into the seat. Nor was there any tendency to be thrown to either the right or left side of the seat."

Other members of the crew experienced strong acceleration forces which made it difficult for them to move about in the airplane during the spin. Lieut. Ragsdale states:

"I was lying on the forward gunner's platform reading the Handbook of Instructions when the airplane snap-rolled to the left. Having been thrown into the Bomber's control panel and down on the floor with great force, I immediately operated the bomb-bay door lever to 'open' and put on my parachute, which was on the floor. I crawled back to the emergency door which I found difficult to open. Private Shealey pulled the emergency release and I pushed the door open. Shealey then bailed out. I did not get out, as the airplane was recovering from the spin. My right hand was slightly cut while opening the door."

Hand sight is better than fore sight, but it is through the study of accidents or near accidents in which the participants live to tell their stories that we increase our knowledge of flying. In this case the airplane was so heavily loaded that for the high altitude and low airspeed, it was flying near a stall. A slight gust or possibly a little ice was sufficient to complete the stall, and the YB-17, which flies easily and as normally as any other airplane, responded by dropping off into a spin. The automatic pilot, not as yet designed to nose and rudder into a spin, did the best it could, which in this case, of course, merely accentuated the spin. The pilot's reactions left nothing to be desired. He immediately disconnected the automatic pilot, took manual control himself, and

through his skill in instrument flying, soon leveled off - not, however, until after 3,000 feet of altitude had been lost.

Most large airplanes, military and commercial, are nowadays equipped with automatic pilots, and their use on long flights and when on instruments is standard practice. They are a marvelous aid to air navigation. They assist in bombing. They perform with a high degree of reliability the functions for which they are designed. They are not now designed to pull an airplane out of a spin, but it is possible that some day some bright mind will invent an automatic pilot which can recover from a stall.

Lessons to be learned:

- (1) Disconnect the automatic pilot and fly by hand:
 - a. In extremely turbulent air;
 - b. When wing de-icers are operating;
 - c. In climbs or straightaway flight near stalling speed;
 - d. When power output on one or more motors is below standard.

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AERIAL PASSENGER SERVICE ON SHOE STRING

A citizen of San Jose, Costa Rica, recently wrote a letter to the Chief of the Air Corps, the translation of which is as follows:

"At the suggestion of Captain A.C. Reed of the Navy Department of Aeronautics, to which I wrote before, to direct the present letter to yourself, I now write.

I desire to know if that department does not wish to sell one of its dirigibles which is not in service or which it is retiring from service in usable condition.

The Navy Department was not able to favor me in this matter, because they say they had very few of these ships. The Goodyear Company gave me the same reply. I have no money to make this negotiation, because I have available only \$25 but sometimes that department might sell me one of its old dirigibles cheap and give me the opportunity to pay for it in installments.

It is possible that I may establish a passenger service in this country with this dirigible as a means of transportation. In this matter I believe I will do well."

The writer of the above letter adds that it is his understanding that some few years ago the War Department sold a large semi-rigid dirigible for a small sum and wants to know if that airship was in usable condition.

Ed. Note: It was not. The only thing of value on this dirigible was the aluminum keel, and this could only be sold as junk.

A PERFECT FORCED LANDING - ALMOST.

It seems that in flying the pilot gets a tough "break" now and then just after everything looks "rosy" for getting safely out of a mess. A Reserve officer down in Panama, confronted with a forced landing when the engine went dead while flying over a jungle, appeared in a fair way to escape from his predicament with flying colors when a pesky telephone guy wire "gummed up the works."

While blithely doing acrobatics at 4,000 feet and recovering from a slow roll, Lieut. R.T. Black, Air Reserve, in a P-12E, found his engine had cut out completely. Thinking very little about it, as it is an old habit for P-12's to do just that after inverted flight, he started gliding down, expecting the engine to pick up any minute.

For 3,000 feet he tried everything in the book to get the engine started, but to no avail, and a quick glance for a field revealed nothing but jungle, and his only possible landing spot was the National Highway. Getting a straight shot at the highway, he squeezed down between 150-foot trees which lined the road on either side, but just as he was about to ease it onto the concrete the right wing cut through a telephone guy wire, throwing the ship around enough to wipe off the landing gear upon landing.

The airplane then skidded along on its belly for about 75 feet, coming to a stop just off the edge of the road, with no injury to Lieut. Black and the plane damaged to such an extent as to require an overhaul.

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New Scientific Knowledge of the Sun
(Continued from Page 6).

getting high enough to photograph the spectacular course of the moon's shadow as it raced along the earth and cloud tops.

His observations were made near Lima, Peru, in a Pan American Grace Airways plane, piloted by Captain Charles Disher and co-pilot W.E. Gray. Assisting in the difficult task of conducting accurate photography at an altitude where man commonly becomes unconscious or overpowered by lassitude, was W.O. Runcie, a photographer, of Lima.

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The regular Control Area Supply and Engineering Conference and Luncheon, held quarterly at the San Antonio Air Depot, Duncan Field, Texas, took place on August 3rd, and was attended by about fourteen officers from the various Air Corps stations in the Control Area, in addition to the officers of the San Antonio Air Depot.

V-7444, A.C.

THE BLUE AND GOLD CLUB OF LUKE FIELD
By Lloyd D. Miller

The Blue and Gold Club of Luke Field, T.H., which has given the soldiers of that station the equivalent of a university extension lecture course for the past year and a half, sponsored its last program for the summer on July 25th. It will reopen in the fall, on September 19th, with election of officers, and a suitable guest speaker will be selected for the occasion.

With regard to the professional and cultural activities of the Club, Lieut. Colonel Milton E. Beebe, Chaplain at Luke Field, stated that he had never known any university lecture course that had offered such a wide scope of subjects under such impressive and outstanding speakers.

The Army, the Navy, the University of Hawaii, the Honolulu Art Academy and the leading professional men of Honolulu all contributed to the splendid program of the Air Corps society.

Mr. Walter R. Coombs, Dean of Scottish Rite Masons in Hawaii, delivered on July 25th a masterful interpretation of the extent of Masonic work in Hawaii and on the mainland. With impressive speech, he expanded the beautiful background of Scottish Rite Masonry.

On July 18th, Brigadier General Barton K. Yount, Commanding General of the 18th Composite Wing, dwelt on his experience as military attache to the U.S. Embassy in Paris at the time of Colonel Lindberg's solo flight across the Atlantic. This talk also emphasized the growth of professional pride in the Air Corps by one of its outstanding leaders.

The religious development of the Club had an outlet in the appearance of Lieut. Colonel C.J. Bell, of the Salvation Army, with his Girls Band of 25 pieces. Prayer, religious talks of Colonel Bell, songs of worship and a band program provided an evening of worthwhile enjoyment to over 150 soldiers of the field.

Another notable program was one where Mr. J.M. Whitenack, of Honolulu, kamaaina sportsman, who is a lecturer of potent humor, flashed on the screen the best original colored slides of royal funerals of Hawaiian monarchs and of inaccessible craters and trails of the eight islands that have ever been produced.

A purely cultural lecture, which stressed the beauty of Oriental Art, was given by Miss Alyce Hoogs, instructor in that subject at the Honolulu Art Academy. She illustrated her talk with many fine pictures of both Chinese and Japanese art and interested many of the military personnel in a subject which had never been understood or appreciated before her informative remarks.

Mr. E.H. Bryan, Curator of the Bishop

Museum, covered the wanderings of the Polynesians in an ethnological lecture: "Whence the Polynesian?" In his descriptions of the Polynesians, he showed the reactions of personal visits to most of these islands and interested the soldier in the South Seas and their original colonizers.

Chief Blaisdell, of the Honolulu Fire Department, dispatched five of his troubadours on an eventful Sunday evening, in which Hawaiian songs and string music entertained the Army flyers. These native Hawaiians almost coax their old Kahunas (witch doctor's enchantment) out of their steel guitars at times.

Warden Luckie, formerly a Lieut. Colonel of the Medical Corps, U.S. Army, spoke of the present treatment of prisoners and their development in Oahu Territorial Prison of which he is the head. When it is known that the value of the agricultural products ran over \$20,000 last year, it can be said that Warden Luckie has in Oahu Prison an institution which is producing.

Chaplain Milton O. Beebe, who has acted as critic of the Blue and Gold Club, sails for the mainland on September 10th, next. His probable successor, Chaplain Albert F. Vaughan, it is believed will lead the Blue and Gold in its coming activities. Lloyd D. Miller, who has worked with Chaplain Beebe as Chairman of the Program Committee of the Blue and Gold Club, will assist Chaplain Vaughan for a few months before his return to the mainland.

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P-26A's IN THE PHILIPPINES

Touching on the receipt of a consignment of new (to them) P-26A airplanes, the News Letter Correspondent of Clark Field, P.I., states that the 3rd Pursuit Squadron is now speedily surveying its P-12B's, C's and D's, and adds:

"In a former News Letter the Correspondent pessimistically predicted that the P-26A would limit our small and strange field operations, but after two months' experience we find that we can operate without difficulty in all except a few of the unimportant fields. The Philippine Bureau of Aeronautics, under the able guidance of Major Harvey Prosser, has done wonders in clearing good fields in even the most remote sections of the Southern Islands. Captain Van Meter, 1st Lieuts. W.M. Canterbury and R.A. Legg have just returned from a five-day Southern Island flight and report that the P-26A is admirably suited for the Southern Island flights.

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Regular contributions to the columns of the News Letter from Wheeler, Chanute, Nichols and Patterson Fields would be greatly appreciated, as well as from the various Air Corps National Guard and Reserve organizations.

In a recent issue of the aeronautical magazine, THE AEROPLANE, London, Eng., "Babs" writes very entertainingly on the subject of finding some happy solution to the problem of providing a proper place for airplanes which have outlived their usefulness in military and commercial aviation. His dissertation is as follows:

"My Dears,-

The other day I was at a certain airport, and I got talking to a dear old air-liner who had just come in. I thought she was looking rather the worse for wear, so I asked her if she found her work too much of a strain.

"Well," she said, "I won't deny that I do sometimes feel a bit worn out. My pilot and the mechanics are very kind to me, but it's no good - I'm not so young as I was."

"Couldn't you retire?" I asked. "After so many years of faithful service, I'm sure your company would want you to have a happy old age."

"I wish I could," she replied, with tears in her eyes. "But where could I go to? No, Babs, there isn't any rest for old aeroplanes till the day they're broken up. So I shall just have to carry on somehow as long as I've got my C. of A."

I did wish I could help her... and then it occurred to me that she isn't the only old aeroplane who is having a bad time. All over the country there must be hundreds of others, civil and military types, who ought to have given up service long ago, but who haven't been able to, partly because they've not been replaced, and partly because there's simply nowhere for them to go.

Then suddenly I had an idea. How wonderful it would be, wouldn't it?, if there were an aerodrome specially for old aircraft... a happy home where they could enjoy their obsolescence away from the turmoil of modern airports and R.A.F. stations!

I was so thrilled with the idea that I dashed off to consult two Air Force friends of mine - a Bomber and a Fighter.

At first they were rather sceptical. - "It would be all very well for civil types," said the Bomber, "but peace and quiet isn't my idea of a happy old age. I'd far prefer to go to Spain and have a real fling."

The Fighter burst out laughing. - "Yes, I know you would!" she said. "I hear you've been practising the Right Wing salute in case you get the chance to go. But actually I quite agree with you. We get enough hanging about when we're young in the Air Force."

"I'd love to fire away at some wicked B-----s. It seems to me only editors can do that in this country. All the same, I think Bab's aerodrome would be

splendid for old air-liners and trainers and light aeroplanes; but it would be better not to admit old military types at all. At least I know that civil types don't get on at all well in the same works as military aeroplanes."

"What about balloons and airships?" asked the Bomber.

"Oh, they would never fit in either," went on the Fighter. "I know! You ought to put up a notice at the gate, 'No Hawkers, No Circulars.'"

"It would be nice to have a lake for old seaplanes and flying boats," I said. "I wonder if we could arrange to take over Gatwick."

"If elderly aeroplanes are to feel really at home," said the Bomber, the hangars oughtn't to be too modern. None of this newfangled concrete and chromium. My first hangar was made of yellow brick and corrugated iron. And oh! it was such a homely old place."

"What would the aeroplanes do all the day?" enquired the Fighter. "They'd be miserable if they had nothing to do."

"There would be plenty for them to do!" I said triumphantly, "that's one of the chief points of the scheme. They would serve the sacred cause of Publicity - giving free flights to the Dear Big British Public."

"There are masses of people who haven't ever flown, and who would soon become air-minded if they got the chance to go up free. I wouldn't worry them if the aeroplanes were old - they'd be far too thrilled at getting off the ground. It would be a really practical and useful form of publicity."

The Bomber looked rather suspicious. - "But would the old aeroplanes be safe?" she asked. "It wouldn't be good publicity if they went crashing about all over the place."

"They'd be safe all right," I told her. "You see, they would be well looked after on the ground, and as a rule they would only go on very short flights. Besides, if they did go further afield they'd always be given enough petrol to get them back to the aerodrome."

"That would be a nice change for some of the air-liners!" said the Fighter.

"Isn't it all going to cost rather a lot?" asked the Bomber.

"I've figured it out," I replied.

"There would be the cost of the aerodrome, compensations to the owners of the aeroplanes and the running expenses. It needn't come to so very much; and, anyway, nobody would notice an extra naught on the end of the Air Estimates."

"The only thing I'm worried about," I continued, "is how to get the Air Ministry to take up the idea."

"That's easy!" exclaimed the Fighter. "You've only got to mention the scheme in THE AEROPLANE and it's as good as

adopted. There was a man from the Air Ministry down here last week, and he told my pilot that Lord Swinton always has his brainwaves on Fridays."

"I must say I'm glad I'm not Lord Swinton," said the Bomber. "I think his job sounds most uncomfortable. I've heard that he's tied down with red tape and absolutely wrapped up in White Papers."

"Yes, I know - " the Fighter exclaimed. "And how can one expect a quick Expansion in those conditions!"

"I'm afraid I must go now," I said. "There are several aeroplanes waiting at the office to see me. But thank you both very much for your helpful advice. I shall launch my idea in THE AEROPLANE and await results."

"Good-bye!" they both called after me. "And good luck to the scheme!"

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SCHOOL OF AVIATION ORDNANCE TO BE STARTED

Spectators at the public bombing and gunnery exhibitions of the GHQ Air Force which are held occasionally at Plum Tree Island, Va., and Muroc Dry Lake, Calif., are always thrilled by the downward drop of the death missiles and the curving trajectories of the machine gun tracer bullets. They respond with enthusiasm to the detonations and dust clouds that follow each bombing salvo.

But how many of them realize the amount of patience, skill and back-breaking labor that go, without a murmur, into the loading, fuzing and delivery of the blunt nosed death messengers?

All of the preliminary work at the six air bases of the General Headquarters Air Force, except the actual loading of the bombs into the airplanes, is performed by the six platoons of the Tenth Ordnance Service Company, commanded by Lieut. Colonel Russell L. Maxwell, Ordnance Department. The headquarters and the First Platoon of the company is stationed at Langley Field, Va.

To further the training of these Ordnance enlisted men, the School of Aviation has been established at Langley Field. The object of the School will be to give initial training in their assigned duties to the enlisted men of the six GHQ Air Force Ordnance platoons.

This is a special project of the Tenth Company, organized last January by the War Department on the recommendation of Major General Frank M. Andrews, the commander of the GHQ Air Force. Colonel Maxwell has selected Captain Edward P. Mechling, Ordnance Department, as the school director.

Enlisted men will come to Langley Field by air from all over the GHQ Air Force to study under the guidance of some of the outstanding Ordnance specialists on the Atlantic coast. One student each will come from March and Hamilton Fields, Calif.; Selfridge Field, Mich., Mitchel Field, N.Y., and Barksdale Field, La., and four from Langley Field.

Three sessions will be held in the 1937-1938 school year, with classes beginning in October, January and March. An entirely new group will comprise each class. There will be no school in December. The final course will be com-

pleted in April to enable the Tenth Ordnance Company to be 100% available for the spring exercises of GHQ Air Force units.

Captain Mechling comes here from the directorship of the Automotive and Military Departments of the Ordnance Field Service School, Raritan Arsenal, N.J. He states that the Aviation Ordnance students will have a very intensive scholastic schedule, compressed as it is in two months. Nearly eight hours a day will be spent in the class room.

Work will not be limited to the classroom. Every Ordnance facility of Langley Field, the largest air base in the Army, will be at the disposal of the students. Langley Field has a well equipped Ordnance warehouse.

The only subjects taught will be those dealing directly with Aviation Ordnance. These will include theoretical and practical training in the storage of bombs, fuzes, pyrotechnics, small arms, ammunition and machine guns. Subjects of principal interest will be small arms and ammunition.

In addition to Captain Mechling, the faculty will include Mr. Thomas Gaines, of Langley Field, instruction in ammunition inspection and storage and surveillance; Technical Sergeant Robert Tokely, formerly of Raritan Arsenal, N.J., who will teach "Ammunition, General," at the Langley Field School and Staff Sergeant George Arnold, the instructor in "Small Arms."

Implements of warfare that will be taught at Langley Field next autumn are the .30 caliber rifle, the .45 caliber automatic pistol, pyrotechnic projectors, Browning aircraft machine guns of the .30 and .50 caliber types, Browning machine gun for ground service of the .30 caliber type, the Winchester and Remington shotguns and the .22 caliber rifle.

Explosives and ammunition used in the military service will form an interesting part of the curriculum. This will embrace small arms, trench mortars, aircraft bombs and artillery ammunition in the introductory phase of the sub-course.

In low explosives the group will delve into smokeless, rifle, black and ballis-

tite powders. TNT or trinitrotoulene is one of the many high explosives the students will handle gingerly during their studies. Even blank ammunition, the variety used on national holidays and to salute living and deceased officials, will come under the scrutiny of the Ordnance men.

Forced down airplanes use signal pistols to call for help. Flares are used in night landings in isolated regions. The study of this subject is known as pyrotechnics.

Other subjects concerning which instruction will be given at Langley Field are General Storage, Chemical Bombs, Surveillance, Transportation, Issues of Property, Accounting for Property and Storage and the Issue of Ammunition.

It is expected that this experiment in military education will be watched with interest by Major General W.H. Tschappat, Chief of the Ordnance Department of the Army.

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FLIGHT FROM PANAMA TO RANDOLPH FIELD

Air Corps officers and enlisted men from Albrook Field, Panama Canal Zone, under the command of Lieut. Colonel B.G. Weir, recently made an extended flight to Randolph Field, Texas. Pilots of the planes were Major W.N. Reid, Captain Charles T. Myers, Lieuts. William C. Dolan, D.F. Callahan, Max H. Warren and Technical Sergeant Paul D. Jackson.

"Encountering excellent weather and slight tail winds, the flight made good time to Managua, Nicaragua, where we landed to refuel," says the News Letter Correspondent. "Dame fortune continued to smile as our reports indicated excellent weather to Guatemala City, where we landed about 3:30 p.m. Friday afternoon, having put ourselves 1,000 miles nearer our goal, Randolph Field. The next morning bright and early we were off for our long hop to Vera Cruz, Mexico. The pass crossing Mexico's narrowest point at Minatitlan being closed forced us to go over the top, but once reaching the Atlantic coast we again hit fair weather, and four hours and a half after leaving Guatemala we landed at Vera Cruz. It was here that our plans hit the first snag and our hopes of reaching Randolph Field that day were rudely interrupted. While taxiing out to the end of the runway, the first ship to take off hit some very soft ground and managed to get stuck up to the hub. After two hours of using every theory advanced (many in number) we succeeded in getting the ship first out of one hole into another until we were finally on firm ground. Our problem then was to get off the other runway which not only being short was about 45° cross wind.

Throwing out lift by the handful all ships got off OK, and we were on the way to Brownsville, where we landed two hours later, and after clearing the customs we were off for the hotel and bed. The next day being Sunday, and the trip being short, we decided to make a rather late take-off, and twelve noon found us at Randolph Field, the end of our journey."

It was at this point that the only mishap of the entire round trip flight occurred. Lieut. Jack Price, flying a Bombing plane, was just preparing to return to Randolph Field after a short flight when both motors cut out without warning at 600 feet. Not having much choice he headed for the first available field and, had it not been for a row of mesquite trees, he would have gotten away with a perfect forced landing. As it was, the ship went through a fairly large mesquite. The damage to the ship, however, was slight, and it was flown out several days later.

After a ten day stay at Randolph Field, the problem was to obtain authority from the Mexican Government to enter Mexico, and with four days of being on alert authority was finally obtained, and on July 3rd the airmen took off for Brownsville. Immediately after arriving there, bad weather set in which forced them to remain in Brownsville over July 4th, finally taking off the next morning for Tampico, Mexico. Arriving at Tampico, it was raining slightly but increasing every minute, and a heavy storm was moving in fast. Two ships succeeded in landing, but as Lieut. Scott was coming in the deluge occurred and he had nothing to do but fly blind until he found a lighter spot in the rain. All of the ships, however, got in safely.

The following day, July 6th, saw the longest single hop from Tampico to Tapachula, Mexico. The flight took five hours to reach destination and, except for having to go over the top again when crossing the Isthmus at Minatitlan, the weather was fairly good. After clearing customs, the flight headed for Guatemala City. As it entered the pass about 30 miles from Guatemala City, the weather was closing in fast and raining lightly. So quickly did it close in that several planes had to return to Tapachula for the night. Having flown 6½ hours and serviced planes for three more, the airmen were a tired lot, and everyone was off to bed early.

July 7th beamed bright and clear, which was, indeed, a pleasant outlook for the long 1,000-mile jaunt ahead. After receiving weather reports, the airmen were in for another pleasant surprise, as the weather was perfect all the way to Albrook Field. Two and one-half hours after leaving Guatemala, landing was made at Managua, where the flight was

joined by the planes which had returned from Tapachula.

On this leg the flying was at an altitude of 10,000 feet, in order to gain advantage of the winds aloft, and at this altitude one pilot, Lieut. Cy Kitchens, found his motor losing RPM's rapidly. Apparently the trouble was ice in the carburetor, but even putting his air heat control in the hot position the engine continued to lose RPM's until it had completely cut out. He was making for the nearest emergency field when at about 4,000 feet his motor slowly started, picking up until it was again functioning normally.

"Even though the surface winds were directly on our nose," says the News Letter Correspondent, "we climbed to 14,000 feet, where we had a light tail wind, enabling us to make Albrook Field in 3 hours, 40 minutes, for an average of just under 180 m.p.h. Some of we thin-blooded boys were nearly frozen stiff when he landed at Albrook, but we were all happy to be back after having been gone for twenty days."

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LIEUT. DENSFORD BRINGS HOME MORE TROPHIES

Firing in the Texas State Championship Pistol Matches at Laredo, Texas, July 17th and 18th, Lieut. Charles F. Densford - ace pistol shot of the Air Corps - was forced to be content with second place for the second time since his return to duty in Texas. His aggregate score for the championship was 1097, which was bettered by 5 points by Captain Charles Askins, of the U.S. Immigration Border Patrol, El Paso.

Captain Askins won the State Championship in 1936. However, Lieut. Densford brought home three new trophies and seven medals to add to his collection. The trophies included the Fort Worth Trophy, the L.L. Cline Trophy for rapid fire aggregate, and the Bettencourt Trophy for a rapid fire match. In this last match, Lieut. Densford tied the world's record - 195 out of 200.

Lieut. Densford does not plan to enter the National Matches this year, since there is no team from Kelly Field, and he is not eligible to compete on any other team.

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PERSONNEL CHANGES AT ADVANCED FLYING SCHOOL

Major Arthur G. Liggett has been relieved from command of the 63rd School Squadron and assigned to duty as Director of Ground School, Kelly Field, effective August 1, 1937. Captain Harvey F. Dyer now commands the 63rd, assisted by Lieut. Robin B. Epler, a recent arrival from the Panama Canal Department.

BOMBING TRAINING AT LANGLEY FIELD

The 1st Bombardment Squadron, stationed at Mitchel Field and commanded by Major Claude Duncan, and the 31st Bombardment Squadron, from Hamilton Field, Calif., and commanded by Major James Taylor, recently returned to their home stations after a week of intensive bombing training at Langley Field on stationary and moving targets.

The officers of the 31st Bombardment Squadron were ferried to Langley Field by transport planes. They were furnished enlisted crews and airplanes by the 2nd Bombardment Group. The planes were maintained and serviced with 20th Bombardment Squadron facilities.

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CADET HANDLES SITUATION LIKE VETERAN

Flying Cadet Charles W. Bicking, of the 21st Reconnaissance Squadron, Langley Field, Va., piloting a B-10B Bombing plane one morning recently, found that he was unable to extend one leg of the landing gear when he was making preparations for a landing. As a result, he and his companions, Sergeant Brewer, Private 1st Cl. Sprecher and Private Weyer found themselves in a rather uncomfortable situation. Radio communication was apparently cut off by the same trouble which placed the landing gear out of commission.

Upon learning of the condition of the plane in flight, the Commanding Officer of the 2nd Bombardment Group sent an A-17 airplane into the air and instructions were communicated to Cadet Bicking to proceed to the Middletown Air Depot for a landing. At that station the landing was made without the use of the landing gear.

The News Letter Correspondent states that much credit is due Cadet Bicking for the success of the landing and his coolness in handling a dangerous situation.

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NO MITCHEL TROPHY RACE THIS YEAR

Army Air Corps officials at Selfridge Field, Mich., recently announced that "circumstances have made it advisable" to cancel all plans to hold the annual Mitchel Trophy Race this year. Although plans for holding the event on September 18th were already well under way, Major Edwin J. House, commanding the 1st Pursuit Group, GHQ Air Force, ordered all preparations stopped. He stated he regretted very deeply that there will be no race this year, but that visitors to Selfridge Field who are interested in the training of the First Pursuit Group pilots would be most welcome at any time.

B I O G R A P H I E S

LIEUT. COLONEL WILLIAM E. KEPNER ✓

Colonel Kepner's career as an officer in the U.S. Army has been a very colorful one. This fact would be evident even to a most casual observer were Col. Kepner to take the trouble to display the various decorations, certificates, etc., in his possession. The decorations include the Distinguished Service Cross, the Distinguished Flying Cross, French Legion of Honor, Croix de Guerre with palm. In further recognition for his exceptional service in the World War, he received a citation from both the American Army and the French Army.

Colonel Kepner possesses four Air Corps flying ratings, namely, Airplane Pilot, Airship Pilot, Airplane Observer and Balloon Observer. He is a member of the mythical Caterpillar Club. He has piloted the two Navy rigid airships SHENANDOAH and LOS ANGELES and received part of his airship training on the ill-fated airship ROMA. For a number of years he has piloted the various types of semi-rigid airships of the Army Air Corps and participated in many extended cross-country flights therein. He participated in several National Elimination Balloon Races, three International Balloon Races and in the first Stratosphere Balloon Flight in this country. He served as safety pilot in the first successful flight of an airplane across the American continent where the pilot, Major Ira C. Eaker, Air Corps, flew solely by instruments and with no outside vision.

Born in Miami, Indiana, January 6, 1893, Colonel Kepner enlisted in the U.S. Marine Corps in November, 1909, and was discharged four years later with a "Good Conduct Medal" as a reward. When National Guard regiments were Federalized for service on the Mexican Border, he was, on June 26, 1916, commissioned a second lieutenant, 2nd Infantry, Indiana National Guard. He was promoted to 1st Lieutenant on November 9, 1916. He was appointed a second lieutenant of Cavalry in the Regular Army on June 14, 1917, and promoted to 1st Lieutenant on the same date.

Transferred to the 4th Infantry on September 11, 1917, he served with his regiment in France in the Aisne Offensive, Champaign-Marne Defensive, Aisne-Marne Offensive, Chateau-Thierry Sector, St. Mihiel Offensive and the Meuse-Argonne Offensive. On October 5-6, 1918, near Cunel, France, while in command of a battalion, Colonel Kepner personally led one company of his command in an attack on a woods occupied by a company of German machine gunners. He was the first man to enter the woods and later, when

part of the attacking company was held up by flanking machine-gun fire, he with a patrol of three men encircled this machine gun, and after a hand to hand fight put the gun out of action.

After the Armistice, Colonel Kepner served as Operations Officer, 4th Infantry, at Plaidt, Germany, for six months, and as Executive Officer, Headquarters troops, Coblenz, Germany, for five months.

Colonel Kepner started his career in the Air Corps in October, 1920, when he was detailed as a student to take lighter-than-air training at the Army Balloon School at Ross Field, Arcadia, Calif. He graduated therefrom on April 25, 1921, and was rated a Balloon Observer, May 9, 1921.

After commanding the 1st Balloon Company at Ross Field from April 26 to May 12, 1921, he was transferred to Camp Benning, Ga., where he commanded the 32nd Balloon Company from June 7th until the following November, when this Balloon Company was placed on inactive status. He was then transferred to Langley Field, Va., where he commanded the Airship School Detachment and was a student at the Airship School until the completion of his airship training in June, 1922. He was rated as "Airship Pilot" on June 22nd.

Transferred to Aberdeen Proving Ground, Md., Colonel Kepner commanded the 18th Airship Company until March, 1923, and performed the additional duty as Commanding Officer of Air Corps troops at that station to November 15, 1922. During the night of July 27-28, 1922, he made a cross country flight to New York City and return in the Airship C-2.

On March 5, 1923, Colonel Kepner reported at the Naval Airship Station at Lakehurst, N.J., for duty as student to pursue the rigid airship course. During the course of this training he participated in flights aboard the airships SHENANDOAH and LOS ANGELES. In addition, he pursued the regular navigation course, and he served as assistant navigator on the airship LOS ANGELES on two flights to the Island of Bermuda. In all, he completed 340 hours of flying on rigid airships.

In August, 1925, upon the completion of his ground, flying and navigation instruction at the Lakehurst Naval Air Station, Colonel Kepner was transferred to Brooks Field, Texas.

He was stationed at that Field until March 31, 1926, and was then transferred to Scott Field, Belleville, Ill., where he was Post Exchange Officer to August 4, 1926; Commanding Officer of the 9th Airship Company, in addition to various other duties, to July 18, 1927;

and thereafter, until November 1, 1928, Assistant Commandant of the Balloon and Airship School and Executive Officer of Scott Field. During the maneuvers in Texas in 1927, he was a member of two airship crews, and during the summers of 1927 and 1928 he was test pilot and commander of the Air Corps semi-rigid airship RS-1.

In the National Elimination Balloon Race in 1927, which started from Akron, Ohio, Colonel Kepner, with Lieut. Wm. O. Eareckson as his aide, finished in third place among a field of 15 contestants and traveling a distance given officially as 595 miles, landing at Biddeford, Maine. Entitled to represent the United States in the Gordon-Bennett International Balloon Race, held September 10, 1927, at Detroit, Mich., the Army team of Kepner and Eareckson finished tenth in a field of 15 contestants. Better times, however, were ahead of these two aeronauts in the following year, for in the National Elimination Balloon Race, which started from Pittsburgh, Pa., on May 30th, Army Entry No. 1, which they piloted, finished in first place, which again entitled them to represent the United States in the Gordon-Bennett International Balloon Race, held at Detroit, Mich., on June 30th. In competition with eleven other entrants, they finished in first place, covering a distance of 460.9 miles and landing near Kenbridge, Va.

Starting on November 3, 1928, Colonel Kepner pursued the special course in Airplane Observation at the Advance Flying School at Kelly Field, Texas, and graduated on February 28, 1929. He was then assigned to duty at the Materiel Division, Wright Field, Dayton, Ohio, as Chief of the Lighter-than-Air Branch of the Experimental Engineering Section.

Colonel Kepner, for the third consecutive year, was a contestant in the International Balloon Race, which started from St. Louis, Mo., September 28, 1929. With Captain James F. Powell as his aide, he missed being a winner for the second time by a matter of three miles and finished in second place.

Relieved from duty at Wright Field on May 19, 1930, Colonel Kepner was on detached service at Lakehurst, N.J., and at Langley Field, Va., with the 19th Airship Company until August 21, 1930, and was then assigned to station at March Field, Riverside, Calif., where he was a student at the Primary Flying School and commanded the 9th Bombardment Squadron. Upon the completion of his primary flying training, October 20, 1931, he was transferred to Kelly Field, Texas, for advanced training, which he completed on February 26, 1932, on which date he was rated as "Airplane Pilot." He then was again assigned to Wright

Field, Ohio, this time for duty in the Procurement Section of the Materiel Division. In June, 1932, he was appointed Chief of the Purchase Branch of the Materiel Division, and he occupied this position until August, 1935.

In the Gordon-Bennett International Balloon Race, which was held at Chicago in September, 1933, Colonel Kepner served as Chief of Operations on the Contest Committee.

For a period of two months during the summer of 1934, he was on detached service at Rapid City, S.D., in connection with the National Geographic Society-Army Air Corps Stratosphere Flight. On July 28th of that year, accompanied by Captains Albert W. Stevens and Orvil A. Anderson, he reached an altitude of 60,613 feet in the stratosphere balloon, when a tear in the balloon fabric necessitated a descent. After the balloon virtually parachuted down to an altitude somewhat below 4,000 feet, it was considered that the rate of descent was too rapid for the personal safety of the aeronauts, and they jumped from the gondola with their parachutes. This daring venture into the regions of the upper air was considered such an extraordinary achievement that all three of these Air Corps officers were awarded the Distinguished Flying Cross.

From August, 1935, to June, 1936, Colonel Kepner was a student at the Air Corps Tactical School at Maxwell Field, Ala., and, following his graduation, he was a student for another year at the Command and General Staff School at Fort Leavenworth, Kansas, from which he graduated in June, 1937. He is now under orders for duty with the GHQ Air Force at Langley Field, Va.

From June 3 to 7, 1936, Colonel Kepner participated in a novel flight across the American continent from Mitchel Field N.Y., to Los Angeles, Calif. Piloting a P-12 Pursuit plane, he escorted Major Ira C. Eaker, Air Corps, who also piloted a P-12 but who, on the trip of 2600 miles of airway, relied solely on the instruments in the plane, without any outside vision, to guide him to his destination. By easy stages, owing to the limited gasoline supply of the small Pursuit planes, the two officers completed the long trip without incident, Major Eaker seated in the hooded cockpit of his plane and Colonel Kepner serving as a convoy to avert any mishaps. There were several times when the escort plane was forced to stay behind the "blind" ship, because of poor visibility, thus placing reliance on the "blind" ship to lead the way.

Colonel Kepner received his promotion to Captain on July 1, 1930; to Major, October 1, 1930, and to Lieut. Colonel (temp.) on June 16, 1936.

LIEUT. COLONEL WILLIAM C. OCKER

Lieut. Colonel William C. Ocker, one of the oldest pilots in point of service in the Army Air Corps, and who was considered one of its most expert fliers, was born in Philadelphia, Pa., June 18, 1880, and was educated in the public schools of that city. Entering the military service, June 25, 1898, he served in the Spanish-American War and the Philippine Insurrection.

Up to January 31, 1899, he was with Battery G, 1st Artillery. Thereafter, and until September, 1912, he was a Cavalryman, serving an enlistment each with Troop L, 5th Cavalry; Troop C, 2nd Cavalry; Troop G, 13th Cavalry, and Troop M, 7th Cavalry.

When he reenlisted on September 24, 1912, he cast his lot with the Signal Corps, joined the Aviation Section of that branch of the service, and has been connected with Army aviation ever since. During his enlisted service with the Aviation Section, Signal Corps, he held successively the grades of Corporal, Sergeant, and Sergeant, 1st Class.

It was not long before he became an expert aviation mechanic as well as a proficient pilot of many different types of airplanes. He qualified for a pilot's license of the Aero Club of America in the year 1914, while holding the grade of Corporal, under circumstances which were quite interesting. During the time the Signal Corps Aviation School was in operation at North Island, San Diego, Calif., it occupied one end of the flying field thereat, while a flying school operated by the Curtiss Company was located at the other end. Colonel Ocker was such a devoted aviation enthusiast that, after he finished his day's work at the Signal Corps Aviation School, he was wont to repair to the other end of North Island to make himself as useful as possible at the Curtiss School in his capacity as aviation mechanic. So appreciative were the authorities of that School of the valuable assistance he rendered that one of their flying instructors, Mr. T.C. Macaulay, a pioneer aviator, who served as a Major in the Air Service during the World War, undertook to teach him to fly. Colonel Ocker proved to be an apt pupil, indeed, and showed exceptional flying skill when he took the test for his pilot's license. During his stay at the San Diego Aviation School, he acted as instructor in charge of training and himself supervised the training of officers from the time they started flying until they completed their tests for the rating of Junior Military Aviator.

In 1916, Colonel Ocker came to Washington with a Glenn L. Martin tractor plane for the purpose of demonstrating the Macy stabilizer. The late Brigadier

General William Mitchell, then a Major in the Signal Corps, verbally instructed Colonel Ocker (then a Sergeant) to fly over the site of what is now the old Bolling Field to report his opinion on the suitability thereof as a flying field for the Nation's Capital. This flight was made on December 16th of that year.

Shortly thereafter, on January 11, 1917, Colonel Ocker accepted a commission in the Aviation Section, Signal Corps Reserve. He was the first to receive a Reserve commission in that branch of the service and the first reserve officer to be called to active duty.

Aside from his skill as an airplane pilot, Colonel Ocker excelled as a rifle and pistol shot, and he has in his possession two gold medals for victories achieved at the National Rifle and Pistol Matches.

Colonel Ocker was probably one of the first pilots to become interested in the Turn Indicator. It is believed that he tested the original Turn Indicator for Dr. Elmer Sperry, the inventor, and when the Bank and Turn instrument was brought out, he was very much enthused over it. The original intent of these instruments was to improve technical flying ability by showing pilots when smooth turns and banks were being made.

It was after Colonel Ocker realized the fallibility of the human senses as a true barometer of the actions of an airplane in flight, when the vision of the pilot was cut off by fog or other weather conditions, that he set out to convince pilots that their "feel of the ship" was largely a myth. He designed a small box with a bank and turn indicator and other instruments for use in connection with a revolving chair. This training device proved without doubt that man-made instruments are more reliable than the human mechanism in flight.

It was during the year 1926 that Col. Ocker and Major David A. Myers, Medical Corps, Flight Surgeon, conducted certain experiments and research work which led to the introduction of instrument flying instruction at the Air Corps Training Center. It had been firmly established that individuals who were blind-folded, placed in a revolving chair and rotated for a few turns, invariably replied after the chair was gently stopped that they had started to turn in the opposite direction of prior motion. The tendency of an individual's senses to play him false in a situation of this kind is the result of induced vertigo.

Major Myers gave this induced vertigo test to Colonel Ocker to ascertain what the mental reactions of an old-time pilot would be when he discovered he could not tell whether he was turning or sitting still. Following the test, he disappeared without comment of any kind, but soon returned with a view box which he carried

in his hand. This was the box with the bank and turn indicator, previously mentioned. A very useful gadget in this view box was a flashlight bulb. The revolving chair test was repeated in all combinations of rotation, using the unlighted box to cut out the light and thus remove sight from the trinity of equilibrium senses.

There was the usual induced vertigo, with the usual inability to tell correctly which way his body was turning. The gyroscope was then started and the Bank and Turn Indicator put in action. The flashlight bulb was turned on and the tests repeated. This time every answer was correct as to direction of motion, stopping and starting. Even the confusion of reversals was absent. The sensations were felt the same as before, but by giving the answer shown by the pointer on the Bank and Turn Indicator instead of the answer prompted by his senses, it was found impossible to confuse him. This demonstration started the research into Blind Flying. It was immediately recognized that here was the answer to the inability of pilots to do blind flying without a visual reference to gravity.

By lighting the box, the equilibrium trinity of senses was restored to a coordinated action. Merely restoring sight to the equilibrium sense is not enough, however. There must be something within the pilot's range of vision that will act as a vertigo stopper and tell him what position his ship is in with relation to the earth; in other words, allow the pilot mentally to visualize "where is the ground." The hand on the Bank and Turn Indicator will accurately show motion in either direction, right or left, and will come to a dead center and remain there when there is no rotation.

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The value of the Ocker-Myers view box became generally recognized as the only means available of instructing pilots and prospective pilots while on the ground in the sensations they would ex-

perience and the reactions they would have if they attempted to do blind flying without an artificial horizon, which term means any instrument or combination of instruments that will quickly, easily and reliably give the pilot information that he may mentally visualize in terms of where is the ground.

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In his various demonstrations and experiments in connection with "Blind" or instrument flying, Colonel Ocker had a most valuable ally in Lieut. Carl J. Crane, Air Corps, and they are the joint authors of the book published in 1932, under the title "Blind Flight in Theory and Practice."

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Returning to the spot where for a number of years before the War he served as an enlisted man in the Aviation Section, Signal Corps - Rockwell Field, San Diego, Calif. - Colonel Ocker, in addition to performing various other duties, served as meteorological officer, signal officer, radio officer and information officer until January 2, 1926, when he was transferred to Crissy Field, Presidio of San Francisco, Calif. At this post, also, his duties were of a varied character, and at various times he commanded the post and the 91st Observation Squadron until July 16, 1929. He was then assigned to Brooks Field, Texas, where he commanded the 46th School Squadron until July, 1930.

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TEST FLIGHTS OF SUB-STRATOSPHERE PLANE

A recent announcement of Hon. Harry H. Woodring, Secretary of War, was to the effect that flight tests have begun at Wright Field, Dayton, Ohio, on the Army's new sub-stratosphere plane, the Lockheed XC-35. The plane, which successfully completed its transfer flight from Los Angeles, Calif., to Dayton, has passed its ground technical inspection and made its initial performance flights on August 5th.

Reports from Wright Field on the early flights indicate that the plane will be a satisfactory flying laboratory in which to accomplish the purpose of its purchase, namely, experiments on sealed, pressure cabins, high altitude apparatus, and air medical tests on human reactions in the sub-stratosphere.

The plane itself is not novel, save for its sealed, pressure cabin, supercharged engines and instruments. From an exterior view it is very similar to the Lockheed Electra now in use on several commercial airlines. Its principal experimental features are its cabin, which is designed and equipped to permit maintaining sea level pressures and oxygen content at high altitudes, and the many instruments it carries to facilitate physiological and psychological tests on personnel and technical tests of materiel in rarified atmospheres.

Aside from the military value expected from these tests, which are of prime importance now that planes are designed to fight at high altitudes, it is believed that the data procured should be of great importance to civil airlines, since the tests will go hand in hand with the experiments now being conducted commercially on "over-weather" flying.

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JAPANESE OFFICERS VISIT KELLY FIELD

Kelly Field received a visit recently from four Japanese Army officers and one civilian engineer who are now on a tour of flying fields in this country. The party, headed by Colonel J. Okada, included Major T. Kawashima, Major Tomojiro Honda, Captain K. Ikeda and Engineer W. Kuboyama.

The Japanese officers were particularly interested in American methods of periodic inspection of aircraft and engines. They also exhibited considerable interest in Kelly Field's new miniature range building, which had been completed a short time prior to their arrival. They were entertained during their 3-hour visit by Colonel E.A. Lohman, Assistant Commandant, and Major Isaiah Davies, Secretary of the Advanced Flying School, and were guests at luncheon at the Kelly Field Officers' Club.

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A recent announcement of Hon. Harry H. Woodring, Secretary of War, was to the effect that flight tests have begun at Wright Field, Dayton, Ohio, on the Army's new sub-stratosphere plane, the Lockheed XC-35. The plane, which successfully completed its transfer flight from Los Angeles, Calif., to Dayton, has passed its ground technical inspection and made its initial performance flights on August 5th.

Reports from Wright Field on the early flights indicate that the plane will be a satisfactory flying laboratory in which to accomplish the purpose of its purchase, namely, experiments on sealed, pressure cabins, high altitude apparatus, and air medical tests on human reactions in the sub-stratosphere.

The plane itself is not novel, save for its sealed, pressure cabin, supercharged engines and instruments. From an exterior view it is very similar to the Lockheed Electra now in use on several commercial airlines. Its principal experimental features are its cabin, which is designed and equipped to permit maintaining sea level pressures and oxygen content at high altitudes, and the many instruments it carries to facilitate physiological and psychological tests on personnel and technical tests of materiel in rarified atmospheres.

Aside from the military value expected from these tests, which are of prime importance now that planes are designed to fight at high altitudes, it is believed that the data procured should be of great importance to civil airlines, since the tests will go hand in hand with the experiments now being conducted commercially on "over-weather" flying.

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JAPANESE OFFICERS VISIT KELLY FIELD

Kelly Field received a visit recently from four Japanese Army officers and one civilian engineer who are now on a tour of flying fields in this country. The party, headed by Colonel J. Okada, included Major T. Kawashima, Major Tomojiro Honda, Captain K. Ikeda and Engineer W. Kuboyama.

The Japanese officers were particularly interested in American methods of periodic inspection of aircraft and engines. They also exhibited considerable interest in Kelly Field's new miniature range building, which had been completed a short time prior to their arrival. They were entertained during their 3-hour visit by Colonel E.A. Lohman, Assistant Commandant, and Major Isaiah Davies, Secretary of the Advanced Flying School, and were guests at luncheon at the Kelly Field Officers' Club.

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Langley Field, Va., August 4th.

49th Bombardment Squadron: A warm welcome is extended to Lieut. Irving R. Selby, who recently became a member of this organization. He came here from Albrook Field, Canal Zone, where he was on duty with the 44th Observation Squadron. Lieut. Selby was assigned the duties of Squadron Adjutant, Mess and Supply Officer.

Enlisted men of this organization who were promoted during the past two weeks were Corporals Aubrey C. Moore and James E. Sands to 1st Cl., and Private, 1st Class, Joseph I. Little to Corporal.

Delivery of another Boeing Bomber, Y1B-17, for this organization was made on July 3rd. Captain Archibald Y. Smith, Lieuts. Robert F. Travis, Carlos J. Cochrane and the enlisted crew of Staff Sergeants Troy V. Martin, Henry P. Hansen and Pvt. 1st Cl. Russell E. Junior, ferried the plane from Seattle, Wash., without incident. This Squadron now has three of these Bombers, and expects delivery of the fourth in August.

96th Bombardment Squadron: Lieuts. William A. Matheny and Eugene P. Mussett, who recently completed the Navigation School course of instruction, returned to duty with this organization. Captain Frank H. Robinson, a recent graduate of the Air Corps Tactical School, reported for duty and was assigned as Squadron Operations Officer.

Two Reserve officers, Lieuts. Douglass and Wassell, just completed 14 days' active duty training with this Squadron.

Major Harold L. George with Major Harvey H. Holland and Captain Edwin R. McReynolds of Headquarters and Headquarters Squadron, 2nd Bombardment Group, and enlisted crew consisting of Staff Sgts. Leonard A. Baker, William J. Duffy and Corporal William A. Withers, departed July 21st for Seattle, Wash., to ferry back our fourth Y1B-17 airplane.

Hq. and Hq. Squadron, 2nd Bombardment Group: During the past two weeks, the following-named men of this organization were promoted to the grades indicated: Private, 1st Cl. Britton C. Vick to Corporal; Privates Matthew M. Chittum, Neal E. Emery, Archie R. Jester and Arvine A. Green to Private 1st Class.

21st Reconnaissance Squadron: It is with much regret that the 21st Squadron records the first accident in its existence. On the morning of July 22nd, Private, 1st Class, Clarence A. Hurd was struck by a revolving propeller. While the engines were running Pvt. Hurd apparently started toward the front of the ship, going under the wing and between the motors. In doing this he was struck by the left propeller. He was rushed to the Post Hospital, where an emergency operation was performed. We are advised that although in a serious condition he is holding his own.

The Squadron gained two new members in the persons of Privates Claude M. Scales and Myron A. Drozdiak, and welcomes them in our midst.

The organization regrets the loss of Staff Sgt. Luther W. Fagan, who was transferred to the 80th Service Squadron at Albrook Field, Canal Zone, on July 17th.

33rd Pursuit Squadron:

We write this letter under a pyramidal tent encamped at Virginia Beach, home of the Virginia National Guard. The 8th Pursuit Group, minus the 37th Attack Squadron, moved in on Monday, July 26th, and will remain until August 7th. The daily program consists of aerial and ground gunnery, formation, interception problem and flying for the news reel camera.

Two brand new second lieutenants of the Air Reserve reported in at the 33rd, Lieuts. M.L. Hardeman and J.R. Alison. We welcome them into the Chain of Command and feel sure both will make very capable airplane commanders.

35th Pursuit Squadron: On July 13th, two Air Reserve officers reported to the Squadron for two weeks of active training, namely, Major H.R. Bazley and Captain S.A. Morgan. After transition time in a faithful BT-2, they were given a PB-2A for the rest of their training, which consisted of local flying, ground gunnery and familiarization cross-countries.

Notification was received of the assignment of two officers to the 35th, 1st Lieut. W.H. Wise and 2nd Lieut. Sprague. The latter graduated from the Training Center last June. They are expected to report soon, and will bring the total officer personnel to thirteen.

The 8th Pursuit Group is thinking seriously of moving its headquarters to 'Langley Field No. 2,' listed on the map as the National Guard Airport at Virginia Beach, Va. Early Monday morning, July 26th, the Group was scheduled to depart, en masse, for a two-week maneuver, the third in the last five months. Gunnery is again the main item on the training schedule. Our firing isn't so bad, but one thing is certain - the Group can certainly throw up a neat camp.

36th Pursuit Squadron: Effective July 14th, Captain Ned Schramm assumed command of the 36th, relieving Captain W.L. Wheeler, who was transferred to Headquarters and Headquarters Squadron. Captain Wheeler was the remaining member of the "Wheeler combination, C.D. and W.L." upon the transfer of Captain C.D. Wheeler to Panama a few months ago. At the same time, Captain John E. Bodle was assigned to this Squadron to act as flight commander. He has reorganized the flight positions, and an extensive training program is well under way under his guidance.

Lieuts. H.C. Godman and A. Watson, recent graduates of the Training Center, are now assigned to the 36th. We are glad to welcome both of these pilots and are satisfied that they will prove valuable assets to the organization.

First Lieut. L.L.H. Kunish has been assigned to this organization upon completion of a course of studies at Chanute Field. The training he has received at Chanute Field, combined with the several years' tactical training he has received, will add materially to the efficiency of the outfit.

37th Attack Squadron: Probably the two men most responsible for the splendid reputation of the 37th Attack Squadron are Captain Ned

Schramm and Master Sergeant U.S. Nero, two men who put all their energy and eagerness into the Squadron work and for whom the other members would do anything. Needless to say, it was a sad day for all members of the organization when they were transferred to the 36th Pursuit Squadron, but with Major Goldsborough now in command, and with Master Sergeant Hawley in the place of Master Sergeant Nero, the organization is regaining its old spirit and will carry on the good work.

The 37th is carrying on its tactical training as best it can without the facilities of a regular Attack Range. At present the combat crews are looking forward to a very interesting and instructive series of problems with the Chemical Warfare School at Edgewood Arsenal and also to working interception problems with the Pursuit Squadrons now on Maneuvers at Virginia Beach National Guard Airport.

Hq. and Ho. Squadron, 8th Pursuit Group: The Eighth Pursuit Group is back at Virginia Beach, Va. again, after being at Langley Field only 17 days since the last maneuvers there. The Group left Langley Field at 5:00 a.m., July 26th, and arrived at Virginia Beach at 8:00 a.m.

The weather has been rather bad since the very first day here, although it hasn't slowed down operations very much. The Group was scheduled to return to Langley Field on Thursday, August 5th. Whether or not the Group will return to Virginia Beach on maneuvers again this year is not determined.

On July 28th, Major Warren R. Carter, former Group Operations Officer, departed on leave of absence for 20 days, upon the termination of which he will report for duty as a student at the Army War College, Washington, D.C. The Major won the friendship and respect of everyone in the Group and we regret seeing him leave our organization.

Major A.E. Waller recently returned from the Command and General Staff School and is now Group Operations Officer. He is an old-timer in the Group and we welcome his return.

Maxwell Field, Ala., August 7th.

Hqs. and Hqs. Squadron, A.C. Tactical School: Major E.E. Hildreth, our regularly assigned Squadron Commander, just returned from his leave of absence which he spent at Dennisport, Mass., and assumed command of the Squadron, relieving Captain John F. McBlain, who was in temporary command during his absence. The Squadron welcomes the Major back, and we are glad to hear that he had a most enjoyable vacation in the east.

Staff Sergeant Walker received "hurry up orders" for detail to the Panama Canal Zone, for a tour of foreign service, sailing on the Transport "Chateau Thierry" from Charleston, S.C., on August 27th, as replacement for Staff Sergeant Paige, who has been returned to this organization for duty. Sergeant Walker was on duty at the Bombing and Gunnery Base at Valparaiso, Fla., and, therefore, Sergeant Paige drew his assignment.

Master Sergeant Lessels was assigned to the Squadron on July 26th, having just returned from a tour of foreign service in the Hawaiian

Department as replacement for Master Sergeant Lundy, who was transferred to the Air Corps detachment at Pope Field, Fort Bragg, N.C., on May 1, 1937. Sergeant Lessels is on a 60-day delay enroute and will report for duty in September, 1937.

On July 31st, the 4th Photo Section at this station was rendered inactive and the personnel thereof, numbering 19 enlisted men, were transferred with grades and ratings to Headquarters Squadron, and are to continue on technical photographic duties. We welcome this new addition to the Squadron, as we have had the Section attached to Headquarters Squadron for some time for quarters and rations.

Staff Sgt. Lyon has also received his orders for a tour of foreign service in the Hawaiian Department, as replacement for Staff Sgt. Stieringer, who was stationed here prior to his departure for foreign service.

91st School Squadron: Organization Day.

Lake Haven was the setting for the recent Organization Day Party of this Squadron. A more desirable spot for an outing would be hard to find in this vicinity. A lake designed for swimming, fishing, etc., is surrounded by a thickly wooded section of secluded beauty. A small clearing provides room for picnics and play. Overlooking the lake is a large dance pavilion which, on occasion, serves as a banquet hall.

In the course of the day, all of these features were utilized to the straining point. From the time of the gathering of the clans shortly after noon until the final note of "Home Sweet Home," Carnival held sway. On paper, the program would look something like this: Dutch Lunch. Recreation (fishing, swimming, loafing, etc.) Fried Chicken Dinner. Dance. Actually, these were all provided in goodly amount and fashion, but with the addition of several interesting innovations.

About a half dozen or more vocal choruses sprang up as though at a singing convention. If the quality of the renditions could be judged by the amount of enthusiasm and effort expended, a certain prominent radio maestro would have to look no further to fill out his all-male amateur singing unit. Probably started in competition to the singing was what looked like a dance by the Men-from-Mars led by Buck Rodgers (Kil, to you). This soon developed into a game somewhat resembling football, called "Sock the Top-Kick or Anybody Else you Don't Like." To be eligible to play this game, one merely had to get in the center of the ring and clip or be clipped. Quite a few who played this game wondered the next day what was wrong with their underpinning.

First call for the fried chicken drew everybody inside, where that much appreciated Southern dish was served in style and eaten with relish. At this point in the program, the waitresses also came in for their share of attention. If "Man Bites Dog" is news, then "Biscuit-shooter Shot with Biscuits" rates the front page.

In the evening, everybody returned, bringing wives and sweethearts to enjoy dancing to the music of Jimmy Hamm's Swing Band. This rounded out a day that will be remembered not only as

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the first but the best 91st School Squadron Organization Day. A word of praise is due the Committee and a Medal for Valor should be awarded the invited guests from other outfits who most certainly faced unknown dangers but nevertheless escaped unharmed.

Luke Field, T.H., July 16th.

4th Observation Squadron: The Squadron looked forward to the two weeks' training period at Waimanalo, scheduled to start about August 9th. While at Waimanalo the Squadron is to fire the record course for small arms, including pistol, ground and anti-aircraft machine guns. We are confident that our qualifications with all three arms will rate very high in the Group.

50th Observation Squadron: At 0900 hours, 12 July 1937, Flights A, B and C, of this Squadron, consisting of various types of aircraft, seven in number, and accompanied by the Observation Amphibian, with 8 officers and 32 enlisted men, led by Lieut. Stranathan, with Colonel Harmon as a guest and fishing companion, took off on a "pioneering expedition" to Morse Field, Hawaii.

Upon arrival at our destination, and after a light lunch, seasoned with much dust, tent-pitching was in order. Assisted(?) by a 45-mile gale, 8 pyramidal and 6 wall tents were erected by supper time (8:00 p.m.) The rest of them, three in number, were left for breakfast. After that everybody got down to the serious side of hunting, fishing and "bull sessions."

Tactical training began in earnest on the 14th, with three reconnaissance patrols and a photographic mission, two ships going "over the top" of Mauna Loa. The next morning, Thursday, pictures were taken of a proposed landing site at Kilauea, two planes reconnoitering the slopes of Mauna Kea. A daily supply run was made to Hilo with a B-4A Cargo plane, and a C-33 was available for supply runs back to Luke Field whenever necessary.

Due to the high winds and their ability to collect the minute particles of terra firma and effectively but annoyingly deposit them in everybody's eyes, ears, nose and throat, not to mention beds, the boys have all agreed upon a theme song that is very appropriate to the tune of "Let's Call the Whole Thing Off," or, as one of our French Chefs (Swacick) would work it, "Let's Go Home." However, we think that if orders to this effect were given there would be no end of weeping and wailing. As the old Army saying goes - "As long as a soldier is griping, he is happy, but when he is quiet he is in bad shape."

The hunting and fishing club seems to have lost its magic powers in these southern waters. Back home they tell us of this one they caught and about that one that got away, but they seem to have lost that power over these aquatic denizens of the deep, or else the under-water grapevine hasn't had time to send the message to the effect that these great sportsmen have arrived in these parts, and would the fish hereabouts kindly show these visitors some of the old southern hospitality and do everything possible to make these gentlemen's stay here a very happy one. The goats probably have taken to higher ground and the wild pigeons seem to be

very safe, although one was killed by mistake. He was a very old fellow and would have gotten away if he could have cleared the cliff, but the old man's wings had carried him a long distance and were getting very poor in their lifting ability. Therefore, he ran into the side of the cliff and broke his neck, so they had to shoot him. And the boys came home with a long story about their expert shooting ability (they had to use a box of shells to kill the old bird of the cliffs). One well known buck sergeant, who has the knack of washing the wrong mess kit (which may be from bad eyesight), while stalking the wildest of wild cats, turned loose a barrage that made the Battle of the Marne sound like a Honolulu Shooting Gallery. The only casualty was the buck, who took an awful beating before he could get that contraption (he calls it a shotgun) turned off.

Colonel Harmon, the True Disciple of Isaac Walton, who came to Morse Field to spend at least two days following in the footsteps of his illustrious leader, decided that no fish were found to be feeding on the ever present dust and returned to Luke Field at the first opportunity.

We claim that our operations in the field have been a success up to the present writing, but we wonder what we would do without Mr. Gibson, of the Lighthouse Service. His transportation, his coal-oil, telephone service, and continual good advice and suggestions make that smiling, sun-and-wind tanned face always a welcome sight.

Upon evacuation of the camp everyone will welcome the chance to take a bath in water that is possible to stand under. The water system here is laid on the ground, under the direct supervision of Old Sol, and during the day the water is too hot to bathe in.

72nd Bombardment Squadron: The Squadron welcomes Lieut. D.C. Strother, a recent arrival from the mainland. He will assume command of the Squadron during the absence of Lieut. Ruestow, who is attending the Wing Navigation School.

The Squadron was scheduled to depart July 26th for Bellows Field for gunnery, with the tentative date of return as August 7th.

26th Attack Squadron: The Squadron bade farewell to three of its short-timers at an aloha dinner in the Squadron mess hall on July 2nd. Lieut. Vernon C. Smith, who for the past two years was Squadron Adjutant, goes to the Technical School at Chanute Field, where he hopes to better himself in a technical way. His loss will be felt in the Squadron, as his administrative knowledge lent much to the smoothness of this Squadron. In Staff Sergeant Michael E. Smith, the 26th loses an excellent crew chief, and this Squadron's loss is Kelly Field's gain. Private, 1st Class, Arthur P. Coddington goes to Fort McDowell for discharge. Although Coddington has made great strides as an assistant in the radio section and, no doubt, would have been a success in his chosen line, he elected to return to civil life. Major G.A. McHenry presented each of the outgoing men with leis and wished them success. He took the opportunity to introduce

several of the newly assigned personnel, viz: Captain G.A. Acheson, who came from Mitchel Field, N.Y.; Lieut. W.C. Mills from Barksdale Field, La., and Lieut. E.W. Suarez, who recently transferred to this Squadron from Luke Field. The short-timers were scheduled to sail on the July 3rd Transport.

Hawaiian Air Depot, Luke Field, T.H., July 13.

Gone but not forgotten are the enlisted men who used to work side by side with the Civil Service employees in this Depot. A representative basket ball team from the Depot is now negotiating entrance into the Luke Field Inter-Squadron League. In this manner not only participants but also rooters will be able to renew and maintain friendships made while in a more serious vein.

Several P-26A planes arrived on the transport on July 11th, the first consignment of this particular breed to the Islands. No doubt excitement will run high up at Wheeler when these new speedsters first take the air. Up until now, a P-12E has been the last word - by necessity, not by choice.

Albrook Field, Panama Canal Zone.

On Friday, July 9th, four Douglas Transports, piloted by Major J.E. Duke, Commanding; Captain R.W.C. Wimsatt; Lieuts. W.R. Rawlings, A.L. Moore, E.G. Rose, M.H. Warren and Tech. Sgt. C. Jackson, took off from Albrook Field for Randolph Field, Texas. The transports had arrived from the States on July 7th, and the air-men were honored by a reception on the evening of their arrival.

San Antonio Air Depot, Texas, August 5th.

Among the recent visitors at the Depot on cross-country flights were Colonel A.G. Fisher, Commanding Officer of Scott Field, with Major Neal Creighton and Lieuts. Wm. B. Bell and M.E. Thompson, of that field, August 3-4. Colonel Fisher, who commanded this Depot up to June, 1934, was busy greeting his many friends in this vicinity. Captain D.J. Ellinger, of Chanute Field, Ill., also paid a visit, by air, to old friends here on July 21st. He had been on duty at this Depot up to April of this year.

Lieut. Colonel B.L. Wilson, M.C., of March Field, was on temporary duty at this Depot July 21-24, supervising the construction of an emergency first-aid kit container.

Lieut. Colonel Morris Berman, Executive Officer, was relieved from assignment and duty at the Depot August 4th, departing with his family by automobile for his new station, Wright Field, Ohio, where he will be on duty in the Office of the Chief of the Materiel Division. Lieut. Col. and Mrs. Berman, their son and two daughters have been at this station since March 14, 1934, and had previously been stationed at various other Air Corps activities in this vicinity. Their many friends in this area regret their departure and wish them all good fortune at their new station.

Major John J. Clark, Depot Supply Officer, made an inter-depot transport service trip to the Middletown Air Depot, Pa., and return, in a C-33 Transport, July 26 to 28.

Lieuts. Max H. Warren, A.C., and L.P. Kleinoeder and J. Will Campbell, Air Reserve, of the 3rd Transport Squadron, took off August 4th in an O-19B, an O-19C and a C-27C on a ferry flight to Marshall Field, Fort Riley, Kansas, leaving the O-19's there and returning the following day in the C-27C.

Lieut. Thomas B. McDonald, who graduated from the Air Corps Engineering School, Wright Field, on July 31st, was assigned to duty at this Depot and will report upon the expiration of his month's leave of absence.

Lieut. L.P. Kleinoeder ferried an engine and mechanics to Atlantic, Iowa, for installation of the engine in a March Field C-24 airplane at that point.

The personnel of this Depot were greatly shocked at the sudden death from heart trouble on August 4th of an old friend among the civilian employees, Arleigh C. Thomas, chauffeur, who had been employed at this Depot since March, 1919, and who had previously served at Fort Sam Houston since May, 1916. His efficiency, devotion to duty and his genial friendly character and spirit of helpfulness at all times won him the highest esteem of his superiors and associates and made him the loved and respected friend of everyone at the Depot. Surviving him are his widow and one son, residing in San Antonio.

The 3rd Transport Squadron has been kept very busy on well-filled schedules, demonstrating the usefulness of the transport organization in the Air Corps. Its two C-33 transports were again loaned to the GHQ Air Force for transporting personnel to and from the recent Joint Coastal Air Defense Exercise in California, and were flown to Langley Field on July 30th, with Lieut. Tracy K. Dorsett, Air Res., Pilot; Staff Sergeant Blair, co-pilot, and Corporal Hansen, mechanic, as the crew of one; and Tech. Sgt. Jackson, pilot; Master Sergeant C.P. Smith, co-pilot, and Staff Sergeant Simcoe, mechanic, as the crew of the other. A three-day schedule from this Depot to the Middletown Air Depot and return has been maintained fairly well the last few months with the C-33's. The old reliable C-27 Bellancas have the record on round trips to and from the Fairfield Air Depot, Staff Sgt. Tyler leaving this station May 9th at 7:00 a.m., and returning May 10th at 6:30 p.m., with a total flying time of 8:35. Lieut. Dorsett made a return trip from the Middletown Air Depot on June 22nd, leaving there at 7:45 a.m., and returning here at 10:45 p.m., total flying time 12:55. The enlisted pilots of the Squadron are piling up flying time, Tech. Sgt. Jackson and Staff Sgt. Blair leading with more than 80 hours to their credit for July.

Clark Field, Pampanga, P.I., July 9th.

With the arrival of the July Transport we welcomed two new officers, 1st Lieut. C.H. Anderson from Selfridge Field, and 2nd Lieut. E.W. Maschmeyer, Air Reserve, from Mitchel Field. Major Lloyd Barnett, our Commanding Officer, recently returned from Japan after six weeks of temporary duty with the Attache as Aeronautical Inspector. Lieut. and Mrs. S.W. Cheyney have just returned from a two weeks' trip to the Southern Islands, V-7444, A.C.

traveling extensively by motor car in Mindanao. Lieut. and Mrs. L.R. Brownfield arrived on the May Transport and last week announced the birth of a new daughter.

Lieut. Canterbury is still operating his amateur radio, call KAICF, and handles considerable traffic with the States for personnel of the field.

The rainy season has now started with a vengeance, and with it, the annual bowling season. The Engineering Department won the Inter-Squadron tournament, and we are looking forward to a successful season with Fort Stotsenburg and the Philippine Department tournaments in the near future.

March Field, Calif., July 26th.

The 19th Bombardment Group celebrated a very successful and enjoyable Organization Day on July 9th. San Juan Capistrano was selected as the ideal location for the function. The facilities of the Beach Club nearby were reserved on that day for the use of the Group.

Personnel of the Group drove to the beach during the morning and found a tasty picnic lunch ready on their arrival. After everyone concerned had eaten his fill, each set about enjoying himself at his favorite sport. Swimmers chose between the Beach Club pool and the salty breakers. The officers played the enlisted men a spirited game of soft ball. Some fished from the pier, others in the surf. One of the fish hooked was so big that he pulled the unfortunate angler from the pier into the briny deep - that was his story, at least.

Late in the afternoon, an Alpine trio played for dancing at the Beach Club, and presented songs and dances of the Tyrol, to the delight of all present. At sundown, the Group dispersed, tired, happy, and looking forward to our next Organization Day.

Organization Day was more than a celebration this year, because, due to many changes in the personnel it was necessary to reorganize the Group. Lieut. Colonel Harvey S. Burwell, who recently replaced Lieut. Col. Hubert R. Harmon as Group Commander, selected Major W.S. Gravely as Group Executive. Major John K. Cannon was assigned to the 30th Squadron to take the command vacated by Major Albert F. Hegenberger, and Major Harry A. Halverson was appointed Commanding Officer of the 38th Reconnaissance Squadron vice Major Gravely.

The Group is now conducting intensive bombing practice, both individual and formation, and is well pleased with the results obtained.

Kelly Field, San Antonio, Texas, August 6th.

First Sergeant Harry Meyers, 12th Air Base Squadron, retired from active duty on July 31st after more than 30 years' service. Sergeant Meyers saw service in the Navy, Infantry, Coast Artillery and the Air Corps.

Lieut. Marshall Bonner, a recent arrival from the Hawaiian Department, was assigned to duty with the 12th Air Base Squadron.

Major Isaiah Davies reported to Kelly Field on July 8th from the Philippine Department and assumed the duties of Secretary of the Air Corps Advanced Flying School. This is Major Davies' first tour of duty in Texas.

The newly organized Kelly Field Enlisted Men's Service Club held its first dance Saturday, July 24th. Approximately 500 people attended. Tables were placed on the lawn and refreshments served by the Post Exchange. The affair was considered highly successful by all concerned, and it is hoped that it will be repeated from time to time.

Captain Clyde K. Rich departed for his new station, Maxwell Field, on August 3rd. After completing a tour of foreign service in Hawaii, he came to Brooks Field in 1929; thence to Randolph Field in 1931, and in 1934 he was assigned to Kelly Field, where he has been since that date. While at Kelly Field he has served as Chief Instructor of the Pursuit Section. He was a graduate of the Class of 1923 of the U.S. Military Academy. Captain Rich was granted leave of absence for one month before reporting to the Air Corps Tactical School for duty as student.

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WAR DEPARTMENT ORDERS Changes of Station

To Mitchel Field, N.Y.: 1st Lieuts. Edward D. Marshall, from Hawaiian Department, and P. Ernest Gabel, from Panama Canal Department, for duty with 97th Observation Squadron; 1st Lieut. Philo G. Meisenholder, from duty as student at Harvard Graduate School of Business Administration, Cambridge, Mass., for duty with 97th Observation Squadron.

To Maxwell Field, Ala.: Major Lester T. Miller, upon completion of present course of instruction at Advanced Flying School, Kelly Field, for duty with Staff and Faculty of Air Corps Tactical School.

To Hamilton Field, Calif.: 1st Lieut. John G. Armstrong, from Hawaiian Department.

Promotions

Colonel John H. Pirie (Temp.) to Colonel; Major James F. Powell (temp.) to Major, both with rank from July 1, 1937.

Orders Revoked

Assignment of 1st Lieut. Louis A. Guenther, Brooks Field, to Chanute Field, for duty as student in Airplane Maintenance Engineering Course.

Attached to Air Corps

2nd Lieut. Walter C. Conway, Coast Artillery Corps, to duty as student at Primary Flying School, Randolph Field, Texas.

Retirements

Technical Sergeant Marcus F. Moretti, 4th Air Base Squadron, March Field, July 31, 1937.

1st Sergeant Harry Meyers, 12th Air Base Squadron, Kelly Field, Texas, July 31, 1937.

Extended Active Duty for Reserve Officers
2nd Lt. David B. Lancaster, St. Pauls, N.C., to Barksdale Field, La., to July 31, 1940.

2nd Lieut. Charles Lee Hamilton, Ashdown, Ark., to Barksdale Field, La., to Aug. 14, 1940.

Relieved from Assignment to Air Corps

2nd Lieut. Alvin D. Robbins, Coast Artillery, from duty at Primary Flying School, Randolph Field, Texas, and to duty with the Coast Artillery Corps in Panama Canal Department.

Assignment of Captain Ralph E. Holmes from Kelly Field to Chanute Field, Ill., revoked.

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KEEPING FIT

Bolling Field After a slow start, the Bolling Field Baseball Team has acquired top form and is well on its way toward winning first honors in the District of Columbia, which is well represented in the baseball field. With the hearty support and cooperation of the Commanding Officer, Lt. Colonel Wm. Ord Ryan, and the post, the team has given Bolling the best season of baseball in five years.

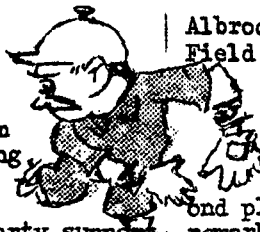
Bolling Field entered the Third Corps Area League and came out in third place, winning four and losing four against teams from Fort Myer, Va., Fort Belvoir, Va., Forts Humphreys and Washington, Md. After the Corps Area play-off, the team entered the second half of the Federal League games in the District of Columbia and came out with top honors. One more game, scheduled in the near future with the Procurement Division team, will decide the championship of the Federal League. The winning team will enter the play-off for the championship of the District of Columbia, which Bolling Field has a very good chance of capturing.

Since the beginning of the season, the boys have played forty games, including the Corps Area League, winning 23 and losing 17. Corp. W.P. Griffith has coached and managed the team with great success, and has developed a well organized squad. Pvt. Henry J. Chaplin is the star pitcher, with Pvt. Browning as a very efficient backstop. Other members of the team's pitching staff are Pvts. Zwisle, Baumgartner and Wissner. The catchers are Pvts. Griffiths and Davies.

With prospects of winning the District Championship this year, and a good squad to start the season right next year, Bolling Field has hopes of making a good showing in baseball.

Maxwell Field Headquarters and Headquarters Squadron were the proud recipients of the Post Baseball Trophy on July 23rd at a ceremony on the drill field. The squadrons were all assembled in a quadrangle on the drill field at 7:30 a.m., and upon arrival of the Post Commander and the E. & R. Officer, troops were brought to attention, and the Post Commander, Colonel Sneed, called out first the winner of the Post Tennis Trophy, who was Pvt. 1st Cl. Weese, of Hqrs. and Hqrs. Squadron, and who was awarded the coveted trophy. Next, the Squadron Baseball Team was called out and presented to the Post Commander, who made a short talk and presented the handsome trophy to the Captain of the Team, Pvt. 1st Class Davis. The Squadron is now seeking a suitable trophy case to be installed in the Squadron Recreation Room to house its trophies.

Langley Field The 21st Reconnaissance Squadron's soft ball teams (#1 and #2) have played eleven games, winning nine and losing two. We are looking forward to a very successful season.



Albrook Field The 74th Squadron, losing only one game in ten, won the Albrook Field inter-squadron basketball championship. The only game they lost was one of the two with the 19th Composite team, which finished in a tie for second place with the 80th Service Squadron. Each second place team lost three games, which is a remarkable accomplishment for the Wing team, as the Detachment only has 22 men compared with full squadrons. Interest ran high, and all games were hard fought and clean contests, ably officiated by Lieuts. Vidal, Greenbank, Eskridge and Pocock. The 74th will be presented with a trophy, signifying their championship.

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NOTES FROM THE WASHINGTON OFFICE

Major General Oscar Westover departed on August 9th for March Field, Calif.

Brigadier General Henry H. Arnold departed on August 5th for Atlanta, Ga., on temporary duty, returning on August 8th.

Two officers from Brooks Field, Texas, Major Douglas Johnston, the commanding officer, and 1st Lt. Joseph Carroll, dropped into the Chief's Office on August 2nd while on an extended navigation flight.

Captain Stewart W. Towle departed on August 2nd on leave of absence prior to reporting for duty at Maxwell Field, Ala.

Lieut. Colonel Michael F. Davis, Assistant Executive, made a navigation flight to Provincetown, Mass., on July 30th.

Major C.Y. Banfil departed August 14th on a navigation flight to Fort Ethan Allen, Vt., returning on August 17th.

Major Walter J. Reed, of Langley Field, was on temporary duty in the Chief's Office for a few weeks.

Colonel Rush B. Lincoln and Major Norman D. Brophy departed on August 16th for temporary duty at the Materiel Division, Wright Field, as did Lieut. Colonel G.E. Brower.

Major C.P. Kane, who was on temporary duty for several months in the Supply Division, following the completion of his tour of duty in the Hawaiian Department, checked out on August 17th to assume the role of student at the Army Industrial College.

Visitors at the Chief's office during the past few weeks, during the course of leaves of absence, navigation flights, temporary duty, etc., were Colonel A.H. Hopley, Majors J.B. Fowell, Martinus Stenseth, J.E. Upston, T.J. Koenig, F.M. Brady, Harlan W. Holden, Delmar H. Dunton, Captains R.W. Douglass, Jr., George W. Goddard, N.F. Twining, 1st Lieuts. B.E. Brugge and T.B. McDonald.

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