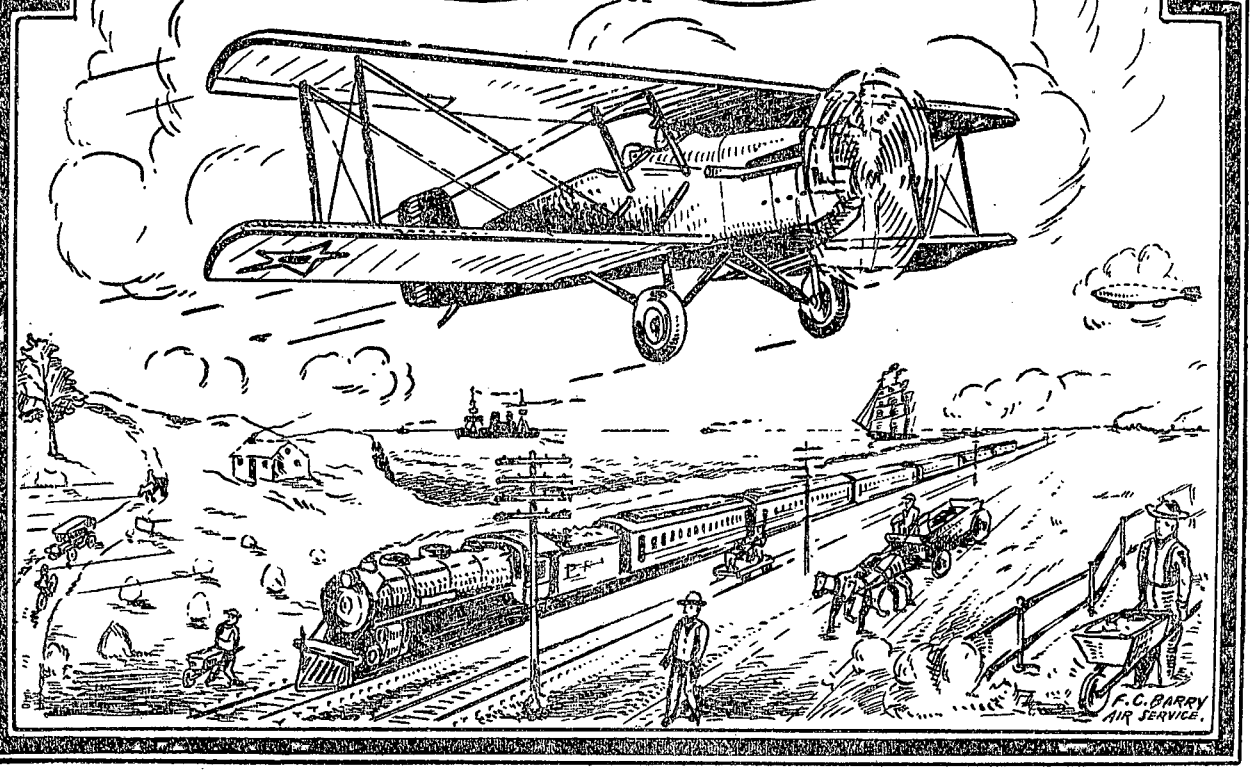
U. S. Army Air Service News Letter



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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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EXPLORING SOUTH AMERICAN JUNGLES BY AIRPLANE

By A.M. Jacobs, McCook Field Correspondent

Looking bronzed and fit from a year's work with the Alexander Hamilton Rice Expedition, which had been engaged in exploring the wilds of the Amazon River basin in Brazil where no white man had ever before penetrated, Captain A.W. Stevens, Air Service, who recently returned to McCook Field, was warmly welcomed by his many friends.

According to Captain Stevens, who acted as official aerial photographer and mapper, the experience was one of rare interest. Dr. Rice, leader of the expedition, has been for some twenty years a student of this part of South America and had already made some half a dozen journeys into it, each time venturing farther into unknown territory or covering a little different area.

On this last expedition a party of twelve sailed with Dr. Rice from New York, equipped with symbols of progress which explorers never used before - radio receiving and sending apparatus, an airplane and two aerial cameras (the K-3 and K-6). The plane was a Curtiss "Sea Gull" hydroplane, flown by Walter C. Hinton, well remembered as the pilot of the NC-4 on its Trans-Atlantic flight.

Sailing up the Amazon, the party of explorers embarked at Manaos, in this case not a mere spot on the map but their last outpost of civilization, for thereafter they were to encounter only small settlements or Indian huts. Here the "Sea Gull" was assembled. About fifty natives and Indians were hired for paddling the canoes, carrying supplies, clearing the way through jungles, cooking, and general camp labor. Supplies were collected and final preparations made for the departure into the interior. Two launches were equipped with radio.

After some delay, caused by one of those frequent South American revolutions, the start was finally made on August 20th. A small river steamer was taken up the first part of the Rio Negro, one of the great tributaries of the Amazon and so called on account of the blackness of its waters. Lieut. Hinton and Captain Stevens flew ahead of the party, making photographs and sketches of the country and waterways over which it would later pass. Each night for a time, the hydroplane returned and anchored beside the steamer. Often when flying above the black water of the Rio Negro, it was so difficult to tell the elevation of the plane above the mirror-like surface that it would come down in the steamer's wake.

At the direction of Dr. Rice, the oil and gasoline was cached at certain landing points, to be used after the steamer had gone back to Manaos and the plane would be returning alone. After the termination of steamer navigation was reached, gasoline and supplies were sent forward in light launches and later, as the party worked up from the Rio Negro into the brown waters of the Rio Branco, the launches were stopped by rocks and rapids. From then on supplies were transported by canoes, but there were stretches where it was impossible to navigate even this light craft and they had to be carried on the shoulders of the natives.

From the Rio Branco the route lay into the Uraricoera, a stream with swift, wild current and very little known. Many years ago one Brazilian went half way up this river, and two Germans had followed its course to its junction with the Rio Parima. Otherwise, except for the Rice parties, it traversed its course through the jungles unmolested by civilization save for a few native Indians who brought dugout canoes and forest products to the nearest settlement now and then. From the Uraricoera, the party went into the Parima River.

The Parima River rises in the eastern slope of a range of mountains, known as the Sierra Parimas. Several years ago Dr. Rice followed almost to its source the Orinoco River, which flows down the western slope of the Sierra Parimas, believing that if he could follow the river far enough into the heights

he would find that the two great rivers, the Orinoco and the Parima, had common headwaters. At this time, with a party of eight "civilized" Indians he made camp on an island, when suddenly a shower of arrows surprised them and they found an army of hostile Indians rushing down upon them with decided malevolence in their greeting. Dr. Rice was forced to fire upon them, first above their heads and then into their ranks to hold them off long enough to make a get-away. This incident tended to break up the expedition at that time, for to have continued upon a rapidly diminishing river, lined with dense jungle, in which hostile savages lurked, would have been but a rash form of suicide. With a larger force and more modern equipment, however, Dr. Rice had come back hoping to reach the same goal, but this time approaching by way of the Parima River from the East.

The plane progressed up the Parima River to where a fork, known as the Aracasa, flows into it. Beyond this it was impassable because of a series of steep canons and rapids. To this point Charles Bull, a former Harvard athlete, with the aid of four Indians transported with great labor 70 gallons of gasoline. Forty of these precious gallons were put in the gas tank of the plane for the purpose of making the flight to the Parima headwaters. The formidable canon with its raging waters was found to extend four unbroken miles, the occupants of the plane being the first white men in history to gaze upon this bit of earth. The highest landing of the entire trip was made above these rapids, as the progress from Manaos had been constantly into higher country and the river here was more than 1,000 feet above sea level. The flight was continued 120 miles farther until the stream became a mere creek. Going up the river the bends were carefully followed, but in returning some of them were cut to save gasoline. In one place the flight lay for thirty miles above dense forests, where a forced landing meant that the aviators, if uninjured, would have had a long job cutting their way back to the river. Tools had been placed in the plane with which to cut away the wings and remove the engine with the idea of using the hull as a boat if necessary, but it is doubtful whether the hull would have withstood the rapids. Fortunately, the engine gave no trouble.

This stretch of the river proved quite deserted. Indian "maloccas"(huts) had appeared at the four-mile canon and at the headwaters. Otherwise, there were no signs of human life for 120 miles. It was impossible to land at the upper Indian camp, the river being so narrow and crooked that, unless the plane were directly over it, the trees hid the water completely from view. Moreover, these Indians, a particularly savage tribe known as the Guahariba, were at war with those below and had made it understood that no intruders would be welcome. The lower Indians, friendly enough to whites, held them in great dread. Eating their fish and game raw, this tribe is evidently unacquainted with the use of fire; nor do they use canoes, but travel always through the mountains and jungles on foot. Just above this Indian clearing, the stream traveled down a canon a mile long, the water showing white from end to end. For some distance the plane traveled on, but there was nothing to be seen but the ridges of the dividing range as far as the eye could reach, and as more than half the gasoline had been used, it was necessary to turn back. A complete sketch of the river and its tributaries and aerial views of features of importance had been made. These sketches were delivered to Dr. Rice to be fitted to exact locations later by the surveyors of the party through their night observations of the constellations with the theodolite.

The last of the gasoline available for pushing into the wilderness having been used, the plane was ready for its homeward journey to Manaos. From 3 degrees south of the equator, the plane had traveled to 3 degrees north of the equator. The total flying time from Manaos and return was 174 hours, and 12,000 miles were covered, many trips being made to connect with the canoe party in the rear.

Dr. Rice and his party are continuing their journey into the country shown on the sketches made from the plane. A five-mile path will be cut around the four-mile canon, the Indians carrying the lightest supplies and canoes overland and embarking again above. At the point of the one-mile canon, it is thought that even canoe travel will have to be abandoned, the party taking to the Guahariba Indian trail, which probably leads across the divide to the Orinoco source. Whether they will get there, considering the dense forest, the steep hills, the high falls and long stretches of rapids, not to mention hostile Indians, one can only wait and learn.

Since Ulysses, the stories of wanderings in strange lands have ever held their fascination for the ear of man. Captain Stevens, extremely conservative in his accounts, has not been able to iron out the thrills.

The prime question in such journeyings is always one of physical adjustment to uncivilized surroundings, strange climates, foods, customs, and conditions. In the tropics there is the great question of malaria from which the white man tries to keep immune through quinine, the use of mosquito netting while sleeping and general care of the health. The expedition did not have smooth sailing all the way. On the river steamer most of the crew came down sick. Dr. Koch-Grunberg, an eminent scientist with a distinguished record in South American research, was stricken and died within ten days at the little settlement of Vista Alegre, not shown on any map. The airplane mechanic had to be sent back to Manaos for treatment, leaving Lt. Hinton and Capt. Stevens to care for the plane. Lt. Hinton was down several times but would not stop flying. So great was the drain on his vitality, however, that on one flight to 6,000 feet where the temperature dropped from the accustomed 85-95 degrees to 55 degrees, the chill was enough to put him on his back for several days. Stevens' stories of Hinton's grit savor of heroism.

Game and fish were plentiful, the Indians keeping the camp well supplied. Tapir meat was mostly eaten. Monkey, wild pig, and large lizzards were often eaten by the Indians. The monkey and pig were not so bad, according to Capt. Stevens, who said he drew the line, however, at lizzards. Farinha, a yellowish-white Indian root, somewhat resembling our grape-nuts in hardness and coarseness, was used to a considerable extent.

There was "water, water, everywhere", but in it was a strange fish called the "Piranhya", with sword-like teeth which ripped the flesh of the unwary to the bone; hence, swimming was indulged in only where safety was assured. Many of the natives had fingers missing, torn away by the "Piranhya" while paddling a canoe.

Insects were the great pests. Thousands of ants swarmed over the plane when it was anchored near shore. Fortunately, however, the fabric was not to their taste, so they did no harm. Spiders had to be continually poked out of the venturi tube to keep it registering. Mosquitos, chiggers, and "piumes", a small insect whose bite immediately drew blood, were not conducive to the gaining of superfluous flesh.

The amazement and fright of the Indians, some of whom had never seen a white man before, at the appearance of the plane may be imagined. The semi-civilized ones called it the "bicho grande" (great insect). There is an appeal to the imagination also in the picture of a party encamped in a far land, mostly jungle - a land where the tropical stars are strangely brilliant, where natives wear long rods through their ears, and "howler" monkeys scream in the night - receiving the time from Arlington by wireless, or listening to a jazz concert broadcast from KDKA, Pittsburg, U.S.A. It was by radio that the news came through when Capt. Stevens and Lt. Hinton were supposedly "Lost". Forced to beach the plane to make repairs when a submerged part struck a rock in landing, the river had suddenly dropped and they had had to wait patiently for eleven days before the heavy rains brought the river up sufficiently for them to get it afloat.

Capt. Stevens is most enthusiastic about the airplane for exploration purposes and hopes to return to the same country at some future time, with a plane perhaps of the Douglas type, having greater gas capacity and longer range of travel.

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THE NATIONAL GUARD AIR SERVICE

Two years ago, when he reported for duty with the Tennessee National Guard Air Service, writes Lieut. Vincent J. Meloy, Air Service, he was an unwelcome visitor in the eyes of wives, mothers, et al of the officers' families, because they firmly believed that flying was the most hazardous adventure possible. Today their attitude has changed entirely, and without exception they are now listed among the boosters. Furthermore, city and county officials and prominent business men of Nashville gradually became sold on the Air Service and joined the booster list. All this is due to the

fact that the Guard unit actually has planes, pilots and enlisted men and can make the best of nearly every opportunity offered to put the Air Service before the public.

Lieut. Meloy believes that the National Guard Air Service affords one of the best mediums possible for selling the Air Service to the public. At the same time it is an organization which with very little training could go into the field and function properly. Equipped with service type planes they would be ready for field service after a maximum training of one month. A National Guard squadron is not a paper organization but a complete unit in itself, which, after a period of about one year of organization, can be handled as a mobile unit. Its officers and men are actually present, and they represent the community and the State itself.

Bringing a community in close touch with flying gives a large field from which to pick prospective pilots. The cadet class at the Primary Flying School at Brooks Field and the special courses at this School for National Guard officers are the most effective means for increasing the number of men able to fly. The course for National Guard officers resulted in eight new pilots being added to the Tennessee Air Service during the past two years, and there is a prospect of a yearly addition of at least two.

Air Service organizations have so much more to offer an enlisted man in comparison to other branches of the service that the right type of man not only becomes interested but he also becomes a booster and a salesman of the Air Service. After his first airplane ride the average boy under 20 is usually thoroughly sold on his new venture. Another method to induce men in public life to work for a bigger and better Air Service would be to permit them to take flights. It has been Lieut. Meloy's experience that one booster will always add several others, particularly if said booster happens to be a man of prominence. He cites the case of a local bank president who became so enthusiastic after his first ride that he is now a Colonel of Air Service on the Governor's Staff and one of the most active workers in the campaign to bring a new $100,000 airdrome to Nashville.

Lieut. Melow visited the airdromes of nine National Guard squadrons and invariably found the officer personnel eager to remain proficient in their flying. Permitting National Guard pilots to make cross-country flights with the privilege of visiting distant towns and cities is a wonderful source of encouragement to them. The Tennessee Air Service has endeavored to attain perfection in cross-country flying, which constitutes four-fifths of their flying, and it is the usual custom of all pilots to take off and land in formation. The only airdrome flying carried on is that in connection with panel exercises, test flights, photo missions and artillery reglage missions. The pilots as a rule forget grandstand flying and attend strictly to business, and it has been found that the most effective means of curing the tendency of a few to indulge in eccentric and wild flying is to put them on the ground.

One advantage of a National Guard squadron over that of a Reserve squadron is the fact that its entire enlisted personnel is available. National Guard Regulations authorize the hire of caretakers, who must be enlisted men of the squadron, for the maintenance and repair of planes and equipment. This means that a minimum of five and a maximum of ten caretakers are on duty at the field at all times. In nearly allthe existing organizations these caretakers are former Regular Army Air Service noncommissioned officers who obtained their present positions through high recommendations from their former commanding officers. These full time men are augmented by the remainder of the enlisted personnel who live in the locality where the unit is located. They are compelled to be present for one drill a week, during which time they receive instruction in airplane motors, rigging, radio, photography, and all other specialized work of the Air Service. For each drill they receive the pay and allowances of their respective grades.

There is a general and loud wail from National Guard officers when the question of equipment is brought up, the first complaint being against the planes they are flying. The National Guard squadrons were organized around the nucleus of former Air Service pilots, many of whom have flown English, French and German planes. Naturally, they are not particularly enthused over the prospect of being forced to fly "Jennies" for an indefinite period. Last summer all squadrons received training in service planes, and their success was truly remarkable. Recent information from the Chief of the Militia Bureau in regard to new equipment for the National Guard has proved a big boost to the morale of all pilots. A new plane adapted for use of National Guard squadrons will greatly improve the efficiency of all these units. V-5448, A.S.

Considerable benefit has been derived as a result of training National Guard units at Regular Army stations each summer. This has brought about a close co-operation between officers of the Regular Air Service and those of the National Guard. Both the Tennessee and Alabama squadrons feel very kindly disposed towards the officers at Maxwell Field, Montgomery, Alabama, because of the untiring efforts shown by the latter in facilitating the training of the National Guard. These summer camps are looked forward to with good feeling by all concerned, the National Guard officers realizing that the Air Service is trying to help them and the Regular officers feeling that their former war time associates are alive to the present needs of an adequate Air Service and are constantly working for its improvement.

In discussing the character of his detail Lieut. Meloy states that an officer reporting for duty with a new organization will find the first year the hardest, for it is not an easy matter to see things from the viewpoint of National Guard officers and it will take some time to realize that a Guard unit cannot be built up over night. No set rules for building up a squadron can be laid down, and the National Guard instructor must adapt himself to local conditions. The instructor has no authority and is merely serving in the capacity of an adviser. The National Guard officers invariably look to the instructor for advice and sooner or later will follow instructions given them. It is best for the instructor to make himself just one of the squadron officers and assist in all undertakings. He cannot be inactive and merely offer suggestions, because the men associated with him will follow his example. The officers will not fly unless the instructor does so himself and their interest and pride in their organization will be no greater than that shown by the instructor. The most effective means of placing the Air Service in a favorable light is for the Instructor to become a member of a civic organization and take an active part in its program.

The Tennessee Air Service deserves great credit for the work accomplished during the past three years. The pilots averaged in the neighborhood of five to ten hours or more of flying per month, attended drill one night every week in addition to flying on week-ends, and have flown nearly everywhere in the country on cross-country flights, and this despite the fact that the National Guard airmen do not receive extra pay for flying. Furthermore, they have followed the reserve officers to summer camps where they have been compelled to sit back and watch reserve officers receive flying pay while they, holding a dual commission in the National Guard and the Reserve, had to train without additional compensation.

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NEW AIRPLANE COURSES OF STUDY AT TECHNICAL SCHOOL.

During the coming October the Department of Mechanics, Air Service Technical School, plans to establish two new courses for commissioned personnel, one "Airplane Maintenance Engineering" and the other "Aircraft Armament."

The course in Airplane Maintenance Engineering covers in its scope the latest methods used in the repair, inspection and preservation of airplanes, airplane engines and auxiliary appliances. Its duration will be 24 weeks and it is contemplated starting this course on October 15th. The program consists of 720 hours of instruction, subdivided as follows: 60 hours each in the following subjects: Machine Practice, Woodworking and Propellers; Fuselage and Wings; Airplane Rigging; Ignition; Starting and Lighting Systems; Engine Testing; 30 hours each in Sheet Metal and Welding; Airplane Wires and Cables; Fabrics and Dopes; Carburetion and Lubrication; Engine Installation and Operation; Installation Auxiliary Equipment; Parachutes; 15 hours each in Airplane Instruments; Engineering and Supply Systems; and 120 hours in Airplane Engine Repair.

The course in Aircraft Armament will last twenty weeks, commencing on or about October 15th, and will cover the maintenance, repair and inspection of same.

In the 600-hour program of instruction 60 hours each will be allotted to the following subjects: Bench and Machine Work; Machine Gun Synchronizers and Mounts; Small Arms; 180 hours to Aircraft Machine Guns; 30 hours each to Machine Gun Sights and Camera Guns; 45 hours to Aerial Bombs and Pyrotechnics; 90 hours to Bomb and Flare Racks and 15 hours to Ammunition, Ammunition Belts and Explosives.

Available facilities at Chanute Field can accommodate an initial enrollment of five students in each course.

PARACHUTE AGAIN SAVES FLYER'S LIFE.

Lieutenant Limberg, Air Service Reserve, is the twentieth flyer whose life was saved through the medium of the Army parachute. The incident occurred recently at the Lambeth-St.Louis Flying Field, and it demonstrated the wisdom of enforcing all rules and regulations pertaining to the factor of safety.

The 35th Division Air Service is stationed at this field with Major W.H.Leininger in command. By authority of General Wm. M. Raupp, the Commanding Officer of the 35th Division assumed charge over the factor of safety and flying operations on the field - a mutual arrangement which has worked to advantage in handling the many civilian ships and the care of the public. A test flight was to be made in a new ship designed and constructed by Sergeant Bell of the Air Unit. To all appearances the plane was stable and with every indication of flying propensities.

Lieut. Limberg, who recently returned from Kelly Field, undertook to make the test flight. Before taking off the Officer of the Day in charge of the field insisted that the pilot wear a parachute. To make a long story short, the airplane slipped into a left hand spin at 2,000 feet after eight or ten minutes of perfect behavior. The pilot made every effort to right the plane, but without success, and finally at 300 feet he jumped out of the plane. The parachute opened at once and a fairly safe landing was made, Lieut. Limberg sustaining a bruised shoulder.

The 110th Photo Section of the 35th Division, observing the flight, took photographs at the instant of the jump, showing the nose dive and exact position of the plane. This photograph is on record at the above station.

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5th COMPOSITE GROUP CELEBRATES FIFTH ANNIVERSARY.

The 5th Composite Group, Air Service, stationed at Luke Field, H.T., celebrated its fifth Organization Day Anniversary on May 19th. This field was named in honor of Lieut.Frank Luke, World War "Ace", and May 19th being the deceased officer's birthday it was chosen as Organization Day for the Group.

The big event of the morning was the semi-annual Field Meet, and the 5th Pursuit Squadron, the oldest organization at this station, easily won first honors. As a reward for their prowess, the 5th Squadron was presented with the handsome new Major Wheeler Memorial Cup, purchased and appropriately engraved by the Fox-Cornet Post No. 9, American Legion, of Luke Field. The presentation speech was made by Mrs. Sheldon H. Wheeler, widow of Major Wheeler, former Commanding Officer of Luke Field. This solid silver cup, standing twenty inches high, is surmounted by a woman's figure holding a model airplane, also of solid silver. The cup willbe competed for annually by the different organizations composing the 5th Composite Group.

Distinguished visitors of the day were Major-General Edward M. Lewis, Commanding General of the Hawaiian Department; Major Gerald C. Brant, General Staff Corps, who functioned as Department Air Officer during the joint Army-Navy exercises No.3; Mrs. Wheeler, and Mrs. Hagood, representing the American Legion of Honolulu.

In the afternoon Luke Field won an interesting ball game from the team representing Wheeler Field.

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PARACHUTE INSTRUCTION IN THE PHILIPPINES.

Eight enlisted men recently graduated from the first class in Parachute Maintenance and Repair in the 4th Composite Group, Camp Nichols, P.I. These men are now qualified to act as capable "service men" for this very important equipment.

The period of instruction lasted two months, during which time the students were given a great deal of very practical experience as well as instruction on the theory and fine points of the work. In addition to the interest and close personal attention of the Parachute Officer, Lieut. D. M. Myers, the Group was particularly fortunate in having as Chief Instructor Master Sergeant Erwin H. Nichols, assisted by Corporal C. E. Buelow, graduate of Parachute School, Chanute Field, in 1923. Sergeant Nichols needs no introduction to Air Service personnel, and it is really sufficient to say that he gave the instruction. Every student practiced many times all operations necessary to this service, such as folding the chutes, inspecting same for defects or weaknesses, complete construction of the pack carrier, and special care and attention necessary in the tropics.

As a graduation exercise the men were flown to Clark Field and there made their first jumps, plunging headlong into space from the rear cockpit of the bomber flown by Lieut. Myers. The result of the jumps testified to the faultless packing of the parachutes. The jumpers declared that the testing of their own chutes was great sport and they appeared eager to jump again.

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HOT WEATHER NO DETERRENT TO FLYING AT BROOKS FIELD.

Under a sweltering sun, with the thermometer fluctuating in the neighborhood of 100°, student training at Brooks Field, San Antonio, Texas, goes merrily on. While at such a time there is a tendency to have perpetual spring fever, interest has not flagged in flying. Instead there is the same zip and zest that prevailed during the cooler months. In fact, the interest appears to be more keen, probably due to the fact that the students have advanced far enough along the course to feel that they are embryo pilots.

During the third week in June the total aircraft hours flown at Brooks Field was 593:55, man hours 876:10.

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LANGLEY FIELD STAGES AERIAL DEMONSTRATION FOR VIRGINIA GOVERNOR.

Governor E. Lee Trinkle, of Virginia, recently visited Langley Field, Hampton Va., and incidentally received his first airplane ride, being piloted in a short flight over the lower Peninsula by Major Oscar Westover, Post Commander, in a DH4B airplane. Members of the National Editorial Association and their wives were also present on the occasion of the Virginia Executive's visit. The party numbered 136, and most of the States in the Union were represented.

Major Westover and his staff met the Governor and his party at the main gate. The proper salute being rendered upon the Governor's arrival, the visitors were then escorted to the flying field. The Airship TC-4, piloted by Lieut. Kieburtz of the 19th Airship Company, flew at a fairly low altitude about midway between Langley Field and Hampton, and after sighting the visiting party proceeded directly to the Field along the route to be followed by the visitors and gave a signal of their approach.

Following a general inspection by the Governor and his party of the airplanes on the field, an aerial review was held, which was participated in by six flights of various types of airplanes, consisting of 3 CO-4 planes, 5 SE-5's, 5 DH4B's, 9 NBS1's, 3 MBS and 6 JNS 1's.

The demonstration consisted of a simulated attack on a battleship target by the 2nd, 4th and 5th Flights. After passing in review the 1st Provisional Pursuit Squadron, represented by a flight of 3 MB3 planes, obtained supremacy of the air over the area where the battleship target was located. Over the target this flight met and cooperated with the other flights throughout the attack.

The 2nd Provisional Pursuit Squadron, represented by five SE5 planes, proceeded to the battleship target, after passing in review and after air supremacy was gained by the 1st Provisional Pursuit Squadron, and attacked simultaneously, with bombs and forward machine guns from low altitudes. Upon completion of the attack, this squadron reinforced the 1st Provisional Pursuit Squadron and cooperated with it during the remainder of the attack. The bomb load for each plane was five 25-pound fragmentation bombs.

The 2nd Bombardment Group furnished three flights for the attack, each consisting of three planes each, and each plane carrying five 100-lb. sand-loaded bombs containing a charge of two pounds of black powder. They attacked the battleship target immediately upon completion of the attack by the flight of SE5 planes. The altitude for the attack was 2500 feet.

Following the above demonstration was a program of acrobatics, consisting of loops, nose dives, tail spins and other maneuvers used in warfare.

The Governor, his staff, and the other visitors were profuse in their appreciation of the courtesies extended and gave liberal praise to the Air Service for the flying program arranged for the occasion.

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THE WAR ON HAWAII

By Corp. W. Waynflete, A.S.

The 5th Composite Group, Air Service, at Luke Field, went into war condition Thursday afternoon, April 24th. Pilots, crews, ships and Group Operations Headquarters stood by day and night waiting for orders from Department Headquarters. On Sunday afternoon the enemy was reported in large numbers off Kaena Point, on the leeward shore of Oahu. We sent out every available ship and pilot. The Navy, which shares our island airdrome with us, sent out 3 squadrons. Visibility was poor, a low ground fog which turned into a drizzle making almost impossible flying weather. Nevertheless, diving through the low clouds, the enemy was attacked. The flights from Luke Field were joined by some light bombing planes from Wheeler Field, so there were quite a number of planes in the air at the critical moment. The scouting fleet was totally destroyed.

At daybreak on Monday, April 27th, Martin Bombers (one of them bearing General Eltinge, Senior Umpire "Black"), deHavilland light bombardment planes, and MB-3A pursuit fighters, armed with both .30 and .50 calibre machine guns were sent to attack the main body of the fleet, which was effecting a landing in Waialua Bay at the northwest end of Oahu. The mission did "great damage," though many planes were theoretically shot down.

During the absence of this big mission, "Galloping Geese," launched by the battleships, straffed their way up Pearl Harbor. Our defensive pursuit patrolling the area over our field forced them down into the harbor one after another in such realistic fashion that the Chief Umpire ruled that the planes of both forces must keep at least 100 yards apart.

At seven o'clock a second bombing mission was sent to Haleia and another at 9:30 to strafe the landing parties and sink the Navy. The Field was on its toes for another big concerted attack at 2:00 o'clock, when an order came from the Chief Umpires that the "guerre was finis." We were disappointed, though sleepy, as we had been getting lots of fun and practical experience out of the game.

Reveille ceased to sound at 3:45 a.m. At 4:00 p.m. the invading Blue ships o'war, many of which had been "sunk," steamed majestically into the various reaches of Pearl Harbor, and as tributes to the invaders we had them make use of our swimming facilities, Post restaurant and Post exchange.

At the outset of the maneuvers the enemy detached 32 vessels and concentrated them off the Island of Lanai. We had already established an outpost there, with seven planes, pilots, repair crew, radio and pigeon communication. As the Marines from the "Shawmut" landed to take our outpost prisoners, they were much annoyed to find they had been sunk the night before. Our panty took off shortly after without meeting aerial resistance from the hostile fleet. It developed that the air strength of the "Langley" and other elements of the fleet was grossly overestimated. We had looked for an invasion of at least 100 planes from the sea, bent on destroying our landing field and much of the valuable property around Pearl Harbor. Hence we were a bit cautious the first few days about sending the main body of our defense, especially the Martin Bombers, too far from our home station.

It later developed that a few planes from the battleships came over singly on Sunday morning, about a dozen all told. And the "swarms" which the "Langley" was supposed to carry never did blot the sky around Pearl Harbor, following a realization of which we sent out two damaging bombing expeditions. We could have had out a half dozen others from our defending destroyers and submarines prior to that time, as radio reports came in and had been coming in for days giving the exact names and locations of vessels, on the Naval Grid Map. Potting them singly would have been about like a small boy breaking thin ice on a small puddle with a big rock.

The Five Day Critique.

Then came the official critique in the Service Club, Honolulu, when 900 superior officers of both invaders and defenders talked themselves black and blue for five days. As no announcements have come forth, every man, especially those who were here on the ground, has had to form his opinion for himself as to the outcome of the "War on Oahu."

THE JOINT ARMY AND NAVY MANEUVERS IN HAWAII.

In an illustrated lecture touching on the Joint Army and Navy Exercises in Hawaiian waters, Major Gerald C. Brant, Air Service (General Steff), while conceding that the Navy is essential to the security of this country and that we will probably always need some sort of fighting seacraft, stated that it is his firm conviction, as well as that of all the Hawaiian air force, that no force of surface vessels unprotected in the air can ever come in as close to a hostile coast as the Blue Navy did in this case without losing the bulk of its forces, even when opposed by such an inadequate air force as the Air Service had.

Major Brant stated that as a result of various newspaper reports and articles published since the conclusion of these Joint Army and Navy exercises the general impression has gone out that the attack of the Blue Fleet was successful; that troops were landed and that Pearl Harbor had been captured - almost without resistance. Editorials with more or less of an "I told you so air" pointed out that the battleship is still the vital factor in offense or defense; that the maneuvers showed that Billie Mitchell was wrong and that naval strength is still the big element in our national defense. "As a matter of fact," Major Brant stated, "the maneuvers did not prove any such thing, and those of us who were serving with the air forces during the maneuvers know that it is far from the truth.

In Hawaii we have an inadequate air force. That was strongly impressed on us when we started to make our plans for the coming maneuvers. It had been agreed by the Joint Army and Navy Board that neither the Army nor the Navy forces constituting the defense of Hawaii would be reinforced for the purpose of the joint exercise; in other words, we were to fight 'as is.'

The fleet, however, did reinforce the Naval aviation by sending over eight DT's to bolster up the regular Naval aviation unit stationed at Pearl Harbor under Commander Rodgers, which up to that time had in their possession only two or three old seaplanes. About a month before the exercise there also arrived at Pearl Harbor the "Wright" and the "Jason" with two more Naval aviation squadrons on board, one equipped with F-5's and the other with DT's. We were glad to see them because the problem of scouting long distances out to sea in land planes is really more of a problem in those waters than one would suppose. The waters near the islands are popularly supposed to be full of sharks - large ones with evil dispositions, and always hungry, if local reports are to be credited. In addition, the brisk trade winds which blow most of the year kick up quite a choppy sea. No land plane will stay afloat for more than a few minutes. Even the heavy seaplanes last a comparatively short time at sea.

Just prior to the Joint Exercise a Navy D.T. returning from Kanai was forced down in mid-channel and drifted about twelve hours before being picked up. According to reports only one pontoon was then above water and the plane sank a few moments after the fliers were rescued. We did what we could in the way of safety precautions - wireless, planes in pairs, inflated inner tubes, life belts, Very pistols, signal rockets, etc., but we all knew that in case of a forced landing far at sea the chances of being picked up were very small. There is very little navigation on those waters, and although a few Navy tenders were strategically placed during the reconnaissance, they were widely separated. One DH pilot told me afterwards that while on one leg of his reconnaissance course, after being out of sight of land for about an hour, he sighted a submarine, and that that lone sub looked to him as big as all of Kelly Field.

We did fly during the problem about 10,000 miles over sea, much of it out of sight of land, and lost only one DH. This one landed just outside the reef on the island of Oahu and the pilot and his observer swam ashore on their inflated Martin tubes without being nibbled by the sharks. It was evident then that the Naval aviation units should logically do the long distance reconnaissance. I might state that this reconnaissance was well carried out. According to the rules of the problem no scouting could commence prior to 5:00 a.m. on the 25th - the opening day of the exercise. At 5:20 a.m. (twenty minutes after the opening) the planes from our advanced base on the Island of Lanai discovered the Scouting Fleet anchoring in the Lahaina roadstead, with tenders off the south coast of the island of Molokai. This was correctly estimated as an attempt on the part of the Blues to establish an air base on land. This was

confirmed later by the Chief Umpire who sent several synthetic messages, ostensibly from our Lanai base, reporting the arrival of various detachments of land planes (constructive) flying to the base on Molokai from seawards, presumably from an airplane carrier. We promptly proposed to launch a constructive air attack against this constructive base, but no constructive attacks were allowed by the umpires. Late in the afternoon the Navy landed a seaplane on the beach, substituted wheels for pontoons and flew it to the Molokai field (Cookes Ranch). This plane was said by the umpires to represent 36 enemy planes; so at dawn the next morning one of our DH's, representing 46 Black planes, flew over to Molokai and attacked the enemy's represented 36 planes. This attack, however, was not allowed by the umpires, who desired a real attack. This was decided against by the Commanding General, Hawaiian Department, and by the Commandant, 14th Naval District, who made a strong protest against requiring our squadrons to go out over 70 miles of sea to look for imaginary enemies. As a matter of fact, we had figured on playing the game squarely and as we had planes opposed to nearly the same number with the Navy we expected that air tactics would have an important part to play. It is obvious that tactics have no place in combat against imaginary planes.

We had established our advance scouting base on the island of Lanai which has an excellent natural airdrome, large enough to accommodate the entire air force. A certain degree of secrecy had attended the organization of this base and the planes were not flown there until the day before the problem commenced. The radio station which we had installed there, however, in a burst of enthusiasm, sent in a message announcing the safe arrival of the detachment. This message was sent in the clear and was picked up by the Blue Navy which at that time were only a short distance away. This resulted, of course, in landing parties being promptly sent on the 25th to capture our Lanai base. The first attempt ended in complete disaster, as the Commanding Officer of the Lanai detachment formed a provisional attack squadron with seven DH planes and theoretically sunk the "Shawmut" and destroyed the landing party. Later in the afternoon a larger force of seven destroyers was seen converging on Lanai; so the Commanding Officer very properly withdrew the detachment to Oahu, after bombing the constructive air base on Molokai.

During that day and the succeeding one, reports from our planes were received almost hourly giving various items of information concerning the Blue activities. Detached destroyers and cruisers ventured in near shore and were much surprised not to be immediately pounced on by the Air Service, but with the exception of a few isolated attacks by planes on reconnaissance duty no operations were undertaken. Scouting missions went out as per schedule and all attention centered on discovering the whereabouts of the "Langley" and the at. Main Fleet. On Sunday morning (about 11 a.m.) our reconnaissance planes definitely reported the presence of the Scouting Fleet, comprising one battleship, six cruisers, and several destroyers escorting two transports, and located in a general direction southwest of Oahu and about 50 miles off the coast. At about 2:30 p.m. a combined attack was made on this force, participated in by Black planes, Army and Navy, and the Blue Scouting Fleet theoretically destroyed. This attack was made through a storm of wind and rain, so severe at times on the way to and from the objective that the nearest plane in formation could scarcely be seen. The attack emerged from the clouds at 1,000 feet directly over their prey.

A series of photos taken from No.2 plane in the leading flight of the 23rd Bombardment Squadron are conclusive proof of the destruction of this Naval force. It was raining at the time, deck awnings were covering many of the anti-aircraft guns; the ship's planes are shown on deck or in the catapults; and the anti-aircraft guns which are visible are still horizontal - indications that the attack was a surprise, as was to be expected in such weather.
The entire formation returned to Oahu after the attack, having lost but two planes, one DH in the sea and one DH forced down near Barbers Point. Late that evening two Black Navy seaplanes on reconnaissance discovered the "Langley" about 60 miles south of Oahu, and flying over her at a low altitude theoretically bombed her with eight 220-lb. bombs. It is obvious that even small bombs would have a disastrous effect upon the deck of the "Langley," but the umpires did not make any decision, nor did they in the case of the attack against the Scouting Fleet earlier in the afternoon.

When the seaplanes reported the presence of the "Langley" the Commander of the Black Naval Aircraft Squadrons decided on an immediate attack. One Army Pursuit Squadron protected the take-off of the two Navy Squadrons, but no other Army units participated in the attack on account of the low visibility and approaching darkness. The Naval units went to the reported location of the "Langley" but she had fled. After scouting around, the flight returned to Pearl Harbor, arriving long after dark., No particular credit was given the Naval aviation for this attack, as the objective was not reached, but to my mind it was a very daring piece of work, showing the high degree to which aerial navigation in the Navy has progressed. Their return to a small island in the darkness and rain, with practically no visibility, after cruising around on various courses for several hours, was a fine thing. We should have more practice in this sort of navigation in the Army.

At a council of war held that evening, it was decided that the presence of the Scouting Fleet probably foreshadowed an early morning attack on Oahu. All combat units were therefore ordered to be in readiness for a dawn attack, pursuit to be in the air half an hour before dawn. Commencing at 2:00 a.m., the sea areas south and west of Oahu were lighted with flares dropped every half hour. At 2:30 a.m. the main body of the fleet was discovered approaching Oahu from the west and was kept under observation from then till dawn, when an air attack with all Black Army and Navy units was launched. The reconditioned airway flares worked very well and, by the way, were of great aid also to the Blue Navy who were conducting all night operations without lights. As a matter of fact, one Navy officer fervently thanked me afterwards for the great assistance our flares had been to them in preventing collisions.

At dawn a combined attack was made on the Fleet. Photographs were taken showing the appearance of the sea areas off the Haleiwa coast at dawn, also of the transports, tenders, cruisers and battleships as they were bombed, and landing parties in boats and on shore as they were being machine gunned by the attacking planes. The order of target priority in attack was first the transports, as they were considered most dangerous and most vulnerable. It is our belief that none of these transports would have escaped. An attack could have been made during the early hours of the morning, but with so many air units, both Blue and Black, operating in a comparatively small area at night the chances of accidental collision were very great, so it was not considered. The Blue Navy were actuated by the same considerations of safety and no landing of troops was attempted till dawn. It should be borne in mind, however, that in time of war these operations will be carried out at night, and chances taken that we were not justified in taking in a peace time maneuver. As a matter of fact, the landing parties had no picnic in getting ashore through the surf and coral in the daylight.

After dropping their load of bombs on the vessels all units except the Heavy Bombardment acted as attack aviation and machine gunned decks and small boats on their way in. Three attacks were made in all - the planes returning to the airdrome after each attack to be re-armed and refueled.

In the critique which followed the exercise the Air Service made no claim for damages. We did not assert that bombs had sunk or damaged a single vessel, but it is significant that five Blue Admirals expressed ideas indicating that the question of air operations in such a maneuver is of paramount importance, and that the success of the undertaking would very probably depend upon securing air supremacy.

We had expected a very determined Blue air resistance to our attack, but it did not materialize. Lack of fighting cohesion will always be the rule where fighting planes are so widely scattered in the Navy as they are at present, with only one or two on each battleship or cruiser. We had expected also bombing attacks from the "Langley" against Pearl Harbor and against our coast defenses. The Sixth Pursuit Squadron which was left on the alert at Luke Field accounted for practically every enemy plane that came over, actually forcing down and capturing five or six Blue pilots who ventured in that vicinity.

There were several serious lessons drawn from the maneuvers, most of which have been explained in confidential reports to the War Department and to the Chief of Air Service. Some deductions can be drawn which are not secret:-

a. That bad weather offers no unsurmountable obstacle to successful air operations; in fact, bad flying weather may well facilitate the attack.

b. Darkness no longer offers an impenetrable cloak of secrecy. Our present flares light up the sea and landscape with surprising detail.

c. It is believed that larger carriers or a greater number of them are necessary with the Fleet if it is ever to have any superiority in the air.

d. That even with a number of carriers a land base is absolutely necessary for any extended operations. It is, of course, possible to secure air supremacy in any particular area for a limited time by the simple expedient of concentrating air units there. This superiority is of limited duration, however, unless the hostile air force is practically destroyed. The answer is an increased force of fighting planes and pilots for both the Army and Navy.

e. It must be obvious nowadays to all except the most desk-hardened bureaucrat that our own United States has not that grand isolation which it has enjoyed in the past. The airplane and its carrier can bring an aerial menace very quickly to any place on the globe not adequately protected by its own air forces.

f. It is the concensus of opinion in all the air units that took part in Joint Exercise No. 3 that the first and primary line of defense of our coast lies in the air. It is inconceivable that such an attack as was launched against Oahu could hope for even a measure of success unless and until air supremacy is assured.

Commander Yarnell, commanding the Aircraft Squadrons of the Scouting Fleet, said that the most valuable part of the exercise was the association of Navy fliers with Army fliers, as they learned a great deal about aerial tactics, formation flying and combat work. They had had practically no combat work as we know it.

We expected the Navy would try new ideas. We knew they had smoke laying apparatus and had been experimenting with tear gas. We equipped a Martin Bomber and two DH's with smoke apparatus. The Kohala District of Honolulu is the exclusive residential district; most all the servants are Japanese. When the smoke screen laid down by the Navy at Diamond Head struck the beach many servants packed up and beat it, thinking it was a gas attack. So far as is known, there is no way to avoid a gas attack from fast planes delivered at night. We should think about this in the Air Service as to the use of gas from airplanes in the next war. The smoke screen went back over the country three or four miles, still retaining its dense form. As far as beach defenses were concerned, it would completely destroy their local observation and the enemy could advance in small boats."

Touching on the use of radio during the exercise, Major Brant stated that they had the #134 sets for use in the DH's and #135 sets for the Martin Bombers. These were received such a short time before the maneuvers that the advisability of their use was doubtful. The sets were used, however, to good advantage and it is the opinion that the #135 sets are the best developed for airplane use so far. During the maneuver it was found necessary to use the telegraph set, as it had a sharp penetrating note and could get through any kind of interference. The telephone did not work so well with all the other sets going and the air was full of radio all the time.

Commander Loftin of the Navy worked up a simple code covering all possible contingencies that reconnaissance would be called on to use. There was one code for artillery, another for infantry, and one for anti-aircraft. A radio operator in one of the planes had to be a "wiz." In Hawaii a great deal more practice in radio is needed.

With regard to the use of anti-aircraft during the Exercise, Major Brant stated that an order was issued directing the Commanding General to conduct, on the afternoon of the close of the maneuver, a conclusive test to demonstrate the efficiency of anti-aircraft against aircraft. This consisted of firing at two ranges at altitudes of 4,000 and 8,000 feet, at a towed target over a given area, towed by a Martin Bomber. No such test is conclusive, no more conclusive than the known-distance target practice of an infantryman. General Patrick wrote protesting this conclusive test. The Air Service, however, had to prepare three Martin Bombers with winches and targets, and expected to carry out the test until the War Department finally cancelled the order.

Major Brant stated that the Air Service made no claims at all, but that the first five admirals who spoke at the Critique, without any urging, made reference to the necessity for air power, three stating that this operation could not have been attempted even without first securing superiority in the air. He believes that the Navy is trying to get on the band wagon; that they see what

is coming in aviation; further, that the Navy will embark on a campaign to greatly increase Naval aviation, and to take our coast defense and put it with their Naval aviation.

In conclusion, Major Brant stated: "I would like to say a word of praise for the enlisted men of the Hawaiian Air Force. Our pilots were good - even the Navy admitted that - but we all know that the enlisted mechanic is the bird who keeps the planes in the air, and the fact that everything went off so well is a high tribute to the enlisted force. I have never seen planes in better shape."

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INSPECTOR GENERAL OF THE ARMY VISITS LUKE FIELD.

Luke Field, according to the News Letter Correspondent, "enjoyed" its annual inspection beneath the eye of Major General Eli A. Helmick, Inspector General of the Army, on June 11th, and an aerial review was staged in his honor. To secure a proper view of this event, General Helmick cruised a thousand feet aloft in a Martin Bomber. He seemed very well pleased with his inspection and his trip in the air.

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A FLIGHT TO THE ISLAND OF KAUAI.

Six Martin Bombers from Luke Field, H.T., were recently sent on the first concerted flight to the distant Island of Kauai at the westernmost end of the Hawaiian Group. Prior to this flight several planes had made the trip singly to Kauai, and several suitable landing fields were established on that Island. One of the bombers sustained damage to an aileron, which resulted in keeping the pilots and crew on Kauai for five days. The remainder of the mission remained on Kauai over night and returned to their home station the next day without mishap. The Navy had dispatched a tender to patrol the center of the channel during the long 100-mile water flight.

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WEIGHT DROPPING PARACHUTES.

All Air Service pilots recall the problem encountered at some time in their experiences of letting down supplies from an airplane to the ground at a spot where a landing could not be made. Two notable instances may here be mentioned. One occurred a year ago last winter when a colony marooned on an island in the Great Lakes by ice floes suffered for lack of food until relief was brought by airplane. Another goes a bit farther back in aviation history when a party went into one of the most inaccessible regions of old Mexico by automobile and on foot to salvage a plane abandoned by the late Lieut. Alexander Pearson, who had a forced landing and who suffered many hardships in his wearisome journey back to American soil. On this occasion ice and other supplies were handed down from an airplane flying above the salvaging party. Various makeshift contrivances were used for the purpose in these and other instances, with varying degrees of difficulty and success.

To fill the need of a suitable device for transferring supplies, etc., from airplane to the ground, the Parachute Branch of the Engineering Division at McCook Field, Dayton, Ohio, recently completed tests on a weight-dropping parachute, which promises to accomplish its important function efficiently and with the least amount of difficulty. This device consists of a neat metal container, 4 feet in height and 15 inches in diameter, divided into two separate compartments. The lower compartment of the container is utilized for the supplies, while the upper compartment, which is somewhat shallow, contains a folded parachute of cotton fabric and measuring 25 feet in diameter. The container is carried lengthwise on a bomb rack and released by the bomb release handle. Upon release a cord, one end of which is fastened to the airplane and the other to the fabric cover of the container, extending down into the folds of the parachute pulls the cover off and the parachute out of the top compartment. The parachute then takes the air, suspending the container, and continues the journey down to the ground at a safe speed of 16 feet per second.

The lower compartment of the container opens down the side and into it

fits snugly a metal can for water, gasoline or other liquids. Solids may be packed directly in the container.

The weight of the parachute and the container is about 25 pounds, and a maximum of about 150 pounds may be lowered in this way.

A smaller parachute, having a diameter of 15 feet, has also been designed to take care of from 30 to 50 pounds in supplies. This parachute is wrapped about the bundle which it suspends and is thrown from the rear cockpit, a cord rolled up in the parachute and held in the hand by one end, or fastened to the airplane, hastening its unfolding.

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TESTING THE CEILING OF A "JENNY"

Lieut. C.F. Woolsey, recent check pilot at Brooks Field, made a test flight to determine the maximum performance of a "Jenny". The Curtiss plane with an "E" type of motor, using one of the newly developed McCook Field propellers, with a maximum of 2125 revolutions, gave a very creditable performance.

The ship took off in 25 paces, held 98 miles per hour on straightaway, climbed 5000 feet in 5 minutes, 10,000 feet in 30 minutes, reached a maximum altitude (using 2 altimeters) of 18,600 feet, and held a maximum r.p.m. of 1800 while climbing. Lieut. Woolsey, who is an ardent theorist in aeronautics, has just been transferred to McCook Field, where he can practice theory at great length.

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AERIAL DEMONSTRATION AT POST FIELD

Post Field, Fort Sill, Okla., recently was the scene of great aerial activity. Forty-one planes from Kelly Field, Texas, carrying 43 officers, 52 enlisted men and one civilian, arrived to take part in a four-day problem in observation and bombing in cooperation with the Field Artillery School.

The first two days were spent in servicing and inspecting the planes and drawing up plans for the mimic warfare. At midnight of the third day an exhibition of night bombing was carried out, which was very impressive and was witnessed by many of the personnel of the reservation, as well as many civilians who has secured passes to view the spectacle. The spectators assembled on the top of Medicine Bluff , from which a very good view of the performance was obtained.

Due to the fact that the moon was shining brightly, the flares and other lighting devices used did not show up as plainly as would have been the case on a dark night. The additional light was a great help in other ways, however, as it enabled the pilots and observers to see the ground quite distinctly and enabled them to drop bombs accurately and effectively.

On the last day the main event of the problem took place, practically all the visiting ships participating in the maneuvers and putting on a demonstration of such magnitude as has not been seen at this station for several years.

Old unserviceable caissons were drawn with 1,000 feet of steel cable behind tractors, the caissons making excellent moving targets for the bombing operations. The Martin Bombers,flying at an altitude of 1,000 feet, made several direct hits on the targets, demolishing them in a few minutes. The results obtained on the stationary targets were equally satisfactory, proving conclusively the deadly accuracy and effectiveness of aerial bombing.

Another gratifying fact was that during the whole period of the maneuvers no accidents occurred, not one forced landing or case of motor trouble being reported. This record speaks well for the safety of aircraft and for the skill and ability of the officers and enlisted men of the Air Service.

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THE BIG NATIONAL GUARD AIR MEET AT MILLER FIELD

Before a crowd of about 40,000 people at Miller Field, Staten Island, N.Y., the 27th Division Air Service, New York National Guard, staged on Saturday, June 20th, the biggest Air Meet of the year. One hundred and forty-three Army, Navy, Marine, National Guard and Civilian planes competed without a single accident. There were ships of all kinds and sizes, from pursuit planes to the Sikorsky and Remington-Burnelli Air Liners.

Major General Mason M. Patrick, Chief of Air Service, flew in his own DH to the Meet. He congratulated Major George A. Vaughn, Jr., Commanding Officer of the

27th Division Air Service, and Capt. George L. Usher, U.S.A., Inspector-Instructor at Miller Field, for the successful operation of the Squadron in general and the Air Meet in particular.

The 1st Aviation Group, Marine Corps, Quantico, Va., had the honor of sending the greatest number of planes to the Meet, while Langley Field bore off first honors in the matter of covering the greatest number of aircraft hours.

Lieut. Frank O.D. Hunter, of Selfridge Field, won first place in the stunt flying event and in the altitude race, climbing his PW-8 pursuit ship to a height of 14,800 feet. Lieut. L.O. Rogers, Marine Corps, won the DH speed race; Air Pilot E.L. Markham, U.S. Navy, the Seaplane Race; Lieut. G. Cuddihy, U.S. Navy, the Landing to Mark Contest; Lieut. E.T. Weatherdon, New York National Guard, the National Guard Speed Race; Lieut. C. Bettis, Air Service, the Open Speed Race, also the Relay Race, mixed types, piloting a PW-8; and Dan Smith, of Haskell, N.Y. won the Parachute Jumping contest, his descent to the ground from a plane measuring only 110 yards.

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DEFENSE DAY PROGRAM AT MITCHEL FIELD

More than 200 newspapermen and magazine editors took the air at Mitchel Field in a great fleet of Army airplanes on Saturday, July 4th, as part of the National Defense Day program in which the nation's air forces played a leading part. The representatives of the press were guests of the U.S. Army through the invitation of Major William N. Hensley, Commanding Officer of Mitchel Field and the Ninth Observation Group, Army Air Service.

Forty airplanes were at Mitchel Field to carry aloft the visiting newspaper men and they made two flights over New York City, one shortly after eleven o'clock in the morning and the other at three in the afternoon.

For the morning flight, three crack formations took the air, led by Major Hensley, and commanded respectively by Capt. L. N. Keesling and Lieuts. S.M. Connell and M.L. Elliott. The squadron flew from Garden City to New York and thence over all five boroughs. After the afternoon flight was over, three squadrons of five planes each took off from Mitchel Field and flew to Albany, where an aerial demonstration was given over the State capitol. The airmen remained at Albany over night and returned to Mitchel Field the following morning.

During the day (Saturday) the guests inspected the post at Mitchel Field and had lunch there in the army style.

In addition to the army planes, the giant Remington-Burnelli, the first air freighter, and the Sikorsky carried a number of guests in the air.

The flight was arranged by the members of the Aviation Committee of the Newspaper Club of New York. The members of the Committee are: Harry A. Bruno, Chairman; George T. Bye, Howard Mingos, Samuel Moore, Jack Binns, George Quisenberry, George W. Sutton, Jr., George Wheat, Francis J. Tietsort and Frank E. Bogart.

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WAR DEPARTMENT ORDERS AFFECTING AIR SERVICE OFFICERS

Changes of Station

Following officers, relieved as students at Air Service Primary Flying School at Brooks Field, Texas, to report to Commandant, Air Service Advanced Flying School, Kelly Field, for duty and special course of instruction in observation for lighter-than-air officers: 1st Lieuts. James C. Cluck and Junius A. Smith.

Lieut. James H. Doolittle, upon completion of course at Massachusetts Institute of Technology, to proceed to McCook Field for duty.

Major Lawrence S. Churchill relieved as Air Officer, 7th Corps Area, Omaha, Neb., August 1, to proceed to Langley Field, Va.

Lieuts. Wm. O. Eareckson and Edward H. White relieved from further assignment at Advanced Flying School, Kelly Field, and will proceed to Scott Field, Ill. for course of instruction at Air Service Balloon and Airship School.

Major Hubert R. Harmon; A.S. Engineering School, McCook Field, to proceed to Washington, D.C., for duty in Office Chief of Air Service, effective August 18th.

Lieuts. K.N. Walker and C.C. Nutt assigned to 9th Observation Group Headquarters for temporary duty at Mitchel Field.

Lieut. Ernest E. Harmon relieved from assignment with the 56th Service Sqdn.

Bolling Field, and assigned to duty in Office Chief of Air Service.

Capt. Vincent B. Dixon relieved from A. S. Engineering School, and to report to Commanding Officer, McCook Field, for duty.

Lieut. Leigh Wade relieved from duty at Bolling Field, and to take Harvard Graduate School course in Business Administration, commencing Sept. 1st.

Major Clinton W. Howard relieved from assignment at McCook Field and from temporary duty at Fairfield, Ohio, and to proceed to Philippines for duty on transport scheduled to sail from San Francisco about Sept. 3rd.

Lieut. James L. Grisham transferred from Langley Field to Fairfield Air Intermediate Depot for duty.

Lieut. John L. Hitchings from Air Service Advanced Flying School, Kelly Field, for duty at Brooks Field, where he will take course of instriction in Primary Flying School commencing Sept. 15th.

Capt. Dudley B. Howard relieved from duty as student at Primary Flying School, Brooks Field, and assigned to Advanced Flying School at Kelly Field for course of instruction in observation.

Lieut. George H. Bardsley (Coast Artillery) relieved from detail in Air Service and from duty at Primary Flying School and attached for duty with 2nd Div. at Fort Sam Houston, Texas.

Lieut. Wm. P. Campbell (Cavalry) detailed to Air Service and assigned to Primary Flying School for duty and training, effective Sept. 13.

Lieut. Patrick W. Timberlake (Field Artillery) relieved from 17th F.A. at Fort Bragg, N.C. to take training at Air Service Primary Flying School.

Lieut. Lyman O. Williams (Infantry) relieved from Advanced Flying School at Kelly Field and assigned to 2nd Division at Fort Sam Houston, Texas, for duty.

Transfers to Other Branches of Service

Lieut. John H. Claybrook, from Kelly Field, to Cavalry with station at Fort Brown, Texas.

Lieuts. Frank Riley and Harry W. Miller from Kelly Field to Infantry at Fort Sam Houston, Texas.

Lieut. Almond Ford, from Kelly Field, to Coast Artillery, Fort Monroe, Va.

Resignations.

The resignation of 2nd Lieut. Bryan Maxwell Jacobs accepted by President.

Leaves of Absence.

Second Lieut. Leo D. Vichules, one month, 15 days, June 15th.

First Lieut. Samuel O. Carter, one month, 10 days, effective upon arrival in United States, before reporting to Langley Field October 1st.

Major Percy E. Van Nostrand, two months, 15 days, June 15th.

Second Lieut. Kenyon M. Hegardt, two months, August 1st.

Major Wm. B. Duty, one month, July 23rd.

First Lieut. Alfred I. Puryear, three months, on account of sickness, effective June 20th.

Capt. Charles P. Clark, one month, upon arrival at Scott Field.

First Lieut. Alfred E. Waller, one month, July 15th, with permission to leave continental limits of United States.

First Lieut. Benjamin B. Cassidy, two months, effective July 10th.

Reserve Officers ordered to Active Duty.

First Lieut. Byron G. Cook, June 19th, to McCook Field, for training.

Following officers to be relieved from active duty at Langley Field, Sept. 30, 1925: First Lieuts. Wm. Terrell Atkinson, Lewis L. Bowen, Wm. S. Wilson, Jr., Harry J. Brady; 2nd Lieuts. Russell Pyles and James J. Welker.

Following officers ordered to active duty at Langley Field, effective July 1, 1925: First Lieuts. Thos. D. Bohne, Wayne Sanger, Abbott C. Martin; 2nd Lieuts. Darr H. Alkire, Elmer J. Rogers, Leslie R. Tower and George A. Vies. They will be relieved so as to reach their homes by December 31, 1925.

Following officers ordered to active duty at Selfridge Field, effective July 1, 1925: 2nd Lieuts. James H. Collins and Wayne C. Williams. They will be relieved so as to reach their homes by Dec. 31, 1925.

Second Lt. Leonard S. Flo will be relieved from active duty at Selfridge Field so as to reach his home Dec. 31st next instead of June 30th, as previously ordered.

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EXPLORING THE UPPER AIR SHOWN IN GOVT. MOVIES

Two new motion pictures just released by the United States Department of Ag-

riculture show in some detail the upper-air observation work that is being conducted by the Weather Bureau, and one of them gives incidentally a film review of important American aeronautical activities.

The first film - Exploring the Upper Air - is one reel in length and deals in a popular manner with the scientific side of upper-air observation work. It depicts flights by Weather Bureau meteorologists in airplanes, dirigible balloons and free balloons in the study of upper air conditions for weather forecasting. An airplane flight above the clouds, a dirigible journey in the neighborhood of St. Louis, the beginning and end of a free balloon flight, the making of a "dust count" high above the earth's surface, are among the striking scenes. Most of the scenes were photographed at and near Scott Field, Ill., in cooperation with the Army Air Service.

Three days after the scenes were photographed, Lieut. James R. Neely, of the Army Air Service, and Dr. C. Leroy Meisinger, of the Weather Bureau, who appear in the scenes, left Scott Field, Ill. in a large balloon for a long flight, during which the balloon was destroyed, apparently by a static discharge, and both men were killed.

The second film, Watching the Weather Above, is two reels long. It shows the daily work of making upper-air observations at numerous stations by means of large kites and "pilot" balloons, the assembling of the information at three forecast centers - San Francisco, Chicago and Washington - and the distribution of "flying weather" forecasts from these centers to the fourteen aviation forecast zones into which the United States is divided. But first the film shows the need for the forecasts by means of a succession of pictures which constitute a fairly complete review of American aeronautics. It depicts flights by Army airplanes and dirigible balloons, Navy seaplanes, the great Navy airships "Shenandoah" and "Los Angeles", the detection of forest fires by airplanes, and the dusting of cotton and other crops to kill insects. The film closes with the statement:

"Fifty years from now we'll all be flying," is a frequent prophecy. If so, the Weather Bureau, through its present preparations, will be ready to make the air safe for you.

The films will be circulated through the educational film service of the Department of Agriculture and the cooperation of State institutions. Copies may be borrowed for limited periods, or complete new prints may be purchased by authorized institutions at the manufacturing charge. A complete list of the Department's more than 200 film subjects is given in Miscellaneous Circular 27, which also describes in detail the method of distribution.

NOTES FROM AIR SERVICE FIELDS

Brooks Field, San Antonio, Texas, June 16th.

The present student class is progressing very well, and within the next 15 to 20 hours flying time the majority of the class will be ready for test. To date 34.2% of the class were relieved from further training, which is a trifle better than the record of the class last fall when after the same length of time 38.7% had been relieved.

The following cross-country trips were taken the last week end: To Houston, Texas, Lieut. K.B. Wolfe with Lieut. F.C. Wolfe, ASORC; 1st Lieut. N. Twining with Lt. P. d'Arcy, ASORC; Staff Sgt. R. DeWald with Pvt. L.A. Hanson - To New Braunfels, Texas, Lieut. K. Hegardt, with F.B. Stuart, ROTC; 2d Lt. H. Downing with C.A. Waugh, ROTC; Tech. Sgt. G. McGinley, with M.E. Tillery, ROTC.

Major Royce and Lieut. McCormick left for McCook Field in a DH and will continue to Buffalo, N.Y. by train, where they will test out and fly to Brooks Field two of the new Primary Training planes.

For the week ending June 15th Brooks Field had a total of 655:25 aircraft hours and 1008:30 man hours.

As a result of their plane crashing into the ground from a spin on June 8th, Lieut. Edward L. Searl, A.S., Instructor, and Cadet Roy A. Strickland, student, were killed at this field.

Lieut. Searl met his death instantly, while Cadet Strickland lingered for a week without regaining consciousness. The loss of these two airmen is keenly regretted by all.

Brooks Field, San Antonio, Texas, June 22nd.

The combination of a small class and the possibility of a long hot summer has driven quite a few of the permanent officers to take advantage of leave they have stored up for several years; so at this time the more unfortunate ones can think of the missing faces basking in ease and comfort in a cooler clime.

The following cross-countries were taken last week end: To Waco, Texas, Lt. N.F. Twining with Lieut. Hardin; to Laredo, Texas, Capt. A.F. King, Jr., with 2d Lt. C.T. Myers; 2nd Lieut. W.E. Whitson with 1st Lt. C.W. Branshaw; 2nd Lieut. P.W. Wolf with 1st Lt. Pardee Martin; Capt. F.N. Shumaker with Lt. Robinson; Staff Sgt. R.M. DeWald with Sgt. Dee; to Post Field, Okla., Tech. Sgt. C.F. Colby with Cadet E.W. Graham; to Tallulah, La., Tech. Sgt. G.C. McGinley with Tech. Sgt. R.G. Long.

Lieut. Chas. T. Myers received orders to report to West Point Aug. 1st to assist Capt. McEwan, head coach, in rounding out the Army football team. He will return at the end of the football season.

Wilbur Wright Field, Fairfield, O., June 20th.

The Barling Bomber was again removed from its hangar, this time by Lieut. J.A. Macready, who has demonstrated his ability to pilot any and all kinds of aircraft.

Recent visitors at the field were Lieut. A.J. Lyon from Selfridge Field; Lt. Ivan L. Proctor from Chanute Field, Lieut. V.J. Meloy from Nashville, Tenn., and Major B.Q. Jones from the Office Chief of Air Service, Washington, D.C.

Lieuts. L.H. Dunlap and W.S. Hamlin ferried two Curtiss planes to Pittsburgh. These planes had been remodeled in the shops under the direction of Capt. Edward Laughlin, Engineer Officer. They were the first planes to land at the Pittsburgh Air Port, which has just been put in shape for the reception of aircraft.

Lieuts. W.S. Hamlin and M.N. Stewart ferried two JNSE planes, remodeled in the shops, to Nashville, Tenn., for the use of the Tennessee National Guard.

On June 9th Lieut. Hamlin with Capt. J.B. Powers as passenger flew to Indianapolis, Ind., in a DH. Part of their return trip was made through rain, and they landed at the field in the midst of a heavy downpour.

Lieuts. S.G. Frierson and G.P. Tourtellot flew to Oscoda, Mich. on June 13th

Capt. and Mrs. F.F. Christine returned from California and are now living in their new quarters at the field.

Luke Field, T.H., June 16th.

The flying of day and night missions in conjunction with the 64th Coast Artil

tillery (anti-aircraft), which is encamped on the north coast of Oahu, occupies the time of several planes and pilots this month, and will continue throughout the summer months until the end of September.

The first exercise calls for morning and evening preliminary drill (searchlight) between the ground batteries and a DH for the first half of June. The latter half of the month will be given over to "sleeve firing" at a tow target, hitched 3,000 feet behind a bomber. Practice will go forward night and morning.

Through the month of August there will be more searchlight drill and sleeve firing, a DH being used for the former and a Martin Bomber for the latter.

Rounding out the June and September schedules will be a Joint Air Service Anti-Aircraft Exercise, in which three DH's and three bombers will participate.

The total number of flying hours called for in the program is 41 for DH's and a maximum of 240 for the bombers.

The Fifth Composite Group welcomed 52 recruits early this month. They were all East Coast men, and seem to be reacting favorably to our velvet climate. They say they like the Army, the Air Service, and Hawaii. Perhaps they haven't tasted Papaia yet.

Technical Sergeant Philip E. Moloney, our Post Sergeant Major for the past year, put up his hand and said "I do" for another round. He continues to function at his same official post. He was promoted from Staff to Tech. Sgt. last month.

McCook Field, Dayton, Ohio, June 15.

By direction of the Secretary of War, Major Curry, Commanding Officer of McCook Field, presented Lieut. John Harding, Jr., with a Distinguished Service Medal awarded him in connection with his participation in the Round-the-World Flight.

Orders were received assigning Lt. J.H. Doolittle to the Engineering Division for duty upon completion of his course of instruction at the Massachusetts Institute of Technology.

The following reserve officers reported June 15th for 15 days' active duty: Capt. Falk Harmel, Washington, D.C.; Capt. Dudley S. Norton, Long Island, N.Y.; 1st Lieut. W. U. Lovell, Long Island, N.Y.; 2nd Lieuts. C.F. Clevette, Watertown, Mass.; Lyman H. Haggerty, Ipswich, Mass.; and Richard Battell, Milwaukee, Wis.

Major Clinton W. Howard will leave McCook Field August 15th, reporting at the Fairfield Air Intermediate Depot for duty with troops, and proceeding later to San Francisco to take the transport scheduled to leave about Sept. 23rd for the Philippine Islands.

Major E.L. Hoffman, who recently returned to Europe, was a visitor at this station. He has resumed his duties as Commanding Officer of Grisard Field, Blue Ash, Ohio.

Lieut. and Mrs. E.E. Aldrin are being congratulated upon the birth of a daughter on June 2nd.

Lieut. R.A. Greer was granted two months' leave, which he will spend at his home in Beaumont, Texas.

The following officers were assigned to McCook Field to take the next course at the Engineering School: Major T.D. Milling, Capt. P.T. Beck, 1st Lieuts. R.G. Breene, C.F. Woolsey, C.F. Greene, Phillips Melville, J.F. Whiteley, D.G. Ingle, E.C. Whitehead, I.G. Moorman and G.T. Lampton.

Major John F. Curry and the officers of the Engineering School flew to Indianapolis to inspect the Nordyke-Marmon plant.

Lieuts. Tourtellot, Goddard and Batten attended the Military Tournament at Chicago on May 22nd, 23rd and 24th.

Major Leslie MacDill has been ordered to duty here upon completion of the course at the Command and General Staff School.

Major H.S. Martin has been relieved as Air Officer of the 6th Corps Area and assigned to duty at this field.

Orders were received detailing the following officers for duty at McCook: Captains W. F. Volandt and John C. Platt, Jr.; 1st Lieuts. Lester J. Maitland, George H. Burgess, Leroy M. Wolfe, Victor E. Bertrandias and Reuben C. Moffat. Lieuts. Moffat and Bertrandias, who have already arrived, were assigned to duty, the former to the Flying Section as test pilot, and the latter as Chief of Inspection. Lieut. Maitland was granted leave of absence for 29 days, upon completion of which he will assume charge of the Airways Control Office.

Lieut. A.H. Foster was ordered to Brooks Field for heavier-than-air training

upon completion of his course at the Engineering School.

Lieut. Wendell H. Brookley was granted leave for a month and 7 days, upon the expiration of which he will proceed to Brooks Field for duty. Before leaving Dayton, Lieut. Brookley was married to Miss Mary Friese of Dayton.

Upon completion of his course of instruction at the Engineering School, Maj. Barton K. Yount will proceed to Paris, France, for duty as Assistant Military Attache.

Lieut. M.S. Fairchild left June 2nd for duty at Langley Field, Va.

Lieut. Raphael Baez, Jr., upon completion of his course at the Engineering School, will report to Chanute Field for duty.

Hqrs. 2nd Div. Air Service, Biggs Field, Ft. Bliss, Texas, June 15.

Organization Day of the 12th Observation Squadron was held on June 2nd. In the morning the history of the Squadron was read by Lieut. Clark and a talk given by Major Hefferman. A picnic was held in the afternoon.

On June 3rd a radio telephone communications problem between an airplane and ground station was conducted successfully by Lieut. Douglas, Radio Officer. Lt. Smith conducted a problem with the artillery with a spark set at the same time. These problems were conducted in the presence of General Howze, Commanding General, 1st Cavalry Division.

The following cross-country flights were made: Sgt. Pierce an airways flight to Rockwell Field and Clover Field, Calif., June 1st, returning June 5th; Lieut. Douglas to Chanute Field June 4th, ferrying Private Manning to the Technical School, returning June 8th; Lieut. Clark and Pvt. Hart to Denver, Colo., June 6th, to take photos of landing fields en route, returning the 9th; Lieuts. Weddington, Gale, Smith, Sgts. Tyler and Pierce on a formation flight June 7th, accompanying General Howze on the Golden State Limited from El Paso to Newman, N.M.; Lieut. Weddington and Pvt. Hart to Childress, Texas, May 29th, to take photographs of towns and landing fields en route, returning June 2nd; Sgts. Tyler and Simpson to White Water Mesa, N.M., and return, June 9th; Lieut. Clark and Pvt. Donnelly to San Antonio Air Intermediate Depot, Texas, June 11th, ferrying an old ship and returning in a new ship June 14th; Lieut. Smith to Dryden, Texas, and return, June 7th, to ferry an enlisted man to that field in need of medical attention; Major Hefferman and Capt. Johnson, Flight Surgeon, to Marfa and Dryden, Texas, and return, June 12th, to inspect airdromes at these stations; Sgt. Pierce to San Angelo, Texas, and return June 13th, for training.

Captains Campbell and Presley, Marine Air Service, San Diego, Calif., arrived here June 8th. Major Rowell, same branch and station, arrived here on the 9th, on which day all three departed for Kelly Field. They arrived here on their return journey on the 14th, departing the following day for San Diego.

Lieut. Gale and Sgt. Pierce flew cross-country to Williams, Ariz., June 9th to participate in exercises incident to the dedication of Southwest Airways, returning June 12th.

Private Harlan R. Statham received orders directing him to proceed to the U.S. Military Academy at West Point, N.Y.

Lieut. Gale and Capt. Bender made a photographic flight to Rockwell Field June 1st to photograph landing fields recently marked. Lieut. Gale returned on the 5th while Capt. Bender, granted a month's leave, remained at San Diego.

Lieut. Corkille visited here June 9th from Brooks Field en route to Fort Apache, Ariz.

Hqrs. 2nd Div., Air Service, Ft. Bliss, Texas, June 22d.

Cross-country flights by personnel from this station were made as follows: Sgt. Tyler to Dryden, Texas, and return, June 16th, ferrying Pvt. Bush to that station for duty; Lieut. Smith an airways flight to San Diego and Los Angeles, Calif., June 17th, returning the 19th; Major Hefferhan and Sgt. Jensen to Douglas and Tucson, Ariz., and return June 16th, to inspect the airdromes at those stations; Sgts. Tyler and Riley to Yoso, N.M., and return, June 19th, for training; Lieut. Gale an airways flight to San Diego, Calif., June 20th, with Major Hines, ORC, as observer; Sgt. Pierce to Fort Hancock, Texas, and return, June 20th, for training; Lieut. Weddington to Dryden, Texas, June 22nd, ferrying Sgt. Baskas there to relieve Sgt. Bergman as airdrome caretaker, and ferrying the latter back to this station; Lieut. Clark to Albuquerque, N.M., June 22nd, to inspect Air Service

property at that place; Sgt. Pierce and Sgt. Rhodes to Mescalero, N.M., June 22nd to obtain photos of camp at Mescalero and vicinity.

63rd Service Squadron, France Field, C.Z., June 1st.

The Squadron suffered the lose of two of its members on May 11th, Lieut. Arthur G. Watson and Staff Sgt. Otto A. Hanson, who were burned to death in an airplane crash at San Jose, Costa Rica, Central America.

On May 8th five DH4B's left France Field for a three-day cross-country flight to Costa Rica. On the morning of the 11th the plane piloted by Lieut. Watson, with Sgt. Hanson as mechanic, was the fourth to leave the field at San Jose. After all five planes were in the air they circled the city of San Jose and then headed for home. It was noticed that Lieut. Watson had dropped out of the formation and was heading back towards San Jose. The other planes turned back and it was observed that Lt. Watson's plane had caught fire upon landing.

The bodies were escorted from the field to the docks for return to the Canal Zone by high officials of San Jose and Costa Rican military forces. The entire population of the city was present to pay their respects and to offer any assistance that would be needed. Col. Carlos Francisco Bonilla, of the Costa Rican Army, accompanied the bodies and remained for the burial services.

The remains were brought to Ancon Hospital, C.Z., for preparation for burial, and then to France Field, where an impressive ceremony was held to honor the dead. Interment was in Mount Hope Cemetery, where full military and fraternal honors were rendered.

The men of France Field will never forget the courtesy and tribute paid to their departed comrades by the people of Costa Rica.

After having completed 30 years service, 1st Sgt. Addison R. Jones was retired on May 16th. During his military career he served with the 14th U.S. Volunteers, also in the Cavalry, Infantry and the Air Service. The officers of the 63rd Squadron presented him with a beautiful gold watch, and the enlisted men a gold watch chain as a token of appreciation for the services he had rendered while a member of the organization.

Sgt. Jones served with the 63rd Squadron from October 17, 1919, to the date of his retirement. He was well liked by all members of the organization, and all wish him the best of health and success in civil life.

Chanute Field, Rantoul, Ill., June 15th.

The Department of Mechanics, with 1st Lieut. Talcott P. Smith, Director, graduated the following enlisted students of the Air Service from the courses listed:- May 22nd - Cabinet Makers, 1; Draftsmen, 3; Electricians (Ignition) 9; Metal Workers, 2; Oil Reclamation Plant Operators, 5. May 29th - Airplane Mechanics, 8.

The Department of Photography, with Capt. Wm. D. Wheeler, A.S., in charge, graduated 12 enlisted students on May 22nd.

Lieut. Francis C. Crowley, A.S., Reserve, and Lieut. C.F. Schilt, U.S. Marine Corps, were graduated May 29th from the course in the Department of Photography for National Guard and Reserve Officers.

The following cross-country flights were participated in by the personnel of the field: May 28th - Capt. J.J. Devery and Pvt. Frost to Scott Field; Lt. R. B. Williams and Lt. F.C. Crowley to Chicago, Ill.; May 29th - Lieut. Howard C.Brandt and Pvt. Anderson, Lieut. T.M. Lowe and Lt. L.H. Dawson to Chicago; Lt. R .B. Williams and Capt. T.C. Locke to Scott Field; Lieut. T.P. Smith to Indianapolis, Ind., via Chicago, where Major Rice boarded the plane to destination, the return trip being made along same route; Lieut. Charles Backes and Pvt. Haskell to Chicago. May 30th - Lt. Fred D. Lynch and Pvt. Dean to Selfridge Field; Capt. Chas. B.B.Bubb and Corp. Nese, Lt. George P. Johnson and Lt. T.M. Lowe to Indianapolis; Lt. Chas. H. Howard to Chicago, where Lt. Anderfer, Reserve, boarded plane, thence to Indianapolis and return via same route; Lt. John V. Hart and Pvt. Anderson to Galesburg, Ill., Lt. Frank C. Crowley and Pvt. Harris to McCook Field.

Lieuts. C.H. Mills and Wm. L. Wheeler left May 30th with a detachment from the 15th Observation Squadron for Camp Custer, Mich., to participate in the maneuvers thereat.

Fourth Composite Group, Camp Nichols, Rizal, P.I., May 19th.

During the first fourteen days of May the flying time totalled 175 hours, of

84 of which were made in bombing planes and 91 in DH4B's.

Mr. James Otis, prominent merchant and member of the San Francisco Chamber of Commerce, was a guest at the field recently and was a passenger in an airplane flying to San Jose, Mindoro. Mr. Otis is now on a world tour. He declared that he was very much pleased with the flight. He is well known to the Air Service, especially in San Francisco, as a real Air Service enthusiast and as owner of airplanes Several officers remember with pleasure his offers to loan them a plane in which to give rides to their wives.

Chaplain R.E. Boyd was recently transferred from Camp Nichols to Ft. William McKinley. For nearly a year he was in charge of recreational activities on the post, being very active in maintaining a good recreation room and library and in supplying a good series of moving pictures. His efforts here were greatly appreciated by the personnel of the Post, and he will be missed.

Major C.J. Browne, C.O. of 4th Composite Group, is spending a month's detached service at Baguio, accompanied by Mrs. Browne, two daughters and two sons.

Chaplain Frank B. Bonner, who arrived on the April transport, relieved Chaplain Boyd at Camp Nichols. During 1918 he served with the Air Service at Mitchel Field, and since 1920 he was stationed with the 5th Field Artillery at Fort Bragg, N.C.

School activities on the Post for the season will commence June 15th. Capt. R. Beam is Post School Officer, with Lieut. S.P. Mills as Assistant. A complete course of instruction has been laid out covering many tactical operations and airplane and equipment maintenance.

At 7:00 a.m. on the morning of April 29th an imposing array of service airplanes, consisting of Martin Bombers, DH4B's and MB3A's, extended in a large semicircle from the gasoline storage tanks to the Philippine Air Depot hangar. Each plane was groomed and polished as carefully as any automobile salesman's touring car. With bombs in the bomb bays and machine guns fore and aft, the Bombers certainly looked business-like, while the observation, MB3's, with all their equipment, varying from emergency food rations to camera and radio sets, completed the picture. The Armament Section contibuted in no small way in mounting bomb sights, gun synchronizers and in the preparation of bombs. And now came the "show down", for an inspection party was coming down the line. It consisted of Majors E. H. Paine and L.J. Ahern, General Staff; Major G.E.A. Reinburg, Air Service, Capt. W.W. Eagles, Infantry, and Capt. L.B. Jacobs, Air Service.

Prior to the carrying out of a bombing problem, a very careful inspection was made of all post acticities, buildings and grounds. The feature of the inspection was a maneuver in which the bombardment, observation and pursuit were to coordinate in a bombing attack upon a target near Clark Field. In order to inspect the bombing at close range, the inspecting officers rode in the bombing planes. After the Photo planes had secured the information needed, the bombers flew north and east of Mt. Arayat, sneaking down upon the target from the East. In a few moments smoke pots were annoying the ground "defenders". With this accomplished the Bombers came to the attack. Ten bombs were dropped on the target, eight of which were credited as being direct hits. The Pursuit swooped down to harass the enemy and covered the retreat of the Bombers.

The problem proved highly interesting and demonstrated the operation of an aerial attack. Although the report of the inspectors has not yet been made public, it is felt that the field made a good showing. A little more practice in bombing and coordination with units will do much to perfect the Group's effectiveness when working with other branches of the Army.

The usual Transport Hop was given on April 23rd, at the Army and Navy Club, Manila. In spite of the hot weather, the crowd had a fine time. About 75 enjoyed the excellent dinner and the dancing which followed. The honor guests invited included those arriving and departing on the transport THOMAS.

The new arrivals are: Capt. and Mrs. A.I. Eagle, A.S. (Camp Nichols) and Lt. and Mrs. Arthur Thomas, A.S. (Corregidor).

6th Photo Section, Camp Nichols.

The mosaic map of Bataan Peninsula is now in progress and it is expected same will soon be completed. Staff Sgt. Michler is assigned to this work.

Lieut. H.K. Ramey, with Mrs. Ramey and daughter, is now spending two weeks at Camp John Hay, Baguio. During his absence the 66th Service Squadron is building a new engine section upon the photographic plane.

28th Bombardment Squadron

Capt. R. Beam, Commanding Officer since Nov, 1923, was transferred to Hqrs. 4th Composite Group, where his duties will be that of Group Operations Officer,

Group School Officer, etc. Capt. A. I. Eagle, who arrived on the April Transport, has assumed command of the Squadron.

During Capt. Beam's administration, the squadron made excellent progress in its many activities. With 8 DH4B's in November, 1923 , six of which were condemned, the Squadron was greatly handicapped. By January, 1924, when General Mitchell made his tactical inspection, 17 DH4B's were in good flying condition and gave full account of themselves at that time. In April, eight Martin Bombers were acquired, set up and tested. Since that date the Martin planes averaged nearly 100 pilot hours of flying. All eight planes are now in excellent condition, only one having been out of commission for a period of over two days. Two additional planes of this type are held on the field in reserve. Along with the work of airplane maintenance came the construction era of Camp Nichols. Here the 28th Bombardment Squadron, working much of the time longer hours than is customary in the States, in the boiling sun and torrential dompours, did their big bit. Two of the great morale builders of the field, the Post Exchange and the Movie Auditorium, owe their construction largely to the brains and brawn of the 28th. Roads, too, were built, and all manner of barracks, mess halls and office equipment brought up to the minute. Thus, today, with Lieut. Dunton as Engineering Officer, several experienced bomber pilots, Louis Funk as First Sergeant, and a full squadron of healthy, willing and capable soldiers, Captain Beam may well view with satisfaction his association during the past year and a half with the 28th Bombardment Squadron. Our sincere good wishes to our old C.O. - Greetings and cooperation to the new.

Lieut. and Mrs. C.R. MacIver, Lieut. and Mrs. Kessler, Lieut. and Mrs. Kirksey and Lieut. Carter are on detached service at Camp John Hay, Baguio. The "service" is reported as being most agreeable, and the "detachment" certainly makes a difference for the better of several degrees in the temperature of the hot season. Our Flight Surgeon states that two weeks in Baguio should lower a person's golf score by at least ten strokes.

Lieut. R.H. Finley was recently transferred to Corregidor Island, where he became a member of the 2nd Observation Squadron at Kindley Field. Lieut. A.J. Melanson moved his family into the quarters at Camp Nichols vacated by Lieut. Finley.

Lieut. Hugo P. Rush will represent the Squadron in the first flight to Regan Barracks, Legaspi. As this flight is a new route and leads close to the "world's most perfect volcano" and along Southern Luzon, we shall expect an interesting story when he returns.

During the first four days of this week our Bombers flew a total of 77 hours and 20 minutes. Our pilots are becoming very proficient in various kinds of formations, and of late their return at noon has afforded some real cross wind landing practice.

66th Service Squadron.

Lieut. S.A. Blair will assume command of the Squadron upon his return from Baguio about May 20. For several months he was extremely busy as station Supply Officer. Lieut. A.J. Melanson was assigned to this position.

Lieut. LeRoy Walthall, who has commanded our organization, was appointed Group Supply Officer in addition to his duty as Squadron Supply Officer.

Lieut. Bogert just returned from his month at Baguio, and just in time to direct "The Last Pour". A stranger strolling southward along the "hangar" road might easily imagine himself set back a score of years and transferred momentarily to that big ditch in Panama. Here great activity is in progress, a seemingly unending line of wheel-barrows, each filled to the brim with the highest grade concrete and each pushed by a clean cut vigorous American soldier, is making its way from a steam operated concrete mixer to a complicated set of forms on the edge of the slew. Upon closer inspection the stranger may note a net work of steel reinforcing rods of iron and steel bent and twisted in grotesque forms. To the uninitiated it might easily appear a dumping ground for old metal, but those of us who fly over it every day know that the heavy steel placed in the bottom of the beams takes the tension and great amounts of cement above takes the compression. Hardly an ounce of steel has been wasted on the "neutral axis". Now most of us don't know the difference between the "modulus of Elasticity" and the habits of an *"Ornithisarian", but we are all placing our trust in Lieut. Bogert's practical experience as a Civil Engineer, and in his well worn slide rule. And now the point of all these back yard manoeuvers is to construct the foundation and floor of the oil reclamation house rumored, upon fair authority, to be the Squadron's last construction job this year. (The Army year ends June 30th). This last? pour is admitted by everyone to be a concrete example of what the 66th Service Squadron can do when

when given a chance.

*Of the "Ornithisarian" you will learn later - but that is Group news - not exclusively squadron. The "Modulus of Elasticity", however, will never be treated by us in these pages, unless the cement crumbles and the slow claims all that remains.

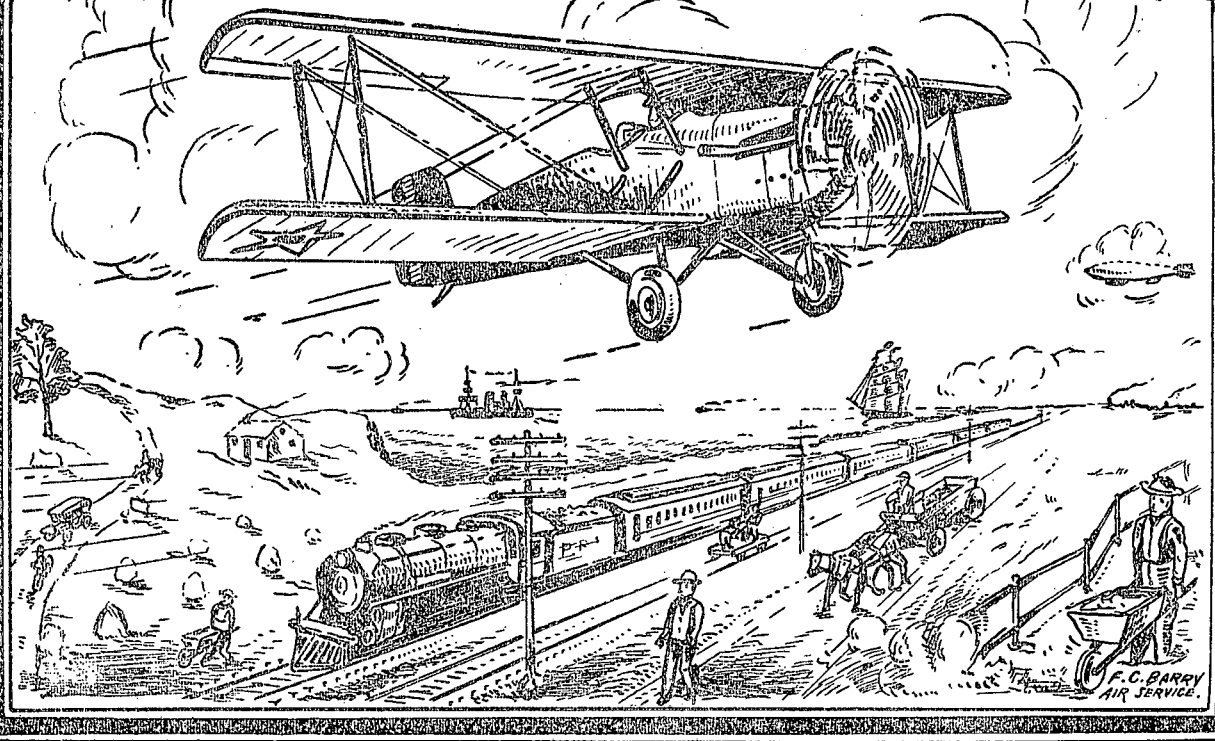
Lieut. Mills, our Mess Officer, was seen shortly after dark on Saturday taking a pot of beans and two cans of "forced issue" hard tacks from the post. When questioned as to his actions, he explained that Capt. Brown has recommended this ration for Samuel Jr., his four weeks old son. He reported the young man to be gaining in weight every day. He was released on bail.

Second Observation Squadron, Kindley Field, Corregidor, P.I.

The Field was exceptionally busy the past few days. A state of war exists and the hostile fleet has been attempting to run by or capture Corregidor. This organization has been furnishing continuous observation. The fleet was located immediately and its location reported by radio telephone. Immediately, a bombing formation, protected by pursuit planes, was notified to take off and bomb the fleet. This mission was accomplished successfully. The next phase was to locate hostile submarines that were to attempt to slip through the channel. These submarines were picked up by our planes and the fact reported at once by radio telephone. Bombers were again requested and the submarines were theoretically bombed. With only two Douglas cruisers available it means continuous flying from 6:00 a.m. to 6:00 p.m., but nevertheless they are functioning perfectly, and these cruisers are all that any one could ask for in performance.

A photo mission will be flown by this squadron in the near future in order to map a section of northeastern Luzon. This work will be accomplished by the personnel of the 6th Photo Section, Camp Nichols, Rizal, P.I., under the direction of Lieut. Ramey. The pilots, Lieuts. Burgess and Umstead, will be from the 2nd Observation Squadron.

U. S. Army Air Service News Letter



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Air Service

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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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ATTACK AVIATION

By Major H.S. Burwell, A. S.

Toward the close of the World War a new type of aerial attack was just coming into operation. It had been discovered that airplanes armed with machine guns and personnel bombs could be used to considerable effect upon troops and convoys. Pursuit and corps observation pilots observing columns of troops on the march and convoys moving behind the lines would come down to low altitudes and, by taking advantage of intervening forests and hills, they were able to approach close enough to pour in a heavy raking machine gun fire followed, many times, by a bombardment with small personnel bombs. The effect was very demoralizing to troops, and this type of attack helped to make any movement of troops or supplies more and more difficult, either by day or night.

The airplane, designed and equipped solely for attack aviation, was not, however, developed during the war. After the Armistice the aeronautical engineers of this country were called upon to develop an airplane for ground attack, i.e., a low flying airplane to be used against troops, machine gun nests, convoys, and other ground targets. In the succeeding years that followed, several designs were completed and airplanes built, all of which depended upon armor plate for protection of crew and vital parts. In nearly all cases, however, they proved to be very heavy and unmaneuverable, and, on account of the great weight of armor plate, their military load and range of operation was not deemed sufficient.

Attack Aviation of Yesterday

Upon the organization of the Third Attack Group in 1921, definite steps were taken to develop ground attack combat principles and to evolve the type of airplane needed in this very important branch of the nation's active air force.

Exhaustive studies were made of the types and kind of targets attack aviation would be called upon to operate against. At first it was believed, relying upon the experience gained in the World War, that attack aviation was more or less a reserve unit to be thrown over the line upon advancing troops or trains. It was considered more of a reserve than an active combatant force. Our studies and our developments have conclusively shown that attack aviation is more than a small aerial force to be used in an emergency.

It is known that attack aviation will be, and is ready now to become, a very active and highly important offensive and defensive force. Attack aviation will be able to lead in every advancement of the ground troops. Its targets will be the front lines themselves, the machine gun nests, the light and heavy field artillery, tanks, ammunition dumps, bridges, cross-roads, factories, troop concentrations, supply convoys and trains.

Of course, all these theories were carefully explained with great enthusiasm to the 8th Corps Area Commander and his staff, and other men in command of important units of the Army. They undoubtedly thought that it was interesting, if true, but it had no great effect, if any, upon their plans. They had to be shown. The Attack Group soon realized that.

The Group then started in to demonstrate its theories by making well planned attacks upon targets so constructed as to represent troops, artillery and truck trains. A snag was struck immediately. The members of the Group found that they had begun their training at the wrong end. For a year or more great effort had been made to develop a highly defensive formation wherein the primary object of its existence had almost been forgotten, i.e., that it was largely an offensive organization. Further, the Group found that though great effort had been made to develop this formation as a whole, the training of the individuals composing it had been neglected. Its attacks were not effective. Machine guns blazed and bombs roared, but the final result was not worth the effort. What was the trouble? The Group had to develop each pilot into an expert machine gunner and an expert

bomber. A training program was laid down calling for intensive individual training in machine gun and bombing practice. Targets were assigned to each pilot. The hits scored were carefully checked after each attack and individual records of the percentages were made. Where at the beginning of the training period the average percentage of hits for all pilots was below five percent, in a few months' time the percentage of all pilots was above 40%, while some were as high as 80%. The secret of it all was carefully aimed fire. The same remarkable increase in accuracy was obtained in low altitude bombing during the same period.

After the individual pilot became efficient in the handling of his armament, the training was then carried to the flight. Before this training period, when a machine gun attack was made, the flights were thrown into columns which scattered them considerably. The three-ship formation, intact, then received its training in formation frontal attack, with machine guns and bombs. The increased effect was tremendous. Flight followed flight with an almost continuous machine gun fire and bomb attack. But the group was not satisfied. The volume of fire, though heavy, was not sufficient. Each flight was able to bring to bear only the fire of six synchronized guns. More were needed. With the aid of the Air Service Engineering Division a mount was devised to carry a machine gun on each of the lower wings making four guns which the pilot of each airplane had at his command. The rate of fire of these wing guns was the maximum they could shoot, since they are not controlled by the speed of the engine as are the synchronized guns. They were mounted outside the propeller disk and were either harmonized, so that their line of fire crossed the line of fire of the synchronized guns at a definite range, or were mounted so as to fire parallel with the synchronized guns, depending upon the type of target. These additional guns more than doubled the volume of fire for each airplane, since the wing gun magazines carry more ammunition than those mounted on the fuselage.

Bombing Equipment Developed

At the same time that all this effort was being made on the machine gun installations, an equal amount of thought and work was being made in the development of our bombing equipment. At the beginning the Group had no satisfactory bomb release or bomb arming mechanisms. These were developed and put into successful operation. The standard bomb release handle previously used prohibited accuracy, due to its construction and location.

Attack Aviation of Today.

The Group now felt that it was in fair condition to show that it was an effective aerial force except for one thing. It was equipped with the obsolete De Haviland airplane. Nevertheless, this did not stop the training program. The guns and bomb racks were mounted on these airplanes. It is true that each DeHaviland airplane cannot safely carry more than four fixed and one flexible gun and ammunition plus ten personnel bombs; it is true that the speed and maneuverability are dangerously cut down, but the results obtained are remarkable.

Method of Attack

On account of the inability of the DH4B to carry the above load, our attacks have been modified somewhat over what they will be when the Group is equipped with the attack airplane now being built. The following two methods of attack are now used: First, if each flight of three airplanes is to make only one attack, they are sent over the targets in waves of two flights of three airplanes. The first flight of each wave, armed only with machine guns, opens fire with all forward guns at a range of 1000 to 1200 yards. The volume of fire is heavy enough to cause an enemy to seek cover. The second flight of each wave is armed with 25-lb fragmentation or 50-lb. demolition bombs and is following very closely behind the machine gun flight. Thus, only a few seconds elapse between the end of the machine gun fire and the exploding of the bombs. Just as soon as the bombs have exploded the machine gun flight of the second wave opens fire and, when completed, the second flight of the second wave drops its bombs. This continues until all waves have passed over. By this method the machine gun flights are able to silence or materially reduce the enemy fire until the low flying bombing flights are able to reach the target unmolested. All of these flights fly at altitudes of 400 feet or less, and it is believed that they are able to defend themselves from all types of enemy planes.

The second method is used when each flight makes a return attack. In this case each airplane carries both machine guns and bombs, but it is not as heavily loaded with either ammunition or bombs as in the flights used in the first method of attack. The first time over the target the procedure is the same as outlined above. As soon as each wave has passed over the target the bombing flight, having dropped its bombs, but being still armed with machine guns and a full load of ammunition, takes the lead as the machine gun flight. The first machine gun flight,

still having its load of bombs, falls in as the bombing flight and the attacks proceed as before.

Results and Effects of Today's Attack

The accompanying diagrams are illustrations of average results, carefully checked upon the various types of targets. Fig. I shows the results obtained upon a target representing a company of infantry in column of squads. The attack was made parallel to the long axis of the company. The targets were made of type "E" silhouette targets. Of course, it is realized that seldom would a pilot be able to attack a company of troops in this formation. Fig. II assumes that the company has heard the airplanes approaching and that the troops have scattered to seek available cover. The attack was made by one wave of two flights of three airplanes each. The company, as shown by the accurately checked results, would have suffered 57% casualties, many of the targets being totally destroyed.

Fig. III is a chart showing the results of a machine gun attack of one flight of three airplanes upon a truck train. Part of the personnel is assumed to be leaving the convoy to seek cover while the rest have not been able to dismount from the trucks. Of the 1279 rounds fired, there were 822 hits or 76% were effective. There were 255 hits on personnel, and only 36 silhouette targets were missed out of total of 120. Every target within the trucks was hit anywhere from one to twelve times. From the large number of hits on the front of each truck it is doubtful whether any of them would still be in commission.

Fig. IV shows the effect of the attack of one wave upon a battery of artillery. Although the machine gun fire did no great amount of damage to the guns, the bomb attack put the battery completely out of action. Every man, save two, was either hit or completely destroyed. Pieces of bomb fragments pierced the metal caissons, and in some cases cut into the heavy tires on the wheels. The force of the explosions would have destroyed or seriously damaged the delicate sighting mechanisms on all pieces. It is possible that some of the larger fragments would have set off some of the shells had the caissons been loaded.

Fig. V is a diagram of the results of a two wave attack of machine guns and bombs upon a truck train and its personnel of 152 men. All except 12 type "E" targets were hit by either machine gun fire or bomb fragments, giving 92% casualties. Three of the trucks were completely demolished and the other two put out of commission. In fact, the truck train and all of its personnel were practically annihilated.

The Eighth Corps Area Commander and other general officers who observed several of these attacks have indicated by their statements that they are absolutely convinced of the effectiveness, tremendous punch and potential power of attack aviation as an offensive combatant force, even though equipped as we are with the present obsolete DeHaviland airplane.

Attack Aviation of Tomorrow.

Yet the Attack Group is not satisfied. The Group is accomplishing in the above attacks only one-sixth of what could be done with the same number of airplanes designed properly and solely for attack aviation. It is believed that with some modifications of the new Douglas Corps Observation airplane this increase in effectiveness can be accomplished.

The two wing guns now mounted on top of the lower wings could be placed inside the thick wings of the Douglas. Two others could be similarly mounted in the two upper wings, and by doubling the amount of ammunition, which can also be placed inside these wings, the total effect from machine gun fire alone would be quadrupled.

At present external bomb racks are mounted on the lower side of the lower wings on the DeHavilands. The Douglas could possibly be so modified as to have these racks placed inside the fuselage and made large enough to carry twice the number of bombs now carried. The results would be that one airplane alone would have the same punch as one complete wave of two flights of three DH4B airplanes each, with a much greater tactical effect.

Alternative Armament

An alternative armament load desired for this new airplane and to be used on such special targets as railway engines, armored trains, bridges and factories is to leave off the load of small personnel bombs and wing guns and substitute therefor one 300-lb. demolition bomb with a delayed fuse, and one 50-cal. Browning machine gun which fires a large bullet having a high penetration. A fast diving attack could be made with the 50-cal. gun, and when the airplane had approached.

very close to the target the bomb could be dropped with great accuracy. The delayed fuze, set for delay of 10 seconds, would allow the airplane to escape from the danger zone before the explosion.

There is no doubt that attack aviation units thus equipped would soon be recognized as one of the most powerful, if not the most powerful, of auxiliary offensive and defensive forces.

Attack Aviation of the Next War.

As an illustration of the potential force of a single group equipped with from 75 to 100 of these airplanes and having a base of operations within 50 miles of the front lines, it would be possible to have single planes make attacks every minute continuously day and night; or waves of six planes could be sent over continuously every five or six minutes. As the base of operations was moved closer and closer to the lines the time interval between attacks could be decreased until an almost continuous attack could be made.

On the other hand, a combined attack of, say, thirty flights of three airplanes each could easily be made. The effective radius of action of the small personnel bombs is sixty yards, or an effective front for each flight of 360 yds. Allowing for 50% overlap of front for each airplane, the total effective front for the thirty flights is a little more than three miles. If the bombs were dropped two at a time and 180 yards apart, the effective depth of this bomb attack would be a little more than one mile. Added to this, each airplane would be able to fire 5000 rounds of 30-cal. ammunition, or a total of approximately one-half million rounds. This attack could be delivered in less than one minute and, with proper war strength organizations located within 25 miles of the front, it is believed that these attacks could be repeated at intervals of one hour.

Thus it is seen to be possible that a group could carry out a heavy attack over an area three miles long by one mile in depth, and all in less than one minute. An attack such as this would have a terrific effect upon the enemy.

Systematizing of Group and Squadron Departments

By what means has the Attack Group been able to reach its present standard of performance? On what basis will it be possible to carry out such enormous aerial attacks as set forth in the preceding paragraphs? Proper organization is the answer to both questions.

More than a year of intensive study and work has been spent in organizing and reorganizing the departments of the squadrons and the Group in order to bring them up to a very high standard of operation. The Group and squadron supply systems have been developed into a smoothly running department, requiring a minimum of personnel and time. New methods of accounting of property have been installed, making it possible at all times for the Group and Squadron supply offices to quickly and accurately check all property within the Group.

The Group and Squadron Engineering Departments have developed new methods and systems for maintaining planes and motors. Work stands have been constructed and equipped for each crew chief. These stands contain all the tools and miscellaneous items, such as cleaning material, grease, cotter pins, hose clamps, and many other small parts, thereby practically eliminating the necessity of a crew continuously running back and forth between the plane and the stock room. Inspection sheets covering all items on an airplane are maintained. This sheet is divided into sections, setting apart the items to be checked daily, weekly and monthly, also the items to be checked at end of a definite number of hours flying time. These sheets make it possible for the Engineering Officers and the crew chiefs to quickly check an airplane and to know positively when the work called for was last performed.

The Transportation Department has completely overhauled all unit equipment and placed it in storage so that it is all ready today for any field maneuver or emergency that may arise. There will be no delay because of trucks being out of commission or doubt as to their operation should they be needed.

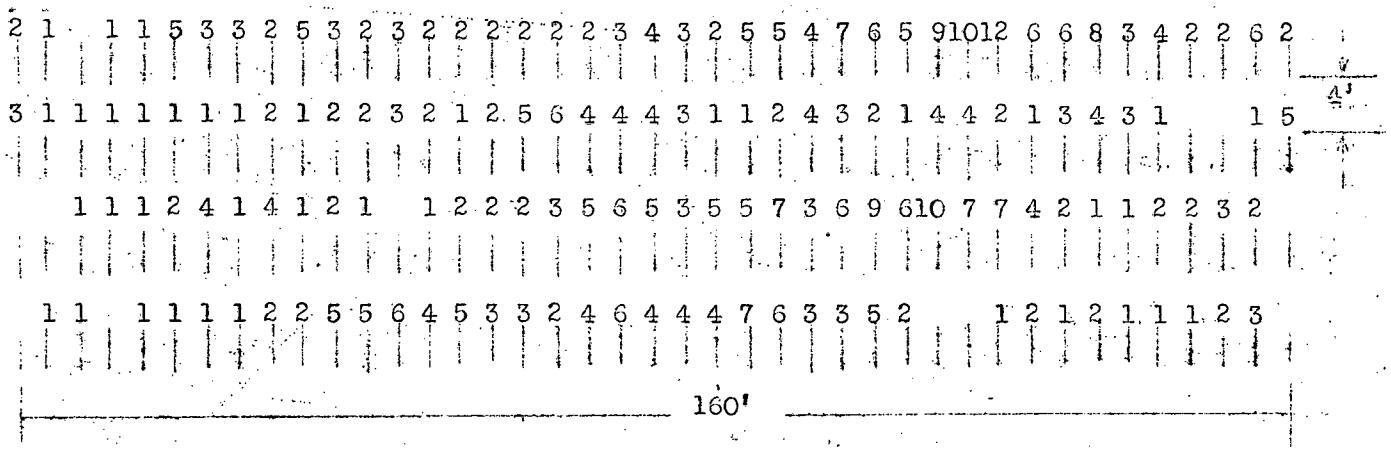
All other departments of the Group have been similarly reorganized and systematized. Each has been made into a smoothly running section. The result of all this has been that more men are available for the line and the armament sections, which in turn has made them more efficient and effective departments. And so it is believed that, in time of emergency, with this framework, the Group will be able to withstand the strain of sudden wartime expansion and rush, and that it will be able to weld the whole into a powerful military machine.

Night Training in Attack Aviation.

The next step forward in attack aviation will be the training of squadrons to

FIG. I

Company of Infantry in Column of Squads.



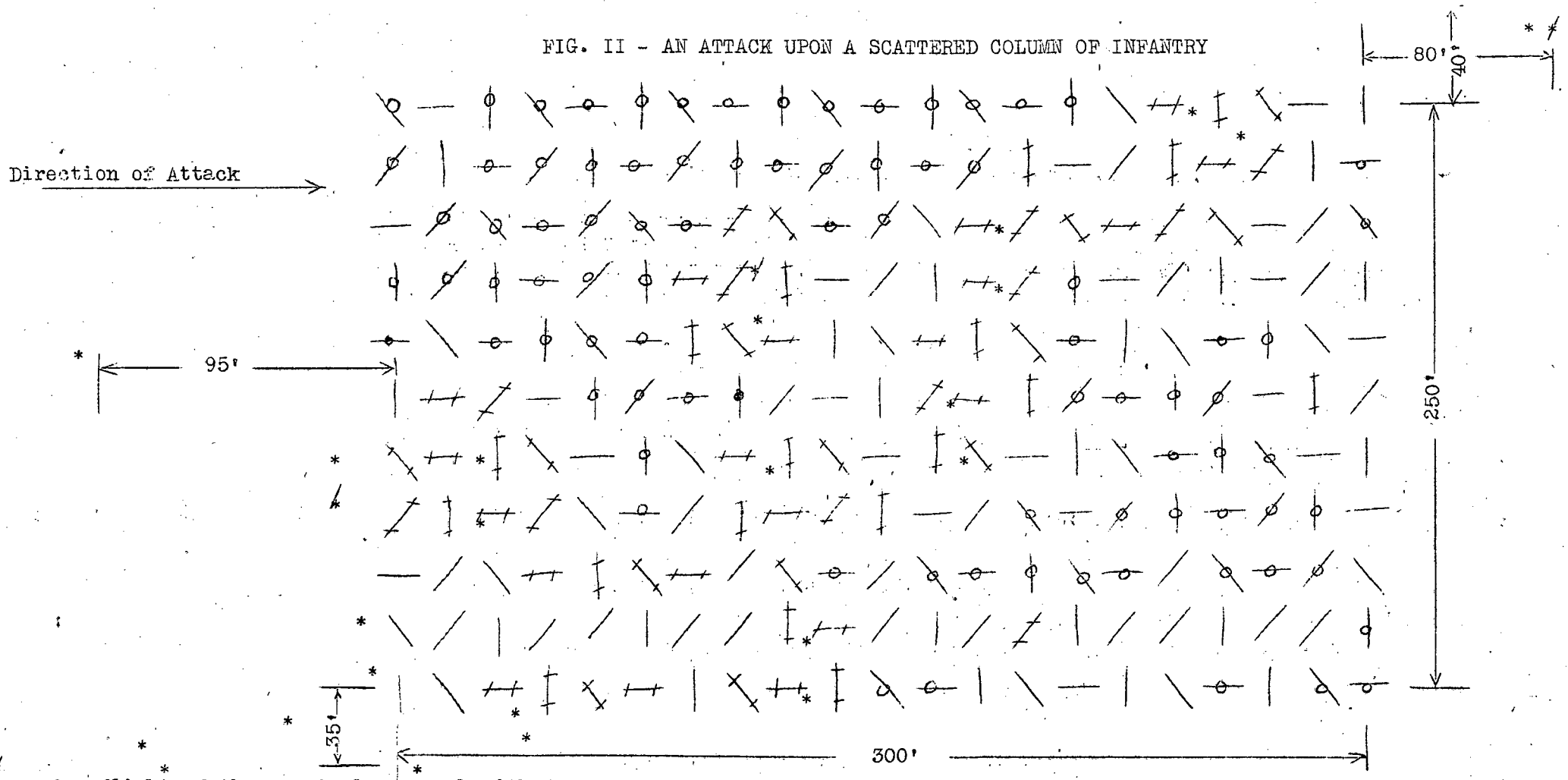
Direction of Attack →

Number of type "E" targets - - - - - 164
Number of targets hit - - - - - - - 152
Total number of hits - - - - - - - - 488
Number of rounds fired - - - - - - - 971

Attack made by flight of two planes
Column attack, (1) attack each.
4 guns per plane.
Guns harmonized at 300 yards.

Figures above targets denote number of hits on each target.

FIG. II - AN ATTACK UPON A SCATTERED COLUMN OF INFANTRY



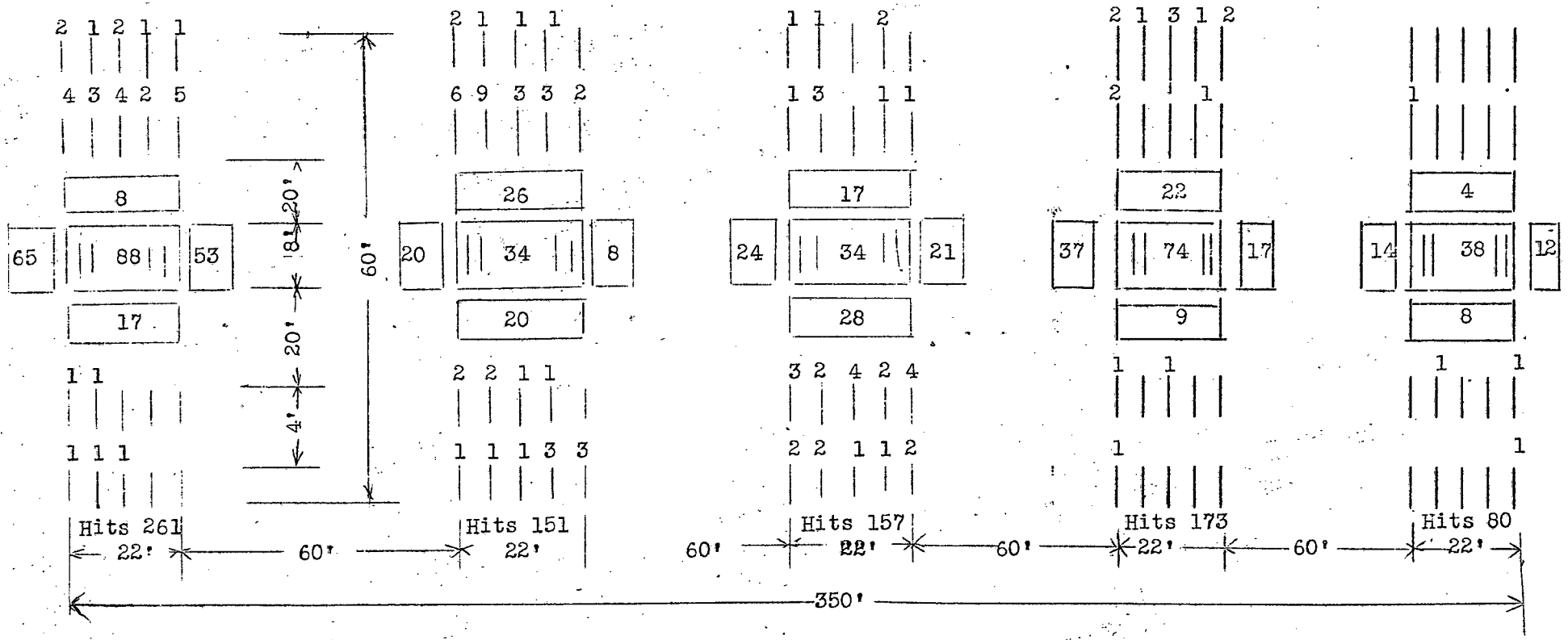
One flight of threee airplanes each with 4 machine guns, each
One flight of three airplanes with 10 fragmentation bombs each.

Number of Type E targets	200
Number of machine gun hits	31
Number of bomb hits	475
Number of targets hit by machine gun fire	23
Number of targets hit by bomb fragments	128
Number of bombs dropped	29
Number of targets not hit	86
Number of duds	4
Number of targets totally destroyed	64

* - Bomb hit
/ - "Dud"
/ - Targets totally destroyed.
/ - Targets not hit
/ - Targets hit from 1 to 24 times by machine gun or bomb fragments or both.

FIG. III

ATTACK ON LIBERTY TRUCK TRAIN



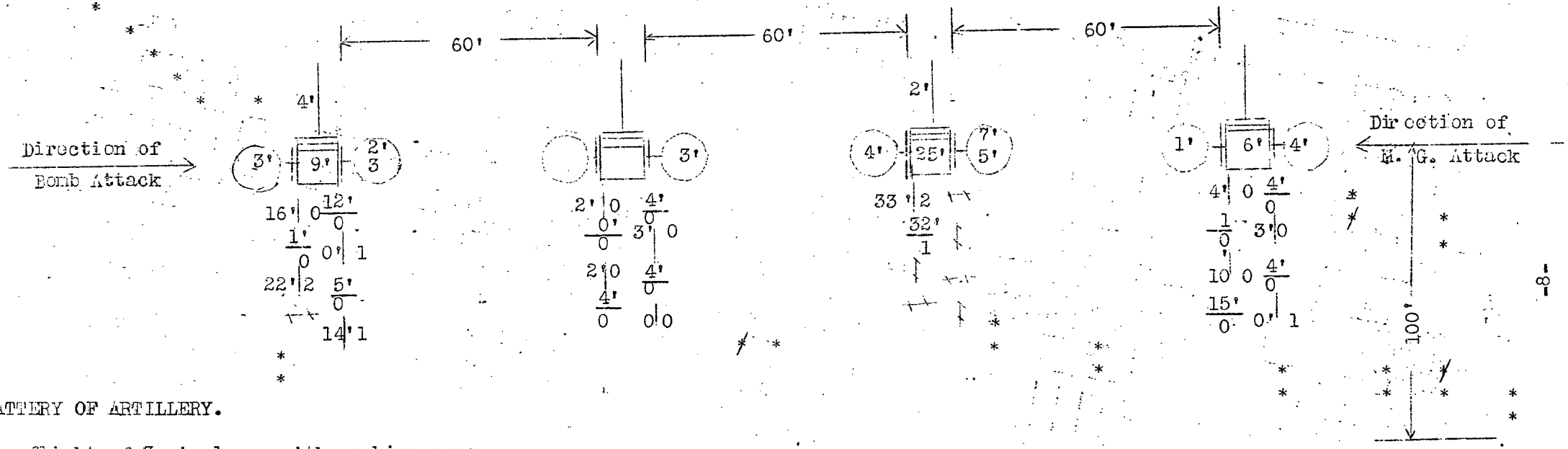
Direction of Attack (Frontal)

Attack by flight of three-airplanes in column using machine guns

Number of rounds carried - - - - - - - - - 2850
Number of rounds fired - - - - - - - - - - 1279

Number of hits - - - - - - - - - - 822
Percentage - - - - - - - - - - - - - 76%
Hits on personnel - - - - - - - - - 236
Number of targets not hit - - - - 36
Number of Type "E" targets - - - - 120

FIG. IV.
AN ATTACK UPON A BATTERY OF ARTILLERY



ATTERY OF ARTILLERY.

ne flight of 3 airplanes with machine guns
ne flight of 3 airplanes with bombs

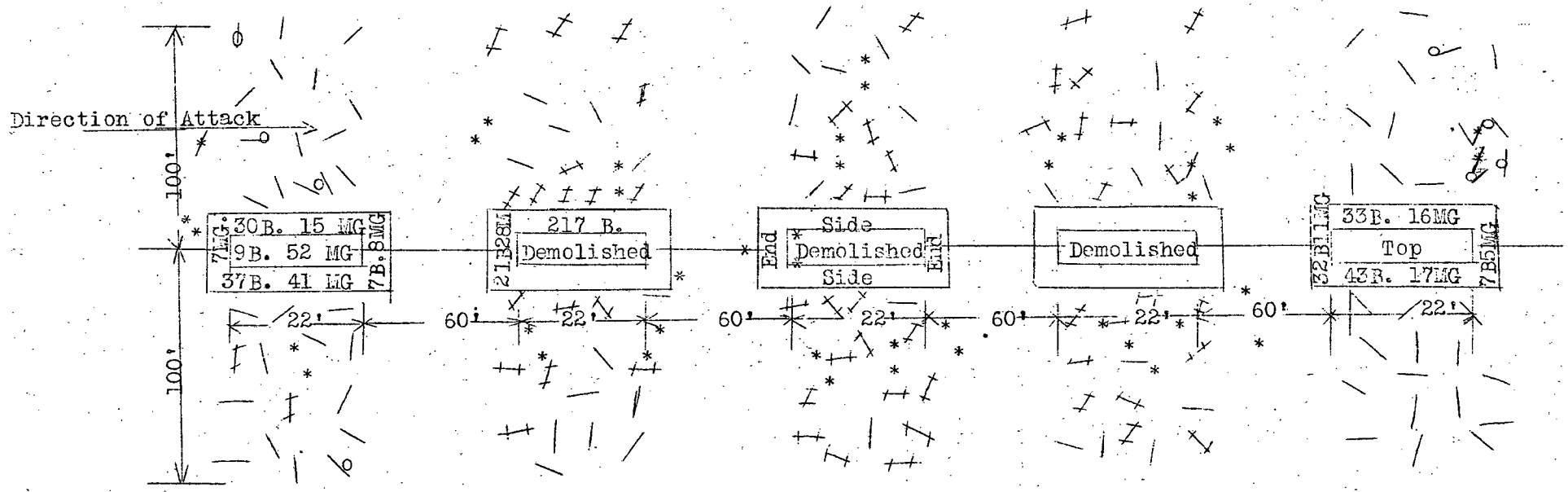
umber of rounds fired by machine gun flight	873
umber of bombs dropped	30
umber of "duds"	3
umber of type "E" targets hit by machine gun	4
umber of type "E" targets hit by bomb fragments	28
umber of machine gun hits	16
umber of bomb hits	276
otal number of type "E" targets	32
otal number of type "E" targets hit	29
umber of type "E" targets totally demolished	7

* - Bomb hit
⁄ - "Dud" bomb
/ - Target totally destroyed

Figures marked ' (4') represent number of bomb hits.
Otherwise - machine gun hits.
(All bombs accurately placed reference center line).

FIG. V. AN ATTACK UPON A LIBERTY TRUCK TRAIN AND DISPERSING PERSONNEL

No. type "E" targets - 30	No. type "E" targets - 30	No. type "E" targets - 30	No. type "E" targets 30	No.type "E" targets 30
No. targets hit - 25	No. of targets hit - 30	No. of targets hit - 30	No. targets hit 30	No. of targets hit 23
By bombs - 22	By bombs - 28	By bombs - 30	By bombs - 30	By bombs - 25
By M.G. - 16	By M.G. - 5	By M.G. - 3	By M.G. - 3	By M.G. 10
Total no. bomb hits - 99	Total No. bomb hits - 79	Total No. bomb hits - 79	Total No. bomb hits 101	Total No. bomb hits 146
Total No. M.G. hits - 26	Total No. M.G. hits - 11	Total No. M.G. hits -10	Total No. M.G. hits 12	Total No. M.G.hits 15



All trucks were hit with bombs and machine guns.
Two flights of 3 planes each with machine guns.
Two flights of 3 planes each with 25-lb.frag.bombs
Number of rounds of Cal .30 ammunition fired 2834
Number of bombs dropped - - - - - - - - - - 60
Number of machine gun hits on truck train - - 200
Number of machine gun hits on type "E" targets 74
Number of bomb hits on truck train 436

Number of bomb hits on type "E" targets - 504
Number of type "E" targets hit by bombs - 135
Number of type "E" targets hit by M.G. - 37
Total number of machine gun hits - 274
Total number of bomb hits - 888
Total number of type "E" targets hit - 140
Trucks totally demolished - 3

* - Bomb hit.
/ - "Dud" bomb.
/ - Target totally destroyed
ø - Target not hit
MG - Machine gun, hits
B - Bomb hits
(Bombs accurately placed reference center line.)

carry out effective night attacks. Considerable work and training in night formation and cross-country flying has already been accomplished, but the present great need is a highly efficient parachute flare to light up the targets sufficiently to make accurate night attacks.

Low Flying Airplanes.

The skeptic not intimately familiar with or proficient in actual test practices will immediately think that the casualties and loss of planes in such attacks as outlined above will be so great as to put the air force out of commission. This will not be true. Undoubtedly there will be some loss of personnel and planes. The flight leaders, however, are trained to take advantage of every hill and forest in approaching their targets. By flying just off the ground and following valleys and, where possible, coming at the objective over a hill, it is proven that, due to the suddenness of the attack and the immediate getaway of the plane, fewer airplanes will be shot down than would be theoretically supposed on first thought. By carefully studying the contour maps of the areas to be attacked, it is possible to choose a route, even in comparatively level country, whereby a pilot can approach unseen to within a very short distance of the target. The sound of a low flying airplane is also reflected upward, thus making it difficult to locate. Only with the greatest difficulty can enemy pilots observe an airplan flying at very low altitudes.

Conclusion

In conclusion, then, it is believed that the demonstrations carried out by this Group have brought out the following important facts:

a. That attack aviation is absolutely necessary in the development o f military aviation.

b. That it is probably the most important auxiliary offensive and defensive force against ground targets.

c. That it has tremendous potential power.

d. That it is fully capable of its own defense, and that it will be the best offensive aerial force against enemy attack aviation.

e. That the secret of its success will be a large volume of accurately aimed machine gun fire and a large number of accurately dropped small bombs, i.e., a volume of small projectiles carefully placed at low altitude under the protection of its superiority of aimed machine gun fire, instead of relying upon a few large projectiles dropped from high altitudes.

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AIR SERVICE PERSONNEL AT MAXWELL FIELD

For the information of the Air Service at large, a roster of Air Service officers now on duty at Maxwell Field, Montgomery, Ala., is given, as follows:

Major H.H.C. Richards, Commanding Officer, 22nd Observation Squadron and post; 1st Lieuts. Benedict A. Coyle, Alvan C. Kincaid, Aubrey Hornsby, Robert D. Knapp, Ward F. Robinson, Edward M. Morris, and Oscar L. Rogers, all assigned to the 22nd Observation Squadron; 1st Lieut. Leland W. Miller, C.O. 4th Photo Sec.; 1st Lieut. Rufus B. Davidson, DOL, now on temporary duty in connection with summer camps, and 2nd Lieut. Don W. Mayhew, with Det. 22nd Obs. Squadron, at Fort Bragg, N.C., and now on temporary duty in connection with summer camps.

Major Roy S. Brown has been succeeded as Commanding Officer of the 22nd Squadron and post by Major Richards. Major Brown was in command of the squadron and post for the past four years, and his departure will end a most successful administration. He has accomplished excellent results during his tenure of office, and the best wishes of the entire command go with him to his new station - Kelly Field, San Antonio, Texas.

The 22nd Squadron, 4th Photo Section, and detachment of Signal Corps at Maxwell Field fired for record on the pistol range, with 1st Lieut. Benedict A. Coyle, A.S., acting as instructor. Of the men firing, 87% qualified as marksman or higher.

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40TH SCHOOL SQUADRON CELEBRATES THIRD ANNIVERSARY

The 40th School Squadron celebrated its third anniversary on June 22nd by holding a Field Meet. In the baseball game the bachelors defeated the married men. A special dinner, followed by a dance in the evening, completed the day. This

squadron is characterized by a very high esprit de corps, and the good quality of its work justifies the high opinion held of it by the School Group Commander and all the officers at Kelly Field.

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PARACHUTE ACTIVITIES IN THE ARMY AIR SERVICE

Now that the parachute has come into general use in the Army Air Service, it is but natural to expect that articles and reports on this so called aerial life preserver will become more and more numerous as time goes on. An aviator striding towards his plane for the purpose of making a flight was wont to carry in his hand either his flying helmet or goggles. Nowadays he also carries a burden on his shoulders, though a very slight one, since it only weighs about 18 pounds. This burden is a canvas-covered package, about 14-inches square and about 4 inches in thickness, suspended from his shoulders by a net work of web straps, called parachute harness. One would hardly believe that this package contains a folded silk umbrella, about 25 feet in diameter, together with the necessary shroud lines. It takes skill to fold this mass of silk and cord into such a compact bundle and in such a manner that the parachute will function perfectly when the emergency arises. But Air Service personnel are gradually being trained how to fold this highly important article of equipment, and pilots cheerfully carry this little pack, knowing that it is all that stands between them and eternity should an accident transpire in the air which would necessitate a hasty exit from their plane.

Experiments with the parachute are now being conducted at practically all the large Air Service flying fields. There is an element of thrill connected with a parachute jump, though one would imagine that it should now be a commonplace incident, considering the great many jumps which have been made of late, all with absolute safety. The wonderful record for safety which the service type parachute bears today is due to its high stage of development by the Army Air Service.

Development work on the parachute is being carried on at the Air Service Engineering Division at McCook Field, Dayton, O. Formerly the distribution, drop testing, repair and maintenance of parachutes were also functions of the Engineering Division, but under a new policy in the handling of parachutes recently adopted, these functions were transferred to the Fairfield Air Intermediate Depot at Wilbur Wright Field, Fairfield, O. Since this transfer, live parachute jumps at Wilbur Wright Field are becoming quite common, as this is in line with observation and study of performance of parachutes under actual conditions.

Instruction in jumping and in folding the parachute is conducted at the Air Service Technical School at Chanute Field, Rantoul, Ill. Under the supervision of the Parachute Department of this School, 53 parachute jumps were accomplished without injury to participants from January 1 to June 30, 1925. With the exception of two "wing pull-offs", all were "live" jumps from the cockpits of airplanes at varying heights from 2,000 to 7,500 feet. Of these 53 jumps, Army Air Service personnel accounted for 37 (8 commissioned officers and 29 enlisted men); one was made by an officer of the Medical Department; 7 by enlisted men of the U.S. Marine Corps; 4 by members of the Canadian Royal Air Force (3 commissioned and 1 enlisted); three by officers of the British Royal Air Force and one by an officer of the Dutch Air Force. Three training type parachutes were used for all of these jumps.

On June 22nd two civilians on duty at the Field Service Section, Fairfield Air Intermediate Depot, Messrs. O.R. Rose and C.A. Shade, made successful jumps with the Air Service training type parachute from a standard DeHaviland airplane flying at an altitude of 3,000 feet. The parachutes functioned perfectly, giving further assurance that flying with parachutes is becoming more safe every day.

To avoid hitting one of the hangars, Mr. Rose pulled on the riser strap in order to slip the parachute away from the building. Mr. Rose stated that this was the only thrill he had. A strong wind was blowing at the time, causing the parachute to sway heavily, but this did not cause any unpleasant sensation.

Mr. Shade turned one and one-half somersaults before the chute opened. He was headed downward when it opened and he received a strong, sharp pull - a very welcome pull, he admitted. He made a good landing despite the fact that a fairly strong wind was blowing. He had his harness unfastened by the time he landed, so that the wind did not cause him to be dragged over the ground. Mr. Shade further stated that it was a wonderful adventure, no dizziness or other unpleasant sensation, and he has no reason to regret that he made the jump. The harness fitted perfectly and did not cause any discomfort.

In addition to the two civilians mentioned above, Mr. W.H. Aue, a civilian at-

tached to the Parachute Repair Department at the Fairfield Depot, also made a jump. Mr. Aue described his jump as follows:

"The experiences in connection with my jump were rather pleasant, with the exception of landing, which was a little rough due to a stiff breeze. The part of the whole affair that surprised me most was the entire absence of any fear for my safety. The fact of having had experience in experimental work, repair and maintenance of parachutes, gave me absolute confidence in the Government chute. It is my thought that every one connected with parachutes should make at least one jump, as it gives you a better view of the work. I am also of the opinion that one free jump should be included in a pilot's training."

Two night parachute jumps were recently made at Kelly Field, San Antonio, Texas, one by Staff Sergeant August W. Thiemann of the 10th School Group Headquarters, and the other by Corporal Harlan R. Utterback of the 43rd School Squadron. This was Corporal Utterback's second night jump. The written reports of these two intrepid parachute jumpers follow:

Sergeant Thiemann -

"On the night of Thursday, May 28th, two parachute jumps were to be made and I was the first off. As it was very windy, (the velocity of the wind being about 17½ mph, due east) it was thought best to wait 25 or 30 minutes before making the jump. In the meantime, I had talked matters and conditions over with Corporal Harlan R. Utterback, who was to make the second jump of the night. At precisely 8:10 P.M., Capt. McDaniels asked me what I had decided to do. My answer was: "I am ready, Captain." With Corporal Utterback and Sergeant Likens I made my way for ship #26, a D.H. 4 B, fully equipped with lights.

First Lieutenant J. S. Griffith was the pilot and, after talking things over with him, the motor was started and warmed up. With the help of Corporal Utterback and Sergeant Likens, I was strapped in my parachute and after decided hesitations, signals were decided upon. After telling Lieut. Griffith the altitude at which I wanted to jump, I climbed in the cockpit and Lieut. Griffith started the ship across the flying field. We had taken off due east and made one complete circle of the airdrome. In making this circle our altitude was slightly over 2700 feet. I was a bit nervous, due to only one fear, that of being dragged after landing. I was taking things rather easy when Lieut. Griffith signaled me to get ready. At this signal I was to get up in the cockpit, and stand up. As soon as I had stood up, Lieut. Griffith cut the gun and I jumped. In jumping, as I left the plane, I placed my left hand on the chest pack, as I was carrying a search light that I intended to use, if possible. I left the plane about 500 yards east of the Frio City Road, and just north of the water tower in Duncan Field. The large search light in Kelly Field was focused on me just before the jump, but at the moment of jumping the search light lost me, and again picked me up after the parachute was opened. I did not grapple for the rip-cord, as I had my hand on it from the moment of leaving the plane. In leaving the plane I dove straight down, and upon the sudden opening of the parachute, I produced the search light that I was carrying, and played it in the open parachute. The result was even better than expected, for officers and enlisted men some distance away could very plainly see the parachute, as it looked like a huge lamp in mid air. By this time I had dropped a considerable distance and decided that it was time to unfasten the straps on the harness, as I had intended to be free of the harness, upon hitting the ground, to prevent my being dragged in the high wind. All this time in descending the large search light was kept on me. I landed in the center of the Flying Field, just south of hangar #4, in Kelly Field, and landed on both feet, but due to the high wind was being dragged. I began pulling on three or four shroud lines, in an effort to collapse the parachute. After having done so I noticed that my search light was still lit, and I began playing it in the direction of the Post Operations Office, and noticed almost in front of me the ambulance that had been sent to pick me up. Although I had a pair of bruised shoulders, I was unhurt otherwise."

Corporal Utterback -

"My jump was second on schedule for the night on May 28th. Having only one Training Type Parachute in Kelly Field, it was necessary for me to use the same parachute that Sergeant Thiemann jumped with. I watched Sergeant Thiemann jump, and noticing the location from which he left the plane, I decided to go to the same altitude and place for my jump. But the fact that the wind changed slightly, and my weighing about sixty pounds less than Sergeant Thiemann, came near causing serious injury to me. I left the plane, a DH4B, piloted by Lieut. Griffith, over Duncan Field at an altitude of 3000 feet. The wind was blowing at 15 mph on the ground, but having made jumps in higher winds, this bothered

me very little. Signals for leaving the ship were prepared, and upon the signal of Lieut. Griffith, I stood up in the seat, I put my right foot on the cowling of the right side of the ship and shoved off. I cleared the ship easily, and released the chute by pulling the rip-cord when I was well clear. The chute opened immediately. I set myself in the harness and released all snaps, so as to be out of the harness upon landing. I probably escaped serious injury by doing this. I drifted across Duncan Field (which adjoins Kelly Field on the east) on to Kelly Field. The wind which was blowing from the east when I jumped seemed to change slightly to the south when I was about 500 feet from the ground. This change in the wind carried me across the line of hangars into the line of officers' quarters, and I was swung against the side of quarters #72D. Throughout my descent I was followed by the search light on the Field. I was drifting face to the wind, and passing over the light it shone in my eyes and blinded me. I dropped behind a row of quarters and turned in the harness in time to see where I was going to hit. I hit feet first against the building. Being free in the harness, I let the chute go and it draped itself across the building and into the road beside the building. Captain W.E.Lynd was one of the first to reach me, and I explained that I was not injured. After getting the chute off the building, I reported to Major Hickam. I made a safe landing, such as it was, and I was not injured in any way.

My conclusion from this jump is that the best thing for any jumper to do is to set himself in the harness and release all snaps. I am positive that I escaped serious injury by being free in the harness."

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RESERVE AND NATIONAL GUARD OFFICERS ATTEND SCHOOL OF AVIATION MEDICINE

The School of Aviation Medicine at Mineola, L.I., New York, held a special session for Reserve and National Guard Officers for the period May 1st to June 15th last. The following officers took the preliminary course and have been qualified to perform the physical examination for flying:
Majors William D. Petit, Thorndale, Texas; Irwin E. Ruhl, Kansas City, Mo.; Lewis W. Fetzer, Dallas, Texas; Alexander W. Burke, Chicago, Ill.; Archie McCallister, Oteen, N.C.; Victor W. Maxwell, Sanitorium, Miss.; Capt. Albert J. Pullen, Fond-du-Lac, Wis., all of the Medical Reserve Corps; Captains Louis C. Pawelek, Houston, Texas; and Wilbur F. Smith, Indianapolis, Ind., of the National Guard.

The following officers took the advanced course and qualified as flight surgeons: Lieut.-Col. Serge Androp, Gallipolis, Ohio; Major Haramont N. Anderson, Woodbine, Iowa; Major Granbow Thomsen-von Colditz, Evanston, Ill.; 1st Lt. Albert J. Herbolsheimer, Minneapolis, Minn., all of the Medical Reserve Corps; and Capt. Elmer E. Langley, Spokane, Wash., of the National Guard.

Major Charles W. Greene, Sanitary Reserve Corps, Columbia, Mo., reported for two weeks' training in the progress of physiology of Aviation.

This class, which comprised officers from every section of the country, is the largest Reserve and National Guard class which has ever passed through the School.

The course of instruction was entirely professional and consisted of lectures, practical work at the School and clinics in New York City: The subjects taken up in the preliminary course were ophthalmology and otology, cardiology, and neuro-psychiatry. In the advanced course the same subjects were taken up plus physiology, psychology, and administration.

On June 11th the class gave a dinner at Mineola for the faculty. Besides the faculty and class there were present Lieut.-Col. Wm. R. Davis, Medical Corps, Chief of the Medical Section, Air Service; and Major H.P. Carter of the School Section, Surgeon General's Office. At the dinner the class gave their impressions of the School and the faculty spoke on the course from the standpoint of the instructor. Colonel Davis and Major Carter emphasized the importance of the work and the necessity of training a large number of Reserve and National Guard Officers for duty with the Air Service.

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THE AERONAUTICAL MUSEUM AT MCCOOK FIELD

One of the many interesting places of interest at McCook Field, Dayton, O., is the Aeronautical Museum, wherein are stored many airplanes and engines of various designs, most of them being of considerable historical interest.

The Museum is divided into two parts, one for airplanes and the other for aviation engines. A total of 67 different types of engines, ranging from four to sixteen cylinders, are on display - air cooled, water-cooled, stationary and rotor types. These engines are of British, French, Italian, German,

Austrian and domestic designs.

Practically all of the engines from foreign countries which are on display were used in active servide during the World War, and some of them bear scars of service in the shape of jagged bullet holes. The engine display presents a neat and attractive appearance, each engine being thoroughly cleaned, polished, and the rough metal parts painted half black and half aluminum color. There are duplicates on hand of approximately 80 percent of the total number of these engines, one being set up complete and the duplicate disassembled to enable those interested in engine design to make a more minute inspection and closer study of same. A cylinder from the majority of the disassembled engines is displayed in sectional form, carrying valves, pistons, push rod and connecting rod, thus affording a complete mechanical display.

An exhibit attracting more than passing interest is the original Wright 6-cylinder engine, enabling one to note the great contrast between it and the present day type of aviation engine, and demonstrating the great progress which has been made in engine construction in the comparatively brief lapse of time since man first started to fly.

Among other interesting exhibits are the original supercharger with which two world's altitude records were made - one by Major Rudolph W. Schroeder and the other by Lieut. John A. Macready, and the Ansaldo engine originally used in the ill-fated Airship ROMA.

In the Airplane Section of the Museum 51 airplanes are stored, many of them being types used by allied and enemy countries during the World War. The fabric on some of these planes is still in a good state of preservation, despite the lapse of from 8 to 10 years. Some of the airplanes are of considerable historic interest, such as the famous around-the-world Douglas Cruisers, the CHICAGO and the NEW ORLEANS; a sister ship to the T-2 in which Lieuts. Macready and Kelly made their non-stop flight across the American continent; the LePere, in which Lieut. Macready made his world's altitude record; the original Verville monoplane in which Lieut. C.C.Moseley won the first Pulitzer Race in 1920; the Verville-Sperry monoplane with retractable landing gear; the deBothezat Helicopter, etc.

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GUNNERY PRACTICE FOR ADVANCED FLYING SCHOOL AT ELLINGTON FIELD

All the students and most of the instructors of the Advanced Flying School at Kelly Field, Texas, were engaged in gunnery practice at Ellington Field, Houston, Texas, for about 20 days. The Gunnery Expedition, under the command of Captain A. B. McDaniel, left Kelly Field on June 20th. It included about 60 planes and a truck train. The students assigned for specialized pursuit training, did not go, being engaged in preliminary pursuit work, but were scheduled to go later in the course.

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RESERVE OFFICERS TRAINING CAMP AT WILBUR WRIGHT FIELD

The first of the Reserve Officers Training Camps at Wilbur Wright Field, Fairfield, Ohio, came to a close on June 27th. Those in attendance included 2 Majors, 2 Captains, 7 First Lieutenants, and 17 Second Lieutenants and one Staff Sergeant. These men were attached to the 88th Observation Squadron, which is permanently located at the field, and were assigned as assistants to the officers in charge of the various squadron activities with the idea of giving them the same training which is given to the regular personnel. Lectures and practical demonstrations in all phases of the work of an observation Squadron were given. For example, instruction was given in the communications work of an Observation Squadron; in photography (including the work of a photo laboratory); in airplane rigging; in engine overhaul; in the installation, operation and maintenance of special equipment, and in the method of handling operations within the Squadron.

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ENGINEERING STUDENTS COMPLETE COURSE IN ENGINE DESIGN

Students attending the Air Service Engineering School at McCook Field, Dayton, Ohio, recently completed a course in Engine Design which covered the essentials in preliminary study of 500 h.p., 12 cylinder Vee engines. Mr. Almen, the designer of the Almen barrel engine; Mr. Caminez, designer of the cam engine, and Mr. Herron, designer of the air cooled engine, gave talks describing their specialities. A practical flight test completed the work on the study of superchargers. One NBS-4 airplane, fitted with a side-type supercharger, made a direct climb to 12,000 feet, while an MB-3 attained slightly over 6,000 feet in practically the same time unsupercharged, both airplanes being flown by

Engineering School officers. While at 12,000 feet the supercharger of the NBS-4 was shut off and the airplane flown to demonstrate the difference in performance. Following the engine design course, instruction was started in the airplane design course. Mr. Douglas, of the Douglas Company of California, delivered a lecture on factory problems in designing an airplane.

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AIRWAYS FLIGHTS FOR OFFICERS ON DUTY IN OFFICE, CHIEF OF AIR SERVICE

In all probability the impression prevails among Air Service pilots stationed at various fields that their fellow officers on duty in Washington in the Office, Chief of Air Service do not have the opportunity to indulge in airplane flights to the extent they desire. While this may be true in a sense, all efforts are being made to afford as many opportunities as possible for officers stationed in Washington to obtain an adequate amount of flying practice. Quite a number of these officers have from time to time taken cross-country flights, Langley Field being the most popular visiting point, but Mitchel Field, Boston Air Port, Aberdeen Proving Grounds, Middletown, Fairfield and other stations being frequently visited.

Arrangements have recently been made with the Commanding Officer of Bolling Field whereby all officers on duty in the Office, Chief of Air Service who so desire, will be placed on the Bolling Field Airways roster for at least one trip a year over the Model Airways as flown by the officers regularly stationed at that field. While such airway flights will result in the various participating officers being absent from their duties for four or five days, it is felt that this will be more than compensated for by the flying experience which they will gain, in addition to such other advantages as coming in contact with other stations, ascertaining the latest activities in progress thereat, and interchanging ideas with personnel with whom they are more or less in constant liaison on matters of policy as dictated by the Office, Chief of Air Service. Furthermore, this break in office routine will, it is believed, benefit the health and esprit of the officers concerned.

The following is a tentative schedule of airways flights to be participated by officers on duty in the Office, Chief of Air Service:

June 29	Lieut. L. D. Schulze	Nov. 23	Lieut. B. R. Dallas
July 13	Major Carl Spatz	Dec. 14	Capt. I. H. Edwards
July 27	Lt.-Col. W. E. Gillmore	Dec. 28	Lieut. M. S. Lawton
Aug. 10	Major H. A. Dargue	Jan. 11	Capt. R. G. Hoyt
Aug. 24	Major R.P. Cousins	Jan. 25	Capt. R. H. Wooten
Sept. 7	Major W.G. Killner	Feb. 8	Lieut. E. S. Hoag
Sept.21	Capt. R. L. Walsh	Feb. 22	Capt. B. V. Baucom
Oct. 5	Lt. A. K. Ladd	Mar. 8	Lieut. H. A. Halverson
Oct. 19	Major J.C. McDonnell	Mar. 22	Lieut. D. G. Duke
Nov. 9	Capt. I.C. Eaker	Apr. 5	Capt. Donald Wilson
		Apr. 19	Maj. J. H. Jouett

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FIELD ARTILLERY SCHOOL OFFICERS VIEW AIR SERVICE DEMONSTRATION

An Air Service demonstration was staged at Post Field, Fort Sill, Okla., for the benefit of the Field Artillery School, on the 3rd and 4th of June. Forty-two officers and 52 enlisted men from Kelly Field traveled to Fort Sill by air and remained four days. The program included message pick-up by observation plane, photographic reconnaissance, artillery adjustment, the employment of Attack Aviation, bomb dropping and smoke screens. One of the most interesting features of the demonstration was the illumination of artillery targets at night by means of parachute flares and the adjustment on these targets by both terrestrial and aerial observation. A forty-mile wind throughout this night work added considerably to the difficulty of this new experiment, but the artillery officers were enthusiastic in their favorable criticism of the work of the Air Service, and stated that the demonstration showed beyond doubt that the illumination of artillery targets by means of flares was entirely practicable.

The movement to Fort Sill and back was made in 7 MB's, 3 SE5's, 31 DeHavilands. The total number of man miles flown on the trip was approximately 78,000, and the number of man hours 902. Machine gun ammunition totalling 8700 rounds was expended, and 423 bombs, weighing 17,625 pounds, were dropped.

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SUMMER TRAINING AT LANGLEY FIELD

Many months ago the schedule of Summer Camps for Langley Field, Va., was received and the detailed program laid out. Camp sites were selected and surveyed; aeronautical equipment was requisitioned and on hand ready for use; messes had been provided, and the entire personnel of the largest flying field in the East awaited the dawn of June 14th which would mark the opening of the summer training season. The officers responsible for the organization and operation of the several camps were drawn from the graduates of the Air Service Tactical School, whose course had just been completed, as well as from the specially qualified officers on duty at Langley Field.

Prior to their departure from their homes the Reserve Officers ordered to active duty for the training period had been furnished with a brief brochure and transportation guide in order that they might be more familiar with the historical interest and recreational facilities afforded them in this oldest settled part of Virginia, so close to the settlement at Jamestown and only a two minute "air hop" from the spot where the Monitor and Merrimac fought their famous duel during the Civil War, upon which our modern naval development is based.

During the day in question some 35.Reserve Officers, in rank from 2nd Lieutenant to Field grade, reported to the Headquarters tent, where they were assigned to quarters and drew the needed equipment, as well as completing arrangements for their special physical examination to determine their fitness for flying duty. At the same time they were welcomed to camp by the Post Commander and made to feel their responsibility and individual share in the broader scheme of National Defense.

By Tuesday morning, June 16th, everyone had settled down to the serious work of the camp, which included flying for those qualified as flying officers, while those individuals who were specialists in technical and administrative matters were assigned to the Supply, Maintenance and Engineering Sections to pursue the prescribed courses of instruction.

During the afternoons these Reserve Officers were given lectures on various aviation subjects. These lectures lasted somewhat over an hour and were given by Regular officers who have spent months in their preparation for this work. The basis of all lectures is found in the doctrines enunciated by the Air Service Tactical School.

Mess facilities are always of prime interest. A noncommissioned officer from the Quartermaster Corps and unusually well qualified to operate a mess was detailed to handle the work. A menu of high quality, and more than enough quantity, was consistently maintained at a nominal cost. Judging by the number of "seconds" that were called for, success was obtained in the matter so strongly pointed out by the great Napoleon.

The following officers constituted the camp staff and instructors: Majors Jacob E. Fickel, Clarence L. Tinker, Captain Edward C. Black, 1st Lieuts. William A. Hayward, George C. McDonald, John A. Kase, and Wm. J. McKiernan, all of the Air Service; Capt. S.E. Clinard, Medical Corps; Captain Clarence E. Hofstetter, Ordnance Dept., and 1st Lieut. Elden Q. Faust, Quartermaster Corps.

The Reserve Officers who reported for duty were as follows: Captains Edgar Graham, Oscar A. Reed, 1st Lieuts. Norman B. Ames, Ellis S. Middleton, Charles D. Martin, Donald Q. Woolf, 2nd Lieuts. Joseph L. Cain and Martin B. Dale, of Washington, D.C.; Major James B. McCalley, Captain Loren E. Roherer, 1st Lieuts. Paul A. Sanber, Theodore Taney, James M. Moore, Harry F. McCaffrey, 2nd Lieuts. Kenneth F. Lovejoy and Robert H. Guyton, of Pittsburgh, Pa.; Capt. John M. Barrett and 1st Lieut. Hyman I. Robinson, of Baltimore, Md.; Capt. C. Loth, Waynesboro, Va.; Captain Henry K. Gibson, Cherrydale, Va.; 1st Lieut. Edward Brown, Wilkesbarre, Pa.; 1st Lieut. Robert A. Culbertson, Erie, Pa.; 1st Lieut. John C. Mansfield, Sewickely, Pa.; 1st Lieut. Philip J. Newland, Riverdale, Md.; 1st Lieut. Charles C. Wodd, Waynesburg, Pa.; 2nd Lieut. Carl D. Bailey, Carmichads, Pa.; 2nd Lieut. John A. Irwin, Bellevue, Pa.; 2nd Lieut. Roger S. Powell, Harrisburg, Pa.; 2nd Lieut. Robert J. Wilde, White Marsh, Md.; 2nd Lieut. Donald L. Fleming, Glenshaw, Pa.; 2nd Lieut. Otto E. Kirchner, Hampton, Va.; 2nd Lieut. Walter E. Lick, North East, Pa.; 2nd Lieut. Kenneth C. Wood, Richmond, Va. and 2nd Lieut. James S. Brown, Uniontown, Pa.

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AIRWAYS FLARE

By McCook Field Correspondent

While various forms of airplane parachutes are under discussion, the Type III Airways flare should be included. Most people are familiar with its

brilliant white light. Its immediate ancestor, the old Mark I flare, was a comrade of War days. This flare, cylindrical and with fins somewhat like a bomb's, was carried on flare racks located under the airplane wing and when released by a release handle placed in the pilot's cockpit, fell in trajectory causing rotation of a pin-wheel-like spinner mounted on its nose. The spinner set into action a rotary firing pin against a friction primer; the primer was ignited and in turn lighted a "Booster" charge of black powder, which blew the candle and parachute out of the container, at the same time igniting a super-sensitive mixture on the end of the flare candle. Out in the air, the candle, because of its greater weight per volume, fell faster than the parachute and dragging upon it caused it to open. The weight of this flare was 33 pounds and the burning time 8 minutes.

For War-time purposes over enemy territory at high altitudes, it was satisfactory enough. The opening of the parachute, however, being the last operation of a cycle depended upon the perfect functioning of each previous operation. The fact that, if the parachute failed to open, the flare continued to fall as a bomb, in which case there was danger of detonation or damage to persons or property on the ground, did not much matter - over enemy territory. And many times the parachute did fail to open. But with peace returned, this element of danger counted greatly, and it was soon seen that a more reliable flare must be devised - one in which the opening of the parachute would be a primary function, not dependent upon the proper functioning of a half dozen other elements.

Work was started in 1922 and, as a result, the Type III airways flare is now the standard for night observation and landing purposes. This flare is carried vertically in a metal container set up into the fuselage of the airplane. A pull upon the release handle causes the flying off of a spring steel band which encircles the bottom of the container. This band carries three studs and when they are removed, the bottom falls out of the container, the upstanding and unsupported candle follows, pulling the parachute out with it. As the parachute is packed zig zag manner similar to the man-carrying parachutes, the opening is almost immediate. The sudden checking of the fall of the candle by the opening parachute operates a firing pin against a friction primer. The primer ignites a quick match which lights a super-sensitive mixture at the lower end of the flare. The cycle of operations is reversed, the lighting of the flare depending entirely upon the opening of the chute. If there is no open chute, there is no lighted flare. The burning time of the candle is 3½ minutes against 8 of the old flare; the weight is 19½ pounds to the old flare's 33 pounds; the candle power is the same as that of the old flare, namely about 300,000. The rate of fall is 250 feet per minute.

The parachute is about as sure of opening as is the larger pilot's parachute upon which so much reliance has been placed. The type III flare is safe for use over the most densely populated districts, providing there is sufficient altitude to give the candle its 3½ minutes' burning time. Supported by the parachute, the burnt remains of the candle is the only part of the flare to come to the ground.

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PARACHUTE "BEATS THE DUTCH"

At the Air Service Technical School at Chanute Field, Rantoul, Ill., where the Army Air Service conducts a school of instruction in parachute jumping, the parachute was recently subjected to a rather severe test when Lieut. H.G.G. DeKruyff Van Dorssen, of the Dutch Air Force, a student of the Parachute School, safely accomplished a live parachute jump from an altitude of 2,000 feet.

It might be stated that Lieut. Van Dorssen's bodily proportions are commensurate with the size of his signature, he being 6 ft. 7 inches tall, and weighing 220 lbs. Being 30 years of age, he still has time left in which to grow. Incidentally, Lieut. Van Dorssen is so far the largest man to ever leap with a parachute from the cockpit of an airplane.

This officer is pursuing a special course of instruction in the Technical School, and in connection therewith is investigating the practical qualities of the present type U.S. Air Service parachute as a factor of safety with a view to its adoption by his government. His jump and previous expositions thoroughly satisfied him of the merits of the 'chute. It might be mentioned that recent tests of the parachute made by British and Canadian flyers at the School were so satisfactory that the Royal Air Forces of England and Canada have adopted same.

Immediately following Lieut. Van Dorssen's jump, Lieut. T. P. Smith, Air Service, Parachute Officer, together with the Chief Instructor of the course, made live jumps from the same altitude.

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MAXWELL FIELD PILOTS AID INFANTRY IN MANEUVERS

Five DeHaviland airplanes, including one photo plane, assisted the 8th Infantry Brigade in their annual maneuvers recently at Camp McClellan, Alabama, which lasted for ten days. The Air Service personnel participating were Major Brown, Lieuts. Coyle, Kincaid, Miller, Robinson and Morris. Technical Sergeant Choate acted as radio operator.

Colonel R. Sheldon, 8th Infantry, sent the following letter of commendation to Major Roy S. Brown:

"I wish to express to you and your officers the appreciation of the regiment and myself of the work performed by your squadron during the field exercises and maneuvers of the 8th Infantry. Your cooperation was fine, and the prompt information furnished was essential to our success."

This letter was endorsed by Brig. General Winans, commanding the 8th Infantry Brigade, as follows:

"The Brigade Commander wishes to add to the above commendation his appreciation of the splendid service rendered by your organization during the period referred to."

Kelly Field, San Antonio, Texas, July 3rd.

On the morning of June 29th, 2nd Lieut. James W. Fletcher, A.S., died as the result of an airplane accident, Lieut. Fletcher was a student in the Advanced Flying School and was temporarily on duty with the Gunnery Expedition at Ellington Field. He was piloting a DeHaviland with Lieut. H.G. Davidson as passenger over the water off Sylvian Beach, between Houston and Galveston, when he saw another airplane in the water. He flew down to render assistance, but on account of the glassy condition of the surface of the Bay misjudged his altitude. The water caught a wing and the plane was pulled under the surface by the propeller. Lt. Davidson got clear of the water first, and by heroic effort after several minutes finally succeeded in disentangling Lieut. Fletcher and bringing him to the surface, but all efforts to resuscitate him were in vain. Lieut. Fletcher was a member of the Class of 1923 at the Military Academy. His home was in Middlebury, Vermont.

The following personnel changes have occurred recently at Kelly Field: Leaves of absence - Capt. W. E. Lynd, three months; Capt. J.H. Davidson, 3rd Attack Group, 3 months; 2nd Lieut. H.W.Long, 3rd Attack Group, four months; 2nd Lieut. H.S. Vandenberg, one month and 14 days.

Transfers: 1st Lieut. Thomas H. Chapman to San Antonio Air Intermediate Depot for duty and station; 1st Lieuts. Wm. C. Farnum, George G. Lundberg and 2nd Lieut. E. S. Moon to Hawaiian Department; Capt. Alfred F. King to Brooks Field; 2nd Lieuts. Rupert D. Graves, Lyman Williams and W.M. Ives to Infantry, 2nd Division, for duty; 2nd Lieuts. Dean S. Ellerthorpe and Leo D. Vichules to Coast Artillery for duty; 2nd Lieuts. Clyde Massey and John H. Claybrook to Cavalry at Fort Brown; 2nd Lieuts. John L. Hitchings and Richard G. Herbine to Brooks Field for further training; 2nd Lieuts. Leslie F. Young, Gordon T. Waite, Edward H. White and Wm. O. Eareckson to Scott Field for Lighter-than-air training.

Arrivals: Capt. D.B. Howard and 1st Lieuts. William A. Gray, James C. Cluck and Junius A. Smith, also 1st Lieut. Arthur B. Custis, Ord. Dept., reported from Brooks Field for training as observers. First Lieuts. William B. Clarke and Frederick A. Johnson have reported for duty; also 1st Lieut. James W. Hammond from Chanute Field.

Major Roy S. Brown reported for duty from Maxwell Field, where he was in command of the Observation Squadron at that station.

Major Albert L. Sneed, who has just completed the course at the Command and General Staff School, Ft. Leavenworth, reported for duty.

Capt. L.L. Harvey detailed to take the course at the Tactical School at Langley Field this Fall, departed on leave. First Lieut. John I. Moore succeeds him as Director of Attack Training.

Second Lieuts. Harvey K. Greenlaw, Robert C. Ashley and Wallace E. Whitson, temporarily on duty at the Advanced Flying School as flying instructors, returned to Brooks Field for duty.

Brooks Field, San Antonio, Texas, July 6th.

During the past week this field had a total of 625:30 aircraft hours and 910:20 man hours.

Major Royce and Lieut. McCormick returned from Buffalo, N.Y. and McCook Field, ferrying two of the new training planes, which will be used entirely on one stage next Fall with the new class.

The following cross-country flights were taken the last week end: Lieut. C. T. Myers with Pvt. Hoffman to Austin, Tex.; Lieut. H.W. Downing with Sgt. Hazzard to Del Rio; Lieut. J.D. Corkille with Pvt. Miller to Muskogee, Okla.; Lieut. F.I. Patrick with Lieut. Twining to Port Aranaas, Tex.; Lieut. McCormick with Col. V.E. Clark to Muskogee; Lieut. E.D. Perrin to Boerne and Tech. Sgt. G. McGinley with Pvt. A. Dukes to Houston, Texas.

Hqrs. 2nd Div. Air Service, Biggs Field, Ft. Bliss, Texas, June 30.

Lieut. Douglas and Sgt. Farrar made parachute jumps June 27th, the former making his jump from an altitude of about 3,000 feet and the latter jumping from 11,000 feet, a record for this field.

Major John N. Reynolds reported to this station for duty as Commanding Officer of the Second Division Air Service, relieving Major L.G.Heffernan of that duty on June 29th. Upon departure from this station Major Heffernan

will go on leave of absence to Wilkesbarre, Pa., and at the expiration of same will proceed to Langley Field to take the course at the Air Service Tactical School.

The airdromes at Tucson, Ariz., and Dryden, Texas, will be reduced from three to two men at each station. Private Krawczyk from Tucson and Pvt. Holmes from Dryden will be returned to this station.

Two parachute jumps were made on June 26th, one by Private Dryden from 1500 feet and another by Pvt. Lang from 3200 feet.

The following cross-country flights were made by personnel at this station: Lieut. Gale an airways flight to San Diego, Calif., June 20th, with Major Hines, ORC as observer, returning June 25th with Capt. Bender as observer; Lieut. Clark to Albuquerque, N.M., June 22nd to inspect Air Service property there, returning same date; Lieut. Weddington and Sgt. Livesay to San Antonio Air Intermediate Depot June 24th, ferrying an old plane to that station and returning on the 26th with a new one; Lieut. Clark to Chanute Field, Ill., June 25th ferrying Pvt. Lowry there to take the course in the Photographic School; Lieut. Gale to Tucson, Ariz. and return, June 27th.

Lieut. Barrett, of the 82nd Field Artillery, made a parachute jump at this airdrome on June 25th.

Wilbur Wright Field, Fairfield, O., July 3rd.

Over 200 members of the Cititan Clubs, attending a convention in Dayton, visited the field on June 24th. They were met by the Commanding Officer and his staff and were taken for a tour of the field.

Lieut. W.S.Hamlin ferried a Curtiss airplane to the Boston Air Port on June 26th. The plane was remodeled in the shops, under the direction of Capt. Edward Laughlin, Engineer Officer, and will be used by the Massachusetts National Guard.

The Officers' Club gave a dinner and dance at the Old Barn Club in Dayton on June 26th in honor of the officers who will soon be leaving for other stations. Those scheduled to leave in the very near future are Major H.J. Knerr, Lieuts. L.R.P. Reese, E.R.Page, C.F. Greene, E.E. Adler, H.H. Mills and G.V. McPike.

Lieuts. James L. Grisham, Barney M. Giles and C.C. Nutt recently reported for duty here. Lieut. Nutt was assigned to the Engineering Dept., and the assignment of the other officers will be made in the near future.

Lieut. A.J. Lyon of Selfridge Field flew here in a PW-8 on July 1st and returned to his home station the same day.

Several officers from this station were scheduled to participate in aerial maneuvers on the morning of July 4th to assist in the fitting observance of Defense Day. According to the elaborate program planned at Dayton all Reserve Officers from Fairfield and vicinity were to report at 9:15 A.M. at Memorial Hall in Dayton to register their names; patriotic speeches by Congressman Fitzgerald and others nationally known were to be broadcasted; and airplanes from Wilbur Wright Field were to fly over Dayton, Xenia, Springfield and other nearby cities.

The annual picnic of Wilbur Wright Field and the Fairfield Intermediate Depot took place at Overlook Park, West Milton, Ohio, June 27th. The picnic was planned by the Welfare Association, the committee in charge being E.H. Eglekraut, Chairman; L. W. Armour; R.Evans, W.Harris, Paul Dixon, C. Collins, G.Stevens and Miss C. Kittinger.

The day was perfect and the attendance was the largest ever known in the history of the field. An elaborate program of sports had been arranged by the Committee and the zest and enthusiasm shown by all participants proved how interesting and suitable were the events chosen. The baseball game in particular was hotly contested and settled the championship; preliminary games had been played during the noon hour each day for the past month, and both the Supply and Engineering teams were eager for the fray.

The Aero Repair won the Field Pennant, having won most pointss in the contests. Dancing was enjoyed in the evening.

Chanute Field, Rantoul, Ill; June 28th.

Recognition of the "Chanute Flyers", Champion Basketball Team of the 6th Corps Area, Season 1924-25, with a record of 42 games played from Dec. 1, 1924 to March 17, 1925, and 37 victories, was received from Fort Sheridan, Ill., in the form of medals and a complimentary letter from the

officer in charge of the Corps Area Tournament. An extract of the letter is quoted:

"Under separate cover, I am sending ten medals to be given to the members of the Basketball team of Chanute Field which won the 6th Corps Area Championship. This team was undoubtedly one of the finest army teams ever gathered together. They certainly were in a class to themselves at this meet. I take this opportunity to congratulate you and the team for their wonderful showing."

The Department of Mechanics enjoyed a picnic on June 24th. Old clothes were in order and it was well, for rain fell continually. It failed, however, to dampen the ardor of the picnickers.

The Reserve Officers attached to the 15th Squadron completed their 15 days of active duty and returned to their homes June 29th.

Flight Lieut. H.G.B. de Kruyff Van Dorssen, Dutch Air Force, graduated from his combined course of instruction in Airplane Mechanics, Engine Mechanics, Aircraft Armament, and Parachute Riggers, June 12th.

First Lieuts. Frank M. Paul, Hobart R. Yeager, Frederick D. Lynch and 2nd Lieut. John G. Salsman, Air Service, were graduated June 26th from the course for Regular Army Officers, Department of Communications.

The following number of enlisted students, Air Service, were graduated June 26th from the courses indicated: Parachute Riggers, 3; General Photography,6; Radio Mechanics, 7.

Boston Air Port, Boston, Mass., July 7.

National Guard pilots flew 18 hours and 40 minutes last week, totalling 22 flights.

A new DH plane was flown here July 3rd by Lieut. D.G. Duke, Air Service, also a new JN was brought here on the 6th by Lieut. George Ford. The new planes swell the 26th Division Air Service equipment of planes to five JN's and one DH. Lieut. A.E.Jones, Regular Army instructor for the Guard, has been particularly anxious to have the DH, as it gives the Squadron a cross-country ship. National Guardsmen cannot fly outside Massachusetts. But there is more room inside than the faithful JN's carry the gas to cover. The Squadron goes to Langley Field August 29 - Sept. 12, inclusive, for flying training.

The Regular Army flyers together with the Guardsmen flew several formations during the week. On Friday afternoon Lieut. R.J. Brown, Jr. led a flight over Cambridge in honor of President Coolidge. Capt. B. Beaman, Lieuts. C.H. Hollidge and Frank Crowley piloted the other planes. On Saturday all the ships went into the air for the defense test. Lieut. H. R. Wells and Capt. Lyle C. White, flight surgeon, sailed clear down to the end of the Cape and back. Capt. Beaman, Lieuts. Robert Nagle and C.H. Hollidge flew with 3 Guard pilots in several flights to cities along the shore and back into the hinterland.

The Army made 30 flights during the week, their flying time totalling 24 hours.

Among visitors were the following from Mitchel Field; Lieut. J.A. Wilson on July 5th; Sergeant C.W.O'Connor with Sgt. W.H. Farrell on July 1st, and Lieut. Ployer P. Hill on July 6th.

Lieut. R.J. Brown, Jr., flew Assistant Secretary of the Treasury Winston to New York on June 29th, and returned the following day.

Chanute Field, Rantoul, Ill., June 17.

The following student officers graduated from the course for Regular Army Officers, Department of Photography, on June 19th; 1st Lieut. Charles Backes, Infantry; 2nd Lieuts. Herbert K. Baisley, James M. Fitzmaurice, Joseph H. Hicks, Thomas M. Lowe, Stewart W. Towle, Jr., John M. Weikert and Robert B. Williams, Air Service.

The Department of Mechanics on June 19th graduated the following number of enlisted students, Air Service: Airplane Mechanics, 12; Auto Mechanics, 6; Engine Mechanics, 12; Machinists, 6.

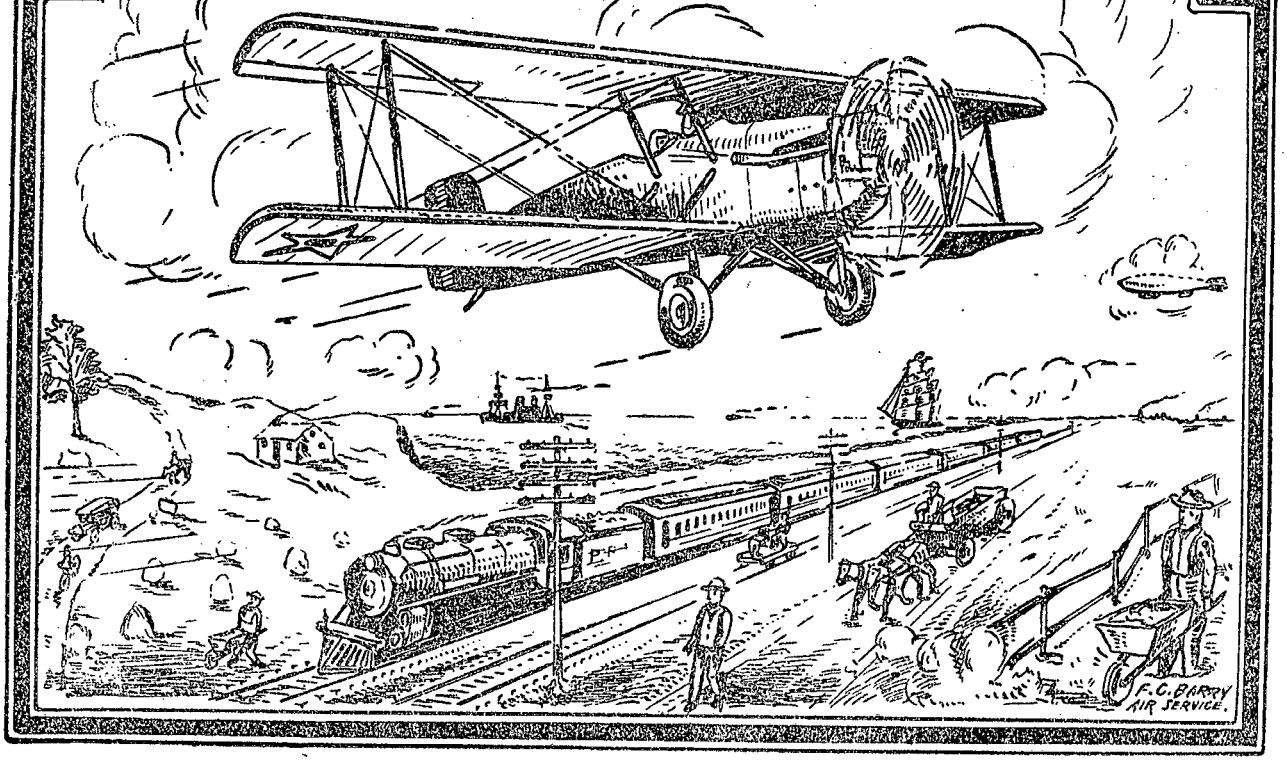
First Lieut. Ivan L. Proctor, A.S., Assistant Director, Department of Mechanics, and Mr. J.L. Sprague, Civilian Instructor, that Department, returned from McCook Field where they had taken an intensive course of instruction in tubular steel welding, this preparatory to the proposed inception of a course of that nature in the School.

The R.O.T.C. Camp was established on June 19th with Major Maxwell Kirby as Commanding Officer, 2nd Lt. Harold G. Peterson, Supply Officer; and 2nd Lt. Arnold H. Rich, Mess Officer. The student personnel, which numbered 28, came from the following educational institutions: University of Illinois, Urbana, Ill., 25; Culver Military Academy, Culver, Ind., 3; Georgia School of Technology, Atlanta, Ga. 1.

Six Reserve Officers reported for 15 days' active training on June 16th. They were attached to the 6th Division, Air Service, Capt. Ernest Clark, A.S., Commanding, for duty.

The Chanute Field Branch, Corps Area Correspondence School, suspended activities June 10th with 115 students on the rolls. Thirty-four of these students graduated from the sub-courses in which they had been taking instruction. Air Service instructors were: Capt. J.J. Devery, 1st Lieut. A.L. Johnson, 2nd Lieut. H.G. Peterson, and Chaplain C.P. Futcher.

U. S. Army Air Service News Letter



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VOL. IX AIR SERVICE NEWS NO. 14

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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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DISCIPLINE IN THE ARMY AIR SERVICE

Just recently a Technical Sergeant in the Army Air Service was reduced to the grade of Private through sentence of a Special Courts Martial. To one conversant with Army life such an occurrence would appear to be nothing out of the ordinary - rather commonplace. And yet for the Air Service it is an extraordinary occurrence. Going back as far as 1920, it is the first case on record where a noncommissioned officer in the Air Service, appointed by the Chief of Air Service, suffered a reduction in rank through the action of a Courts Martial. This is, indeed, a remarkable record and speaks volumes for the high state of discipline existing in the Army Air Service.

Unfortunately, no comparative statistics are at hand showing the state of discipline existing in the various branches of the Service, but as far back as 1921, when the War Department General Staff made an analysis of morale reports throughout the Army, it was learned that the Air Service commands had less desertion rates, lower number of absences without leave, less punishments (and therefore less delinquency) and less severe punishments (probably indicating less serious delinquency) than the average of other troops in the Army at large. Taking this analysis as a criterion, as well as the exceptional case of the demotion by sentence of Courts-Martial of the noncommissioned officer above mentioned, one may not be far wrong in assuming that the state of discipline in the Army Air Service today is still on a high scale.

As to the reasons for this exceptional state of discipline in the aviation branch, a number of answers suggest themselves which may be briefly summarized as follows: It may be stated without fear of successful contradiction that the Air Service is the most democratic combatant branch in the Army today - this for the reason that the officers and enlisted men have more things in common with one another. There is a closer bond of sympathy between officer and man because of the necessarily closer contact they have with one another. Air Service pilots usually carry enlisted men along with them as their mechanics when making an airplane flight. One long cross-country flight will give the enlisted passenger and the officer pilot a far greater insight into each other's character than would be possible in another branch of the service during weeks and months spent on the drill field.

The pilots rely to a great extent upon their mechanics for the proper upkeep of their planes. Let us say that a pilot made a long cross-country flight; that the engine functioned perfectly throughout the trip and that everything went along in first class shape. It is but natural to expect that upon return of the pilot to his home station he will hunt up the crew chief and express his appreciation of the excellent work done on his ship. Since human nature is virtually the same all over, what is the result? The mechanic, seeing that his efforts are appreciated, will strive all the harder to please his superiors. Aside from this, however, the enlisted mechanics fully appreciate the great responsibility that rests upon their shoulders, realizing that any carelessness or neglect on their part is apt to result in disaster - loss of life.

One would not be far wrong in assuming that there exists in the Army Air Service a mutual admiration society. The enlisted man taking a flight as passenger and observing the skillful handling of the airplane by the pilot, particularly when facing adverse flying conditions, cannot but entertain a feeling of admiration for his superior officer. On the other hand, the pilot making a long cross-country flight, with his machine functioning perfectly throughout, cannot help but gain a feeling of admiration for the enlisted mechanic whose efficient performance of duty played such a great part in the successful accomplishment of his flight.

And where there exists mutual respect, cordiality, and good will, there is bound to prevail the fullest cooperation, a willingness to please and a high sense of appreciation of the importance of duties imposed. It is not then nat-

ural to expect a high degree of discipline in the Army Air Service?

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RESERVE TRAINING

By Captain Armin F. Herold

It has been my fortune to be associated at one time or another with practically every Reserve organization in the 9th Corps Area - with the 91st Division and the non-divisional units near San Francisco, up the coast with the 96th Division and south for another temporary duty detail at Clover Field, and finally at Salt Lake City, Utah.

I have found one thing in common with every one of them - undivided loyalty to the Air Service. Not once have I found a man who was not heart and soul for this newest arm of the service, not one who was not whole heartedly boosting for a bigger, better Air Service and who was not willing to get out and work for that end.

And do they still love to fly? I'll say they do. At one station it is a recognized fact that they will give up one and two days to dirty overhaul and cleanup work in order to have their planes ready for a cross-country flight. In almost every station they will give up other pleasures to come out and help service and clean planes for the regular flying days.

With a personnel like that it is small wonder that the Ninth Corps Area has come to the top in Reserve Air Service training. Nor is it any wonder that the officers on this duty have had such success.

When the training first started at Crissy Field there were two JN's available. No sooner had the news spread that an officer was there to look after their interests than more planes were needed. From the initial two planes the supply increased to eleven. From two pilots the first month, the number was swelled to 75 in the course of a year.

Training the officers offered no particular difficulty. Permitted the use of a plane and almost any pilot would report for training. Refresher work, of course, was necessary in every case, varying in lengths from 15 minutes to as high as 15 hours. It is a noteworthy fact that those pilots who had had time up in the hundreds of hours required very little refresher work, even though they had not flown for years. But many of the scant 50 hour RMA's were worse than new beginners. Probably a feeling of overconfidence, badly shattered after their first hop, took all the confidence away. Some of them had forgotten what rudders were for and some thought that the ground was more or less stationary. But everyone of them stuck to it and regained his flying ability. I have in mind a man who was rather indignant when told he would have to take a refresher and who later refused to solo without an additional hour's flight with his instructor, and that after I had personally checked him and turned him loose.

There is, of course, a certain dissatisfaction with the old JN for this work. I am quite convinced that this is reasonable. From the standpoint of the flyer it is. There is a monotony to flying JN's that causes many pilots to lay off for weeks at a time until the urge comes on again. Most of them have flown faster and better types of planes, and find that they are learning nothing new. And even under voluntary flying something new must be offered to hold their interest. They want to feel that they are doing something worth while as well as having a little pleasure. The greatest boost for the Reserve interest on the Coast this year was a certain amount of cooperation with the Regular Army outfit at Crissy. In the maneuvers with the Navy, the 316th Squadron was used extensively. At another time Artillery observation problems were carried out with the 76th Field Artillery at Monterey. It was surprising to see the amount of preliminary work that was put in, unsolicited, in preparation therefor. And then the Forest Patrol. For nine vacancies 85 applicants were examined.

It is the opinion of some that all this work being voluntary, the Reserve officer must be handled with kid gloves. I have not found it so. Man to man dealing throughout, strict discipline and, in case of necessity, an occasional "bawling out" will do no harm. When they come out to fly they want to soldier, and if they "pull a boner" they are willing to take their medicine. Make them feel that they are part of the Army and not favored guests.

Assignment to duties in an organization is a more serious and difficult problem. To carry out efficiently such a duty requires a great deal of home work. Most of the officers are busy enough during the day and do not care to take on additional brain work after hours. A continuation of the present

policy of ordering organizations to duty instead of individuals will solve this problem. A reassignment during the inactive period in preparation for the camp will eventually put every man where he is most useful. There are in this Corps Area two well organized, functioning squadrons, Captain Giffin's 316th and Lt. Kenyon's 477th. They are the targets at which all the associated outfits are aiming.

Training enlisted reserves is a task. An occasional ride is about the only inducement to active participation on their own time, and this soon grows tiresome. Since most of them are recruited from the mechanical professions, there is little pleasure of continuing that work on holidays. This year the entire enlisted reserve allotment for active duty is being spent on Air Service, with the result that we can offer a camp vacation as an inducement to them to turn out more regularly on week ends.

Training the Reserve is beyond doubt the Army's most interesting detail. It is unquestionably the most pleasant. And every officer of the Army will concede it the most important. Give them a more up-to-date plane and, above all, let them help out on our problems and difficulties, and the increase in activity in the next few years will make the increase in the last three look very small. For all they ask in return for their time are good planes and useful work, a reasonable amount of study and an occasional cross-country flight. They will then guarantee to keep themselves in readiness for any emergency.

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NEW UNIFORM FOR OFFICERS OF THE AIR SERVICE

Honorable Dwight F. Davis, Acting Secretary of War, has definitely approved the new uniform for officers of the Air Service. The following is a general description of the altered articles of uniform as adopted:

The officer's coat will be a single-breasted four-button coat made of the same material as the present one with a roll collar and notched lapel. It will have four pockets with flap on each. It will be cut to extend two or three inches below the crotch and to fit the figure easily over the chest and snug at the waist. It will have a belt two inches wide sewed down, all round the waist. All insignia will be embroidered in gold and silver bullion.

The overcoat will be a double-breasted four-button overcoat with roll collar and notched lapels. Three buttons will show below the end of lapel roll. The coat will reach one inch below the knee. The insignia of rank will be on shoulder loops.

The cap will be similar in type to the overseas cap and will have a piping of ultra-marine blue with golden orange threads.

The boots will be similar to the present field boots, but need not necessarily be weatherproof, nor with bellows tongue.

The olive drab shirt will be of the existing type, except that shoulder loops need not be worn when the coat is worn.

Stockings will be "golf commercial", plain tops and made of olive drab wool.

It is expected that formal orders announcing these changes in uniform will be issued to the service within a short time.

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NAME OF NEW FIELD FOR ENGINEERING DIVISION

Great interest is being taken in the name of the new field which is to house the Engineering Division. The News Letter Correspondent states that as it seems probable that Wilbur Wright Field and the Fairfield Air Intermediate Depot will be merged with the new activity, it would follow that the name "Wilbur Wright Field" would be lost. A movement has been started by an enterprising Dayton newspaper to have the name "Wright Field" retained, and a vote is being conducted by ballot to obtain the wishes of Dayton citizens in this matter.

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LIEUT. BERTRANDIAS RECEIVES TROPHY FOR 1,000 KILOMETER FLIGHT

Lieut. Victor E. Bertrandias, Chief of Inspection, Engineering Division, McCook Field, is showing his friends a new trophy received from the Loening Aeronautical Engineering Corporation with the inscription "For his flight of November 7, 1924, setting up a new world's seaplane record for 1,000 kilometers in 6 hours

6 minutes, 47.8 seconds". The trophy is a small model, beautifully mounted on a base, of the Loening Air Yacht in which Lieut. Bertrandias made his record-breaking flight.

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WHAT McCOOK FIELD IS DOING

The public at large has hardly any conception of the work performed by the Engineering Division at McCook Field, Dayton, Ohio. To gain some idea of the varied activities carried on at this government aviation field, situated on the outskirts of Dayton, one must go through the various buildings on the field and spend some time in each one of them.

To put it briefly, McCook Field acts as the Guardian Angel of the Army Air Service so far as concerns the equipment which the flyers take up in the air. The very few isolated cases in the history of the Air Service where structural failures in an airplane occurred during flight testify to the careful, painstaking and conscientious work performed by the engineers and the men lower down in the employ of the Engineering Division. Nothing is left to chance; there is no guess work; everything done is based on careful calculation and thorough test, not only by the men in the shops but also by expert test pilots who take the airplanes in the air and subject them to various maneuvers to satisfy themselves that they are safe for flying.

No new type of airplane built for the Government receives McCook Field's O.K. until the experimental model fulfills all the requirements of the Engineering Division. Everything that goes to make up the complete airplane is tested - the wood, fabric, metal, wires; in fact, there is not a thing about the airplane which is not included.

Statistics gathered by the Static Test Branch of the Engineering Division show that of the many complete airplanes static tested, approximately 25% were found to be absolutely unsafe to fly even with the most careful piloting. Fifteen percent were complete failures as far as design and construction were concerned. None of the airplanes subjected to static test were found strictly perfect, and it was necessary to recommend certain changes in their design.

This demonstrates the extreme care that is taken to insure that every component of the airplane is safe when it goes out on the line. This policy not only protects the lives of the pilots, but prevents the exorbitant expenditures by the Government in the purchase of large quantities of airplanes unfit for use.

It will thus be seen that the function of the Static Test Branch of the Engineering Division is to determine the structural value of aircraft by actual test. An airplane is subjected to eleven tests, as follows: Three tests on wings (high incidence, low incidence and inverted flight); one test each on horizontal tail surfaces and controls; aileron and aileron controls; fuselage or body; chassis or landing gear; tail skid; leading edge; and wing ribs.

In order to facilitate the performance of static tests, it is customary to test the horizontal tail surfaces first, then set up the airplane for the inverted flight test and conduct the aileron test. The inverted flight test is then made, followed by the low and high incidence wing tests, the fuselage, chassis, tail skid and leading edge test. The wing rib tests are made on sample ribs submitted previous to the delivery of the plane.

Special tests, called "Proof Loading Tests", are made of new types of airplanes before they are flown to determine their strength and tortional stiffness. To accomplish these tests the different parts of the airplane are loaded with bags containing sand or lead shot. These bags are put on in such manner as to simulate the actual load an airplane is subjected to in flight. When the specified proof load has been reached, the load is removed and the structure examined to see whether it has withstood the test without permanent deformation of any part. Unless otherwise specified, the proof load is one-half of the design load.

After an airplane has undergone a thorough static test, that type of airplane is safe to fly if the pilot uses a fair amount of judgment.

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COORDINATING AERONAUTICAL SPECIFICATIONS

Representatives of practically all the aircraft contractors, accessory man-

ufacturers, the Society of Automotive Engineers, and the U.S. Navy held a conference at the Engineering Division, McCook Field, Dayton, Ohio, July 20th to 25th, for the purpose of bringing into agreement detailed requirements for various utility parts and material specifications. The first three days of the meeting were devoted to discussion of utility parts and standard aircraft equipment, and the last three to material specifications.

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AN EFFICIENT AIR SERVICE SQUADRON

An idea of the general efficiency of Air Service organizations may be gained from a report received from Langley Field, Va., touching on the work of the 58th Service Squadron at that station. This organization, in addition to functioning as a Service Squadron, has maintained two DeHaviland airplanes for the use of reserve officers undergoing training at Langley Field. For the entire period of their training an average of 35 flights were made daily without the slightest mishap to either plane or pilot.

Major Henry W. Harms, Air Service, returned to Langley Field July 18th, having completed the model airways flight with an average flying speed of 88 miles per hour for the entire 2,400 miles covered. The plane he used has made seven consecutive successful trips with no mishap whatsoever. This is, indeed, a creditable reflection upon the mechanics and other personnel of the organization responsible for its upkeep.

ACTIVITIES OF THE SAN ANTONIO AIR INTERMEDIATE DEPOT

During the six months' period from January 1 to June 30, 1925, 262 airplanes and 441 engines were completely overhauled and repaired by the Engineering Department of the San Antonio Air Intermediate Depot, San Antonio, Texas, as follows: Airplanes - 117 DH4B, 8 DH4B-1, 2 DH4B-3, 38 JN6H, 3 DH4B-P-1, 8 SE5E, 14 MB3A, 21 DH4M-1, 2 NBS-1, 19 TW-3, 6 VE-9, 1 TP-1, 1 CO-4, 4 TW-5, 11 MB-3M, 7 AT-1; Engines - 254 Liberty 12-A, 5 Wright A-2, 92 Wright-I, 61 Wright-E, 12 Wright-H, 13 Wright H-3, 4 Lawrance L-4.

During the period above mentioned a completely overhauled and repaired airplane, ready for flight, was turned out every four hours and six minutes; and a completely overhauled engine, ready for installation in an airplane, was turned out every two hours and 26 minutes. In addition to servicing Army Air Service equipment, this Depot delivered to various National Guard units throughout the States during the last six months ending June 30, 1925, 18 TW-3 airplanes with engines, 2 JN6H airplanes with engines and 9 spare Wright engines.

During the month of June, the Engineering Department, under the direction of Lieut. Clements McMullen, completely overhauled and repaired 54 airplanes and 97 engines, as follows: Airplanes - 7 DH4B, 1 DH4B-3, 4 JN6H, 3 SE5E, 3 MB3A, 10 MB3M, 15 DH4M-1, 2 NBS-1, 1 VE-9, 8 TW-3; Engines - 48 Liberty-12, 1 Wright A-2, 10 Wright-I, 9 Wright-H, 2 Wright H-3, 27 Wright-E.

Following the rush due to the last minute jobs at the end of the fiscal year, the employees of the Supply Depot found a little time to look over their surroundings and they now feel justly proud of their abode. Painters have been busily engaged in changing the exterior from a glaring white to an eye-resting green. All of the buildings of the Supply Depot now shine forth in green paint trimmed with white, and with the red roofs they surely please the eye.

One of the major accomplishments during the month of June was the completion of the rubber storage room. This storeroom is completely darkened, in addition to being thoroughly ventilated and cooled, making it one of the most up-to-date rubber storage warehouses in the Army. By a unique arrangement, tires cannot become misshapen when placed in this warehouse.

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RESERVE OFFICERS RECEIVE TRAINING AT BROOKS FIELD

Sixteen Reserve officers of the 103rd Division, Air Service, reported at Brooks Field July 12th for a 15-day period of flying training in accordance with the War Dept. schedule relative to summer training. An intensive but highly interesting training schedule was prepared for this period, calling for 3½ hours flying each morning with the afternoons taken up with ground school work. A brief but thorough resume of all subjects covered during the regular six months' course was taken up in a very interesting manner and should prove of great instructive value.

IMPRESSIONS OF THE AIR SERVICE BY THE MILITARY ACADEMY CLASS OF 1926

-- By William E. House '26

During the period of June 14th to 26th, inclusive, the Class of 1926 of the United States Military Academy visited Mitchel Field - half of the class at a time - for instruction in Air Service work. It would be a bit difficult to make a single article cover all of the impressions resulting from our visit. The reactions of a single individual would furnish enough material for a fair sized book, and a summary of the impressions of the entire class would be a most formidable document. As a result it will be necessary to confine this discussion to very general statements.

In the first place, we were being introduced to something which was strange to most of us. Quite a number of the class had at one time or another made short hops as more or less disinterested passengers, but now we were to be thrown bodily into the midst of aviation "as she is spoke", in order to study the subject as a phase of military activity. As a whole we were a bit dubious about the business. We knew what planes were; we knew that they come down as well as go up; and we had a smattering of such technical terms as "down wash", "lift over drag", and "camber", as a result of our recent course in Aerodynamics. But we were absolutely unacquainted with flying as a vocation and "daily dozen".

Our introduction to the air was quickly accomplished. The original sensation of unreality soon wore off and we gained confidence in both ships and pilots. After that came a period devoted almost entirely, as far as we were concerned, to getting the most enjoyment possible out of our time in the air. Maps and ground were coordinated and before long we felt like old timers at the game of observing. The most important point of this phase was, perhaps, the grasping of the idea that flying is not as dangerous as is popularly supposed. We soon found out that you could safely depend on the ship to take you out and bring you back again all in one piece. As soon as that point was cleared up, the rest was easy.

Flying, however, occupied only a small portion of our time. Through lectures and visits around the post we were able to comprehend something of the scope, possibilities, and importance of the Air Service. We discovered that, far from being merely a form of amusement, military aviation is a very serious business, covering a multitude of details, all of which are important. We were shown its various missions, either alone or in conjunction with other branches, and just how those missions should be accomplished. We learned of the vast amount of work and special training necessary for even ordinary operations. And, frankly, we were amazed; our admiration and respect grew by leaps and bounds.

Another point in which we were deeply interested was personnel. Naturally, when a man is trying to choose a branch to which to go after graduation, he wants to know what sort of people he will meet. He wants to make sure that he will come into contact with congenial souls. Consequently, the officers and men at Mitchel Field were observed every bit as closely as the shops and planes. The results of these unofficial investigations were very gratifying. We noted that the officers were comparatively young and very enthusiastic about their work. They left nothing undone to make us feel completely at home and to make our visit as interesting as possible. We were unanimous in our decision that they were a crowd of mighty keen files - which is local argot denoting the best of good fellows.

In general, then, our impressions were these; the Air Service is a desirable branch; aviation is an interesting vocation and offers no end of opportunities if one is sufficiently ambitious; the work itself is pleasant, and one will be associated with men with whom it will be a privilege and pleasure to serve.

It is much too early yet to make a prophecy as to the number of men from '26 who will go to the Air Service. However, present indications are that the quota for our class will be far exceeded. The branch is very popular with us and quite a number of us have definitely decided to ask to be assigned to it.

The Class of 1926 wishes to take advantage of this opportunity to express in some degree our appreciation for the welcome extended to us by the Air Service in general and Mitchel Field in particular. A trip intended primarily for instruction was made exceedingly interesting and highly entertaining, and we are deeply grateful for the generous efforts made made in our behalf "over and above the call of duty".

V-5454,AS

WHY PILOTS CRASH

It has been quite a revelation to find that the greater majority of airplane wrecks in the Army Air Service occurred while the pilot was trying to effect a landing in order to orient himself after having lost his exact bearings. This finding was the result of a very close study by the Field Service Section of the Fairfield Air Intermediate Depot, Fairfield, Ohio, of airplanes wrecked while engaged in cross-country flights in order to determine the direct and indirect causes of these wrecks. The pilot may have become lost for any one of several good reasons, all of which are familiar to most pilots who have done much cross-country flying.

Lieut. Carl A. Cover, Air Service, at present on duty with the Field Service Section, who has deeply interested himself in the above subject, is a strong advocate of a movement to paint the names of cities and towns on railway station roofs, contending that if all railway stations were marked we would save many wrecks which in many cases result in damage to personnel as well as to planes and property. He asserts that the loss of one airplane, not to speak of injury to personnel, would pay for enough material to paint approximately 2500 roofs.

Lieut. Cover goes on to say that one of the main things to do in flying cross-country is to keep one's self always oriented and to know for a certainty one's approximate location at all times. This is something that is very hard to do under certain circumstances, such as poor visibility or in direct compass courses over strange country. When the pilot wishes to check his position he generally drops down to try to read the name of the station on the nearest railroad, which generally makes the easiest checking. The names on stations are usually under the eaves of the roofs and almost impossible to see, and in many cases the pilot is forced to land because the name cannot be seen, and there is no other means of knowing where he is. This means, in many cases, no suitable landing field being available, that the pilot gets desperate and tries for a landing immediately in the best available field. This often results in wrecks either in getting in or taking-off.

Of the personnel questioned on this subject (who are considered average pilots, and in some cases above average) all freely admitted that they had been lost no less than an average of five times in the past year.

If this matter could be brought before the commercial clubs, or other public spirited organizations of the country, and the fact impressed upon them that it is far more necessary for the pilots of aircraft to have signs than it is for automobile drivers, it is thought that the clubs would be glad to lend all the help necessary to accomplish such markings as desired.

The system of marking recommended by Lieut. Cover is as follows:

That the name of the town be painted on the station roof on the side nearest the railroad, this to apply to towns of moderate size only. The size of letters should be in proportion to the size of the roof and the number of letters required for the same.

That the names of the cities be painted on the roof of some building located along the railroad on the outskirts of the city, this to eliminate the necessity for low flying over cities.

That in cities where more than one railroad enters the city, a building on each road be marked in the manner mentioned above.

That in cities or towns that have an available landing field, an arrow approximately one foot wide and twelve feet long be painted on the same roof with the name, the arrow pointing in the direction of the landing field. This will enable the pilots to locate fields and will be an especially good help in thick weather.

That the Air Service is alive to the great need of markers on railroad stations throughout the country is attested by the fact that as early as 1921 the principal railway companies were approached on this subject, at which time they stated emphatically that they could not bear the expense of painting the names of towns in large letters on the roofs of their railway stations. Considering the fact that there was no prospect of their obtaining any immediate return for the financial outlay such a project involved, their stand in the matter could not be considered unreasonable.

In 1923 the Army Air Service was able to allot the necessary funds to mark towns and cities along the Model Airway between Washington and Dayton, Ohio. At that time a total of 106 towns were so marked - 39 in Ohio, 32 in West Virginia,

16 in Pennsylvania, 11 in Maryland and 8 in Virginia. Since that time only a few other towns and cities in the country have been marked in such manner.

A plan has been devised by the Office Chief of Air Service for carrying out the program as suggested by the Fairfield Depot. The Airways Section broached the matter to the American Railway Association and to the United States Chamber of Commerce, and it now appears that the fullest cooperation and assistance can be secured from these two sources. With this help and with such additional aid as can be expected from various national and civic organizations, with headquarters at Washington, it is felt that a very substantial beginning can be made in the work of marking the airways throughout the country.

The War Department has been recently requested to approve the plan and to authorize the Air Service to undertake the inauguration and development of the project. It was also suggested that the plan be circulated to the various departments and bureaus of the United States government interested in the operation and development of aircraft in order to receive their views on the subject, this with the idea of securing the general adoption of the same.

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THE INTERNATIONAL AIR RACES

At a conference held recently by Rear Admiral W.A. Moffett, Chief of the Bureau of Aeronautics, Navy Department; Major-General Mason N. Patrick, Chief of the Army Air Service; Brigadier-General James E. Fechet, Assistant Chief of Air Service, and Captain E.S. Land, of the Bureau of Aeronautics, Navy Department, decisions were reached in regard to the participation of Army and Navy planes in the International Air Races to be held at Mitchel Field, L.I., on October 8, 9 and 10 of this year.

It was agreed that the first of the three high speed planes being procured jointly by the Army and Navy for entry in the Pulitzer High Speed Race, to be held October 10th, will be flown by both Army and Navy pilots, who are to be principals and alternates in the Pulitzer Race. When the second plane is delivered, it will be decided by lot as to whether this plane will go to the Army or the Navy, and it will be flown only by the pilots of the Service which secured it. The third plane will be taken by the service which did not secured the second plane. After the first plane has been delivered the Navy will take the first plane and test it as a seaplane, preparatory to using it in the Schneider Cup Race to be held near Baltimore on October 24th.

In addition to the entry by each service in the Pulitzer Race of one of the new high speed planes now being procured, it was agreed, inasmuch as the conditions for the race apparently call for not less than three entries, that the Army will provide one or more of its fastest pursuit planes as entries in this contest, and will turn over to the Navy one or more of these pursuit planes to be flown by Navy pilots.

Both the Army and the Navy will have entries in the Liberty Engine Builders' Trophy Race, an event of the International Air Races. In case there is no foreign entry in this race, it was agreed that the Army and the Navy will enter none but standard DH observation planes with the usual DH wings and Liberty engines. This will result in all of the entries in this race being practically identical. In case there is a foreign entry, then the Army Air Service and the Navy will be at liberty to put into this race any bona-fide two place observation planes which they can prepare for the event.

The Army, under these conditions, may have available some of the XO-1 or XO-2 fast observation planes, or some of both of these types. Should there be more than one of this type which can be made available, it was agreed that these planes will be divided between the Army and Navy pilots.

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AVIATORS' CLOTHING

Among the many functions of the Engineering Division at McCook Field, Dayton, Ohio, is that of designing suitable flying togs for the pilots of the Army Air Service. This work is carried on by the Equipment Section under the charge of Mr. R.C. La Van. Nothing is left undone to provide every possible comfort to the men flying Uncle Sam's airplanes, and the Equipment Section is continually working on new and improved articles of equipment for them.

Flying suits have been designed which keep the airman warm and comfortable even in the most intense cold encountered in high altitude flying. Also, for pilots stationed at fields where a considerable amount of flying is done over water, a non-sinkable suit has been devised which serves as a most efficient life preserver in case the pilot is so unfortunate as to experience a forced landing in the water.

Among other articles of flying equipment now under development, there may be mentioned summer and winter helmets, an oxygen mask for high altitude flying, moccasins, radio communication helmets, non-fogging goggles, etc. Improvements recently effected in the equipment above mentioned, all of which were designed by Mr. LaVan, are described below. In this connection, the Engineering Division is greatly indebted to A. G. Spalding & Bros., of New York City, a firm which has cooperated with and aided the Division to the fullest extent in developing all experimental flying equipment.

Summer Suits.

This light-weight summer flying suit is made of worsted gabardine, and is wind and water proof. All openings on sleeves, legs and down the front of the suit are of the hookless fastener type. The hookless fasteners on the legs are on the inseams, enabling the wearer to open and close the legs very easily. The weight of the suit varies from 2½ to 3 pounds, according to its size.

Winter Suits

Two types of winter suits have been designed and developed. One suit has a nutria fur lining next to the body, and between the fur lining and the outer covering there is an inner lining of chamois. The upper half of the outer covering of the suit is of leather and the lower half of Bedford Cord. The roll type collar is covered with nutria fur. This suit, which is now ready for production, is warm, light, very flexible, and does not interfere with the movement of the body. All openings are of the hookless fastener type. The weight of the suit is 13 pounds.

Another design of winter suit has fawn reindeer lining, a nutria roll collar, and an inner collar of knitted material which is adjustable to fit closely around the neck. This inner collar serves to effectually prevent any air from going down the back of the neck. The front opening of the suit is closed by a hookless fastener, running on a bias from the crotch to the shoulder. Running the fastener in this position, the wearer is completely protected from any air that might otherwise seep in at the openings. The suit from the collar down to the waist is of leather, as are the sleeves from the shoulders down to the elbow. Bedford Cord is the material used from waist to ankle and from the elbow down to the wrist. Hookless fasteners are placed on the inseams of the legs and sleeves. The opening in the legs extends from the ankle to the knee, which fact greatly facilitates putting on and taking off this suit.

In another design of a winter suit now in process of development, a good blanket material will be utilized for the lining instead of fur, and the entire outer covering will be of cape leather with all vents opened and closed by hookless fasteners.

Suits - Non-sinkable (life preserver).

A non-sinkable suit has been developed for the use of pilots whose activities require them to make frequent flights over water. This suit has an outer covering of gabardine and an inner lining of satin. Between the satin and the outer covering a composition called "Chicago Foam" is placed over the chest and sides, on the shoulders and the collar. This suit when worn will keep approximately 200 pounds afloat for a great length of time. This "Chicago Foam" does not absorb water, is lighter than sponge rubber, and will not harden or crack from use. All vents in the suit are opened and closed by hookless fasteners. The weight of it varies from 8 to 10 pounds, according to its size. The suit is now ready for production.

Helmets - Summer and Winter

New types of helmets for summer and winter wear have been designed and developed. In the summer helmet cape leather is used for the outer covering and chamois for the lining and the ear pads. The winter helmet also utilizes cape leather for the outer covering, but fawn reindeer and Nutria are used for the lining. These helmets fit very snugly, will not rip or flap in the wind, and no air can get in around the face. They are now ready for production.

Oxygen Mask

In the new type of oxygen helmet and face mask (combined), cape leather is used for the outer covering and chamois for the lining. This headgear completely covers the face, but does not interfere with vision or breathing.

Radio Helmets.

The new type of Radio Communication helmet recently developed is made of cape leather with chamois lining. This helmet is very comfortable, and the hearing of radio signals is far superior than is the case with the old style helmet.

Moccasins.

An aviator's high top moccasin has been developed to replace the old style three-buckle moccasin. This moccasin, which measures 17 inches high, is made of chrome tanned sheep leather from the top down to the sole. The sole is of chrome tanned moose leather. The front of the moccasin has a series of eyelets for the lacing adjustment, with a tongue three inches wide from the instep upward, lined with close-cropped sheep wool. The back of the moccasin has a series of eyelets for laces in connection with a hookless fastener for opening and closing it. The eyelets are placed there for emergency use in the event that the hookless fastener does not work. On the outside of the moccasin near the top is a pocket with a flap having a snap fastener. This pocket is utilized for carrying an extra pair of laces. The moccasin is lined throughout with close cropped sheep wool. The bottoms are interchangeable, an extra pair of bottoms being provided for each pair of moccasins made.

Goggles.

A new type of curved lens goggle, tending to overcome fogging, is the latest development along the line of providing a better optical instrument for flyers. The goggles are so designed and the ventilators placed in such manner that the air flow covers the entire inner surface of the lens. Air comes in at the end side next to the nose and is expelled at the end next to the ear. These goggles are light, have good vision, and lie close to the face without interference with the eyelashes. The lenses have large sponge rubber eye cushions which prevent any pressure of the frame on the face.

Lenses.

The Engineering Division has developed a curved lens which is cylindrically ground and polished. The size of the lens is such that it will fit a Meyrowitz No. 6 goggle. Heretofore all lenses ground and polished in the curve were spherical, causing reflections which are a source of much annoyance to the wearer. Air Service pilots may be especially interested to know that the Engineering Division now has under development a ground and polished non-shatterable cylindrical lens, which it is hoped to substitute in the near future for the present shatterable lense.

Within the course of the next few months an amber-colored lense will be ready for service which will penetrate fog, and eliminate 30% of the blue and 50% of the yellow, or glare. The lense, which is very restful to the eyes, will also prevent snow blindness.

Wind Cones.

Three new types of wind cones have been developed, one a portable cone designed to be easily and readily moved from one place to another, and the other two standard 24 and 48-inch cones. These are all dyed a chrome yellow, a color which has excellent visibility under all weather conditions and over any background.

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AN EFFECTIVE MOTH PREVENTATIVE

A very effective preparation tending to eliminate moths from fur and woolen flying equipment has been devised by Mr. R.C. La Van, in charge of the designing and development of flying equipment at the Engineering Division, McCook Field, Dayton, O. Once a fur or woolen suit is sprayed with this solution, it is not necessary to further treat the garment for a period of at least three months, when a further spraying is advisable.

Aside from its effectiveness in eliminating moths, the compound has the added advantage of being perfectly harmless to the material treated, for after evaporation of the solution the fabric or wool retains its former appearance and lustre. Mr. La Van states that it is advisable to make up the preparation in not less than gallon quantities at a time, the following ingredients being used: To one quart of grain alcohol add one pint of formaldehyde and

about three ounces of powdered cyanide potassium. Add one quart of C.P. Benzol into which has been dissolved one-half pound of Napthaline. Thoroughly mix the ingredients and use spray gun.

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THE AIRSHIP RS-1.

The Army Semi-Rigid Airship RS-1, now in process of erection at Scott Field, Belleville, Ill., is ready for inflation as soon as repurified helium gas is received from the Lakehurst repurification plant.

The RS-1 is of the Italian Forlaini design with enclosed triangular aluminum alloy keel. The keel has the apex pointing up and is suspended by catenary cables which attach to the three points of the keel at 10 ft. intervals. The load coming on the center catenary gives the envelope a bilunar or heart-shape cross section, whose greatest dimensions are 66.5' x 73' high. The envelope is 282 ft. long and is divided into four compartments by transverse diaphragms. The center diaphragm is a solid wall, while the end ones have surge holes near the bottom in the gas and air compartments. The ballonets have a total capacity of 224,000 cu. ft. and are divided into four compartments by the above diaphragms. The valves are the standard 18" automatic and a special 28" valve developed for this ship.

The nose cone consists of 19 aluminum alloy battens secured to the keel, laced to patches on the envelope and supported laterally by five sets of brace wires and two telescopic rings of aluminum alloy tubing. The nose of the ship is also arranged for and provided with mooring equipment for mooring to masts like, or similar to, the Navy mast at Lakehurst, N.J.

The keel is constructed of aluminum alloy columns, Phoenix type, and maximum length of 10 ft. These columns are connected by a ball and socket joint in a forged lynite housing, which housing are part of the rigid transverse triangles. The tension wires of the keel are of the streamline form. Fuel and oil tanks, emergency and regular water ballast and fore and aft drag ropes are suspended in the keel from the transverse keel frames.

The pilot car is attached to the keel and is of streamline form 8 x 35 ft. It is constructed of aluminum alloy frame work covered with fabric and metal sheathing. The control room is separated from the rest of the car by a hollow partition which houses the control cables coming down from the keel. The control capstans operate thru a non-locking worm gear and drum. The equipment of the pilot car, in addition to the latest design of navigating instruments, includes an SCR-135 radio set, a type B-3 camera, bomber's cockpit and equipment, four berths, an auxiliary power driven 5,000 cu. ft. capacity air blower, map table, provision cupboards, etc. This car complete weighs 1900 lbs., exclusive of radio, camera and bomb sight.

Power is supplied by four Liberty 12-A engines with carburetor settings to give 300 h.p. at 1550 r.p.m. These are mounted in two power cars, strut and wire suspended from the keel, and drive two 17'6" propellers through transmissions with 2'4" gear reductions. Either or both engines may be used to drive the propeller forward, but only one engine in each car can be used in reverse.

The RS-1 is the first semi-rigid to be constructed in America and is considered by our engineers as experimental (notwithstanding that Mr. Nobile, an experienced Italian semi-rigid engineer, was consulted regarding the design). Of the three years spent in bringing the RS-1 to its present state of completion, a large percentage should be charged against research and test which have given data of lasting importance. All materials used in the construction have met the chemical and physical requirements of A.S. material specifications. Rigid process inspection and tests of finished parts have made the safety factor the important consideration over weight and performance. Its use in training officers for command of larger airships of the Shenandoah and Los Angeles types was also considered and the control cabin is arranged for such instruction.

Arrangements have also been made for further experimenting with the landing and launching of airplanes and the keel is designed for the attachment of landing devices.

Arrangements for armament include bomb racks of 3500 lb. capacity, and single machine gun mounts on both sides of the forward end of the pilot car. A gun mount can easily be arranged for at the extreme bow of the ship if required.

It is estimated that another month will be required to complete assembly after receipt of the helium and approximately two weeks more to test out the power plant and signalling devices before the RS-1 takes the air on its first test flight.

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THE NEW METAL FUSELAGE DEHAVILAND

By Wilbur Wright Field Correspondent

One of the most interesting types of planes received at the Repair Shops at Wilbur Wright Field is the new steel fuselage DeHaviland, known as the DH-4M2. It differs in many essential features from metal fuselages previously designed, in that it is more stoutly and compactly built, is less liable to break in case of a rough landing and meets with more favor from pilots and mechanics alike than does the previous attempts along the lines of metal design.

A contract for 100 of these metal DH's has been awarded to the Atlantic Aircraft Corporation of Hasbrouck Heights, N.J. The factory is located about 12 miles from New York City. Among those who are active in the affairs of this Corporation is Mr. Fokker, the well known aircraft designer and builder, who has transferred some of his interests to this country; also Chief Engineer Mr. A.F. Arcier, and Mr. Noorduyn, General Manager.

Sixty-five of the planes will be of regular observation type; twenty-five will be special photographic planes to be known as DH-4M2P, and the other ten, to be provided with side type superchargers, will be known as DH-4M2S.

The photographic and supercharger types have not as yet been completed; the Atlantic Aircraft Corporation devoting its attention at present to the regular type. The first shipment, comprising 8 planes, has just been received at Wilbur Wright Field, and the first one is being assembled in the Repair Shops. The wings, interplane struts, wires, etc., are the same as in the wooden DeH's, no changes whatever being made in them. The fuselage, however, is entirely new, being constructed of steel tubing welded into a solid structure, or rather two structures, because the fuselage is made in two sections. The cowling is easily removable, and the fabric covering for the rear portions of the fuselage, instead of being attached like the fabric in the old fashioned type, is easily removable, being held in place by a clever system of hooks and cords.

The main gas tank is of brass to prevent corrosion that might occur in a tank built of terneplate. Its capacity is 110 gallons. There is also a small gravity tank in the front wing. The oil capacity is 14 gallons.

The pilot's seat is adjustable so as to suit the individual requirements of each pilot. In spite of the steel construction and the increase of gas and oil capacity, the total weight of the fuselage is no greater than that of the old wooden fuselage, showing the adaptability of metal to the design of a structure where lightness in weight is the first consideration.

A new type of wide tread landing gears, constructed of steel, will probably be used with this new DeHaviland. An altimeter and air speed indicator is provided in the rear cockpit while in the pilot's cockpit there is a full assortment of instruments including air-speedmeter and bank-and-turn indicator.

The fuselage is designed for a Liberty engine and equipped with 8-volt ignition with provision for the 12-volt system to be used in the future. Hand starters and also electric starters are provided.

The same radiator that was used on the old DeHaviland plane is employed, together with a system of shutters for tempering the air current when necessary.

No wood whatever is used in the fuselage except for a few small battens to keep the fabric away from the tubing and a wooden floor for the gunners' cockpit.

The armament comprises a .30 caliber Browning machine gun and two .30 cal. Lewis machine guns, one mounted forward and the other upon a ring mount at the rear. Bombing racks, shell chute and ejection chute are also provided.

Mr. O.J. Neff, of the Field Service Section, Wilbur Wright Field, recently returned from the factory of the Atlantic Aircraft Corporation where he prepared a complete catalogue of DH4M2, showing all component parts, listed by assemblies. This catalogue, when approved by the Chief of Air Service, will be used by Supply Officers and Engineer Officers at all stations throughout the Air Service

LIEUT. SANDERSON TRICKS DEATH, BRINGING PLANE DOWN IN WATER

Breaks Wheel and Damages Wing in Take-Off, but Refuses to Use Parachute, Lsnding as Engine stalls with Gas All Gone.

Lieut. Lawson H. Sanderson, U.S.M.C., star left end on the famous Quantico foot ball squad and airplane pilot extraordinary, yesterday afternoon put another star in his crown of hairbreadth escapes when he landed his high-speed Curtiss PW-8 pursuit plane in the water at Aberdeen, Md., after having broken his landing wheels on taking off from Pitcairn Field, near Philadelphia.

Lieut. Sanderson, who has been in training with the 1st Army Pursuit Group at Selfridge Field, Mt. Clemens, Mich., flew to Pitcairn Field Sunday with Lieut. H.J.Norton, another Quantico flyer, and Lieut. T.K. Matthews of the Army Air Service, to "put on a little show."

Filling up his gasoline tank to its capacity, which would enable him to fly for more than five hours without landing, Lieut. Sanderson took off from the field. The ground was very rough and the little plane bumped about as it got up its flying speed. Just as he was about to "pull her into the air" the right wheel broke and fell off. Grasping the situation immediately, Lieut. Sanderson dipped the plane down on the left and continued on one wheel at more than 75 miles an hour and then left the ground. Had he stopped his take-off the result would have been a nose-over and possible fire.

As the wheel flew off it bounced up under the wing close to the fuselage and broke a spar, causing splinters to break through the fabric and bulge out. This, likewise, was none too pleasant a sight, but Lieut. Sanderson pulled the little ship up, saying to himself, "If I get this thing to 3,000 feet I don't care what happens," because at that altitude he could use his parachute successfully.

In the air and comparatively safe after a few minutes flying, he was under the impression he was going straight out to Selfridge Field, but Lieut. Matthews, by signals in the air, assured him he was not going to take the chance, but would go to Bolling Field.

After the two flyers had disappeared from the field (Lieut. Norton did not take off at the time) a message was sent here that Lieut. Sanderson was on his way with a smashed landing gear and that he undoubtedly would try to land in the river. Lieut. C.D. Palmer, officer of the day at the Naval Air Station, ordered out several boats to station themselves in the river and the Army Air Service had its ambulances standing by.

As the flyers neared Aberdeen, Lieut. Sanderson said, "Matthews came up along side and, standing up in his ship, showed he wanted me to jump by going through the motions of pulling his own parachute rip cord. Jump, my eye, I wouldn't jump unless the thing caught fire and then it would have to be pretty hot. When he saw I wouldn't jump, he landed and told them on the ground I was going do come down in the water.

"I flew close to the ground, tossed out my cap, blouse and Sam Brown belt, then I took my wrist watch off and stuck it in my collar and drained gas out of the tank so the thing wouldn't burn up if I struck something hard."

Boats were ordered out, and the dock was lined with soldiers, who anxiously watched the feat of putting a land plane down in the water. Lieut. Sanderson took his time, circling around while his gasoline was draining and losing speed, and just as he reached the stalling point, he cut his switches and came to a sudden halt in four feet of water. His head was down in the cockpit, and when he looked up cheers rang out from the shore. A boat picked him up.

Lieut. George Henderson of the Naval Air Station, returning to Washington from Miller Field, Staten Island, ran into a squall at Baltimore, and with his motor cutting out, returned to Aberdeen. After receiving the congratulations of those on shore, Lieut. Sanderson climbed in the back seat of Lieut. Henderson's De Haviland and was flown to Washington, landing here at 6 o'clock.

Lieut. Sanderson completed his training at Selfridge Field Saturday, and will return to Quantico for duty with the 1st Aviation group there. The only repairs to the airplane needed, he said, would be two lower wings and a new set of landing gear. Lieut. Sanderson last night planned to return to Selfridge Field today.

Yesterday's forced landing was the third Lieut. Sanderson has had in high-speed planes. He fell in Lake St. Clair, Mich., in a racing plane during the Pulitzer races of 1922, and crashed his Wright fighter at the end of the St. Louis races of 1923, when he ran out of fuel just as he finished the race. His safety in those two adventures spurred him on yesterday to save the Army's $30,000 plane.

-12- Washington Star, July 21, 1925.

V-5454, A.S.

FOREIGN VISITORS AT BROOKS FIELD

Captain Bouche, formerly of the French Air Service, recently spent a few days at Brooks Field, San Antonio, Texas. He is editor of a French Aeronautical publication and very enthusiastic about the progress of aviation. The purpose of his visit was to collect material for editorials relative to the American air force.

Another visitor whom Brooks Field had the pleasure of entertaining was Lieut. Van Dorsen, an Air Service officer from Holland, who recently completed a course in Aircraft Maintenance at Chanute Field. At present he is touring the various flying fields throughout the country.

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SHIPMENTS BY AIR FROM MIDDLETOWN

During the months of March, April, May and June, a total of 3990 pounds of freight, including airplane and engine spare parts and aviators' clothing, shipped by air from the Middletown Air Intermediate Depot. Of this amount of freight, 325 pounds were shipped in DH4B airplanes and the remaining 2665 pounds in Martin Bombers. The greater portion of these shipments, totalling 2045 pounds were consigned to Mitchel Field, a Martin Bomber on three different occasions transporting 465 pounds, 905 pounds and 675 pounds, respectively. Langley Field received 590 pounds, Bolling Field 315 pounds and Phillips Field 40 pounds.

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A DURABLE MAP FOR AIRWAYS FLIGHTS

The Airways Section, Office, Chief of Air Service, is endeavoring to secure more durable strip maps for the use of pilots on airways and long cross-country flights. The paper strip maps now in use rarely last longer than one trip, usually being so frayed or torn that when the pilot later makes a similar trip he finds it necessary to secure another set of maps. Furthermore, when a pilot makes an extended cross-country trip the strip maps, rolled up, become too bulky and difficult to handle.

The Airways Section recently received a sample strip map covering the airway from Wheeling, W. Va., to Washington, D.C., which is printed on a piece of balloon cloth, 14 by 35 inches. This map is reproduced in all the varied colors of a lithographed paper map. The colors and lettering are clear and sharp, making the map very easy to read. The advantage of using maps printed on such finely woven material as balloon cloth can readily be seen. First of all, the map is very durable and can be used over and over again without any appreciable wear. Due to its pliability, a map covering, say, the airway from Washington, D.C., to Kelly Field, Texas, can be rolled up so compactly that it will be no thicker than a broom handle.

The only disadvantage such a map has is this very feature of pliability, for a pilot must hold it very taut in order to scan any particular part of it. Experiments are now being conducted with various kinds of chemicals which will tend to give these balloon cloth maps the necessary stiffness for ease in reading, and when this improvement has been effected pilots will be relieved of the trouble of securing a new map every time they start out on a long aerial journey. Here the element of economy also creeps in, for with the adoption of cloth maps the Air Service will be able to function with a much lesser number of maps than at present.

The cloth map above referred to was produced by the Corps of Engineers, U. S. Army. It is the result of experiments suggested by Colonel W.C. Brown, U. S. Army, an officer of long and varied experience in map making.

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INDIANS SEE "HEAP BIG BIRDS".

The Indians at the Mescalero Indian Reservation were afforded an excellent opportunity of viewing some of Uncle Sam's airplanes on Independence Day. Pilots of the Army Air Service stationed at Biggs Field, Fort Bliss, El Paso, Texas, flew over different towns in Western Texas, New Mexico and Arizona as part of the Defense Day exercises held thereat. Lieuts. G.H. Gale and L. D. Weddington, Privates Dryden and Smith flew cross-country to Alamogordo, Tulerosa, Mescalero Apache Indian Camp and Roswell, New Mexico; and Sierra Blanca, Fabens and Clint, Texas. Photographs were taken of the Indian celebration at the Mescalero Reservation by Private Smith, and Private Dryden made a parachute jump at Roswell, New Mexico.

Other Air Service pilots from Biggs Field who made cross-country flights for the purpose of participating in Defense Day Exercises were Lieut. Charles Douglas with Private Griffith to Douglas, Arizona; Sergeant Pierce with Corp. Weaver to Phoenix, Tucson and Douglas, Arizona; and Lieut. Milton J. Smith, Sergeants, Riley and Tyler to Deming, Lordsburg, Silver City and Los Cruces, New Mexico.

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THE WORK AT THE FAIRFIELD AIR INTERMEDIATE DEPOT

The production of airplanes and engines in the repair shops at Wilbur Wright Field, Fairfield, O., for the months of May and June was as follows: May, 32 airplanes (24 JNSE, 5 JNS-1; 1 DH4B, 2 DH4M-1); 52 engines (28 Wright E, 12 Liberty, 2 Curtiss D-12, 5 Wright H-3, 1 Wright I and 4 Wright A-2): June, 33 airplanes (17 JNSE, 2 JNS-A2, 1 AT1, 1 DH4B, 1 DH4M-1, 4 MB3A, 1 DH4B-M, 2 DH4B-M1, 2 DH4B-2, 2 DH4M-2, 1-DH4BM-2); 53 engines (21 Wright E, 19 Liberty 12, 6 Curtiss D-12, 2 Wright I, and 5 Wright A-2).

This is probably the largest output for a two-month period since the Repair Depot was established. In addition to the above, some 15 minor repair jobs, such as engine installation, wing and control surface installations were handled on the line.

Several of the new DH4M-2 airplanes are now being put through the shops. These sturdy and handsome fuselage ships, which will eventually replace the old wooden DeHavilands, were built by the Atlantic Aircraft Company at Hasbrouck Heights, N.J. and were shipped to the Depot for assembling.

There are now three Martin Bombers in the Shops. One of them is being equipped with superchargers so that it can be used for high altitude bombing. It will probably be flown to Mitchel Field when completed, and it is expected that all previous altitude records for planes of this type will be surpassed.

Practically all of the "Jennies" to be used by reserve officers and by National Guard pilots during the summer have been completed and delivered to destinations.

The rearrangement of the layout of the shops has been of great assistance in speeding up the production program. Among the notable improvements is the building of an enclosed passageway from the Aero Repair to the Dismantling Hangar, which almost doubles the effective space used by the Aero Rapair. All of these betterments have been carried forward to completion by the Engineer Officer, Captain Edward Laughlin. The Assistant Engineer is Lieut. C.C. Nutt.

Mr. G.R. Marley has recently been appointed Shop Superintendent; Mr. Jack Knight is in charge of the Aero Repair; Mr. Grant Webster, Engine Repair; Mr. Wm. Harris, Machine Shop; and Mr. P.A. Klover, Final Assembly. Mr. C.O. Perry is Chief Clerk.

The men in the shops are looking forward to an active summer and confidently expect to surpass all previous records. Along with quantity of work they are not neglecting quality of work, for a very rigid system of inspection is maintained.

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RESERVE OFFICERS CAMP AT WILBUR WRIGHT FIELD

The second camp for the training of reserve officers at Wilbur Wright Field, Fairfield, O., commenced on July 13th. About 40 reserve officers are in attendance, and they are receiving practical experience in all kinds of work in connection with the operation of an Observation squadron. They are also carrying on a large amount of refresher work in flying, and several of the officers piloted planes to the ceremonies in connection with the opening of Stowe Field at Akron, Ohio, on July 18th. Major E.L. Hoffman of Grisard Field is the Commanding Officer of the Camp.

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SOME LIGHT ON ALLEGED FAILURE OF AIR FORCE IN RIFF CAMPAIGN

Considerable discussion has been arcused as to the cause of the prolongation of the French campaign against the Riffs in Morocco, in view of the popular belief that by the use of air force France would crush the rebellious Tribesmen in short order. Judging from what has lately appeared in the newspapers, there seems to be an impression in some quarters that the French air force has not lived up to expectations

The appearance in the columns of the Washington POST recently of an article touching on the Moroccan campaign led General Vidal, ex-Commander of the 31st Division, Paris, France, to address the following letter to the editor, viz:

To the Editor of the Post--Sir: In the article entitled, "Has Air Force Failed?" (June 1, 1925) you ask if the French air force has failed in the war against Abd-el-Krim's army.

Will you allow me to let you know the truth about the results obtained by our aviation in Morocco?

I don't mention the "dire fate that awaits our aviators when captured by the Riffians." You answer this question yourself by these words: "Death has no terrors for them." To be cut to pieces by the enemy or to be burnt alive by accident, as it happens too often, is a danger that does not frighten the airmen.

There is no possible comparison between the British campaign in Mesopotamia and our war in Morocco; from the point of view of the opposing forces, the military value of the native fighters, topographic conditions, organization and number of the enemy's army, everything is different.

You ask "where is the rain of death that was to be poured down by air fleets upon enemies unprovided with defending air forces?" It is true, as you say, that "in the Riff there are no air forces capable of meeting the French air forces," but one must not forget that in this war the airplane's objectives are generally small villages or little groups of men and that, at the north of the Wergha river, friendly and hostile tribes are so intermingled that is very difficult to know exactly where to drop the "rain of death".

Nevertheless many hundreds of bombardments have taken place, and in all the fights, airplanes, flying very low, have fired at enemy groups.

It must be added that there has been a rather large number of casualties of aviators killed or wounded by infantry bullets. Guerrilla warfare is not a very easy task for aviation in a country where every rock is a shelter for a sharpshooter; it is only when a mass of troops is attacking our lines that aviators can play their game--and so they did with success in many cases.

But what to do against "une poussiere d'hommes" or tiny groups of huts? It is known that Abd-el-Krim employes modern methods with very brave and well-trained troops. European instructors have taught the Riffians, viz., Russians, Turks and Germans.

The real characteristics of this war are: (a) The difficulty of meeting the main body of the adversary.

(b) The possibility for him to retire, after a defeat, in a zone (theoretically Spanish) where we have no right to follow him.

(c) The versatillity of the tribes who, for fear of a cruel chastisement or by fallacious promises of Abd-el-Krim, change continually their minds and the direction of their fire.

(d) Also, it must be said, the magnificient bravery of the men of the mountain as well as (e) The length of our front line of 300 km. (f) Finally, the necessity for Marshal Lyautey to keep behind an important mass of troops in view of holding the rest of Moroccan territory, so many times larger than the northern area.

As concerns the clouds of asphyxiating gas. France does not want to transfer into Africa such methods of warfare; there are better ways of introducing science in the native circles.

To sum up this too long letter, French aviation has not failed in Morocco; to realize this assertion it is sufficient to read in the newspapers the work accomplished by the aviators, reconnoitering patrols, photographs, bombardments, supplies poured down (life instead of death) to many besieged posts (same have been rescued and saved by the airplane's activity), firing, at short range, at enemy groups.

In reading the "citations" of many aviators, one can realize what splendid work they have done, and every one knows what gratitude their comrades of infantry have expressed to them.

If I don't mention the communist propaganda in Morocco, it is because I have no relationship with Abd-el-Krim's friends.

General Vidal.
Ex-Commander of the 31st Division.
52. Avenue de la Motte-Picquet; Paris.

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A TRANS-ATLANTIC FLIGHT FOR A $25,000 PRIZE.

A prize of $25,000 has been offered by Mr. Raymond Orteig, of New York,

to be awarded to the aviator who shall cross the Atlantic in a land or water aircraft (heavier-than-air) from Paris or the shores of France to New York, or from New York to Paris or the shores of France, without stop, within five years from June 1, 1925. The flight may be made either way across the Atlantic.

The competition is open to aviators of any allied nationality holding an F.A.I. certificate (land plane or seaplane) and annual sporting license issued by a National Federation affiliated with the Federation Aeronautique Internationale and duly entered on the competitors' Register of the National Aeronautic Association.

The Entry Form for each attempt, which must be accompanied by the Entrance Fee of $250.00, must be sent to the Contest Committee of the National Aeronautic Association at Washington, D.C., and notice thereof sent immediately to the Secretary of the Trustees of the Raymond Orteig $25,000 Prize at the Army and Navy Club of America, No. 112 West 59th Street, New York City.

No part of the Entrance Fees is to be received by Mr. Raymond Orteig, the donor. All amounts received will be applied toward payment of the expenses of conducting the competition.

The start or landing may be made from land or water. If a land plane is used the point of starting or landing must be within fifty miles of Paris or New York. If a seaplane or flying boat is used, the start or landing must be made from a point within fifty miles of New York and the start or landing may be made from or on any point on the coast of France. The time will be taken from the moment of leaving the selected starting place, in case of the land machines. In the case of starts made from the water, the time of start and finish will be taken from the moment of leaving or reaching land, or crossing the coast line. In each case the pilot must report in person to the Trustees of the Raymond Orteig $25,000 Prize, or the National Aeronautic Association of the United States of America, at the Army and Navy Club of America, No. 112 West 59th Street, New York City, or the Federation Aeronautique Internationale at 35 Rue Francois-Premier, Paris, France.

All starts must be made under the supervision of an official or officials appointed by the National Aeronautic Association of the United States of America.

Only one aircraft may be used for each attempt. It will be so marked before starting that it can be identified on reaching the other side. It will carry a barograph which must be sealed with the seal of the official in control at the starting point, and this seal must be intact when it reaches the official in control at the terminus. The gasoline tank or tanks must likewise be sealed with the seal of the official in control at the starting point, and the seals remain intact when reaching the terminus, and subject to the inspection of the official there in control.

General

1. A competitor, by entering, thereby agrees that he is bound by the Regulations herein contained, or to be hereafter issued in connection with this competition.

2. The interpretation of these regulations, or of any to be hereafter issued, shall rest entirely with the National Aeronautic Association.

3. The competitor shall be solely responsible to the officials for the due observance of these regulations, and shall be the person with whom the officials will deal in respect thereof, or of any other question arising out of this competition.

4. A competitor, by entering, waives any right of action against the National Aeronautic Association for any damages sustained by him in consequence of any act or omission on the part of the officials of the National Aeronautic Association of the United States of America, and the Trustees of the Raymond Orteig $25,000 Prize, or Mr. Raymond Orteig, the donor, or their representatives or servants, or any fellow competitor.

5. The aircraft shall at all times be at the risk in all respects of the competitor, who shall be deemed by entry to waive all claim for injury either to himself or his passenger, or his aircraft, or his employees or workmen, and to assume all liability for damage to third parties or their property, and to indemnify the National Aeronautic Association, the Trustees of the Raymond Orteig $25,000 Prize and Mr. Raymond Orteig, the donor, in respect thereof.

6. The Trustees of the Raymond Orteig $25,000 Prize reserve to themselves the right, with the consent of Mr. Raymond Orteig and the approval of the National Aeronautic Association of the United States of America, to add to, amend or omit any of these rules should they think fit.

7. The entry for each attempt, with certified check for $250, must be received by the National Aeronautic Association at its Washington address at

least 60 days before the flight is commenced, and they must then be notified of the time and place at which the flight is to start.

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WAR DEPARTMENT ORDERS AFFECTING AIR SERVICE OFFICERS

Changes of Station

Major Douglas B. Netherwood assigned to take course of instruction at Harvard Graduate School of Business Administration, effective September 1st, and granted leave of absence for 15 days from July 3rd.

Captain Charles P. Clark relieved from duty at Scott Field, Ill, and assigned to Langley Field.

First Lieut. Edwin B. Bobzien relieved from duty at Chanute Field and to sail on or about September 3rd for Philippine Islands.

First Lieut. James C. Cluck relieved from Kelly Field and to sail on or about November 24th for Panama Canal Zone.

First Lieut. Lewis S. Webster assigned to duty at Langley Field upon completion of his tour of duty in Panama Canal Zone.

First Lieut. Harry A. Sutton relieved from McCook Field and to take course of instruction at Massachusetts Institite of Technology, Cambridge, Mass.

First Lieut. Henry G. Woodward relieved from Primary Flying School, Brooks Field, and assigned to Advanced Flying School at Kelly Field, Texas.

First Lieut. Oliver W. Broberg from Selfridge Field to Chanute Field.

First Lieut. James E. Duke, Jr., from Kelly Field to San Antonio Air Intermediate Depot.

First Lieut. Walter T. Meyer from Fort Bragg, N.C. to Kelly Field, Texas.

Second Lieut. Hilton W. Long from Kelly Field to Selfridge Field, Michigan.

First Lieut. Harold L. George from Phillips Field, Md., to Office, Chief of Air Service, Washington, D.C.

Second Lieut. Frederic B. Wieners to Kelly Field, Texas, upon expiration of tour of foreign service.

Capt. Albert M. Guidera from Kelly Field to duty at Agricultural and Mechanical College of Texas, College Station, Texas, effective September 1.

Capt. William O. Butler from Langley Field to Brooks Field to take primary flying training, effective September 13th.

First Lieut. Harold F. Rouse from Langley Field to Wilbur Wright Field, effective September 1st.

Captain Wm. E. Kepner from Naval Air Station, Lakehurst, N.J., to Brooks Field for primary flying training, effective September 13th.

Changes in Duties.

Major Frank M. Andrews detailed as Assistant Commandant, Air Service Advanced Flying School, Kelly Field, upon relief of Major Horace M. Hickam.

Major Earl L. Naiden detailed as Assistant Commandant, Air Service Tactical School, Langley Field, upon relief of Major Thomas DeW. Milling.

Orders relieving 2nd Lieuts. Howard H. Couch, William O. Eareckson and Edwin H. White from duty at Scott Field, Ill., September 15th, in order to pursue course at Balloon and Airship School, Scott Field, amended to take effect July 15th.

First Lieut. Earl S. Schofield, 2nd Lieuts. Leslie A. Skinner, Gordon T. Waite, Leslie F. Young and Uzal G. Ent relieved from duty at Scott Field and to take course at Balloon and Airship School at that station.

Transfers.

Second Lieut. Eugene B. Ely to Field Artillery and duty with 2nd Division at Fort Sam Houston, Texas.

Second Lieut. Paul R. Greenhalgh to Cavalry and to duty with 12th Cavalry at Fort Ringgold, Texas.

Details to Air Service.

First Lieut. Clough F. Gee, Q.M. Corps, to report to Brooks Field for primary flying training, effective Sept. 13th.

Orders detailing 2nd Lieut. R. Van Brunt, Infantry, to Air Service, revoked.

Promotions.

Captain Leo A. Walton to grade of Major, with rank June 18th; Captain Ralph P. Cousins to grade of Major with rank June 21; 1st Lieut. Elmer E. Adler to Captain with rank June 18th; 2nd Lieut. Donald F. Stace to 1st Lieut., July 2.

Leaves of Absence.

Major James E. Chaney one month, 15 days, from July 5th; Captain Warner B. Gates, 2 months from July 8th; 2nd Lieut. Glen C. Jamison, one month, 15 days

from August 3rd; 2nd Lieut. Hugh W. Downing, 2 months from August 1st; Captain David S. Seaton, one month, 10 days, July 15th, with permission to leave continental limits of U.S.; Capt. James. L. Hatcher 26 days from August 12th; Major Frederick L. Martin one month from August 1st; 2nd Lieut. Charles W. Lawrence, 2 months, August 1st; 1st Lieut. Rex K. Stoner, one month, 10 days, July 23rd; Major George E.A. Reinburg one month upon arrival at San Francisco from foreigh service.

Reserve Officers Ordered to Active Duty

First Lieut. James H. Kindleberger, 15 days from July 5th, to Langley Field.

2nd Lieuts. David L. Behncke and Foster V. Tompkins, 6 months, effective July 15th, to Langley Field, Va.

Capt. Charles W. Childress, 6 months, effective July 15th, to Kelly Field for duty with 3rd Attack Group.

First Lieut. George L. Murray, July 11th to October 10th, at Bolling Field, D. C.

Second Lieut. Rodney S. Lamont, July 22nd to January 14th, to Selfridge Field.

Second Lieut. Harry H. McGee, 6 months from July 15th, to Selfridge Field.

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FOREST AIR PATROL READY FOR ACTION IN CALIFORNIA.

The airplanes assigned to the California District (Forest Service) for patrol work have now reached their bases and are ready for duty. The following is quoted from the California District News Letter:

All of our planes are of the metal fuselage type, while those assigned to the other Districts are of the wooden type.

At Mather Field, Norman W. Potter of San Francisco, who holds the rank of Captain in the Officers' Reserve Corps, is in charge of the detachment of two pilots and three mechanics stationed there. Captain Potter is an experienced flyer and has been flying planes at Crissy Field during the past three years regularly. The other pilot, Paul A. Andert of San Diego, is a Second Lieut. in the Reserve Corps, and flew on air patrol work in Oregon and Washington in 1920 and 1921.

At Griffith Park, near Glendale, California, Charlie N. James of Los Angeles, First Lieutenant in the Reserve Corps, is the pilot in charge. He has been on National Forest Air patrol previously, flying out of March Field.

The mechanics are all former members of the enlisted personnel of the Army and are well qualified by experience and training to keep out planes in shape. The men at Mather Field are C. DeValschon, O.O. Hansen and B.T.Torrey; at Griffith Park, H.C. Babcock and R.L. Polk.

First Lieutenant Lloyd Barnett of the 91st Squadron, Air Service, has been detailed by the War Department to the Forest Service to assist in handling the technical details of the undertaking.

Mr. Hess of the District Office is at Griffith Park now and will probably be at Mather Field later on in the season to assist in keeping matters running smoothly there.

It is hoped and expected that the field will cooperate in making the first year in which we have entire charge of the air patrol work a great success.-

R.L.D.

Brooks Field, San Antonio, Texas, July 14.

The popularity of cross-country trips the past week-end brought about 120:45 aircraft hours, which swelled the total to 633:55 aircraft hours and 1026:25 man hours.

The base club with its pitching ace Woods had become a very formidable aggregation. So far this season they played nineteen games, of which seventeen were victories.

Lieut. W.W. White pulled the stunt of diving into the swimming pool and trying to end up several feet under the bottom. As a result he cut his head and is minus a front tooth. So far he claims that hole in front isn't worth much, being too small to hold a pipe and too large for a cigarette. Also it leaks ice when drinking various types of drinks requiring ice.

Hez McClellan, after about six months' debating and interviewing salesmen has turned in his 1914 Buick on a new Hudson coach. To watch him in it is like watching a kid with a new toy.

At the last two board meetings the usual toll was taken. Ten more unfortunates fell by the wayside, when the hand of the powers that be called them in audience. The class has now dwindled to about 12 officers and some 60 cadets.

Brooks Field, San Antonio, Texas, July 21.

Besides a dirth of instructors, the past month brought about a great need for enlisted men. So many have been lost through expiration of enlistment that the three stages have barely enough men to keep ships in working condition. Since no recruits are reporting in, at the present rate the situation will very soon become critical.

At the last board meeting something unusual took place. Seven men were called and only one eliminated. This is unprecedented and hard to account for.

Student flying has been cut down so that men will not pile up so much time. To date the average time is greater than what it should be before passing test and so the daily flying allowed has been reduced to a minimum.

Major Royce and Lieut. Patrick left Tuesday for Buffalo, N.Y., where they will act as members of a Board and ferry another PT-1 back. This is Major Royce's third trip on this duty.

A very successful picnic was held at New Braunfels last Friday. The officer personnel attended en masse. Besides enjoying a cool swim, added attractions were the lunch and refreshing drinks. In the evening a dance held by Kelly Field furnished the entertainment.

McCook Field, Dayton, O., July 23.

The following officers flew to Akron, Ohio, to participate in the Air Meet at Stowe Field, celebrating Akron's Centennial, July 17th and 18th: Majors Harmon, Kennedy, Captains Kraus, Haughton, Stone, Lieuts. Eubanks, Wells, Downey, Woolsey and Whitehead.

Major Clinton W. Howard was granted leave of absence for one month, at the expiration of which he will proceed to San Francisco to sail on the Transport leaving September 3rd for duty with the Philippine Department.

Lieut. C.M. Archer left July 21st for San Francisco to sail on the transport leaving the last of the month for duty in Hawaii.

Captain Wm. F. Volandt who reported for duty July 1st was assigned as Contracting Officer of the Engineering Division.

Upon completion of his course at the Engineering School, Major Hubert R. Harmon will report for duty in the Office Chief of Air Service, Washington, D.C.

Captain Vincent B. Dixon will be assigned to duty with the Engineering Division upon completion of his course at the Engineering School. He will report for duty August 15th.

Captain John C. Pratt, Infantry (Signal Corps) reported here July 5th for duty and was assigned as Signal Officer and Meteorological Officer in connection with Airways work.

Lieut. James H. Doolittle returned to McCook Field after a course of two years' duration at the Massachusetts Institute of Technology. He was assigned to the Flying Section for duty.

Captain G. C. Kenney was granted leave of absence for two months, beginning August 1st, after which he will proceed to Langley Field, Va., to take the course of instruction at the Air Service Tactical School.

Langley Field, Hampton, Va., July 21.

The past two weeks were exceedingly active ones for the personnel of this station due to the summer training program for the R.O.T.C. unit and Reserve Officers' Camp. All available personnel were utilized and the flying equipment was kept going to the limit.

On Friday, July 17th, First Lieut. Anthony DePodesta A.S.-O.R.C., was killed in an airplane accident. This threw a spirit of gloom over the entire station, as this officer had received his summer training here for several years past and was exceedingly popular with his brother officers.

Nineteenth Airship Company.

During the past month, the strength of this company was greatly increased by the assignment of several recruits. The ready reply of each when asked how they like it here, is "Fine, I had rather be here than in Heavier-than-Air any day". Each one sees that, as soon as his preliminary recruit days are over, he will be assigned to a squad and put at some of the numerous pleasant tasks we have to perform. Some go to the Airship hangar as students in engineering, rigging, radio, or woodworking, others to the hydrogen and helium plant to study abrication of gases. The company farm and stables get their share while others do company duty, being first on one duty and then another. And they are not a class of men who enlist today and desert tomorrow; they are stickers.

During the first half of the month the Airship TC-4 put in 32 hours in the air. Besides numerous short flights, an all day flight was made to Fort Bragg, N.C. All newcomers to the company are given rides, or at least an opportunity to go up.

The TC-4 took part in celebration when Governor E. Lee Trinkle of Virginia, inspected Langley Field, by escorting the Governor's party from Hampton to the Flying Station. When the Dismal Swamp Road was formally opened, the TC-4 flew over Portsmouth, Suffolk, and Norfolk, Virginia, from 10:00 A.M. to 2:00 P.M.

Numerous members of the R.O.T.C. in camp on the field were given hops and several inspections of quarters, hangars and grounds were made.

96th Bombardment Squadron.

The Squadron bought a large motor boat, which will be running in a few days.

First Lieut. A.C. Martin, A.S.-O.R.C. reported for six months' training.

This organization performed some night flying the past month and made a few cross-country flights.

Several enlisted men who qualified in various subjects pertaining to the Air Service at the Air Service Technical School at Chanute Field, Rantoul, Illinois reported for duty.

The organization is full up to peace strength.

First Lieut. L.L. Bowen, A.S.-O.R.C., left the service for the Air Mail, and the entire organization wishes him the best of luck.

Second Lieut. E.G. Cross, A.S.-O.R.C. was returned to inactive duty on June 30th. and we lost another good pilot.

2nd Photo Section.

The work of preparing a mosaic of the proposed Shenandoah National Park, in the Blue Ridge Mountains of Virginia, is progressing rapidly under the competent supervision of Master Sergeant Nico G. Loupos, who is attached to this organization for duty. This mission is being flown by Lieut. Charles L. Williams, accompanied by Staff Sergeant Jesse J. Barnhill, who is acting as photographer.

Mr. Sergeant Nico G. Loupos is scheduled to sail for Luke Field, Hawaii, August 8th, having been transferred to the 11th Photo Section at that station.

Much to the surprise of the Section, our Acting First Sergeant Jesse J. Barnhill, decided to enter on the "sea of matrimony" so was married at Staunton,

Virginia on June 3rd. The Section extends congratulations, also wishes Sergeant and Mrs. Bernhill a long and happy wedded life.

Private first-class Samuel L. Lindsay and Private John Steward returned to this section from Chanute Field, Illinois, having successfully completed the prescribed course of instructions in photography given at the Air Service Technical School.

11th Bombardment Squadron.

During the past week the Squadron made 39 flights for a flying time of 26 hours and 25 minutes.

Our top kick, Sergeant Kendricks, returned to the Squadron some time ago, from a thirty day furlough and has everything running fine again.

The Squadron greatly improved the grounds around the barracks and hangar, having made flower beds and sowed grass seed.

Air Service Tactical School.

First Lieut. Rex K. Stoner, the Engineering and Operations Officer of this Organization for the past four years, is busily packing and getting ready to proceed to the Primary Flying School at Brooks Field, Texas, to which station he has been transferred. Lieut. Stoner is exceedingly popular with all personnel of the command, and goes to his new station with the best wishes of every one.

Major Oscar Westover, Commandant of the School, is at present away on a two weeks' inspection trip of summer training camp activities throughout the central and eastern part of the country. This trip is in connection with his duties as a member of the Army Educational Board. During his absence, Major Jacob E. Fickel, Air Service, has assumed command.

Wilbur Wright Field, Fairfield, Ohio, July 21.

Major George H. Brett and Lieut. C.A. Cover recently made a cross-country flight to Maxwell Field to confer with the Commanding Officer of that station with regard to the future work at Maxwell Field. Major Brett flew an AT-1 and Lieut. Cover a Vought.

Mr. A.R. Modler of the Field Service Section returned from Maxwell Field, Montgomery, Ala., after spending several weeks there. He shipped most of the machinery and equipment formerly used by the Repair Depot at Montgomery to Middletown, Fairfield and San Antonio.

Captain Edward Laughlin flew to Akron July 18th, taking with him Paul DeWeese of the Parachute Department. Another plane was piloted by Mr. G.V. Dack, of the Final Assembly, accompanied by Sgt. Butcher.

Major H.J. Knerr, Commanding Officer of the 88th Squadron, was ordered to Langley Field, Va., to pursue the course at the Air Service Tactical School. He will report there October 1st.

Lieut. and Mrs. C.E. Thomas left July 11th for an extended trip in the South by auto. During the absence of Lieut. Thomas, Lieut. S.G. Frierson is Depot Supply Officer and Lieut. W.S. Hamlin, Assistant.

Lieut. J.L. Grisham is now Chief of the Material Branch in the Field Service Section.

Lieut. Raymond R. Brown, C.O. of Bowman Field, Ky., visited the Field Service Section and the F.A.I.D. on July 16th. He brought with him Lieut. Duncan McCollum, a Reserve officer. Lieut. Brown reports great interest in flying activities on the part of Reserve pilots living in and near Louisville.

Lieut. F. M. McKee of Scott Field visited here July 21st to confer on supply matters.

Lieut. H.H. Mills left July 7th for Indianapolis and Chicago to visit relatives and friends before proceeding to the Philippine Islands.

Major A.W. Robins and Lieut. H.A. Bartron flew to Selfridge Field in a DH on July 9th, returning the following day. On July 17th Major Robins, Major Brett, Lieuts. Bartron and Giles made a quick cross-country trip to Selfridge Field and return.

Lieut. and Mrs. Leon E. Sharon returned from an extensive trip in Europe. They spent most of their time in England. They missed the "London Fogs" and their trip was a most enjoyable one.

Captain Ralph H. Wooten, of the O.C.A.S., made a brief visit to Fairfield on July 7th.

Headquarters 2nd Div. Air Service, Biggs Field, El Paso, Texas, July 10-20.

Five pilots with four enlisted men as passengers flew to Tucson, Ariz., July 11th to attend a banquet given by that city in honor of Colonel William Mitchell. They returned on the 13th. The pilots were Major Reynolds, Lieuts. Gale, Weddington, Clark and Smith. The passengers were Corporal Bentley, Privates Corbett, Hays and Lafflen.

The following cross-country flights were made during the above period: Lieut. M.J. Smith with Private Daniels to Albuquerque, N.M. and return, July 10th; Lieuts. G.H.Gale and L.D.Weddington to Duncan Field, Texas, returning July 10th; Lieut. R.H. Clark and Master Sgt. Rhodes a photographic flight to Albuquerque and return on July 10th; Staff Sgt. Fred I. Pierce to Tucson, Ariz., and return July 13th; Sgt. Tyler with Sgt. Louderback to Los Cruces and return July 3rd; Sgt. Pierce with Corp. Weaver to Tucson, July 3rd, to participate in funeral of Sgt. Logan; Sgt. Tyler to White Water Mesa, N.M. and return on July 6th; Lieut. Clark to Chanute Field, Ill., returning July 6th; Lieut. Clark to Columbus, N.M. July 7th, ferrying Lieut. Ballentyne to that place; Lieuts. Gale and Weddington to San Antonio Air Intermediate Depot, July 8th, for the purpose of flying a new DH4M1 to this station; Sgt. Pierce to Douglas, Ariz., and return July 8th, ferrying Sgt. Holmstrand to that station; Lieut. Clark with Sgt. Rhodes and Lieut. Smith with Pvt. Daniels to Albuquerque July 9th to take pictures of landing field and hangars at that place.

Staff Sgt. G.V.Newland enjoyed a three-day pass which he spent on a trip to Willow Creek in the heart of the Mogollon Mountains. He drove his car on this trip, which is a remarkable feat considering the condition of the mountain roads.

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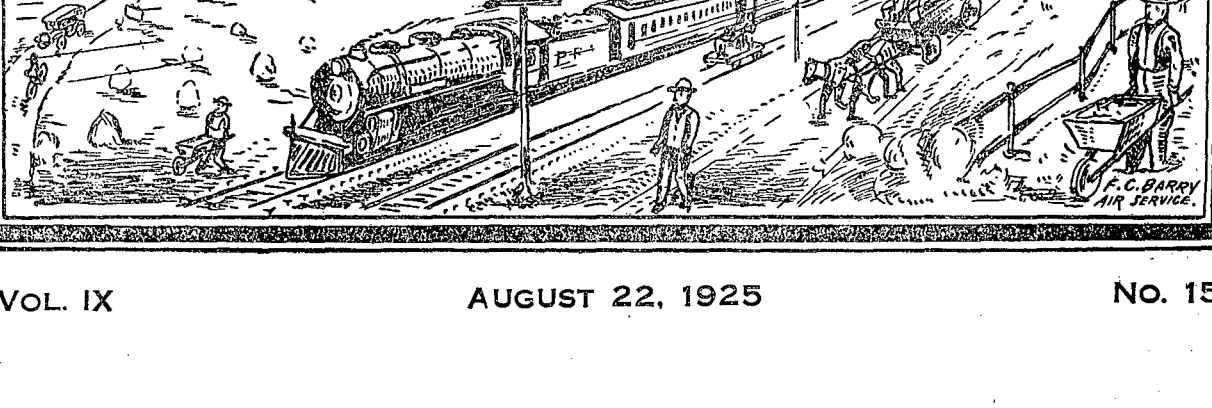
U. S. Army Air Service News Letter



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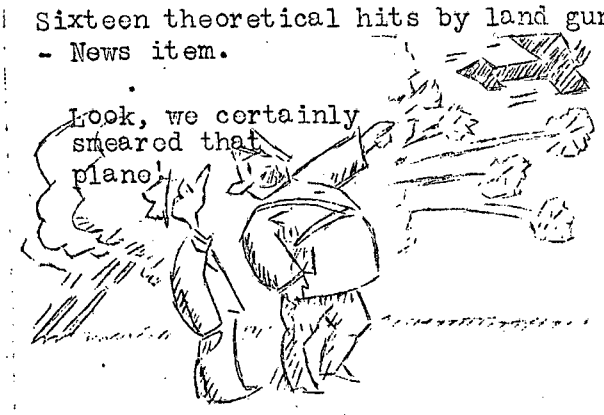
ANTI-AIRCRAFT TESTS

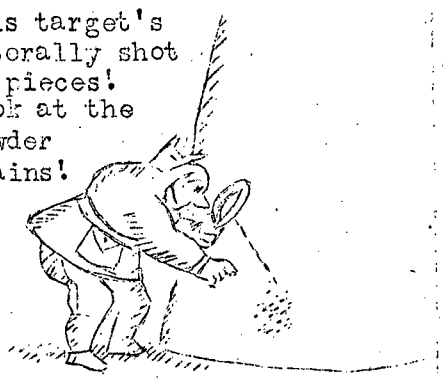
Many interesting articles, serious and frivolous, have appeared in the various newspapers since the anti-aircraft tests were started at Fort Totten, N.Y., last June. A typical example of one of the cartoons printed is the one below, taken from the NEW YORK WORLD, issued Thursday, August 20, 1925.

"THEORETICAL CONTACTS"

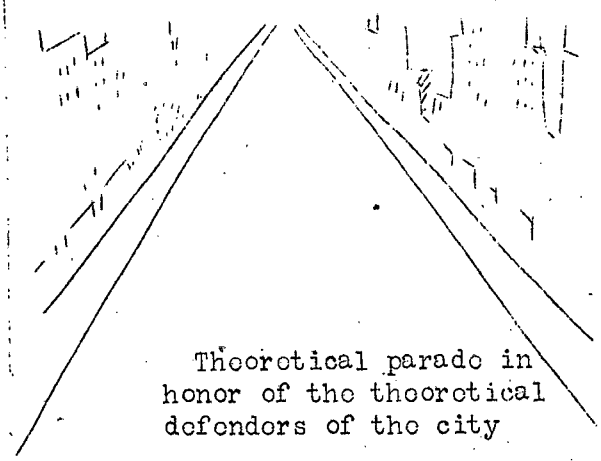
"Four actual holes in airplane target, Sixteen theoretical hits by land guns." - News item.



This target's literally shot to pieces! Look at the powder stains!

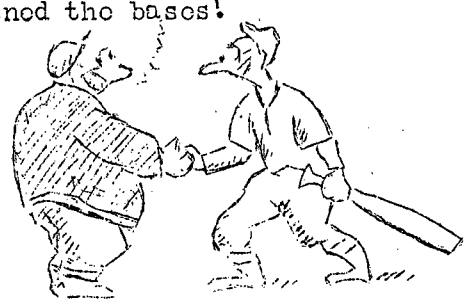


Checking up the carnage.



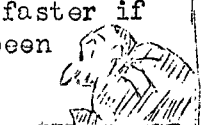
Theoretical parade in honor of the theoretical defenders of the city

Nice theoretical hit, ole boy! If the ball had been lower and your bat bigger you'd have cleaned the bases!



Manager congratulates player who struck out with bases full

Theoretical speedin! YOUR HONOR. He could have gone faster if conditions had been favorable.



I was only goin' 18 miles an hour!

Just licked a guy! I bounced fifty theoretical rights off his jaw while he only landed one actual sock on my beezer!

WHAT?-

VOL. IX A I R S E R V I C E N E W S NO. 15

Information Division Air Service August 22, 1925 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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RECORDING COMPASS FOR AIR TRAVEL

Think of blazing a trail through space and recording it for other sky-pilots to follow.

Such is the latest accomplishment of the Army Air Service through the new recording compass developed by the Instrument Branch of the Engineering Division.

The next thing will be an automatically made "Blue Book of Air Routes" which will include not only maps of air trails, but also mileage and time required to travel each direction to reach a certain destination.

The new device records on a paper chart, by means of pen and ink, all the various headings which the airplane assumes as well as figure eights and other intricate turns. Courses are shown in degrees, starting with North as zero.

First successful tests of this new recording compass were made in flights over Dayton and vicinity the latter part of March. The tests were highly satisfactory. In one of them, after preliminary maneuvering over McCook Field, a straight flight was made to Eaton. After reaching there, a turn was made and the flight made back to McCook. All changes were faithfully and accurately recorded.

So far as is known this is the first practical recording compass developed that depends on magnetism for its action. The vertical movement of the recording pen is governed by a system of magnets and relays so that the entire device can be placed in the wings or in the tail of the fuselage at a distance from iron or steel. The compass itself can be put in the tail and the recording device arranged directly in front of the pilot, the two parts being connected by small wires.

One of the great troubles with using magnetic compasses in airplanes has been the errors caused by the steel in the engine being so close to the compass that indications are affected.

There are two models of the recording compass - one in which the chart is marked off according to the time, so that one can tell how many minutes the plane flew in any one direction, and a second model that lends itself admirably to aerial navigation, in which the chart is marked off in actual miles traveled in each direction. In the latter model, instead of connecting the chart rollers to clockwork, they are actuated by a mechanism interlocked with a true air-distance recorder (another device developed by the Instrument Branch of the Army Air Service Engineering Division).

The advantages of the recording compass to the Air Service are many. In war-time navigation, for night flying or over clouds; it will aid the pilot in reading his destination for bombing and also aid him in reversing his path and returning to his home field.

In commercial aviation it will enable a check to be made on the pilot's efficiency in flying straight and direct courses.

The third and present advantage is that the actual functioning of the compass enables a study to be made of certain improvements in airplanes and instruments designed to help the pilot in cross-country flying.

The first tests of the recording compass were made under the direction of V.E. Showalter, instrument expert at McCook Field. Lieut. D.L. Bruner was the pilot and Newton Lumm the observer.

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CROP CENSUS TAKING BY AIRPLANE

A new mission for aerial-photography sprang into existence recently when representatives of the Department of Agriculture requested the aid of McCook Fie. in obtaining by airplane pictures of Ohio fields. These photographs will be

used in an endeavor to obtain by a simpler method than has ever been tried before statistical information regarding the percentage of the State's acreage of different planted crops. This information is necessary for the purpose of making crop predictions.

Former methods have involved interviewing farmers as to the amount of their land planted in wheat, corn, oats, truck gardening produce, etc., or driving about the country actually measuring off the fields. Either system of taking this census has been slow, burdensome and expensive. The new idea is to take pictures from the air and make measurements from a set scale.

As an experiment in finding the most practical height for taking these pictures, exposures were made at altitudes of 2,000, 3,000, 4,000, 5,000 and 6,000 feet. The advantage of the high altitude is the amount of acreage possible in one photograph, but the exposure must not be so high that the identification characteristics of the different crops is lost.

On July 22nd, Mr. Lockwood, test pilot at McCook Field, piloted Lieut. Plank in the photographic plane (DH4BP) to take the first experimental photographs. Lieut. Hutchinson with Mr. C.J. West, the Ohio representative of the Department of Agriculture, and Mr. Lloyd, the editor of the OHIO FARMER, accompanying the photographic plane on the Honeymoon Express (DH4B) airplane. The weather being favorable, excellent pictures were obtained and turned over to the Department of Agriculture for further action.

Should this airplane-photographic method of crop census taking be adopted, the saving in time and expense would be almost incalculable, and the issuing of crop predictions could be accomplished at a much earlier date. If it is successful, it is only logical to suppose that it would become national in scope - and another set custom will have given way to the revolutionizing qualities of the airplane.

Mr. Walter H. Lloyd wrote an interesting story in the OHIO FARMER on his first airplane flight, which is quoted below, as follows:

"Well, I've ridden in about every form of conveyance this old world affords now but a submarine. I had my first airplane ride last Wednesday at McCook Field, Dayton, thru the courtesy of the officials of the U.S. Army Air Service.

The occasion was the testing out of aerial photography as a basis for estimating crop acreages and was arranged by C.J. West, state-federal crop statistician for Ohio, representing the U.S. Department of Agriculture, and Major L. A. Walton, assistant chief of the engineering division of the U.S. Army Service at McCook Field. Permission for the flight was granted by air service officials at Washington and the planes, pilots and photographer were from McCook Field.

Two planes were necessary for the experiment. The photographic plane was flown by Test Pilot Ralph Lockwood who carried First Lieutenant Ewart G. Plank as the photographer. The observation plane in which West and I rode was piloted by First Lieutenant James T. Hutchinson of the Army Air Service. Both planes were DeHavilands equipped with Liberty motors.

Of the actual flying there is perhaps little comment to make, but if I were to reprint all the advice and good wishes that my friends bestowed on me this issue of THE OHIO FARMER would not be large enough to hold it all.

In the first place the flight was scheduled to take place a week earlier than it actually did and when it was postponed this gave all the folks in THE OHIO FARMER office a chance to accuse me of cold feet, lack of nerve and several other things which went in one ear and out the other.

Then when the time did come to leave for Dayton my wife calmly asked me if my insurance was paid up, and others of my friends were consoling enough to tell me that my insurance wouldn't be any good if I was hurt or killed while flying. Even as I left for the train they all seriously questioned if I really was in earnest about going up.

Then when I got to Columbus, where I spent the night with the Rummells, I got another dose of the same kind of treatment. "What kind of flowers do you like?" and all that sort of thing.

But next morning, even tho the sky was overcast and there was an occasional shower, West and I started for Dayton. We got to McCook Field just before noon, got our pass into the field without any trouble and discussed the chances of the clouds clearing enough to take pictures that afternoon.

It was a freakish afternoon this day after the big storm which drenched southwestern Ohio last Monday. First a batch of dark threatening clouds would roll across the sky. Following this there would be a break and it would look as if it were going to be good, then along would come another influx of clouds a

little darker and a little more threatening.

Finally Major Walton, after a consultation with Lt. Plank, who was to take the pictures, and an examination of the weather map, decided that the next morning offered a better chance inasmuch as there was a "high" coming which meant clear weather or at least a higher ceiling. By ceiling these folks who so business it is to know the air meant the clouds. On the afternoon the flight was scheduled to take place they told us the ceiling was about 2,700 feet, which is low, tho it is a half mile from the surface of Mother Earth.

Sure enough the next morning dawned clear and bright, despite a drenching rain the night before. After a hearty breakfast, altho I noticed West didn't eat so much, we were out at McCook Field and found everything in readiness. The planes were lined out in front of the hangar, the camera was installed in the photographic ship, loaded with film, and the pilots were wearing their flying gear.

On our arrival we were fitted with flying gear which consisted of a chamois or fur-lined helmet, goggles, flying suit and parachute. When the young man issued our flying clothes to us he asked us if we were "coming back here?" and we hastened to assure him that that was our intention, altho what he meant was, were we coming back to McCook Field or were we going to some other field.

Lt. Hutchinson helped us into our parachute harness, tho he explained to us that we would not have to use it as the ship we were going in was perfectly safe and we would not be doing any acrobatic flying. However, we insisted on knowing how the thing worked and he appreciated that our inquiries were not any reflection on his ability.

This parachute which weighs about 16 pounds, is fastened to you with a webbed harness, which goes around your body, over your shoulders and is hooked in front and around each leg. The parachute proper forms a cushion upon which you sit while flying.

Major Walton afterwards explained to us that the parachute is made of a specially fine grade of pure silk and costs the government in the neighborhood of $450. No one is allowed to fly in an army plane without one. The staff at McCook Field is especially proud of the parachute as it was largely worked out there.

In explaining how to work the thing Lt. Hutchinson said that if anything went wrong just to take a "header" over the side and when clear of the ship pull the ring at the left. Otherwise, he cautioned, leave the thing strictly alone. This we were perfectly content to do.

When we had rigged out in our costume we climbed into our ship, which because it was rigged to carry two passengers, was called "The Honeymoon". Personally I cannot see why anyone would want to take a honeymoon in an airplane, especially one where you had to sit facing each other as West and I did in this case. My idea of a honeymoon ride would be in some sort of a vehicle where you could sit alongside of your bride and whisper sweet things in her ear. This is impossible in the McCook Field Honeymoon plane.

But now we were in our plane, had fastened the big belts around our respective, and we hoped respectful stomachs and were all set to go, Lt. Hutchinson started his motor (it had a self starter just like a modern automobile) and after letting it warm up the proper length of time he taxied to the field.

Here we thought the fun would start. He gained speed and was going at a rapid clip across the field. Soon we noticed the slight bumping had stopped and everything was going smoothly. We dared to look out and the ground kept getting farther and farther away without any unpleasant sensation at all. In fact it was mighty comfortable and pleasant riding. All the time the earth kept getting still more distant, the houses smaller and closer together and in but a few seconds the whole of Dayton became visible.

After giving us a good view of Dayton from all angles, Lt. Hutchinson hit north toward Brandt on the National Pike. He followed this road west until almost over the Englewood Dam, then back toward Dayton.

Away to the East and away to West stretched the National Pike, which was written up so well in last week's issue of The Ohio Farmer. We marveled at the work and hardships of Ohio's early pioneers who laid out this straight highway across the state. Once the trail for the ox team and stage it now carries thousands upon thousands of automobiles, while overhead we circled with probably greater safety than if we had been with the average automobile driver.

After circling over Dayton again we flew toward Springfield cutting south before reaching the city, coming back to Dayton by way of Yellow Springs.

All the time we were closely observing the landscape in an effort to see whether or not we could indentify the crops from the air, and to familiarize ourselves with their appearance so we could tell what they were from the

photographs Lt. Plank was obtaining from the other ship which was sailing near us.

The photographs obtained on this flight were taken from different levels beginning at 2,000 feet and going up to 6,000 feet. Each picture carries with it a caption which tells the altitude and the neighborhood in which it was taken.

Finally after another circle around the city of Dayton, in which we decided that if we had a nickle for every bridge in the city of Dayton we would have 90 cents, we dropped down thru the clouds and before we knew it we were back at McCook Field, where we started from.

We felt well repaid for our trip and it was Mr. West's conclusion that an airplane, equipped with camera, would be of great help in checking crop estimates. It would be possible, Mr. West felt, to map out a series of strips across Ohio and other Corn Belt states and cover them regularly in this manner, thus getting an accurate picture of the crop acreages of a large area. By comparison year after year error, which is always present in crop estimates, would be reduced to a minimum.

After expressing our appreciation of the courtesy shown us on the part of everyone at McCook Field we started for our respective homes to let everyone know that our journey was at an end, that no flowers would be needed and that we had taken a step which some day may lead to another practical application of airplane to present day civilization and agriculture.

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THE ARMY AIR SERVICE IN THE PANAMA CANAL ZONE

By Captain T. S. Voss, Air Service

Shortly after the United States entered the World War and our Air Service was slowly but surely coming into its own, the War Department, realizing that the Panama Canal was one of our country's greatest military assets, decided that to properly protect it against a possible attack some air service was necessary. On March 29, 1917 a small air force consisting of two officers and fifty-one enlisted men with two Curtiss R-4 planes was sent to the Canal Zone to serve as a nucleus around which it was hoped a more adequate air force could be built. This small flight was later designated as the 7th Observation Squadron. There were no flying fields available so the field operated from the parade ground at Fort Sherman. In October, 1917, the first flight across the Isthmus was made in forty-seven minutes, then thought to be remarkable time but which was twice the time it takes the present type of planes to make the same trip.

Not long after this, work was started on the filling in of a swamp about three miles from Colon which was to be used as an aviation field. This former swamp is at the present time known as France Field which is considered one of the most beautiful posts on the Canal Zone and is, without doubt, the most picturesque and attractive air service station in the United States or its possessions.

When the World War was over and more air service units could be spared from other duties, the 24th Pursuit Squadron and 25th Bombardment Squadron were ordered to duty at France Field. Shortly afterwards, the 63rd Service Squadron, 12th Photo Section, 40th Air Intelligence Section, and Headquarters Detachment, 6th Composite Group, were sent to join the garrison at France Field. These units were organized into the 6th Composite Group, now containing thirty-eight planes, fifty-seven officers, and six hundred twenty-three enlisted men with the necessary Quartermaster, Signal, Medical and Ordnance troops to properly balance the command. This force comprises the present Air Service garrison in the Canal Zone.

The mission of the Army Air Force in the Canal Zone is to gain and maintain sufficient air superiority to secure the Canal and its accessories against an air attack, to observe fire for the Coast and Field Artillery, to cooperate with the Infantry, to attack any enemy, land or naval forces and to cooperate with the Navy in the execution of its mission.

To properly carry out its functions, the air force must of necessity be highly trained in the various duties incident to the protection of the Canal. Each squadron has a very definite mission to perform and a very important part to play in this protection. The personnel assigned to the various squadrons must be familiar not only with the duties incident to their own particular squadron but must be able in an emergency to perform duties with other units in the Group. The small air force in the Canal Zone makes this three-fold training necessary if any semblance of air protection is to be had. The supply and repair functions of the Army Air Force in the Canal Zone is carried out by the Service Squadron, which, due to the great distance from repair shops in the United States, must function as a Repair Depot in addition to its other duties.

With the exception of France Field, the landing fields in the Canal Zone and the Republic of Panama are not all that can be desired. They are being improved, however, and in a few years landing fields of sufficient size to accommodate any type of plane with loads of bombs will be available. There are landing fields in the Canal Zone at the following places: France Field and Coco Solo on the Atlantic side of the Isthmus; Albrook Field, Fort Clayton and Fort Amador on the Pacific side. In the Republic of Panama landing fields have been located and marked at: Chorrera, Chame, Salud, Penonome, Anton, Aguadulce, Santiago, La Pena, San Francisco, David, Boquete and on the coast opposite the San Blas Islands.

Cross country flying is encouraged. In order that they may become familiar with the location of the various fields, all pilots as soon as they report for duty, are taken to the landing fields in the Canal Zone and Republic of Panama.

Recently a flight of planes visited all the capitals of the Central American countries. The reception accorded the flight personnel was an excellent indication of the good feeling existing between the United States and those countries.

The Army Air Service in the Canal Zone is called upon to perform many missions not included in the curriculum of an air force. For instance, in the spring of 1923 the heavy rains in Costa Rica washed out the roads, railroads, and telephone lines between San Jose and Port Limon (The Atlantic port of Costa Rica), isolating the people from the outside world. Word of this condition was received by the Commanding General through the agency of a steamship company plying between Port Limon and Colon. Planes were dispatched to San Jose with instructions to offer their services to the authorities in the matter of carrying mail. The offer was readily accepted and aerial mail service was maintained in Costa Rica between San Jose and Port Limon by U. S. airmen until the railroads and telegraph lines were repaired.

Due to the lack of railroads and other means of travel from the interior to Panama City and Colon, it is often necessary, in order that they may receive proper attention in the Canal Zone and Panaman hospitals, to send planes to the interior for persons who have been seriously injured or are critically ill. A few months ago an American citizen living in Valcon, a little city about two hundred miles from Panama City, sent a request to the Commanding General that a plane be sent up there for his wife who was in urgent need of medical attention. It was learned that recent rains had washed out all the roads in that section and to get the man's wife to a port where she could be put on a boat for Panama City would necessitate her traveling on horseback for about forty miles over rough and broken trails. Information also was received that near the man's home a plot of ground had been cleared, upon which a plane could land. Acting upon the plea, "For God's sake hurry!", the Commanding General issued the necessary instructions and a plane was dispatched for the lady. At Valcon the pilot could find only one small cleared plot among the hills and trees that a plane could possibly get into, and then there was a 60-40 chance that he would crack up due to the small size of the field and the surrounding trees. The aviator's instructions were so definite that he decidddd to take a chance and he landed safely. Placing his passenger in the rear cockpit, he made her as comfortable as possible. With the assistance of some natives who held the wings of the plane while the motor was opened wide, the plane was successfully piloted out of the field. The two hundred mile-trip back to Panama was made safely and a few hours later the mother and ten pound baby boy were resting easily in the hospital.

Again an urgent call was received from a small company in the hills near Boquette, R. de P., a distance of about two hundred miles from Panama City, to the effect that the wife of an American had been bitten by a poisonous snake and was in a serious condition. A plane could not land at the camp but some serum with instructions as to how to administer it was dropped. The serum saved the lady's life.

Recently some Penonome sportsmen conveived the idea of sending to the Bureau of Fisheries in the States for some mountain trout eggs to stock the streams in the mountains of Chiriqui. In due time the eggs arrived on the Zone but they were just about to hatch and would die if not released in the mountain streams inside of twenty-four hours. There being no boat going up to that country for several days, an appeal was made to the Commanding General to send the eggs by plane. Permission was secured and now there are two million small trout in the mountain streams waiting for the eager anglers to come up and contest their right to stay there.

Emergency flights are not made solely for American citizens. Frequently it has been necessary to make flights to save the life of some Panamanian. In this way the Air Service has done much to bind the friendship existing between the

United States and the people of Panama.

The defense of the Canal for the ground troops is a difficult proposition due to the density of the jungles and swamps near the Canal Sector, and area commanders often take airplane flights with Army pilots over the areas they are to defend against invasion, thus gaining a knowledge of the country in a few minutes that would take many months to gain by ground travel.

These few incidents are cited to show that the sole duty of the Army Air Service in Panama is not that of protecting the Canal and its accessories against attack, but it serves, as perhaps no other branch of the service is in a position to do, to draw the United States and the Latin Americans closer together and, in a small measure, to give our tax payers some return for their money other than providing protection for our country and its institutions.

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NEWSPAPERS CAN AID AVIATION

Sensational newspaper accounts of aviation accidents have exerted a deterrent influence on the growth of commercial aviation, for they have invariably left an impression upon the reader that flying is still dangerous. A case in point recently happened in Boston when Mark C. Hogue, a civilian, considered to be one of the most expert aviators in the country, while flying his Canadian Curtiss plane over the Boston airport with George Burroughs, a prominent Boston Stock Exchange member as his passenger, crashed to the ground, resulting in both men being killed. With one exception, all of the Boston papers sent a representative to the Boston Airport to secure a straight account of the accident. The one exception however, had quite a lengthy account of the accident, and supplemented it with a diagram indicating very clearly that "one of America's foremost aviators" lost control of his plane because of air conditions on a day which was an excellent one for flying.

A letter was written from the Office, Chief of Air Service to the editor of this paper, inviting attention to the fact that the general public fails to take into consideration the fact that the Regular Services, Army, Navy and Air Mail, are flying thousands of miles every day and night with few fatalities; whereas civilian flyers, operating planes seven and eight years old without proper supervision and mechanical inspection, have a much higher rate of accidents, and undue publicity given to their crashes does more harm to aviation than anything else. The editor was requested to give aviation an even break and devote as much publicity to the favorable progress of flying as to its misfortunes, for it is in the hands of the press of the country to advance or retard its progress, and with concerns like the Ford Company and the National Transport Corporation beginning to go into commercial aviation on a business basis, a new day is opening for this kind of transportation.

It was the prevailing belief of the airmen at the Boston airport that the probable cause of the accident was due to the fact that the passenger, a man about fifty who seemed somewhat nervous before the flight, fainted with his knees locked behind the stick, or simply became scared when the plane hit a bumpy spot, lost his head and grabbed the control stick. A Navy flyer who saw the wreckage after the crash reported that the connecting rod between the stick in the front cockpit and the one in the rear cockpit was buckled, indicating that Burroughs was overcome by the situation and innocently caused the crash. That Hogue fainted is improbable, for he had flown too much and was in excellent health. Time and again in the past, during the war, when he was flying with the colors, and since when he was flying commercial stunt work, he has defied death by his coolness and perfect control of his plane and himself.

The letter to the editor of the Boston paper was presumably printed, for it brought forth one to the Office, Chief of Air Service from Major Arthur L. Richmond, Reserve Corps, inviting attention to one paragraph which is possibly misleading to the Massachusetts public, wherein reference was made to "civilian flyers operating planes seven and eight years old without proper supervision and mechanical inspection." Major Richmond states that in Massachusetts since 1921 there has been a committee known as the "State Advisory Board for Aeronautics," appointed by the Registrar of Motor Vehicles (under the Dept. of Public Works) whose duty it has been to supervise the registration of planes and licensing of pilots for commercial aviation, in accordance with the provisions of Chapter 90 of the General Laws of Massachusetts. The section of this chapter applying to aviation was written by members of the Board, chiefly by Professor E. P. Warner of the Massachusetts Institute of Technology. The Board itself, with the exception of one paid inspector, who is a Reserve Officer pilot, is unpaid, and serves entirely voluntarily, its one aim being the advancement of commercial aviation and the protection of the public.

At present the Board consists of Professor Warner, the Corps Air Officer (ex-officio), either Lt. Jones or Lt. Brown at the Airport, Lt. R.L. O'Brien, AS-ORC, (inspector from the Dept. of Public Works), Major Arthur L. Richmond, AS-ORC, and two other ex-pilots who are more or less inactive. Some of the difficulties besetting the Board are due to the natural desire to turn down for registration ships of the Canadian Jenny vintage and other obsolete types, and the disinclination of the Board to kill commercial flying in the State altogether by so doing. They have been between the devil and the deep sea on this question for four years, but have managed to come through with a very satisfactory record of safety on such ships as have been registered for commercial uses.

Professor Warner is very thorough in his inspection of structural details, and has made many concrete recommendations for repair and overhaul before issuing registrations, and it is estimated that one third of the ships presented for registration have been thrown out altogether. On the matter of pilots, the Board has been much more stringent -- all those licensed for passenger-carrying work have had enough time in the air and experience to warrant it. Of course, it is impossible to keep civilian ships up as well as service ships -- hangars and shop facilities are out of reach of most of the local commercial pilots as yet -- and even frequent inspection cannot prove infallible. The Board feels sure that the public of Massachusetts has had as much, or more protection in the line of commercial flying than any other state known.

Convictions for violation of the Aircraft Laws in this State have always been obtained, and the Board is gradually gaining the support and interest of the proper authorities throughout the state in their enforcement. While realizing that under existing conditions the Board is only half way efficient and must be so, as long as it remains a purely voluntary organization, the above points are set forth with a feeling that perhaps the paragraph referred to in letter of the OCAS was not wholly justifiable.

In the case of Hogue's ship, for instance, the Board required the installation of a new set of control wires this Spring, and the entire control system was gone over within ten days prior to the crash. From a minute inspection of the wreck, no sign of control failure could be detected.

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AERIAL PHOTOGRAPHY IN THE AIR SERVICE

The field of usefulness of aerial photography is by no means yet fully explored or developed, but the quality and extent of the work accomplished during the fiscal year of 1925 by the Army Air Service, the expeditious manner in which extensive projects were completed, and the progress made in the perfection of equipment and methods have firmly established its utility as an indispensable military feature and demonstrated its economic value to map making agencies and various departments and bureaus of the federal government.

During the fiscal year there has been a great increase in the demand for aerial photographic work for military and map-making purposes by the War Department. The Air Service, in addition to the routine necessities of training, has cooperated with all other combat branches of the service in carrying out operations and maneuvers in the field under the various corps area commands. Although the reconnaissance value of aerial photography has long been recognized, a considerable skepticism has prevailed as to its worth in the making of maps of sufficient accuracy for military purposes of inaccessible areas. The feasibility of making accurate military maps by aerial survey of areas of which there were none or inadequate maps was convincingly demonstrated in several instances during the fiscal year.

In the Second Division maneuvers, held at Fort Sam Houston in April, 1925, fire control maps were made from aerial photographs, the control for which was projected from base lines established within friendly areas. This map was prepared under the following assumptions:

a. That the area in front of our line was inaccessible, necessitating that all control be taken from in rear of that line.

b. That a map having an accuracy comparable with the accuracy of the Field Artillery firing map would be satisfactory.

c. That the time in which to make a map was limited.

Photographs were made by the 24th Photo Section over the simulated enemy areas and the resulting maps were ready for distribution within eighteen hours after the photographs were made.

General Malone stated that the actual firing by the artillery proved the map was satisfactory in every way, being accurate within two miles of deflection

and to one probable error in range. Road reconnaissance mosaics were also prepared for practice marches of the Second Division.

Experiments were carried on in the last eight months by the Air Service personnel at Fort Bragg with the Field Artillery Board in the use of aerial photographs for fire control. It is found that aerial photographs are as accurate as existing maps in obtaining range and deflection. Report in detail of these experiments is now being compiled by the Field Artillery Board.

Instruction in the utilization and exploitation of aerial photographs for military purposes is now a permanent part of the courses at the General Service Schools, Fort Leavenworth; the Infantry School, Ft. Benning; Engineer School, Fort Humphreys, and various other service schools. This is a strong factor in educating other branches of the service in the military uses of aerial photographs. Photographic maps of the training areas adjacent to these schools were made by the Air Service during the past two years and are now extensively used in working out the tactical problems and maneuvers involved in the school training and for familiarizing the classes of student officers with interpretation of natural and military features contained in aerial photographs. With the adoption of the 24x24 copy camera as standard equipment of photo sections, methods were perfected for the rapid reproduction of these mosaics to original scale and detail on 20x24 sheets with superimposed grid, equal in technical standards to the military and fire control maps made by the Corps of Engineers.

In addition to the cooperation with other branches, photographic mosaic maps of many tactical and strategic areas of the United States for the Corps of Engineers and extensive projects for the Board of Rivers and Harbors have been completed. By far the greatest demand for aerial photographs during the fiscal year, however, emanated from federal agencies outside the War Department, practically every federal bureau being represented in these requests.

A study of the list of projects carried out during the fiscal year for these departments shows that there is a great increase in the variety of uses for which the aerial photographs are desired. The greatest demand, however, has been for photographs for purely map-making purposes. The methods of utilizing aerial photographs in map making have become standardized during the past year to an extent that makes for greater economy in the production of maps from data provided by unassembled multi lens photographs. Under the old system elaborate nets of primary control spread by ground work over the areas to be mapped were considered necessary preliminary to the photographic work. By the new and more economical method, a net of secondary control is established from points located in the photographs themselves, which is satisfactory for standard practice where there is a moderate number of primary control points available.

Aerial survey, based on extensive projects carried out in the past year, is estimated by the U.S. Geological Survey to create a saving of from 35% to 75% in the cost of making and revising maps as compared with the cost by ground survey alone, and cuts the time required more than 50%. The decision of the Topographic Branch, U.S. Geological Survey, to give preference to aerial photographic mapping so far as possible in carrying out the provisions of the Temple Bill program for mapping the entire area of the United States within 20 years, is the most noteworthy evidence that aerial survey has passed from the experimental stage. The stage to which this development has attained is due almost entirely to the experimental development work carried on by the Air Service in cooperation with the Corps of Engineers at the Eng. Div., McCook Field.

During the fiscal year approximately 15,000 square miles were photographed for the War Dept. and federal bureaus for map making purposes alone. Through this continuous peacetime aerial survey service, the Air Service obtains valuable and necessary potential training for war, develops and perfects equipment and methods, and supplies aerial photographs for mapping purposes, annually saving the government thousands of dollars over the cost of maintaining the photographic sections. As an illustration of the increased demands upon the Photographic Branch, reference is made to the mapping program submitted to the Chief of Air Service by the U.S. Geological Survey for the fiscal year 1926. The total area desired photographed approximates 45,000 sq. miles, more than the whole area photographed for that department in the last four years. From data furnished by the Geological Survey the estimated savings on this program alone will amount to approximately a million dollars, whereas the funds appropriated for the purchase of photographic equipment and supplies for all Air Service purposes average less than $150,000 annually. This estimate, of course, does not include the cost of airplanes and flying equipment.

The present wide application of aerial photography is entirely due to the efforts of the Army Air Service, as it has constantly devised and demonstrated

new fields of usefulness for the various types of photographs made from airplanes and has fostered and assisted the commercial development in every possible way.

In conference with the Director of the U.S. Geological Survey on the subject of the Temple Bill program, it was stated that the Survey will map or re-survey practically the entire area of the United States. Less than one-half of the 3,000,000 square miles contained in the continental limits are mapped, and existing maps of practically all of the balance of the area need revision. In order to exercise the fullest economy in cost and time, the Survey will need aerial photographs of approximately 2,000,000 square miles of this territory. As there is no existing organization, either military or commercial, which is trained or equipped to carry out such a colossal project except the Army Air Service, it will be called upon to assist to the limit of its resources of personnel and equipment. The director of the Survey believes that the cost of placing the work on contract with commercial aerial photographic concerns would be so high that the savings in cost over ground survey would be negligible. In the event, therefore, that the Army Air Service is unable to furnish the fullest cooperation, the only alternative will be for the Geological Survey to endeavor to establish its own aviation mapping services.

Only eight of the photographic sections in the United States are equipped with multi-lens mapping cameras. Provisions have been made on the approved procurement schedule for 1926 for the purchase of sufficient additional cameras to equip all sections. By the end of the summer training season, all photo sections will have trained and qualified photographic officers in command. It is believed that these officers, with such assistance as may be obtained from pilots and observers of observation squadrons in flying photographic projects, will be able to carry out the necessary aerial operations.

The fifteen photographic sections in the United States, if maintained to full strength, will be able to fulfill the laboratory operations necessary to keep abreast of the annual requirements of the Geological Survey and priority projects for the War Department, in addition to their routine duties. The prime factor of interference with this schedule, however, is the present summer training program. During the period from June to September, when atmospheric and climatic conditions are best for aerial photography, the majority of photo sections are engaged in giving instructions at the various corps area training centers to reserve, national guard and R.O.T.C. units, and their laboratories and personnel are therefore not available for other work.

The situation as regards necessary airplane reserve is not so favorable, as the special remodeled DH photographic ships at present under production will about supply replacement for the planes now assigned to sections and which are, in most cases, near the limit of their service. After these ships are worn out reliance only can be placed in such numbers of the Davis-Douglas observation type as appropriations may make available.

During the fiscal year laboratories for the 20th Photo Section at Langley Field, and the 24th Photo Section at Fort Travis were constructed by remodeling old wooden buildings, and the eighteen photographic sections in the Air Service are now housed in sufficiently equipped buildings to carry on the laboratory work of the sections in a fairly efficient manner. The majority of the laboratories in the United States, however, are contained in wooden buildings that were built for other purposes during the war. These buildings do not provide proper space and arrangement for the most satisfactory operations. Ceilings are low and sufficient space is not provided for the proper installation of the new equipment for reproduction and map-making purposes. No means are available for obtaining proper ventilation or temperature control of dark rooms. These wooden buildings are rapidly deteriorating and the cost of maintaining them in a habitable state of repair increases from year to year.

A program for the progressive construction of twelve (12) new laboratories to replace these wooden structures during the years 1927 to 1930 inclusive has been submitted. Plans and blueprints for this standard model laboratory are completed and available. The laboratory will be of fire-proof construction and provided with ventilating, heating, and refrigerating systems, whereby the temperature of the workrooms may be controlled to suit the season and climate. Space and arrangement will be adequate to take care of all the activities of the Photo Section, and provide for new developments or increased operations. They will provide better facilities for the instruction of personnel of summer training camps, and in the event of war can be used as training centers to supplement the photographic school in the instruction of reserve and recruit photo units.

When additional items of laboratory and aerial camera equipment, now on the procurement schedule of 1926, are obtained, all photo sections will be fairly well equipped. One set of field laboratory trucks has been constructed and is now undergoing field tests.

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COURTESIES TO VISITING AVIATORS

Three American cities, evincing unusual interest in aviation, have inaugurated the policy of extending all possible courtesies to visiting aviators. The Chambers of Commerce of these three cities - Muskogee, Okla., Little Rock, Ark., and St. Joseph, Mo. - have issued cards in the form of a vest pocket folder to Air Service officers, said cards entitling the holder to various privileges in the matter of hotel accommodations, cafe service and amusements.

The card issued by the Chamber of Commerce of Little Rock contains the following introduction on the second page:

"We are heartily in sympathy with the U. S. Air Service in their aim to build up an adequate National Air Defense for our country and encourage commercial aviation.

There is no adequate defense against air attack except a counter air attack, and it is incumbent upon us to maintain supremacy of the air.

The hospitality of the people of Little Rock, Arkansas, is extended to all aviators."

Holders of the card are given special rates at the Marion, LaFayette, New Merchants, Capital and Gleason hotels; free meals at the Peacock Tea Room, Rose Trellis Tea Room and Steve Felton's cafe; free admissions to the Capitol, Gem, Royal, Palace and Majestic theatres; to the baseball games at Kavanaugh Field; to the Country Club and Golf Links; to Willow Beach and White City, both amusement resorts where dancing, boating, swimming and golf may be indulged in; to the Y.M.C.A., with its gymnasium and swimming pool privileges; and to the various civic clubs of the city.

The introduction on the card issued by the Muskogee Chamber of Commerce is as follows:

"The heart of Muskogee is in the promotion and encouragement of the United States Air Service. The entire citizenship holds the highest respect for the officers and enlisted men. In no community do they stand in higher esteem. For over three years these cards have been issued to Visiting Aviators as indicative of her lack of selfishness and as evidence of the hospitality of her people."

Special rates are given at the Severs, Turner, Huber, Muskogee, Plaza and Baltimore Hotels; a twenty percent discount from listed prices at the Puritan and Quaker Cafes; free entry to the Broadway, Palace, Strand, Yale and Orpheum theatres; to all league games at Athletic Park; to the Country Club and Golf Links; to the various amusements at Stem Beach; to the facilities of the Y.M.C.A. and to all the civic clubs.

At St. Joseph, Mo., the visiting aviator is given free entry to the Lyceum, Electric, Orpheum, Royal, Empress, Colonial and Tootle Theatres; to the St. Joseph baseball park, and the courtesies of the St. Joseph Country Club, Highlands Golf Club and Elks' Club. Special rates are given by the Robidoux, St. Francis, St. Charles, Jerome and Metropole hotels.

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SUMMER TRAINING AT MAXWELL FIELD

The Commanding General of the 4th Corps Area having designated the period from May 1st to August 31st as the "Summer Training Period, 1925", the 22nd Observation Squadron and 4th Photo Section, stationed at Maxwell Field, Montgomery, Ala., have been actively engaged in training thirty-six reserve officers, Air Service, and sixteen Air Service ROTC students from Georgia Tech. The excellent results obtained during this period of training are clearly shown in commendations received from both camps to the effect that the camps of 1925 were the best ever held at Maxwell Field. The training of the 105th and 106th Observation Squadrons, Tennessee and Alabama National Guard, respectively, will conclude the summer training scheduled for this station. This training will cover the entire month of August. Approximately 25 officers and 125 enlisted men will train with each squadron.

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COL. DANFORTH INJURED IN FORCED LANDING

Lieut.-Col. Charles H. Danforth, Air Officer of the 4th Corps Area, was painfully injured in a forced landing caused by the exhaustion of gasoline in the Vought airplane which he was piloting. Col. Danforth was at Maxwell Field, Montgomery, Ala., on an inspection tour and was flying over the Alabama River on a practice flight at the time of the accident. He was forced to land on a sand bar, was thrown from the plane and suffered a fractured shoulder and minor cuts and bruises. Col. Danforth is now recuperating from his injuries in the station hospital at Fort McPherson, Ga.

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HAWAIIAN DEPARTMENT COMMANDER INSPECTS WHEELER FIELD

Major General William R. Smith, commanding the Hawaiian Division, visited Wheeler Field, Schofield Barracks, T.H., on July 14th, for a demonstration of the routine training and daily operations of the Fourth Observation Squadron, Air Service. In the General's party were Brigadier General Mosely, Commanding the 11th Brigade, Colonel Moses, C.O. 13th Field Artillery, Colonel Farr, C.O., 11th Field Artillery, Lt. Col. Weeks, Division G-3, Dr. Smith, brother of General Smith, and Lts. Taylor and Townsley Aide to General Smith and General Mosely's Adj. respectively.

The General's party was met by Captain C. F. Wheeler, Commanding Officer, Wheeler Field, and escorted to the Squadron Operations Office, where the assignment of missions was noted, then hurried to the radio hut to listen in on a two way artillery adjustment, and watch panel practice, then to the camera obscura to see how the Air Service practices bombing, without wasting bombs, then out on the flying field to watch machine gun practice from forward and rear guns, after this 1st Lt. Goldsborough, A.S., made a parachute jump from behind a cloud, and floated down to the field making the customary three point landing, like all good pilots. The program ended with a nine ship formation that broke up into three flights and assimilated an attack on the hangar line. The General's party seemed very much pleased with the training and operations schedule and left, we believe with a better understanding of the problems of the Air Service, also its potency.

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FORD COMPANY MANUFACTURING INVERTED MOTORS

Mr. Louis Meister, test pilot at McCook Field, Dayton, Ohio, and Mr. F.W. Heckert of the Power Plant Section, flew the Amphibian airplane to Dearborn, Michigan, recently for the purpose of checking up the work of the Ford Company on inverted motors. Several months ago when this company first evinced an interest in the inverted engine project, they sent their engineers to McCook Field to investigate the work done along this line. Blueprints and patterns were loaned them and full information given.

Great interest was aroused at the Ford Field by the performance of the Amphibian, Messrs. Henry and Edsel Ford and their chief engineer, Mr. Mayo, leaving a conference to witness its flight and the demonstration of the retractible landing gear. The inverted Liberty engine developed at McCook Field has passed the experimental stage. The Amphibian is built around it and its performance has proved as reliable as the upright Liberty.

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ACTIVITIES AT FAIRFIELD AIR INTERMEDIATE DEPOT

The following is the production of the Repair Shops at the Fairfield Air Intermediate Depot, Fairfield, Ohio, during the month of July: Major Repairs - Airplanes: 7 DH4M2, 1 DH4B, 1 DH4B-M, 7 MB3A, 2 NBS1, 3 JNSE, 1 JNSI, 1 VE9, total 23; Engines - 21 Liberty 12, 1 Wright A2, 27 Wright E, 1 Curtiss D-12, total 50. Minor Repairs - Airplanes: 14 DH4BM-1, 7 DH4B, 1 DH4BK, 4 DH4M-2, 2 JNSI, 3 JNSE, 3 NBS1, 1 Pt-1, 1 SE5, 2 AT-1, 1 DT-2, 1 TW-3, total 40; Engines - 13 Liberty, 1 Wright E, total 14.

The new classification of repair jobs, in accordance with the revised edition of Circular 65-4, has just been put in effect. It will be noted that the number of major overhauls is unusually large, while the minor jobs which heretofore had

not been reported at all, make up quite a lengthy list.

The Martin Bomber which has been equipped with superchargers for high altitude flying has just been completed in the Repair Shops under the direction of Capt. Edward Laughlin, Engineer Officer. It was flight tested by Lieut. C. C. Nutt and will soon be flown to Mitchel Field.

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THE DEVELOPMENT OF THE ARMY PARACHUTE ✓

Among the various improvements in aircraft and aircraft equipment tending to make flying safer, the Engineering Division at McCook Field, Dayton, Ohio, can take pride in the perfection of the present type of parachute. This aerial life preserver has more than justified the time, effort and expense involved in its development and has more than lived up to expectations. No more convincing proof as to its efficiency need be had than the fact that thus far it was instrumental in saving the lives of twenty Air Service pilots and that more than 800 jumps have been successfully made with it.

When development work started, the parachute had no easy road to travel. It was met with opposition and ridicule, but when the life of one pilot after another was saved through its use, all objections vanished as if by magic until now a pilot would not think of making an airplane flight without one of these so-called "chutes". All this serves to accentuate the well known saying: "Nothing succeeds like success".

Work on the parachute was started at the Engineering Division in September, 1918, and for the first nine months it was under the supervision of Mr. Floyd Smith. Since that time and up to the present, Mr. Guy Ball has been in charge. The wonderful efficiency of the parachute gives eloquent testimony as to how well he has performed his task. At the start only a meager amount of information was available concerning the parachute. All the various types of parachutes then in use in this country and abroad were carefully studied, and it was decided that the proper type would be a chute which would operate entirely independent of aircraft and which could be put to instant use in case of a spin, a collision, the airplane falling out of control, etc. It was contemplated sending a group of McCook Field personnel to France to make certain studies and experiments with parachutes, but the war ended before any activities along that line could be undertaken.

Efforts to perfect a satisfactory type of parachute continued, despite the almost general attitude that it would possess no value in peace time and that to conduct further experiments would be a waste of funds. As may well be supposed, therefore, even the small amount of work thereafter on the parachute was beset with great difficulties. Funds were lacking and the Parachute Department received virtually no support. This discouraging state of affairs existed until Major Edward L. Hoffman was assigned to duty at McCook Field. This officer was keenly interested in the parachute and sensed its great possibilities. Through his support the work was carried on even in the face of considerable opposition.

The first parachute turned out for service use was of the back type, but, while proving very successful, was too cumbersome. It was useful in exhibitions of voluntary parachute jumps, but where a man had to sit in the cockpit of an airplane for a number of hours the load on his back became very irksome. The back type was therefore superseded by the seat type, which is used as a seat cushion.

Numerous ideas on parachute construction were submitted to the Engineering Division, the main feature of most of them being an alleged positive opening device. As a matter of fact, however, none of these opening devices lived up to the expectations of the inventor, and it may be of interest to relate in this connection that the positive opening device of the Air Service parachute was responsible for saving the life of one inventor. This man came to McCook Field to demonstrate his own parachute. Profiting by previous experience when a parachute inventor lost his life by having too much confidence in his own device and not enough in the Army chute, an order was issued prohibiting jumps to be made from an altitude of less than 1500 feet, with the additional proviso that when a new type of parachute is to be tested, a reserve parachute must also be carried, same to be of the U. S. Army type. It was well that the McCook Field officials insisted that the inventor wear the Army chute, for his own failed to work, and he left the field a sadder but wiser man and with a feeling of thankfulness for the efficiency of the Army chute.

When looking at the parachute - merely a large piece of fabric with a lot of strings - one is not greatly impressed with it as an article of equipment requiring exhaustive study and research. Nevertheless, parachutes present one of the most difficult studies in aeronautics. There is no rigid framework, shape

or form in a parachute, making it absolutely impossible to figure strains or stresses, resistances or shock. These can only be determined by the out and try method. The parachute is absolutely dependent upon the air flow around the folds of the cloth for its operation. Since there is not much knowledge available on air flow in parachutes it can readily be surmised that there is very little knowledge available on the operation of parachutes.

One of the first big problems in parachute construction was to make it strong enough to withstand the great shock and strain imposed upon it when used from an airplane. Heretofore it had been used only in jumps from balloons, which did not impose any great amount of strain on them. By a slow process of development, a fabric was developed capable of withstanding the necessary amount of strain. This fabric, an Oriental silk, is well adapted for the purpose on account of its elasticity, light weight, small bulk when compressed, great strength and long life. It does not require fireproofing, such as cotton or linen. Its strength is about 50 pounds to the inch. An important factor in parachute design is the amount of air which can leak through the fabric. Even though silk would be tremendously strong if woven tightly, the great air pressure would cause it to burst. If the material is too porous, the parachute would not open readily, hence the porosity of the silk presented quite a problem.

For the rigging of the parachute or suspension lines, a very strong silk cord was developed. This cord is the output of the Horton Mfg. Co. of Bristol, Conn., manufacturers of high grade fishing lines and the only firm which has been able to furnish from time to time the grade of cord called for by the specifications of the Engineering Division. This concern found it necessary, however, to install special machinery to manufacture the cord, for the requirement was that each cord must be capable of withstanding a strain or not less than 400 pounds.

The total strength of the parachute is approximately 10,000 pounds, strong enough to arrest the fall of a body which has attained a velocity of about 400 miles an hour.

The proper maintenance of the parachute is of the highest importance. A properly packed parachute is the best life insurance. Parachutes should be inspected and repacked at least every thirty days. Parachute harness should be fitted to the wearer and then stitched to hold it in place. Parachute harness when properly fitted offers no discomfort whatever to the wearer, otherwise it is a source of great annoyance.

It may not be amiss to give a brief description of how the parachute functions. The chute is carefully packed in such manner that there is little likelihood of the shroud lines becoming twisted. In its compact form the parachute is a bundle about 18 inches square, about four inches thick, weighing 18 pounds. Two pins, running through slots in the outer covering of the pack hold the bundle together. Attached to each pin is a length of very strong flexible cable fastened securely to the release ring. In packing the chute the little pilot chute, about 3 feet in diameter, is the last thing which goes in the bundle before the covering is put on. The umbrella-like springs actuating the opening of this little chute are very powerful, and it takes quite a little strength to collapse it and keep it so. When the release ring is pulled, the two flexible cables pull the pins out of the slots, the flaps fly open and out pops the imprisoned little chute dragging the big chute after it. The air flow around the folds of the chute does the rest, and in two seconds the parachute is open and the jumper, who in this brief space of time has fallen about fifty feet, is suddenly arrested in his headlong flight and he begins to glide down gently to terra firma. In the top of the chute there is an 18-inch vent, equipped with springs, which are designed to regulate the flow of air through the parachute and so control the rate of descent.

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ANOTHER PHOTOGRAPHIC TOUR BY CAPT. STEVENS AND LIEUT. MACREADY

Captain A. W. Stevens, Air Service, who just recently returned from an aerial photographic mission with the Alexander Hamilton Rice Expedition in Brazil, and Lieut. John A. Macready, of altitude and non-stop transcontinental flight fame, left McCook Field, Dayton, Ohio, recently on a photographic trip which will take two to three months to accomplish. Their DeHaviland airplane, equipped with the latest design photographic apparatus, will be used in taking aerial views of practically all of the scenic points of interest in our western states.

This is not a new mission for these two officers, as on a former trip they succeeded in obtaining some wonderful photographs of theretofore inaccessible

places - aerial views which lacked only the coloring of their natural setting to reveal the beauty of our western heights and canyons.

Their itinerary this year is an extensive one, following a main route with occasional side trips for the camera's eye to record the scenic wonders that lay to either side. After arriving at Chicago on the start of the trip, they will follow the Air Mail route to Cheyenne, Wyoming. From Cheyenne a side trip will be made to photograph Rocky Mountain National Park, the flying field at Denver and Fort Collins, Fort Morgan, Fort Lupton, and Fort D.A. Russell. If weather conditions are favorable and visibility and the absence of clouds permit, photographs will be made of Pike's Peak. From Cheyenne they will fly to Rock Springs, thence to Pocatello, Idaho, and through Yellowstone National Park to obtain views that were missed on their former trip due to clouds.

The rest of the proposed flight reads like a vacation tour - Boise, Idaho, to Kalispell, Montana; from which point a flight will be made to and through Glacier National Park; thence to Seattle to photograph Mount Ranier, and then to Portland, Oregon; Crater Lake National Park; Mount Shasta; with a landing at Redding, Calif. A stop will be made at San Francisco to develop the films, then on to Sacramento, Yosemite Park; and with a stop later on at San Diego to overhaul the airplane. Flying from Las Vegas, Nevada; Zion Park and Bryce Canyon will be photographed; thence to Holbrook, Arizona, following the Grand Canyon of Colorado. Views will be obtained of the Hopi, Navajo and Apache Indian Reservations, and on the return trip to Dayton photographs of the landing fields passed over will be thrown in for good measure.

As may be seen, this is an interesting project, indeed, but it is one which requires skill in its accomplishment. With this in mind, we look forward to their return in about three months with a goodly supply of very interesting photographs.

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WEST POINT GRADUATES ASSIGNED TO AIR SERVICE

Of the class of 244 cadets of the United States Military Academy, graduating last June, 38 were assigned to the Army Air Service as 2nd Lieutenants, with rank from June 13, 1925, in the following relative standing:

10. Harry Gordon Spillinger
16. Vincent Joseph Esposito
39. John Henry Dulligan
41. Walter Grant Bryte, Jr.
46. Russell Edward Randall
59. William O'Connor Hoacock
60. Walter William Hodge
67. William Frank Steer
68. Wiley Thomas Moore
71. Thomas Elton Smith
77. Lewis Ackley Riggins
79. William Gardner Plummer
97. Raymond Cecil Condor
102. John William Black
108. Arthur Charles Boll
109. Clifford Palmer Bradley
115. Brannor Pace Purdue
138. Robert Emmett Burns
143. Joseph C.A. Denniston
148. Nathaniel Claiborne Hale
151. Raymond Miller Barton
153. Donald Hudson Bratton
160. Welborn Barton Griffith, Jr.
163. Hubert Whitney Ketchum, Jr.
183. Earl Walter Barnes
185. Porter Bush Fuqua
200. Thaddeus Elmer Smyth
205. Russell Thomas Finn
209. John Laing DePew
215. George Bateman Peploe
219. Charles Henry Caldwell
225. Mitchell Alonzo Giddens
232. George Wellington Madison Dudley
234. Theodore Anderson Baldwin, 3rd
238. Judson MacIver Smith
239. Edgar Turner Noyes
243. Ernest Avmor Suttles
244. August William Farwick

The above named officers have been directed to proceed to Brooks Field, San Antonio, Texas, to take the course in the Primary Flying School.

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A 1926 MODEL RICE EXPEDITION

Probably every officer in the Air Service knows by this time that Lieut. Wendell H. Brookley is married. It is safe to say, however, that no one knows that fact better than this popular officer himself, for the experiences he went through on his wedding day were calculated to leave a lasting impression. And his fellow officers at McCook Field took good care to make it so.

It was a short time before Lieut. Brookley was relieved from duty at McCook

Field that he was joined in the holy bonds of matrimony, the ceremony taking place at a certain town a short distance from Dayton. On the day of the wedding the McCook Field pilots, bent on mischief, gathered together a motley collection of airplanes, among them being the Honeymoon Express, a Huff Daland, a Curtiss Pursuit ship, an SE5, a Vought, etc. This expedition was equipped with fifteen small parachutes, each one bearing a tag inviting the finder to call on Lieut. Brookley at a specified address and receive the sum of one dollar. Sometime before the ceremony the planes were flown to the town, and when the pilots reached a safe altitude above the public square they began performing various acrobatics, calculated to bring the whole populace out on the streets. At this juncture the little chutes were released, it being thought that there was small chance of their going astray under these conditions. After this nefarious bit of work, the pilots circled over the place where the wedding ceremony was held, released some 97 pounds of rice, and followed this up with a heavy bombardment of all the old shoes it was possible for the pilots to gather up.

When the pilots returned to McCook Field they found waiting for them a very lengthy telegram from Lieut. Brookley, marked "Collect", and reading partly as follows:

"Whole town in uproar. Have already paid for fourteen chutes. Worth every damn cent. This telegram will help equalize the cost of one chute. . . ."

The unaccounted fifteenth chute was later found tangled up on the tail skid of one of the airplanes.

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MAJOR GARRISON ORGANIZES THE FEDERAL SERVICE FINANCE CORPORATION

Perhaps but few officers are aware of the existence of a recently organized corporation, the purpose of which is to assist Army officers in purchasing automobiles and furniture. Through this organization (the Federal Service Finance Corporation) officers can purchase practically any make of car at a saving of from 2½ to 10%. Furthermore, the Corporation can finance the officers for as long a period as 16 to 18 months, the requirement being the payment of as near one-third the purchase price as possible. The charges, interest, etc. by this corporation for thus financing officers are less than any other finance corporation in existence and the terms are apparently far more liberal. In order to obtain a saving either on furniture or an automobile, it is necessary for the purchaser to get in touch with the Corporation before seeing a salesman as otherwise the latter receives the commission instead of the Corporation.

Major W.H. Garrison, Air Service, Class of 1908 of the U.S. Military Academy, is Vice President and General Manager of the Federal Service Finance Corporation, with office at 22 Jackson Place, Washington, D.C. Major Garrison was formerly in command of the Middletown and San Antonio Air Intermediate Depots. Upon completing the course at Fort Leavenworth, Kansas, in 1923, he was assigned to the command of Bolling Field. Shortly thereafter he contracted a mild case of diabetes and was sent to Walter Reed General Hospital, where he remained until March, 1924, when he was placed on the Retired List.

Having organized the United States Automobile Service Association at San Antonio, Texas, Major Garrison decided to organize also the Federal Service Finance Corporation, and he has associated with him Lieut.-Col. L.W. Cass, a retired officer of over 25 years' service, and Mr. Francis Pope, a civilian.

Major Garrison recently accepted a commission in the Reserve Corps and passed his examination to the grade of Lt.-Colonel. He passed the 609 examination and obtained a waiver from the War Department for his physical disability for which he was retired, but can only be placed on flying duty as an observer.

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BELOVED COMRADE OF AIR SERVICE OFFICERS LEAVES PHILIPPINES

By the News Letter Correspondent

Col. Samuel I. Johnson, for several years Resident Manager of the Mindoro (cane) Sugar Company at San Jose, Mindoro Island, resigned this position and sailed on the steamship PRESIDENT MADISON for San Francisco.

A group of five Martin Bombers could recently be seen, just before sundown, circling gracefully about a lone President liner headed for the China sea - now in the form of a perfect Vee with hardly any light rays escaping between the

planes, so closely did they fly, and then in the twinkling of an eye a long slender column unfolded itself, apparently playing a vigorous game of follow the leader. Thenthe Vee would come again, and a second later a company front would appear with a caressing closeness between wing tips, and in less time than it takes to tell it the Vee could be distinguished once more against the gold above Mt. Mariveles.

Five hundred feet below one could, with a tiny spark of imagination, distinguish the figure of a man somewhat apart from the rest upon the deck, waving to us with a fondness that was almost touching. Short and stocky, with the build of a well trained athlete, clad in cream colored palm beach suit and Panama hat, this figure gazed not toward Manila fading in the distance, not in the direction of "home", but straight above at a handful of old friends whom fate had selected to cross his path. Yes, "Col. Sam" was really "quitting the Islands" after five years in the Tropics, and the American Air Service of the Philippines was bidding him a farewell that only a popular general on rare occasions actually rated.

"Col. Sam" as he is fondly referred to by the Air Service here, is well known in the States and Hawaii. Holding the rank of Brig. General in the National Guard in Hawaii at the outbreak of the War and seeming to be unable to get into action, he enlisted as a private in the Regular Army but soon rose to the rank of Lieutenant-Colonel. He is commissioned at present in the Reserve. During his residence at Mindoro he acquired an intense interest in aeronautics and certainly expressed it in many practical ways . Thru his efforts a very excellent "cross country field" was established on the grounds of the company, about 10 miles North of San Jose. This field has excellent approaches, good natural drainage and a spur of narrow gauge railroad actually extending along "the line" at about sixty feet distance. All types of land aircraft used in the Islands have been operated from this field. The trip from Nichols over the very scenic route takes about a hundred DH minutes under good conditions. In spite of the short trip, it has always been difficult to fly there and back in a single day due to the genuine hospitality of "Col. Sam". There is hardly an Air Service officer in the Philippine Department who has not visited there. His hospitality has included transportation on the "Sugar Cane Special" to and from the field, barracks for the officers and men, invitations to meals at his home too numerous to mention, opportunity to hunt tamarau, access to his ice box, swimming in an excellent tank, tennis on concrete courts and genuine entertainment during the evenings. Even his three pet monkeys are at the command of the aviators, that is, when the monkeys like their appearance.

The "Trip to Mindoro" has meant much to the officers and men here, and has certainly been a factor in their training and morale. We feel sure that his interest in the Air Service will remain long after his flying days in the Philippines.

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S P E C I A L N O T I C E!

ACCOMMODATIONS AT MITCHEL FIELD FOR OFFICERS ATTENDING INTERNATIONAL AIR RACES.

Mitchel Field is making extensive preparations to accommodate Air Service officers and flight surgeons on duty with the Air Service, together with their families, during the time of the International Air Races, October 8th, 9th and 10th. Every effort will be made, with the limited facilities available, to accommodate and furnish quarters to all officers and their wives who wish such accommodations at the Post. The Post Commander believes that all who attend can be made reasonably comfortable for a period of three or four days during the Races. Messing facilities will be available on the Post and meals served at reasonable prices. There will be only a small charge for sleeping accommodations - just sufficient to cover the cost of laundering linen, janitor service, etc.

While plans are under way for the care of a limited number of children, in view of the fact that proper facilities of this nature are extremely limited, officers are advised to arrange for the care of their children at their present station during their absence.

Mitchel Field has hopes that the Races will develop into an annual Air Service reunion, and with this end in view, would like all officers with their

wives who can attend to do so.

Particular stress is laid to the importance of officers communicating their intention to attend the Races to the Commanding Officer of Mitchel Field not later than September 10th, in order that proper arrangements may be made to care for all who desire to come.

Accommodations will be assigned in the order in which replies to circular-letters, already sent out to all officers, are received. Officers who request same after September 10th will not be given preference because of rank.

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CURTISS COMPANY OFFERS ACCOMMODATIONS TO VISITORS

New York, already known as a hospitable city, will outdo itself as a host when the 1925 Air Races are held at Mitchel Field in October.

Arrangement has just been made that visiting Army and Navy officers and civilian pilots who take part in the 1925 Pulitzer Races at Mitchel Field, L.I., will be supplied with free lodging through the courtesy of the Curtiss Company. During the Meet all contestants who wish to take advantage of the offer will be taken care of on the second and third floors of the executive building of the Company at their factory at Garden City.

One floor will be assigned to Army and Navy officers and one to civilian pilots. Showers, cots and other facilities have been arranged. The restaurant at the factory will be kept open at all times during the Races and a bus service will be run on a half hourly schedule from Mitchel Field with a stop at the Curtiss Plant.

Those desiring to avail themselves of these accommodations should notify Mr. C.S. Jones of the Curtiss Company at Garden City, L.I., or the offices of the New York 1925 Air Races, Inc., at 30 East 42nd Street, N.Y. Reservations should be sent in well in advance so that the necessary arrangements can be made.

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TRAINING CAMPS AT WILBUR WRIGHT FIELD

Wilbur Wright Field, Fairfield, Ohio, was the scene of unusual military activities during the past two weeks. In addition to ordinary routine work, there have been two camps, one of Reserve Officers and the other of National Guard officers and enlisted men.

The Reserve Officers' Camp was held from July 26th to August 9th, with 57 Reserve officers in attendance, of whom 36 were pilots, 8 observers and the remainder possessing no flying ratings. They came from the States of Ohio, Indiana, Kentucky and West Virginia. Major E.L. Hoffman, Commanding Officer of Grisard Field, was in charge. The following staff was chosen to assist the Commanding Officer in his work:

Major Lee O. McQuitty, commanding in absence of Major Hoffman; Executive - Capt. John L. Reymiller; Adjutant - Capt. John W. Ebaugh; Personnel Adjutant - 1st Lieut. R.M. Harnett; Supply Officer - Capt. F.F. Christine; Assistant Supply Officer - 2nd Lieut. L.S. McGinn; Engineer Officer - 1st Lieut. Frank H. Clever; Assistant Engineer Officer - 2nd Lt. W. Vermilya; Assistant Engineer Officer - 2nd Lieut. A.E. Rigney; Operations Officer - Capt. Frank F. McQuilkin; Assistant Operations Officer - 1st Lieut. Alexis B. McMillan; Assistant Operations Officer - 1st Lieut. Samuel J. Price; Inspection of Operations - 1st Lt. James E. Parker; Armament Officer - Capt. F.F. Christine; Assistant Armament Officer - Capt. Albert A. Price; Athletic Officer - Capt. John N. Joyce; Assistant Athletic Officer - 2nd Lt. Theodore A. Pease.

Capt. Christine and Lieut. Parker are officers of the Regular Army; all the others are in the Reserve.

The system of training, as explained by Major McQuitty, was a gradual progression from primary to advanced air work, leading up through various stages until general battle situations were formulated, and appropriate combat orders were issued.

The National Guard Camp comprised the 113th Observation Squadron and the 113th Photo Section which make up the 38th Division of the Air Service. It has encamped regularly for several years, each summer, at Wilbur Wright Field. Capt. W.F. Donnelly of the Regular Army is the Air Service Instructor. The National Guard Officer in command is Major James C. Patten. In the operation

of this camp he was assisted by the following staff:

Capt. J.C. Colgan, Inspector; Capt. W.F. Donnelly, Instructor; Staff Sgt. L.M. Johnson, Sergeant Instructor; Capt. C.R. Bowers, C.O. 113th Obs. Sqdn.; Capt. M.M. Rhorer, C.O. Medical Detach.; Lieut. R.F. Taylor, C.O. 113th Photo Sec.; Capt. R.A. Williams, Adjutant; Lieut. L.K. Lindahl, Supply; Capt. John W. Ziegler, Operations & Intelligence; Lieut. C. Shockley, Transportation; Lieut. R.T. Rooney and Lieut. L.R. Aretz, Engineering; Lieut. O.W.Hovarter, Armament; Lieut. W.E. George - Communications.

Those in attendance are one Major, 5 Captains, 5 1st Lieutenants, 10 2nd Lieutenants and 90 enlisted men. A comprehensive program of instruction was prepared several months in advance, and it is being followed out to the letter. The Camp opened on August 2nd.

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ARMY ENTRIES IN PULITZER HIGH SPEED RACE

The Army Air Service will enter three airplanes in the Pulitzer High Speed Classic, the principal event in the International Air Races, to be held at Mitchel Field, L.I., New York, beginning October 10th next. One of the airplanes will be a new model Curtiss Racer, and the other two specially prepared and exceedingly fast pursuit planes. Three Curtiss Racers have been expressly built for the Pulitzer Race this year. The first Racer to be delivered by the Curtiss Company will be used for practice purposes by both Army and Navy pilots. Of the other two Racers, one will go to the Army and the other to the Navy. Under this arrangement the high speed classic this year promises to be a most interesting and closely contested event, inasmuch as the two Racers, being sister ships, will be equal in performance, and victory will hinge to a large extent on the skill of the competing pilots. It is believed that the new Curtiss Racer will be somewhat similar in design to the type used in the Pulitzer Race last year and the year before. It is expected , however, that it will be capable of attaining a high speed of between 265 and 270 miles an hour, due to a smaller wing spread and modification of the engine cooling system.

First Lieut. Cyrus Bettis, Air Service, has been designated by the Chief of Air Service to pilot the Curtiss Racer, with 1st Lieut. James H.Doolittle of trans-continental flight fame as the alternate pilot. For the second and third entries, using the specially prepared high-speed pursuit ships, of which exact duplicates will be furnished the Navy, Capt. Harvey W. Cook and 2nd Lieut. Leo H. Dawson have been chosen as the pilots.

Lieut. Bettis, whose participation in the International Races last year resulted in his winning the John L. Mitchell Trophy, was born at Carsonville, Mich., January 2, 1893. He was commissioned a 2nd Lieutenant in the Air Service during the World War. He has had considerable experience as a pilot on Mexican Border patrol duty and served a tour of duty of two years in the Philippine Islands. At present he is serving with the First Pursuit Group at Selfridge Field, Mich. He has approximately 1800 flying hours to his credit.

Lieut. James H. Doolittle, one of the foremost cross-country flyers in the Air Service, was born Dec. 14, 1896, at Alameda, Calif. He holds the degree of Bachelor of Arts, University of California. Joining the Air Service during the World War, he was commissioned a 2nd Lieutenant on March 11, 1918. For two years he served on Mexican Border patrol duty.

Lieut. Doolittle is an officer of considerable scholastic attainments, being a graduate of the Air Service Mechanics School, the Air Service Engineering School, and the Massachusetts Institute of Technology, where he just recently completed a two years' course in aeronautical engineering. The outstanding feat in his career as an aviator is his one-stop transcontinental flight in a standard De Haviland observation airplane from Jacksonville, Fla. to San Diego, Calif., on September 2, 1922. He accomplished this noteworthy flight in less than 24 hours, his elapsed time from coast to coast being 22 hours and 30 minutes.

Capt. Harvey W. Cook was born at Wilkinson, Ind., June 30, 1892. He attended DePauw University and Washington and Jefferson College. During the World War he enlisted for service with the Allies, but upon America entering the conflict he joined the Air Service in September, 1917, completed his flying training, and was commissioned a 1st Lieutenant.

This officer was one of the first members of the 94th Squadron, the first

American Pursuit Organization at the front, and he rendered gallant and meritorious service during the entire operations of the Air Service, serving actively at Chateau Thierry, San Mihiel and the Argonne. He is officially credited with having destroyed seven enemy aircraft, and for his exceptional service he was awarded the Distinguished Service Cross with oak leaf cluster.

Upon his return to the United States, Capt. Cook left the military service, but later accepted a commission as Captain in the Air Service, Regular Army. He attended the Engineering School at McCook Field, Dayton, Ohio, and upon graduation served for a time as the Air Service representative at the plant of the L.W.F Aeronautical Corporation. At present he is on duty as instructor at the Air Service Tactical School, Langley Field, Va.

Lieut. Leo H. Dawson, another Air Service officer who was honored with the award of the Distinguished Service Cross, was born at Maxwell City, N.M., Nov. 8, 1893. Joining the Air Service during the World War, he received his flying training at Chanute Field, Rantoul, Ill., and was commissioned a 2nd Lieutenant. He was shortly thereafter ordered to duty with the A.E.F. overseas, served with the 94th and 166 Aero Squadrons, and rendered conspicuous service.

On one occasion while on a voluntary patrol Lieut. Dawson encountered seven enemy planes at an altitude of 2,000 meters. After a brief engagement his guns jammed, but after repairing the jam in the air, all the while under the heavy fire of the enemy, he returned to the fight, shot down one of the enemy in flames and drove off the others. It was for this act of extraordinary heroism that he received the Distinguished Service Cross. Several months later he was awarded a bar to be worn with the Cross for another act of bravery. Sighting four German Rumpler planes, Lieut. Dawson immediately attacked them, and, despite the numerical superiority of the enemy, destroyed one of them and caused the remaining three to scatter and return to their lines.

Lieut. Dawson received his honorable discharge from the service in June, 1919. On Jan. 5, 1923 he accepted a permanent appointment in the Regular Army as 2nd Lieutenant, and became a student at the School of Aerial Photography, Air Service Technical School, Chanute Field. Upon his graduation he was assigned as Photographic Officer at that station.

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WAR DEPARTMENT ORDERS AFFECTING AIR SERVICE OFFICERS

Changes of Station

First Lieut. Harold F. Rouse from Langley Field to Wilbur Wright Field, effective September 1st, on which date he will take 3 months' leave of absence.

First Lieut. Hugh W. Downey relieved as student at Air Service Engineering School and to report to C. O., McCook Field for duty.

First Lieut. Sam L. Ellis from Selfridge to Brooks Field, Sept. 7th.

Major Barton K. Yount, to proceed to Paris, France, for duty as Assistant Military Attache, on or about August 15th.

Detailed to Air Service

Second Lieut. Everett S. Emerson, Corps Engineers, and 2nd Lieut. Richard H. Dean, Signal Corps, to Brooks Field, Texas, for flying training, September 13th.

Leaves of Absence

First Lieut. James C. Cluck, 2 months, effective September 15th.

Capt. W. E. Kepner, 15 days, effective August 25th.

First Lieut. James W. Hammond, one month, September 13th.

Second Lieut. Alden R. Crawford, one month, 26 days, August 11th.

Capt. Early E. W. Duncan, one month, 8 days, August 15th.

Major Walter H. Frank, 10 days, August 15th.

Promotions

Second Lieut. Donald F. Stace to be 1st Lieut, with rank July 2nd, 1925.

Resignations

Second Lieut. Robert C. Ashley, August 1, 1925.

Reserve Officers to Active Duty

First Lieut. James H. Kindelberger to Langley Field, Va. August 23 to September 6th.

First Lieut. Walter F. Reagan to Fairfield Air Intermediate Depot, August 3rd to 17th.

First Lieut. Earle R. Strong to Middletown Air Intermediate Depot, August 3rd to 17th.

Lieut.-Col. John A. Hambleton and Capt. Harold E. Weeks to Langley Field, August 3rd to 17th.

Captains Louis Stokes Connelly, Robert E. L. Murphy, 1st Lieuts. Merlin F. Crutcher, Clayton C. Shangraw, 2nd Lieuts. Gerald CanM. Dack, Henry I. Jenks, Frederic C. Parsons, Clarence W. Welch to Office, Chief of Air Service, Washington Washington, D.C. August 3rd to 17th.

First Lieut. Elliott W. Springs to Selfridge Field, August 18 to 30.

Capt. Samuel H. Anderson to Rockwell Field, August 29 to Sept. 12th.

Capt. John R. Irwin to Rockwell Field, August 30 to September 13th.

Majors George M. Brett, Clifford B. Griswold, Captains Darlington Cope, W. M. Reading, James R. Walsh, 2nd Lieut. Ronald M. Hazen to McCook Field, Ohio, August 30th to September 13th.

First Lieut. Francis T. Murphy and 2nd Lieuts. Archie D. Hunter to Kelly Field, Texas, August 30th to September 13th.

Captain Robert E. Ellis, 1st Lieut. Charles I. Preston, 2nd Lieuts. Paul Bauer, Donovan R. Berlin, Joseph A. Bishop, Vern C. Davison, Jesse E. Eshbaugh, Fred W. Heckert, Wofford E. Lewis and Lester W. Trees to Kelly Field, August 30th to September 13th.

Captain Leo J. Griffin and 1st Lieut. George V. Straker to Mitchel Field, N.Y., August 30th to September 13th.

McCook Field, Dayton, Ohio, July 30.

Members of the 1924-25 course of the Engineering School spent the last week of July in the Flight Section, where practical experience in flight-testing of airplanes and airplane equipment was gained.

Major L. A. Walton and Lieut. James H. Doolittle left McCook Field July 27th for New York. Lieut. Doolittle ferried the first of the new pursuit planes back to McCook from the Curtiss Company's field while Major Walton returned in the CO-4 in which both had flown there.

Lieut. L. D. Bruner, in charge of night flying equipment at McCook Field, flew a Martin Bomber to Cheyenne, Wyo., for the purpose of meeting the Selfridge Field First Pursuit flyers on their return from the Pacific Coast. Lieut. Bruner took charge of the installation of the lighting equipment in the pursuit planes in which the Army pilots left Cheyenne at night, demonstrating the ability of the pursuit planes to negotiate this most difficult leg of the Air Mail route in darkness.

Lieut. Guy B. Thompson and Commander P.M. Bates, Naval representatives stationed at this field, flew to Cleveland on July 27th to witness test flights of a new Glenn Martin plane built about the Packard "2500" engine for the Navy.

Major John F. Curry left on July 30th for a two months' leave of absence during which time he will make a tour of Europe. Mrs. Curry accompanied him.

Brooks Field, San Antonio, Texas, August 2.

Quite a bit of trouble was experienced at Headquarters stage the past few weeks with the advanced training ship, the AT-1. Apparently the difficulty seems to lie in a weak or faulty landing gear. At any rate, they have been cracked on an average of one a day, so that the transition work of the students has been changed to the VE-9 and the TW-5.

For the past week this field totaled 420:50 aircraft hours and 605:70 man hours. Of this, 90:10 hours were cross-country. Second Lieut. H.M. Fey, in his trip to Washington, D.C., was in the air 35:50 hours during the 9 days he was gone.

A stag party was held last Friday night for the new class of Reserves at the Officers' Club. Refreshments of the Dutch lunch variety were served.

The following cross-country trips were taken last week end: To Fort Clark, Texas - 2nd Lieut. P. W. Wolf with mechanic; 2nd Lieut. Charles T. Myers with mechanic; to Fort Ringgold, Texas - 2nd Lieut. P. W. Wolf with Lieut. R. B. Evans; 2nd Lieut. Hugh W. Downing with mechanic; to Dallas Texas - Tech. Sgt. G.C. McGinley with Corp. Hovey; Staff Sgt. Robt. M. DeWald with Corp. N.B. Bardell; to Buffalo, N.Y. - Major Ralph Royce with 1st Lieut. Frederick I. Patrick; to Dayton, Ohio - 1st Lieut. Robert M. Webster with 2nd Lieut. Howard M. Fey; to Muskogee, Okla., via Tyler, Texas - 2nd Lieut. H. T. McCormick with Lieut. R.C. Ashley; to Muskogee, Okla., 2nd Lieut. W. W. White with Lieut. H. W. Downing; to Aransas Pass, Texas - 2nd Lieut. D. W. Watkins with Lieut. Horn; 1st Lieut. K. B. Wolfe with Corp. Crawford; 1st Lieut. Hugh A. Bivins with Capt. Hatcher; 1st Lieut. John D. Corkille with Pvt. H. Jones.

Camp Nichols, Rizal, P.I., June 30.

The annual rainy season seems to have started. A considerable amount of rain has fallen during the past two weeks. One real typhoon many miles distant and a "baby" typhoon in the immediate vicinity of Manila has caused some trouble in shipping circles, although only slight damage was noticed on the land. In Northern Luzon, however, much damage to fields, roads and bridges has been reported. The immediate effect at Nichols is to soften badly parts of the field and retard flying activities, especially with loaded bombers.

Major C. J. Browne, A.S. and family returned from a very pleasant month's period at Baguio, Mountain Province.

The arrival of the Army Freighter MEIGS on May 30th was an event of great interest to many officers' families here, as it bore several automobiles. Those receiving cars were: Lieuts. Whitney and Snavely, who arrived in August; Lieut. A. J. Melanson and Lieut. S. P. Mills and Master Sgt. Nichols, who arrived last November, Warrant Officer Mills who arrived in January; Chaplain Bonner and Capt. Eagle, who arrived last March. From these figures it may be noted

that to get your car aboard the MEIGS at the time you sail is, indeed, good fortune, for the MEIGS makes only about three trips a year.

Hdqrs. 2nd Division, Air Service, Fort Bliss, Texas, July 26.

An Air Service Reserve Officers' Training Camp is scheduled to be held at this station from August 2nd to 16th, thirteen Reserve officers being expected to attend. All JN planes at this station which have not previously been in use are now being set up for use in training these Reserve officers.

Cross-country flights by personnel at this station were made as follows: Sergeant Tyler to White Water Mesa, N.M., July 18th, returning the following day; Lieut. Gale and Sgt. Livesay to Douglas and Tucson, Ariz., July 22nd, for the purpose of taking supplies to these stations; Lieut. Clark and Capt. Johnson to Ruidoso, N.M., and return, July 23rd; Lieut. Gale and Sgt. Tyler to Roswell, N.M. July 24th to ferry two officers to that town; Lieut. Weddington and Sgt. Rhodes to Tucson, Ariz., July 23rd, to make a mosaic of that city; Lieut. Gale and Sgt. Pierce to Ft. Huachuca, Ariz., July 25th, to ferry two officers to that station; Lieuts. Clark and Smith to Denver, Colo., July 25th.

Captain Walter Bender returned here July 22nd from Santa Monica, Calif., where he was on duty since July 1st.

Wilbur Wright Field, Fairfield, Ohio, August 11th.

Major-General Robert L. Howze visited this station August 6th and inspected the 88th Squadron and th. two camps which were then in progress - the National Guard from Kokomo, Ind., and the Reserve Officers' Camp.

The annual golf tournament of the Wilbur Wright Golf Club has just ended, with Lieut. W. S. Hamlin winner of the handicap, Lieut. B. M. Giles the runnerup and Capt. J.C. Colgan winner of the Consolation prize.

Brig. General James E. Fechet and Major Ralph P. Cousins arrived by air on August 3rd, lesving for Chanute Field the following day.

Lieut. H.H.Mills, now on leave, visited this station for a few days and returned to Chicago, where he will remain until he leaves for the Philippines early in September.

Major Geo. H. Brett flew to Middletown on July 27th, returning August 1st. He was in conference with Major B. Q. Jones, Major W. R. Weaver, Lieut. C. A. Cover and others.

The following cross-country trips were made by personnel of this station: Lieut. L. E. Sharon and Lieut. B. M. Giles to Chanute Field; Lieuts. James L. Grisham and W. J. Hanlon to Chicago, July 29th; Lieut. L. E. Sharon to Chanute Field and return, July 24th.

Mr. John M. Gower, in charge of the Lubrication Office of the Field Service Section, returned from an extended trip during which he inspected the oil reclaiming plants at various Air Service stations.

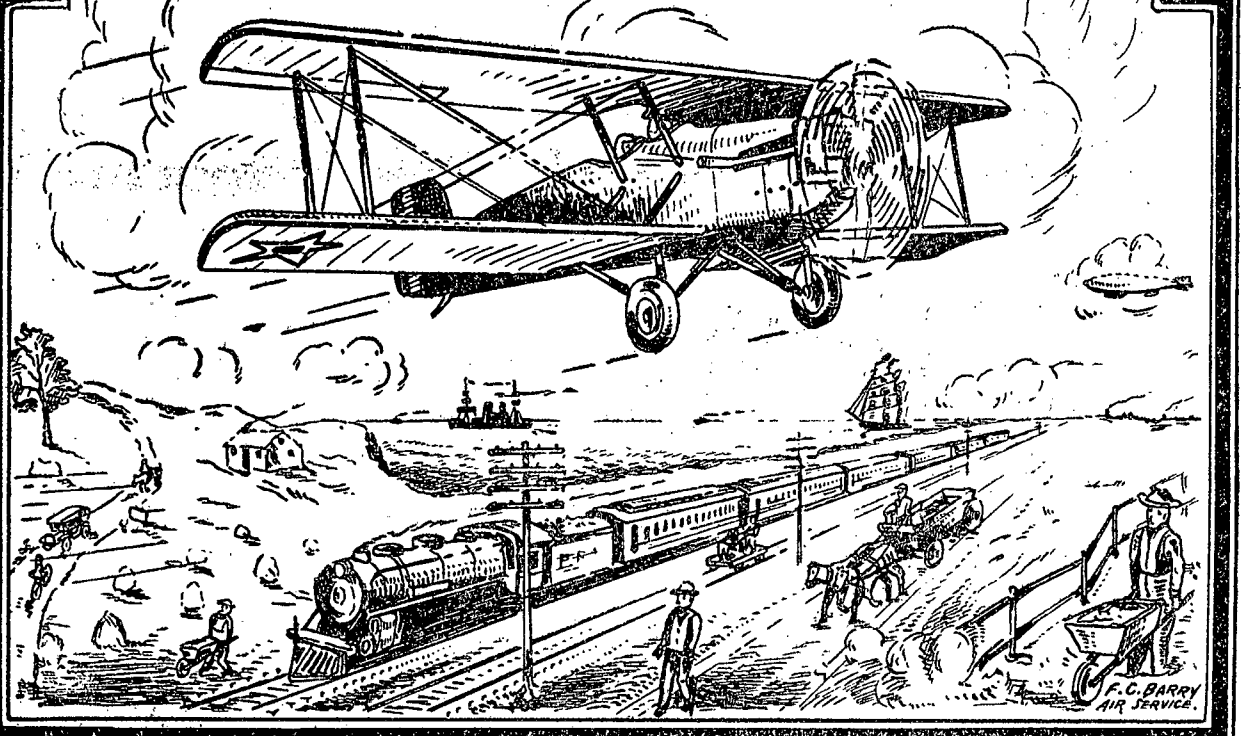
Lieut. B. F. Griffin visited the Field Service Section July 21st and 22nd, returning to his home station at Marshall Field.

Lieut. Charles B. Austin and family from Langley Field visited this station July 22nd, Lieut. Austin being on leave at the time.

Major Ralph Royce, C.O. of Brooks Field, stopped here enroute to Buffalo, where he attended a conference of National Guard and Regular Army Officers.

Major and Mrs. H.J.Knerr left for Langley Field August 5th.

U. S. Army Air Service News Letter



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VOL. IX AIR SERVICE NEWS NO. 16

Information Division
Air Service September 12, 1925 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 Corpss, National Guard, and others connected with aviation.

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THE AIR MEDICAL SERVICE

By Major L. H. Bauer, Medical Corps, U.S.A.

It was recognized quite early in the World War that aviation presents medical problems quite different from those of any other branch of the service. The experience of the allied nations and the work of the Medical Research Laboratory (now the School of Aviation Medicine), laid the foundation for the work of the Flight Surgeon. The Flight Surgeon made his appearance early in 1918. As is the case with all new ventures, there was opposition to the movement in many quarters. The results obtained, however, have justified the venture, and now the Flight Surgeon is considered as a necessary adjunct to all aviation units.

The movement was only fairly launched when the war was over and most of the then Flight Surgeons had to be replaced by regular officers.

A course of instruction was worked out at the Medical Research Laboratory in 1919 and since then there have been constant extensions and improvements in the course.

There are now 67 Flight Surgeons in the Regular Army, (50 on duty as such), 26 in the Navy and 12 in the Reserve Corps and National Guard. There are a number who were trained that have left the Army for civil life. In addition there are 20 Reserve and National Guard Officers qualified as physical examiners.

Aviation medicine,- the flight surgeon's specialty,- is a new subject. It was unheard of prior to the war. The physical factors involved in flying had never been studied because there was no incentive for such a study. The rapid development of aviation during the war, however, resulted in a strong impetus to the development of aviation medicine. The allied nations found that stricter standards were needed for the selection of the flyers than for other branches of the service. The British found that 60% of the deaths due to aviation in the first year of the war were due to physical defects of the pilot. This was eventually reduced to 12% by careful selection and care of the flyers. "Staleness" developed from prolonged flying, high altitude had serious effects, and factors not important to the ground officer were found highly important to the flyer.

Let us briefly consider a few of the more important physical factors. All flyers admit the importance of vision and the ability to judge distance. These tests are important. Some of the other tests are sometimes referred to by flyers as "trick gadgets". Nothing is further from the truth. The tests for ocular balance are very important because defective muscle balance causes strain, headache, fatigue and results in inattention and carelessness, to say nothing of the danger of double vision developing. Workers in the Royal Air Force found that a large number of bad landings were due to defective ocular muscle balance. The ability to see something off at the side when looking straight ahead is highly important, especially for the combat pilot. About 80% of the groundings, temporary and permanent, are due to defects of the nervous makeup. Only one with sound nervous stability can withstand the fatigue of flying for any length of time. Research and experience have taught us much. Our examination for flying has been revised three times since 1917. The recent revision (1925) has resulted in a more elastic examination which takes into account the flying experience of the man examined.

Physical fitness is highly important - more so than in any other branch of the service. The Schneider Index is one test for circulatory efficiency. Many flyers criticize this test without understanding its application. The index is not claimed as infallible. It is only one test,- the best that has yet been developed - for testing circulatory efficiency. Circulatory efficiency depends in turn to a certain extent on physical condition. The normal index for one man is not the normal for another. Because one man gets a score of 16 does not mean he is better physically than a man who gets 14. One cannot split hairs in interpreting the index. We group the scores and consider all in the same group as approximately the same. To use the index intelligently on a flyer one must estab-

lish the normal for that flyer and then he can advise the routine for that individual. It is merely one test, not to be taken alone as a determining factor. Neither is it an indication of the amount of exercise a man is taking, but rather an indication of how much he needs. It has been shown that a flyer may improve his index by regular and consistent exercise. Physiology has taught us this and that mass athletics are better suited than individual athletics. War flying - combat, much reconnaissance and some photography are done at very high altitudes. The effects of altitude are pretty well known. A classification of flyers has been evolved and revised. This classification does not tell how high a flyer may go, as many flyers seem to think, but indicates a level above which he cannot do efficient or repeated work. I have heard more than one flyer say that he was limited to 15,000 feet by the rebreather test and that he went out and made a flight to 18,000 or 20,000 feet and that therefore the rebreather was no good. This means that he does not understand the principle of the rebreather. The rebreather tells us the efficiency ceiling for a man, taking into consideration a margin of safety. The question of oxygen supply has been studied and in conjunction with McCook Field the necessary supply for an aviator has been completely reestimated. The care of the flyer - keeping him fit to fly, is a subject that has been studied also.

The duties of the Flight Surgeon may be summarized as follows:

1. Selection of the flyer, by careful physical and mental examinations.
2. Classification of the flyer - by a rebreather or other test.
3. Care of the flyer, whereby a flyer is maintained in a state of physical efficiency.

The first involves a knowledge of general medicine, psychiatry, opthalmology and otology; the second, physiology and psychology; and the third, physiology, psychiatry and general medicine.

It will be seen that the specialty of aviation medicine is made up of several specialties as applied to aviation. It may be said that the prescription for a successful Flight Surgeon is as follows:

Take

A thorough grounding in internal medicine
A good working knowledge of psychiatry
A good working knowledge of the physiology of respiration, circulation and physical fitness
A moderate amount of opthalmology and otology

Mix thoroughly with a generous amount of sound, common sense.

The duties of a Flight Surgeon, as previously outlined, lie in the field of preventive medicine. He should prevent crashes occurring from a physical cause, and he should keep his flyers fit to fly at all times. He must appreciate the flyer's problems, and to do this he should fly - not once or twice a month, but as often as his other duties permit. He should fly in all sorts of weather, on cross-country trips and, in fact, under as many conditions as possible.

Our knowledge of aviation medicine has developed as a result of practical experience and from medical research here and abroad. The subject is recognized in all countries where aviation has a foothold. More work has been done in this country than in any other and it is believed our examinations are more thorough. However, much remains to be done. Our examination for selection has one serious fault and, that is, after a man is selected mentally and physically he still may not be able to fly, because he is too slow in his reactions. We need a further test for beginners and this is a matter now being taken up.

In the early days the points on which most stress was laid were the eyes and ears. We still hold the eyes as important, but the ears we consider of secondary significance. We now believe psychiatry, psychology and physiology are the most important factors, particularly in the upkeep of the flyer.

The center for training Flight Surgeons and for research is the School of Aviation Medicine. Its functions are to

1. Train Flight Surgeons and Physical Examiners.
2. Train Flight Surgeon's Assistants.
3. Carry on experimental work.
4. Physical examinations

The basic course for Flight Surgeons is of three months' duration and consists of lectures, quizzes and practical work at the School and clinics at the New York hospitals. There are short practical courses and a correspondence course for Reserve and National Guard officers, which in conjunction are designed to train the student, first as a physical examiner and finally as a Flight

Surgeon.

Research is carried on to improve our knowledge of the medical factors involved in aviation and to improve the efficiency of the Flight Surgeon and the Air Service. There still remains much to be done in the research field. The effects of cold and wind must be investigated, more work must be done on the subject of fatigue, and a satisfactory reaction time test must be developed as already indicated.

In order to insure cooperation and a full understanding of Air Service problems, it is believed that all medical officers on duty at Air Service stations should be Flight Surgeons. At all flying schools Flight Surgeons are exceedingly essential, for here is where the training is going on and where the greatest care must be used to prevent accidents.

It should be remembered that when a man is disqualified, we do not mean to say that he could not fly, but that his defects are such that he would be handicapped and that the chances of an accident are increased beyond the reasonable limit. Guynemer, the French ace, is sometimes cited as an example of a successful flyer with physical defects. He was a successful flyer, but Guynemer met his death in the air as a result of these physical defects. Resnati was killed at Hazelhurst in 1918, when he flew against the advice of the Flight Surgeon. A flyer at another Eastern field, disqualified on account of defective judgment of distance, in 1921, wrapped his plane around a tree because he misjudged his distance from it. So we might go on citing instances. That the Flight Surgeon makes mistakes is doubtless true, but it also is undoubtedly true that the Flight Surgeon has reduced fatalities in the Air Service to a marked extent.

It may be interesting to know that of the cadets at West Point and Annapolis who are supposed to be of more than average physical makeup, less than 50% are physically qualified to fly.

The airplane ambulance is another matter that should be considered. The first type was a "Jenny", converted during the war. Since then, DH's, Jennys, Eagles and the transcontinental A-2 have been converted,- none perfectly satisfactory. The new Douglas plane will be so arranged that it can be equipped with litters on short notice. This will carry 4 reclining and 4 sitting patients. In addition, there is a new plane devised for ambulance purposes, the new A-2. This carries two patients in litters and a doctor as well as the pilot. The airplane ambulance was first devised for the purpose of attending crashes. It has limited usefulness here as usually the crash occurs where an airplane cannot land. It can, however, be used to transport patients long distances, and carry them to adequate medical attention. Its chief feature, however, will be in war. A squadron of ambulances can transport more patients and in less time than a hospital train and also transport them much more comfortably. Besides, those heretofore marked "non-transportable" because of the seriousness of their injuries can be transported by airplane because of the absence of shock. The airplane ambulance will form a distinct part of the evacuation system in future wars.

The war plans for six armies call for approximately 1,400 Flight Surgeons, 18 branch laboratories in the Zone of the Interior, also one for each army. There will be the same number of examining units.

It is desired that there be 300 trained Flight Surgeons in the Reserve. If this number is available, the School of Aviation Medicine will be able to turn out the balance at the rate of 100 a month, which will keep pace with the expected expansion of the Air Service after war is declared. More Reserve officers are urgently needed for this branch of the service, as well as sufficient funds to train them.

If our plans can be carried out it is predicted that in the next war there will be less waste of material, better physical selection, fewer accidents and increased efficiency generally.

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ESTIMATING THE CROP SITUATION OF NORTH CAROLINA FROM THE AIR

Lieut. George C. McDonald and Staff Sergeant Chestnutt, stationed at Langley Field, Va., recently made a photographic flight through the Piedmont and coastal sections of North Carolina for the purpose of recording photographically the area and distribution of crops in these sections. The assignment was successfully covered in seven hours and ten minutes flying time by 103 vertical photographs. The mission was performed at the request of the Department of Agriculture of North Carolina.

THE NEW RACING AIRPLANE FOR THE PULITZER RACE
By Lester D. Seymour

For the first time some details are available as to the construction and characteristics of the new Curtiss Army Racers which will be entered in the Pulitzer Trophy Race at the International Air Races in New York in October. This airplane, while more or less conventional in appearance, embodies many refinements which it is hoped will result in a speed in excess of the present world's record of some 270 miles per hour.

Its total weight, ready for the race, will be only about 2150 pounds. Built on the monocoque principle, the body or fuselage of the craft consists of four longitudinal members of wood, supported by diaphragms or bulkheads at regular intervals and covered with thin layers of wood veneer. These layers, in order to give the greatest strength possible, are cut in narrow strips, approximately two inches wide, securely glued and tacked to the longitudinal members at an angle of approximately 45 degrees to the center line of the fuselage. Succeeding layers of this veneer are placed at an angle of 90 degrees to each other. The extreme strength of such construction as regards twisting and bending is obvious. The wings and tail surfaces are built up of wood, ribs and spars also covered with thin strips of plywood. These strips are of two-ply spruce, about 3/32 inches thick.

The general appearance of the airplane is that of a very cleanly designed, conventional one-strut biplane. The overall span or width of the airplane is 22 feet. The total wing area, not including that of the axle-fairing, is approximately 144 square feet. When the airplane is fully loaded, every square foot of the wing surface supports 14.9 pounds of load in flight.

Preliminary ground tests which have been conducted have proved the structure to be extremely strong; the successful loading in many cases having been carried well beyond the high required factor of safety.

Power Plant.

In the new Curtiss Racers is to be found possibly the most highly developed airplane engine yet produced. It is an enormously powerful mechanism, producing about 500 h.p. at a speed of 2100 revolutions per minute. Designated as the Curtiss V-1400, it has successfully passed all of the government acceptance tests which among other things require that the engine be operated continuously over a period of 50 hours without signs of "falling down" in any way. The design is somewhat similar in appearance to airplane engines which have gone before, in that it is the "V" type with twelve cylinders arranged in two banks of six each.

Its weight is well below the 700-pound limit specified in the contract under which the engines were built. Something of the engineering skill exhibited in this power plant is apparent when we remember that here with a weight of considerably less than 700 pounds we are producing 500 h.p., while in the automobile engine we find 50 or 60 h.p. developed in an engine weighing 200 or 300 pounds at the best.

Some idea may be gained of post war progress when we consider that the airplane engine most widely used for training purposes during the war weighed 4.4 pounds per h.p. itself. Comparing this figure with the new racers we find that the entire airplane, including its engine, weighs only 3.7 pounds per h.p.

Almost Equal to a Helicopter.

From the above it is seen that the airplane itself is extremely small for the power with which it is supplied by its new engines. In fact, preliminary tests have shown that the static thrust of the propeller is greater than the total weight of the airplane loaded. By this is meant that with the engine running at full power on the test stand, the propeller gives a forward pull in excess of the airplane's weight. From this it would appear that in flight this craft might well imitate the performance of a helicopter in its ability to fly straight upward.

Safety Factor.

The Army Air Service is taking extra precautions to have this new specially built airplane so strong that there may be no possibility of accident resulting from the failure of the machine itself. Looking into the factory at Garden City where the new racing machines are being put together there may be seen not only the usual hustle and bustle of construction work but also a corps of well trained experts busily engaged in testing the strength of the completed airplane.

When it is remembered that these newly built craft represent the combined knowledge which science and experience has given us in the way of airplane design and that no small expense is involved, it might seem unreasonable to subject them to tests quite liable to cause damage, especially when the tests imposed are many times more severe than the conditions under which it is expected that the airplanes will actually operate. On the other hand, it is gratifying to be assured that no expense is great enough to overbalance the responsibility which the Chief of Air Service feels in providing airplanes which are really safe for pilots under his command.

In the contract ordering the manufacture of the Racers, it is learned that a minimum strength was specified capable of resisting in some parts of the airplane as much as 12 times the normal load. This "factor of safety" was specified, for example, in the case of the wings and fuselage or body.

In actually testing the new Curtiss Racer, the manufacturer has in many cases even exceeded the high specified factor of safety. The particular parts mentioned above have actually been tested and found capable of withstanding a load of 12½ times normal. In order to save time, the tests are carried out at the factory before the airplane is delivered to the service, government engineers being present and participating in the test.

Method of Testing

The method of testing airplanes before they are taken into the air adopted by the Army Air Service, is quite simple but at the same time very effective. Probably every one who is following the progress of preparation for the races will be interested to learn how these tests are carried out. In the case of the wings, the airplane is supported in flying position with scaffolding which may be gradually removed from under the wing structure. While in this position the wings are loaded, under careful observation, with whatever load is necessary to produce the stress required. This load is ordinarily made up of sand bags, piled one on another, along and distributed over the surface of the wings. In some cases the bags containing sand are replaced by strips of lead sewed into pieces of canvas in order to economize on space. These weights are flexible and able to conform to the contous of the wing surface, and also capable of being added in small increments. After the load has been placed upon the surfaces and no tendency toward failure observed with the supports in place, they are removed and any deviation or bending in the members is noted. In the event that rupture occurs, its cause and cure is ascertained and the necessary alterations made. This testing of the strength of an airplane on the ground is called "Static Testing".

The static test of an airplane is by no means complete when the strength of the supporting surfaces have been inquired into. There still remains to be known whether or not the landing gear, control surfaces, control cables, and control levers are sufficiently strong, as well as what strength has been built into the body of the airplane itself.

In the case of the landing gear or undercarriage, we again find a quite logical method of test has been adopted. Calculations have been made to determine the force of impact of an airplane when it alights and from what vertical height the airplane would have to be dropped vertically under the force of gravity, to produce approximately the same shock. Knowing these data, the strength of the landing gear including its supports, wheels, axles, shock absorbers, etc., is determined by simply suspending the loaded craft the required distance above the floor and then suddenly dropping it. In actual practice, this dropping or impact test is carried out, beginning with a short distance and increasing to a height of from 24 to 30 inches. In order to simulate the conditions of the airplane making a landing in a cross wind, the floor is inclined in the lengthwise direction of the wings. In all of these tests the new racing airplanes have proved their strength and sturdiness. In much the same way the tail skid or member on which the tail of the airplane strikes in landing is given preliminary test.

It might be mentioned that the wings and tail surfaces are not only tested for the airplane as in normal flight, but also in the position of inverted flight. This is to take care of any possible position in which the airplane might be operated.

The control surfaces are tested by loading them in a manner similar to that of the wings with a specified load in excess of that which they will be expected to carry, and noting the effect of the load. First, it is ascertained whether the control surfaces themselves show any tendency toward failure. Then also

whether or not those cables or the mechanism which operate them are sufficiently strong. Finally the effort on the part of the pilot which will be required to move the surfaces while under these loads is measured. The method of measuring this effort is simple indeed. A central lever or "control stick", as it is called, universally hinged at its lower end, is used for all of the controls except the rudder, which is manipulated by the pilot's feet somewhat similar to the manner in which the pedals of the clutch and brake are operated on an automobile. To return to the control stick, which is known among aviators as a "joy stick," the effort of the pilot is determined by simply measuring in pounds the pull required to move any particular control surface, when it is subject to a definite load. In the case of the Pulitzer Racers which have been tested, this pull on the control stick, even when the control surfaces were loaded to their maximum factor of safety, has not exceeded 37 lbs. Actually in flight only a fraction of this effort will be required, as the normal loading of the surfaces is much less than they were carrying when this maximum pull was measured.

The test of the fuselage or body of the airplane includes that of determining the resistance of the body to the air pressure, twisting strains and bending to which it may be subjected during flight.

In all of the tests mentioned above the new racers have proven their ability to withstand without apparent difficulty the specified load in all cases, and in some instances certain members have been successfully subjected to a stress even in excess of that contemplated in the specified factor of safety.

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McCOOK FIELD RADIO CAR

By A.M. Jacobs

Ghosts walk at McCook Field in broad daylight. Visitors to the Field on a recent occasion might have had every reason for so believing, for gliding about the flying field, sheeted in white, backing, going forward, performing "figure eights", moving sedately along the road or erratically forsaking it to follow some vagrant stroller across the green, roamed a low strange object, scarcely human, without visible means of propulsion, and decidedly full of "pep".

But the age of the supernatural is passing and analysts would have discovered nothing more mysterious than the McCook Field radio car, white-covered in order to be visible from 2,000 feet in the air, where during two flights lasting an hour, Captain Murphy and Mr. Leland, in turn, kept its movements under perfect control by radio.

The radio car is an Engineering Division development, and for the past several years has been exhibited in various parts of the country, once having gone the entire length of Pennsylvania Avenue, Washington, D.C. Control heretofore had always been from an automobile which followed the radio car at a distance or from a ground station. This was the first instance where it was made to travel successfully by control from an airplane. Tests from greater heights will be conducted in the near future.

It is of interest to know that a standard SCR-134 radio set was used as the transmission medium. The airplane was the Boeing metal DH4B. This car is the only one known of its kind in which the operation is selective, that is, it can be made to back, move forward, turn, blow a claxon, etc., on the instant, at the will of the controller. It does not have to go through a cycle of set operations in turn. The development of remote control for war purposes is of too apparent advantage to need explanation, and the successful accomplishment of this test is but another step in the direction of such development.

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AIR SERVICE ENTRIES IN INTERNATIONAL RACES

As in previous years, the Army Air Service will have entries in four events of the International Air Races to be held at Mitchel Field, Long Island, N.Y., October 8th, 9th and 10th. The outstanding event in point of general interest is, of course, the Pulitzer Race, demonstrating as it does the steady advance made in airplane design with the object in view of greater speed performance. The pilots designated to fly the high speed ships in the Pulitzer Race are 1st Lieut. Cyrus Bettis, the Curtiss Racer, with 1st Lieut. James H. Doolittle, alternate; and Captain Harvey and 2nd Lieut. Leo H. Dawson the two specially prepared high speed pursuit ships.

There is a feeling of confidence that the present Pulitzer Race speed record of 243.67 miles per hour, made by Lieut. Al Williams of the Navy at St. Louis in 1923, will be eclipsed this fall, inasmuch as the latest model Curtiss Racer, now being built especially for this race, is said to be capable of attaining a speed of between 265 and 270 miles an hour, practically 4½ miles a minute. The time may not be far distant when airplanes will race along at 300 miles an hour.

As may well be supposed, to fly this speedy little Curtiss Racer requires a pilot of not only exceptional skill and daring, but one having the faculty of remaining cool under all emergencies with no "nerves." In selecting the pilots for the Pulitzer Race the Committee of Officers, composed of Brig. General James E. Fechet, Majors W. G. Kilner and Carl Spatz, and 1st.Lieut. E. S. Hoag, had no easy task before it. The four pilots were selected from a list of 32 applicants. The record of each officer, his ability as a pilot and his adaptability for flying high speed ships in a contest such as the Pulitzer Race were carefully considered before final decision was reached. It should be stated, in this connection, that the policy of the Army Air Service is to afford each pilot an opportunity to fly in this aeronautical classic, and for this reason any officer who participated therein in a previous year is not eligible to again compete for the prize.

Following the selection of pilots for the Pulitzer Race, the Committee considered 18 applications for ten positions in the John L. Mitchell Trophy Race, a strictly military event and limited to members of the 1st Pursuit Group. The race for this Trophy (given by Colonel William Mitchell in honor of his brother who was killed in action in the World War) is also an annual event, and is over a course of 120 miles. It was decided to leave the selection of the ten officers best qualified to participate in this race to the Commanding Officer of the First Pursuit Group.

A total of 21 applications were considered for the selection of ten entrants for the Bombardment type airplane race, also over a course of 120 miles. This race is limited to large capacity planes capable of carrying a load of 2,000 pounds or more and attaining an air speed of at least 85 miles an hour. The following Air Service pilots were designated for this race: Lieut. K. B. Wolfe, Brooks Field; Captain E. W. Duncan, Lieuts. J.F. Whiteley and C. L. Williams, Langley Field; Lieuts. H. A. Johnson and V. E. Bertrandias, McCook Field; Lieut. J.D. Barker of Phillips Field, Aberdeen, Md.; Lieuts. L.J. Carr and O. Moon of Kelly Field, and Lieut. E. E. Harmon of the Office, Chief of Air Service, Washington. Alternates: Lieut. B.S. Thompson, Phillips Field, and Lieut. D.L. Bruner, McCook Field.

For the Liberty Engine Builders Trophy Race, over a course of 180 miles, and limited to observation planes powered with the Liberty engine, the Committee considered the names of 55 pilots and selected twelve, the last two named being alternates; viz: Major H.A. Dargue, Office, Chief of Air Service; Lieut. E. P. Gaines, Fairfield, O.; Lieut. E. R. McReynolds, Bolling Field; Lieut. H.B. Chandler, Mitchel Field; Lieut. R. H. Clark, Fort Bliss, Texas; Lieut. W.B.McCoy, Brooks Field; Lieut. E.B.Bayley, Crissy Field, Lieut. V.H.Strahm, Middletown, Pa.; Lieut. H.C.Kincaid, Maxwell Field, Ala.; Lieut. M. Stenseth, Minneapolis, Minn.; Lieut. J.G. Williams, Rockwell Field, Calif.; and Lieut. J.E. Parker, Indianapolis, Ind.

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A RADIO BEACON

By A. M. Jacobs.

The announcement of a radio beacon tower to be erected at Mommouth, Ill., under the supervision of the Radio Laboratory, McCook Field, Dayton, Ohio, for the Air Mail Service brings to light another development of the Engineering Division achieved in cooperation with Signal Corps officers stationed there for the purpose. For some time test flights have been conducted by McCook Field in radio finding, using the beacon tower at Wilbur Wright Field as a base. Pilots have flown out and purposely lost themselves, using the direction finding signals as their only guide in returning home. Within a radius of 200 miles these experiments have invariably been successful.

The former system by which this was accomplished was known as the equi-signal system. The present system, which has been in use for something more than a year, is an outgrowth of the old equi-signal system and is known as the interlocking signal system. That is, the pilot trying to keep his course in the direction of the transmitting beacon hears certain signals. To the right and

left of the course, these signals have somewhat the character of the Morse "N" and "A" respectively. On the course, where these two interlocking signals are of the same intensity, a third signal is formed, such as the Morse "T", which is a continuous and unbroken sound. Hearing this constant sound, the pilot knows he is on his course. If the sound becomes broken into either of the two signals before mentioned, he knows he is to the right or the left of the course and must try for correction by resetting the nose of his plane until he hears the constant signal once more. One difficulty with the system has been that the flyer has had to depend entirely upon his hearing, involving considerable concentration and the possibility of personal error. To correct this difficulty a visual indicator has been devised.

This consists mainly of three small lights, mounted on the instrument board and connected with the receiving set, which flash constantly. The unbroken signal obtained by the interlocking of the two separate signals at a point of equal intensity causes a relay to operate a telephone selector which in turn causes a white light to flash. While the white light is flashing, the pilot knows he is on his course. To either side of the course, the component signals operate relays which in turn cause the selector to close the circuit, lighting a green or red light to the right or the left of the course, respectively. For economy of space, these light bulbs are of small, Xmas-tree size.

Perfected, the radio beacon is bound to be of inestimable value, especially on set courses such as are used in Airways flying and by the Air Mail service. It is past the experimental stage and success for it is assured. Tests show the visual indicator to be a most promising improvement.

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FLYING SCHOOL GRADUATES ASSIGNED TO STATIONS

Twenty-eight second lieutenants of Air Service, scheduled to graduate from the Advanced Flying School at Kelly Field, San Antonio, Texas, on or about September 15th, have been assigned to duty at Air Service stations, as follows: To Kelly Field - Earle E. Partridge, Edward F. Booth, Alexander G. Greig, Irving B. Greene; to Langley Field, Va. - Robert L. Brookings and John R. Hawkins; to Phillips Field, Aberdeen, Md. - George H. Steel and James Hewins, Jr.; to Selfridge Field, Mt. Clemens, Mich. - John J. Williams, Luther S. Smith, Carl J. Crane, John R. Armstrong, Lawrence C. Elliott, and Kirtley J. Gregg; to Marshall Field, Fort Riley, Kansas - Ralph E. Fisher; to Mitchel Field, L.I., New York - Walter C. White, Albert F. Glenn, Denis J. Mulligan and Harold C. King; to Post Field, Fort Sill, Okla. - Kenneth C. Strother, Cornelius W. Cousland, and Glen L. Davasher.; to Biggs Field, Ft. Bliss, Texas.- Lloyd E. Hunting; to Fort Sam Houston, Texas - Leslie P. Holcomb; to Bolling Field, D.C. - Thomas D. White and Ralph H. Lawter; to Maxwell Field, Montgomery, Ala. - William D. Old and George A. Whatley.

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One of the foremost juvenile publications in the United States - THE AMERICAN BOY published at Detroit, Michigan - will issue a special Aviation number for the month of October. This indicates the widespread interest which young America is exhibiting in the subject of aeronautics.

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A UNIQUE HOSE LINE

Using bamboo wood as a gasoline hose line is a rather unique experiment, but it demonstrates the truth of the old saying that necessity is the mother of invention.

The Third Pursuit Squadron, stationed at Clark Field, Pampanga, P.I., recently participated in some maneuvers at San Jose, Mindoro, during the course of which the pilot of one of the nine participating MB3A airplanes, Lieut. B.W. Chidlaw, had a forced landing in the wilds of Mindoro caused by a broken hose connection in the gasoline line. This mishap proved a source of no particular worry to the resourceful Engineering Officer of the flight, 2nd Lieut. O. R. Cook. Discovering some bamboo wood in the immediate vicinity of where the plane was set down, he used it in lieu of hose, and Lieut. Chidlaw was enabled to take-off and complete the rest of the flight to San Jose.

Service in the Tropics, it appears, is not without its compensations.

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LOENING AMPHIBIAN DELIVERED TO LANGLEY FIELD

A few days ago one of the new Army Loening Amphibians was delivered by air to Langley Field, Norfolk, Va., where it will be stationed as part of the equipment of the Army Air Service at that field.

Lieut. George C. McDonald, of Langley Field, was sent to the Loening plant to take delivery of the plane. After a few minutes' tuning up the motor, the new plane was launched in the water at the Loening Airport, East River and 31st Street and, with Lieut. McDonald as pilot and Grover Loening as passenger, the plane took off for its first flight, fully loaded with 140 gallons of gas.

As everything on the plane and its installation was found fully satisfactory in the air, Lieut. McDonald and Mr. Loening decided to proceed at once to Langley Field, and this non-stop flight of 310 miles was made in three hours and twelve minutes, showing a cruising average of 100 miles per hour, at 1480 r.p.m. of the inverted Liberty motor. The gas consumption on the way was approximately 23 gallons per hour.

Upon arrival at Langley Field, Lieut. McDonald pressed the electric button operating the lowering of the landing gear and proceeded to land on the field, taxying up to the line, where the aviators were greeted with considerable enthusiasm, not only by the Langley Field personnel but also by a large number of Pennsylvania State National Guard and Reserve pilots who are in training there.

During the trip Lieut. McDonald experimented with the much-talked-of "natural stability" of the Loening Amphibian, and was able to fly for fifteen minutes without touching the controls at all, during which time the plane deviated only slightly from a straight course in a long letter "S", and both longitudinal and lateral stability was shown to be absolutely inherent, in that no correction at all was necessary. This was found particularly interesting, as the air was quite bumpy at the time and apparently indicates that the major aerodynamical features of the Loening Amphibian in having the center of gravity at center of lateral fin area actually works out in practice to give a remarkable airworthy flying machine.

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COLLECTING RUST SPORES FOR THE DEPARTMENT OF AGRICULTURE

McCook Field flyers have been called into service against the deadly grain disease known as stem rust. A series of flights was recently completed by Lieut. James T. Hutchinson, accompanied by an observer, who carried with him a number of glass slides covered with a gelatinous substance. At different altitudes the observer exposed these slides to the rushing air currents, the idea being to collect the rust germs on them and send the slides to the Bureau of Plant Industry, U. S. Department of Agriculture, to determine at which altitude the rust germs are more prevalent and trace the source of same from the knowledge of the prevailing direction of air currents at various altitudes. Through these flights it was also sought to determine from day to day the number of rust spores floating in the air, to show their first appearance in the air and ascertain the connection between air currents and the spread of the germs.

It is the purpose now to have slides made at all flying fields and so determine in what part of the country the spores are most abundant.

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EXTRAORDINARY ACCIDENT TO AN AIRPLANE

A report just received from the American Military Attache at Rome, Italy, tells of a rather extraordinary airplane accident recently near Milan, Italy. The plane, which was piloted by Major Faccenda from Turin was sighted at an altitude of about 3,000 feet by personnel at both the Cinisello and Taliedo aviation fields, Milan. Suddenly a black mass was seen to detach itself from the plane, followed immediately by the landing gear. The plane had commenced to glide when another mass was seen to fall away. It was subsequently learned that the machine had lost its engine and gasoline tank. The engine fell in the courtyard of a house at 51 Viale Abruzzi (Milan), the landing gear and tank in Via

Stradella. After each successive loss the plane regained a horizontal position and pancaked down slowly. At 150 feet from the ground the plane turned over on the wing and then started spinning. It fell on one of the buildings of the Bianchi automobile factory. Both Major Faccenda and his mechanic were unhurt save for a few slight cuts in the head.

The plane and the three parts are being guarded pending an inquiry into the accident by the aviation authorities.

The next day a reporter of a Milan paper interviewed Major Faccenda, who stated: "The engine had functioned perfectly well all the way from Turin when suddenly while over the Central Station, Milan, we heard a clattering noise, the machine shaking violently from nose to tail. A blade of the propeller had broken off, evidently the friction of the propeller against the nose of the machine caused overheating and fracture. I immediately cut off the engine which, no longer properly supported, began to heave and bursting all the bolts, broke away. Deprived of over 700 pounds of weight, the plane assumed the so called 'cross' position (evidently a tail slip) and my first instinct was to jump. I tried the controls but the elevator would not function. The rudder functioned in part because the ailerons were working. The mechanic shouted at me to leave the cross position thinking it was due to my maneuver. I managed to get the plane into a slightly oblique position which corresponds to the side slip. It was now a question of maintaining this position, for if the air rushed into the fuselage it would have burst it. Now and again the plane began to gather speed and I thought we were lost. I knew there was a space in the vicinity where a landing could be effected and I made every effort to direct the plane accordingly. Finally in Via Plinio we shaved the top of a large building but in gliding over the Bianchi factory the wing struck a big hut 18 feet high and we crashed. The tragic flight lasted 7 minutes."

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WORLD FLIGHT COMMANDER RETURNS TO DUTY

Captain Lowell H. Smith recently returned to the Rockwell Air Intermediate Depot, Coronado, Calif., and resumed his old duties as Chief Engineer Officer and Chief Inspector, also Officer in Charge of Parachutes.

Captain Smith has been on detached duty and leave since the starting of the Round the World Flight and, according to the NEWS LETTER Correspondent, his return to duty at the Rockwell Depot was no doubt due to his personal desire to get back to the land of sunshine and flowers for which the Golden State of California is noted.

Lieut. Leslie P. Arnold, who accompanied Captain Smith on the World Flight, also reported at the Rockwell Air Intermediate Depot and has been assigned to duty as Assistant Engineer Officer and Operations Officer.

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WORLD FLYERS PRESENTED WITH D. S. M.

On Friday afternoon, August 14th, at 4:30 P.M., the troops, consisting of officers of the Rockwell Air Intermediate Depot, the 91st Aero Squadron, and the Reserve Officers in Camp, were paraded on the field in front of the Officers' Club and the Distinguished Service Medal awarded by Congress was presented to Captain Lowell H. Smith and 1st Lieut. Erik H. Nelson for services performed in connection with the World Flight, which was in command of Captain Smith.

Lieut.-Colonel Harry Graham, Commanding Officer of the Rockwell Air Intermediate Depot, made the presentation, which was witnessed by a large crowd of citizens from Coronado and San Diego.

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PREPARATIONS FOR INTERNATIONAL RACES AT MITCHEL FIELD

Big preparations are being made at Mitchel Field, Long Island for the International Air Races which will take place October 8, 9, and 10 of this year. The Publicity Committee in New York City, which is promoting the races, has made arrangements to have all roads lead to Mitchel Field during the big event. Large motor vehicles will run between New York City and Mitchel Field, to carry a part of the immense crowd that is expected. Local officials on Long Island and in New York are cooperating with the Army people to assist the traffic.

The flying course has already been laid off and the pylons are being erected. The pylons this year will be marked with black and white stripes, as formerly. Some of the contestants are already practicing on the course. On August 31st, Lieutenants James Doolittle and Cyrus Bettis traveled over the speed course, the former in a Sperry Messenger and the latter in a Vought. While these two officers are to fly speed planes, they are making slow trips around the course in service machines, in order to form a habit of keeping the course under stress of racing conditions. Arrangements have been made to have a doctor with motor conveyances stationed at each two-mile interval, in order to render first aid assistance to any aviators who have forced landings along the course.

Extensive plans are being made by Mitchel Field to take care of the officers and their wives who are expected to attend the meet. Major John B. Brooks, Race Executive Officer, has asked the AIR SERVICE NEWS LETTER to call attention to the fact that many officers are sending in their questionnaires unsigned and this results in confusion over assignments. The unsigned questionnaires are being returned to the various fields and the Commanding Officers asked to place them upon the bulletin board or try to identify the writing among the officers on the Post.

The International Races are becoming a pleasant social affair as well as an air meet. It is an opportunity for the families of officers who have formerly been stationed at the same fields to get together again. It is predicted that within a few years when commercial airplanes become about as cheap as automobiles, aviators will be able to take their families to the Air Races by plane, and thus avoid the expense and delay of train and automobile travel.

A press stand is being built to accommodate reporters at a point of vantage on the field, and arrangements are being made to take care of nearly any size crowd that may gather unless, perchance, the whole of New York, Brooklyn and the Queens decides to invade Mitchel Field. But even at that, the Committee states that plenty of room will be available and every facility is being provided for the pleasure of the guests.

One of the special features of the Races this year will be the "open hangars." The Government airplane hangars, containing all the newest types of airplanes, will be open to the public, and officers or mechanics will be on hand to explain the various types. Commercial flyers are especially invited to inspect the Government planes and see what progress has been made since they left the service. This "open hangar" policy, with special invitation to commercial aviators, is a result of a lesson learned from the races last year, when there was complaint by commercial flyers over not being permitted to inspect the Government planes, and as the Army Air Service wishes to keep commercial pilots abreast of the times, this special invitation has been issued them to come, look and learn what has been done, and if they can make any improvements, let them try to do so.

The commercial planes that are not engaging in the contests will be parked at Hazelhurst Field, across the road from Mitchel Field, while the contestants will be kept at Mitchel Field. A novel arrangement has been made with tickets; a sort of a "wandering" privilege is allowed a ticket holder. When a person buys a ticket, the gatekeeper leaves him a stub and with this stub in hand he can wander off the post, around the line of automobiles, into the hangars, and enjoy complete freedom of the whole premises without feeling that he must stay in one particular pen.

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AIR SERVICE ENLISTED MEN QUALIFY AS FLYING CADETS

Enlisted men of the Army Air Service to the number of twenty-one and three from other branches of the Service have qualified for appointment as flying cadets and have been ordered to Brooks Field, San Antonio, Texas, reporting upon arrival to the Commandant of the Primary Flying School not later than September 10th for appointment as flying cadets, viz:

Private, 1st Cl. Ralph T. Wickford, Boston Air Port; Corporal Arthur E. Derby and Privates Herman E. Buchheim and Burdette C. Hughes from Langley Field, Va.; Privates Harry I. Downes, Arthur G. Benson, Ford J. Lauer, Clare E. McClure, Charles L. Nichols and Louis R. Zeamans from Chanute Field, Ill.; Corporal Harold C. Beedle, Privates Roy Judson Caswell, Ernest H. Lawson, Harold F. Payton and Dan F. Voorhees from Scott Field, Ill.; Privates William Garrett and Otto C. George from Air Service Det., Ft. Leavenworth, Kans; Privates Russell G. Parker and Vaughan T. Ward from Kelly Field, Texas; Privates Howard Franklin

Jones and James M. Morrison from Crissy Field, Calif.; Private Moss Leslie Harris, 2d Div. Train, Q.M. Corps, Ft. Sam Houston, Texas; Private Harold A. Wheaton, Troop E, 2d Cavalry, Ft. Riley, Kansas; Private August J. Hurgon, 6th Signal Service Co. Scott Field, Ill.

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DETROIT FLYING CLUB ADDS BALLOON SECTION

The discovery of an unusually good supply of hydrogen gas in the vicinity of Detroit, Michigan, coupled with the desirability of having some sort of lighter-than-air facilities for the Army in that region, has led the Detroit Flying Club to organize a Balloon Section thereof. The field which it is contemplated using at present is at Wyandotte, about 15 miles southeast of Detroit.

In a recent communication to the Chief of Air Service, Mr. Ralph Upson, Chairman of the Balloon Section of the Detroit Flying Club, expresses the hope that if this balloon station is properly supported it will be found worth while to move it, (piping the gas) to the Ford Airport, where more perfect coordination with other aircraft may be had. He adds that in the meantime the facilities for free ballooning are very good and that he would regard it as a privilege to have the Army participate in their use.

To be eligible for membership in the Balloon Section of the Detroit Flying Club, persons must be over 18 years of age who have made two or more flights of at least one hour each in a free or captive balloon or in an airship. Members will also be required to hold at least one share in the organization, costing $25.00 each.

Cadets shall be those between 14 and 18 years, and all who have not made two flights. Any Cadet is eligible to purchase shares. If under 30 years of age, Cadets may be admitted for an initiation fee of $5.00 (1/5 share), which will be credited to the eventual purchase of shares. Cadets over 30 years of age will be required to hold at least one share.

Non-resident members over 14 with or without any previous flight experience may be admitted on the same basis as Cadets. The voting shall be by shares, except that no individual may cast more than five votes.

Applications for flights up to within one week of flight date will be honored in the following order: 1. Shareholders have repeated preference in proportion to the number of shares. Shareholders of equal ownership, seniority by date of purchase: 2. None-Shareholder Cadets preference in order of man-hours put in on preparations: 3. Flying Club Members not members of balloon section: 4. Non-Members.

After qualification as pilots, shareholders go to bottom of shareholders passenger waiting list.

Classes Nos. 2, 3 and 4 will pay $10.00 service charge per passenger above the regular rate. In the case of Class 2 the service fee will be applied to the purchase of shares.

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MEXICO STUDIES AIRPLANE DUSTING

According to THE OFFICIAL RECORD, U.S. Department of Agriculture, Mexican officials recently visited the United States to find a plan for exterminating the destructive locust. Recognizing the success which the Agricultural Department has had in the use of airplanes in applying insecticides, the Secretary of Agriculture of Mexico, Senor Juan Ballesteros, recently visited the offices of the Bureau of Entomology in Houston, Texas, and Tallulah, La., to investigate that work. Accompanying the Secretary were Senor Manuel Alcazar, a trained naturalist of much experience in Mexico, and Senor Mariano Dominguez, a well-known aviator.

For some time a migratory locust or grasshopper has been causing enormous damage in the southern portion of Mexico. The use of airplanes seemed a feasible method of applying insecticides to control this outbreak. Accordingly, the Bureau of Entomology called the attention of the Mexican Department of Agriculture to this possibility.

Three years ago the Agricultural Department conducted experiments at the boll weevil laboratory at Tallulah, La., relative to the use of airplanes for distributing poison dust for the control of the boll weevil. Results showed definitely that the airplane was an efficient, effective and profitable method of controlling heavy and widespread infestations of the boll weevil and, incidentally, leafworm - a heavy outbreak of which was in the same locality - as

contrasted with the results of dusting with ordinary ground machinery.

In connection with the work of the Bureau of Entomology in airplane dusting, the Office of Motion Pictures, cooperating with the Army Air Service, made a one-reel film entitled "Fighting Insects from Airplanes". This film was shown to the Mexican Government officials while at Tallulah.

The experiments conducted by the Department showed that the military airplane, used solely for the work at first, was not suitable. Therefore a number of airplane manufacturers were interested in the subject of developing special planes for insecticide distribution which would be more efficient and safer than the military types previously employed. The result has been that several of these have now been built and are being further studied and developed. The commercial possibilities of these specially built planes have extended to the point where several thousand acres are being dusted commercially by them this year, and extensive plans are under way for an even more widespread use of this method in the future. As a result of the visit of this commission from the Mexican Government, it is quite likely that the Mexican Government will purchase several of these special dusting planes.

In order to raise funds for the support of the work against the locust, the Mexican Government is now issuing a special 1-cent stamp. All domestic mail in Mexico must carry this additional stamp, the proceeds from which will go into the locust fund. At present the amount reaching the treasury from this source is about $40,000 gold per month.

At Houston, Texas, the commission conferred at length with W. D. Hunter of the Federal Horticultural Board regarding the pink boll worm situation in Mexico. The situation is quite serious at present and the attempt is being made to determine what further steps can be taken to prevent the spread of that insect from the infested district in Mexico to other parts of that Republic and to reduce the danger of infestation reaching the United States. Toward this end, Senor Ballesteros is contemplating the erection of large fumigating houses for disinfecting all railroad cars which leave the regions infested by the pink boll worms for other parts of Mexico, including the ports on the Rio Grande.

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RESERVE OFFICER'S COMMENTS ON TRAINING CAMP

As evidence of his appreciation of the Air Service Training Camp recently conducted at Biggs Field, Fort Bliss, Texas, 1st Lieut. Lloyd J. Andrews, A.S. ORC, addressed the following letter to the Commanding General, Fort Bliss, Texas:

"As our fifteen day tour of active duty draws to a close and we are preparing to return to our homes, there are certain outstanding features, incident to our active tour, foremost in our minds.

The first of these is the courtesy and cooperation extended the Reserve officers by the officers and enlisted personnel of Biggs Field. We have found the officers always ready to do anything in their power to make our short stay pleasant as well as profitable, the most notable thing here is the total absence of any distinction between Reserve and Regular. We leave them with real regret and with the feeling that we are leaving some new, but real friends behind. The enlisted personnel is highly efficient, the ships well rigged and motors in good condition. They have been most courteous and cooperative.

In regard to the instruction received, so far as I am concerned it has been invaluable. For over a year I have not been near a flying field and had lost touch with the air and what was going on. After this active service I again can say that I am really part of the Army, not only in commission but in ability to assist in case of emergency. I have had a general resume of an Air Service Officer's duty and this resume has been most efficiently handled by the Regular officers and men, and I am looking forward to my next tour of active duty at this post.

Quarters and mess facilities available for Reserve officers were the same as those assigned regular officers and were highly satisfactory.

In closing I wish to state that, in my estimation, this Camp has not only been a success from a military standpoint but it has been a success from a civilian standpoint in that it has cemented the friendship between the Regular officers and the officers who are in civil life. In time to come the friendships so made will be of value to the Army as a whole as it will assist in educating our masses of civilian population as to the needs of the Army."

V-5467, A.S.

ITALIAN "ACE" CHALLENGES NAPLES FENCING MASTER

According to a recent issue of one of the local newspapers, Washington may soon be the scene of a duel between Capt. Armond Guglielmi, famous Italian war ace, and Giancinto Sanges, master of the Italian Grand Academy of Fencing, Naples. The challenge was made by Capt. Guglielmi, who is now in Washington. Sanges has just arrived in New York. He accepted the challenge and Washington has been agreed upon as the place for the duel.

Capt. Guglielmi, who wears the decorations of five countries for his war record, told Sanges that "I believe myself able to keep your nose at sword's point." Sanges, famous European duellist, replied that he was "well able to protect it."

The young Italian war ace has adopted the American name of Williams since coming to this country to engage in commercial aviation. He is an automobile racer and a swordsman as well as an aviator. "In tendering this challenge," wrot Capt. Williams to Sanges, "permit me to mention that I have already filled engagements with several swordsmen of renown in Europe. My adversaries included a captain of the Royal British Army, whom I vanquished in the first assault; a recognized swordsman of ability in Rome whose name I cannot give here; and also the Duke of Picani, whom I engaged in Naples, which bout was stopped by the jury on account of his serious wounds.

"In Marseilles also I had an encounter with Monsieur Martell, the Mayor, who at the termination of the bout carried half of my florette thru the muscle of his left arm as a souvenir." Capt. Williams asks Sanges to "provide your jury and doctors" at the earliest possible date.

In accepting the challenge, Sanges said that he was "particularly gratified to encounter a man of such great prowess and one who has vanquished such distinguished opponents."

The young Italian ace is going ahead with his arrangements for the duel. "In Europe the noble sport is witnessed by royalty," he said. "I want President Coolidge to watch this duel." When told that in America he probably would find it difficult to stage the duel without each contestant being well protected and assurance given that the match was simply an exhibition of skill, Capt. Williams said that in meeting Sanges he was prepared for a real duel.

There is no quarrel between the two men. The match is simply to be a test of skill with the swords. The proposed meeting between the young ace and Sanges has created intense interest in diplomatic and Army circles here, where Capt. Williams is well known. He has even gone so far in preparation of the duel to name his doctors and seconds here.

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WAR DEPARTMENT ORDERS AFFECTING AIR SERVICE OFFICERS

Changes of Station

Major Benjamin G. Weir, Capt. W.H. Crom and 1st Lieut. Reuben D. Biggs to temporary duty as students at Army Industrial College, Washington, D.C.

Capt. Albert W. Stevens to report to Primary Flying School, Brooks Field, Texas, for training.

First Lieut. Arthur L. McCullough, Corps of Engineers, and 2nd Lieut. Daniel H. Robertson, Jr., Infantry, both detailed to Air Service, to proceed to Brooks Field for training at Air Service Primary Flying School.

Second Lieut. Judson M. Smith to Brooks Field, Texas, for training at Primary Flying School.

First Lieut. James M. Gillespie, Advanced Flying School, to report to C.O. of that field for duty about September 15th.

Major Adlai H. Gilkeson relieved from Mass. Institute of Technology to take course at Chemical Warfare School, Edgewood Arsenal, Md., upon completion of which to report to Commandant, Chemical Warfare School for duty as liaison officer between Air Service and Chemical Warfare Service.

Major Harold A. Strauss from A.S. Primary Flying School, Brooks Field, to Advanced Flying School, Kelly Field, to take observation course, upon completion of which to report about Sept. 15th to C.O., Scott Field, Ill., for duty.

First Lieut. Alvan C. Kincaid, of Maxwell Field, and 1st Lieut. John B. Patrick, of Pope Field, to proceed to Kelly Field, Texas, about Sept. 8th for duty.

First Lieut. John M. McCulloch, upon relief from duty in Hawaiian Dept., to proceed to Middletown Air Intermediate Depot for duty.

First Lieut. Randolph P. Williams, S.C., detailed to Air Service, to proceed to Scott Field, Ill., about Sept. 13th for training at Balloon and Airship School.

Orders directing change of station of 1st Lieut. Walter K. Burgess from Philippines to Kelly Field, Texas, are revoked.

Second Lieut. Herbert K. Baisley relieved from Chanute Field and assigned to Scott Field, Ill. for duty.

Second Lieut. Stewart W. Towle, Jr. on temporary duty at Chanute Field, to report to C.O. of that field for assignment to duty.

Resignations.

The resignations of Second Lieuts. George James Smith and Hilton Welborn Long accepted by the President.

Appointment

Captain Oliver S. Ferson appointed Assistant Commandant A.S. Engineering School, McCook Field, vice Major Leo A. Walton, A.S.

Promotion

Second Lieut. James Joseph Welker, Reserve, promoted to First Lieut. August 18, 1925.

Leaves of Absence

First Lieut. Walter E. Richards, 2 months, Sept. 10th; Capt. Walter F. Kraus, 19 days, upon relief from Walter Reed General Hospital; Major Leo A. Walton, two months and 10 days, Sept. 3rd.

Reserve Officers assigned to active duty

First Lieut. Harry Jackson to active duty in Office Chief of Air Service for 15 days, effective August 31st.

Second Lieut. Walter Edwin Lees to active duty at McCook Field, Dayton, Ohio, for 15 days, effective Sept. 14th.

Major David Breed Lindsay to active duty in Office Chief of Air Service for 15 days from October 18th.

Second Lieuts. Milo Edward Oliphant and Eldo Armon Peterman to active duty at Brooks Field, Texas, from Sept. 12th to March 11, 1926.

Capt. Raymond Edward Vaughan to McCook Field for 15 days' active duty effective September 7th.

Second Lieut. Irving Sampson Dobbs to active duty at Brooks Field, Texas, from Sept. 12th to March 11, 1926.

Second Lieut. Edward Gordon Nabell to active duty at Brooks Field, Texas, from Sept. 13th to March 12, 1926.

Second Lieuts. John Louis Hosch, Frank Dunne Klein, Charles Bernard Overacker, Jr., Horace Emil Weihmiller to active duty at Brooks Field, San Antonio, Texas, from September 11th to March 10, 1926.

Second Lieuts. William E. Beach and Manning David Seil to active duty at Brooks Field, Texas, from Sept. 12th to March 11, 1926.

Second Lieut. Charles Onno Garrels to active duty at Brooks Field from Sept. 13th to March 12, 1926.

Second Lieut. Vernon Edgar Abbitt to active duty at Chanute Field, Ill., from August 30th to September 13th.

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STUDENT OFFICERS TO ADVANCED FLYING SCHOOL

Thirteen student officers who completed their primary flying training at the school at Brooks Field, San Antonio, Texas, have been assigned to the Advanced Flying School at Kelly Field, San Antonio, Texas, to take the course at that school, beginning September 14th. Among these students is 2nd Lieut. Henry H. Ogden, Air Service, well known as the companion of Lieut. Leigh Wade, on the Around-the-World Flight. The names of these officers are as follows:

Captain Edgar O. Sorenson, First Lieut. Ralph F. Stearley, Second Lts. Walter D. Buie, Donald F. Fritch, Lester M. Rouch, Raymond E. Culbertson, Herbert W. Anderson, Leonard H. Rodieck, John L. Hitchings, Richard W. Gibson, Arthur L. Bump, Jr., Richard G. Herbine and Henry H. Ogden.

ACTING SECRETARY OF WAR FLIES TO MAINE IN LOENING AMPHIBIAN

After spending nearly a week away from Mitchel Field on a cruise up the coast of Maine, Captain Thomas Boland returned to Mitchel Field with the Loening Amphibian, which is being used by this station on numerous special missions. Captain Boland, after leaving Mitchel Field on Aug. 24th, flew up to Hartford, Conn., and then from there cross-country to Newport, R.I., around Cape Cod up to Boston, making a trip of about 300 miles in three hours, studying the cross-country conditions in this region, particularly with reference to water landing localities for operations from Mitchel Field. The Amphibian landed in Boston on the landing field at the East Boston Airport. On the following day when the Acting Secretary of War, Honorable Dwight F. Davis, arrived at 4:00 P.M., the plane promptly took off with him as a passenger, and a non-stop flight was made to Islesboro, Maine, a distance of slightly over 200 miles, which was done in an hour and fifty minutes. The Amphibian carried 140 gallons of gas. It was anchored alongside of Mr. Davis' residence in a protected cove, where it stayed overnight. The Secretary expressed himself as being very pleased with his trip.

The following day, Captain Bolland made several short trips in this vicinity, demonstrating the machine and then flew to Portland, Maine, in about an hour, where he circled over the city examining several landing fields and finally landed in the harbor of Portland and taxied up on a beach convenient to the city. The plane was moored here over-night, and the following day Captain Bolland was joined by Lieut. Wade, the World Flier, and the Amphibian flew from Portland to Mere Point, Maine, where a celebration was being held dedicating a memorial tablet to commemorate the arrival there of the World Fliers last year, and several demonstration flights were made by the Amphibian on this occasion, Lieut. Wade and Captain Bolland piloting, alternately. The Amphibian was then subsequently flown to New London, Connecticut, where Captain Bolland landed it in the Thames River and tied up to a buoy over-night. Lieut. Wade left the plane at New London, and the following day Captain Bolland flew the Amphibian back and landed at Mitchel Field, after having made some thirty or forty flights during his cruise and having inspected virtually the entire New England coast, and made landings in many harbors and coves. Practically throughout the flight the engine was run at 1380 R.P.M. cruising speed, using slightly over twenty gallons an hour, and making an average cruising speed of 100 miles an hour. Captain Bolland reports that while the high speed of the Amphibian is about the same as a D.H., the cruising speed is definitely faster by eight to ten miles an hour. The ease with which the plane may take off, its advantages of alighting on land or water was amply demonstrated in this cruise, as well as the great convenience in cross-country flying of being independent of the limited landing conditions. With many extended cruises of this sort the operating personnel is giving the Loening Amphibian a very thorough service test, and altho the plane was only delivered to Mitchel Field a few weeks ago it has already been off on several extended missions. So far, the pilots at Mitchel Field report that the inverted Liberty motor is functioning perfectly, and no adjustments whatsoever have been necessary on the plane, excepting careful maintenance to prevent rusting of metal parts due to the plane being away so long from its base.

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AIR MEET AT BATTLE CREEK, MICHIGAN

Coincident with the dedication of the airport at Battle Creek, Mich., an air meet was staged there August 29th and 30th, which was participated in by Army Air Service and civilian pilots.

Various races were held, and Lieut. Russell L. Meredith of Selfridge Field carried off high speed honors, his time over a 30-mile course being 13 minutes and 45 seconds. James Piersol of Kalamazoo won the climbing contest, 1,000 feet and down from a standing start in 2 minutes, 9-3/5 seconds.

Specialties included a bomb-dropping exhibition by Lieut. H.A. Johnson, an exhibition flight by Lieut. James H. Doolittle in the Loening Amphibian, sky writing by Lieut. G.P. Tourtellot, parachute jumps by Joe Crane during the course of which he fell 2,000 feet before opening his chute, and air acrobatics by Major T.G. Lanphier, Lieuts. R.J. Minty and A.J. Lyon of the 1st Pursuit Group, Selfridge Field.

Lieut. Tourtellot was awarded first prize for the most expert [illegible]ing of a plane during the meet.

It is estimated that a profit of about $10,000 will be realized from the Meet, which the Chamber of Commerce of Battle Creek will devote towards the development of the airport.

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MORE SAMPLES OF ENGLISH AS SHE IS "WRIT"

Amongst the mass of correspondence received from day to day in the Office, Chief of Air Service there is found every once in a while a veritable literary gem which serves to relieve the monotomy. Two letters recently received are excellent examples of these unusual communications. In one letter the writer offers the Air Service an excellent landing field with fine shade trees, while in another one the writer expresses his desire to purchase an airplane in order to pursue to better advantage his vocation as a church steeple painter. Both letters are quoted below for the edification of NEWS LETTER readers, viz:

"Denver, Colo.
8-20-25

General Patrick
Washington D C
My Dear General.

I Have a fine Place for an aviation field. I am told that you are the only man to see about that.

My Place is 20 miles south of Pueblo Colo in Pueblo co. a Rounding Piece of Prarie six thousand ft elevation. the best of climate not hot nor cold. an unlimited amount of the best of spring water and shade trees. green all year round I think it is the finest Place for an aviation field that I ever saw. one of the Prettiest Places in the World. the Prettiest Mountain Views I ever saw. level Prarie Road to Pueblo. one Hour drive with fliver would be a fortune to a young man to own. I am not young. am an ex soldier.. dont want a fortune out of the Place. will give a Long Lease to the Govt very cheap or sell very cheap, would almost give it to the Government if they would make an aviation field of it. I Have cleared out all the underbrush and Dead Rubbish. it's a Picnic Ground now. lots of wild game quails bob whites mountain quails, jack and cottom tail, bobb cats tiger cats antelope and Deer. several hundred thousand acres of wild uncultivated Land adjoining. I am getting only a little Rent for grazing. it is no toy nor no joke there is no Place about Denver or Cheyenne near its equal for such a field. it beats them badly for climate and neither Denver nor Cheyenne has shade trees or living water. my water is the Healthiest and best that I ever saw and I have been a long way. if I was a young man I would hot offer it for sale at all.

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"Long Lake, Mich. Aug. 23 - 1925

Washington, D.C.
My dear Mr. -------

I thought Id write you a fue lines in regards of witch Ive ben informed. That the Governmint on the West Coast Frisco or Sceatel. The Governmint is selling new crated airaplaines verry cheap. I believe I would verry much Intrested in one. you see I am a Steeple Jack Painter and my bussiness requires me to go up heigh in the air on Church Steeples on Flag poles & Ect. & I would like to go heigher. The Heigher I go the better I like it. I belive this a great Scheem to make aviators for the army and navy by selling air plains to persons at cost or below. or lease them to young men of good Intelegence & ect. Well I dont know what the War Department thinks of this Scheem but let me hear what is the cheepest price fore one. I hope you will find out fore me at an early date. for I have a heigh crane to Paint in Wisconsin & i will be on my way in about 2 weeks or so. Well hears hopping every thing all O.K. verry

Truly yours

Long Lake, Mich." V-5467, A.S.

NOTES FROM AIR SERVICE FIELDS

Rockwell Air Intermediate Depot, Coronado, Calif., August 28.

With the breaking up of the Reserve Officers Training Camp and the return of the 91st Observation Squadron and 15th Photo Section to their home station at Crissy Field, this Depot has settled back into its regular routine of repair and supply. While the Camp this year was considered a big success and was attended by over 160 Reserve officers, due to the shortage of officers at this depot little was done in the way of athletic contests between the Depot force and the visitors.

Rev. S. A. Webber, father of Lieut. Charles L. Webber, whose plane crashed on the Cuyamaca mountains December 7, 1922, while enroute to New Mexico with Colonel Marshall, Chief of Cavalry as passenger, was a recent visitor at this Depot. This was his first visit to this part of the Golden West and he was much pleased with the climate and the hospitality shown him in Southern California.

Mr. Webber came down from Los Angeles for the express purpose of meeting and personally thanking the personnel at this Depot for the untiring work done them in the long search for Lieut. Webber's missing plane, and the thoughtfulness of placing a stone marker on the top of the high peak on which Lieut. Webber made his last landing.

Lieut. Virgil Hine, A.S. Brooks Field, formerly Adjutant at this Depot, with Major Munnikhuysen, Q.M.C., also an old timer here, arrived by air from Brooks Field on August 15th to visit old friends and spend a few days in the cool and invigorating breezes of the Pacific Ocean. While here, Lieut. Hine had a minor overhaul given his ship and an engine change made. They departed for Brooks Field on August 25th.

Major George E. Reinburg, A.S., is a visitor at this field, having just returned from the Philippine Islands.

Brooks Field, San Antonio, Texas, August 19th.

The building of an operations office on the line was started this week, which means the flying office can be moved from the school building and thus be more centrally located for the work they have to carry on.

Although about fifty new men have reported to this field, the squadrons are still under strength. These few, while relieving the situation temporarily will not help very long, as another group of discharges are due in the very near future.

The Faculty Board held two meetings this week, at which time six Cadets were eliminated from further training. Inroads made into the size of the class have been such that by the time it reaches Kelly Field in the next few weeks it will be exceedingly small.

During the past week this field totalled 438:55 aircraft hours and 673:55 man hours, including 177:50 cross-country hours.

The following are the cross-country flights for the week ending August 15th:

To San Diego, Calif. - 1st Lieut. Virgil Hine with Major Munnikhuysen, Q.M.C., as passenger; to Corpus Christi, Texas - 1st Lieut. J. D. Corkille with Sgt. Bills; to Austin, Texas - Staff Sgt. Robert DeWald with mechanic; to Comfort, Texas - 1st Lieut. K. B. Wolfe with Lieut. H. Bivins; to Fort Worth, Texas - 1st Lieut. C. Y. Banfill with Corp. G. A. Campbell; to Laredo, Texas - Capt. Alfred F. King, Jr., with W. O. Albert of Ft. Sam Houston; to Fort Clark, Texas - 2nd Lieut. T. H. McCormick with Capt. J.M. Tully, Cavalry; to Houston, Texas - 2nd Lieut. Paul W. Wolf with Lieut. D. M. Schlatter; to Seattle, Wash. - 2nd Lieut. C.S. Thorpe with Lieut. R.M. Webster; to Bandera, Texas - Capt. Oldfield.

Hdqrs. 2nd Division, Biggs Field, Ft. Bliss, Texas, August 21st.

The class of Reserve Officers consisting of ten Air Service officers and one Medical officer, completed their training at this station on August 15th with a total flying time of 133 hours and 55 minutes.

The following cross-country flights were made: Staff Sergeant F. O. Tyler to Tucson, Ariz., August 14th, taking Private Pietszak to that station to relieve Private Paul Braswell on detached service; Lieut. Ray H. Clark and Tech. Sgt. F. B. Maloney on airways to San Diego and Long Beach, Calif.; Lieut.

Guy H. Gale and Captain Walter Bender to Dryden, Texas, August 18th, for the purpose of inspecting the airdrome at that place, and in connection with the Supply Dept.

Clark Field, Pampanga, P.I., July 16th.

Clark Field is the home station of the 3rd Pursuit Squadron, touted throughout the Philippine Department as the best organization therein. Of course, if you have any doubts I might refer you to the I.G. who paid us a visit on June 27th. Most of you no doubt have experienced the peculiar sensation that the old boy's annual visit gives the officer and soldier prior to his arrival, and the relief after he has departed. But to prove that we do not spend all of our time policing up for his next visit I will quote you some figures on flying with a monthly average of twelve pilots present for duty from July 1, 1924, to June 30, 1925:

Cross-country 968:25; Formation 341:45; Miscellaneous training 466:47; Testing 176:35; Total aircraft hours 1,953:32; Total man hours 2,719:27; High month aircraft hours 278:50, man hours 404:50; Low month aircraft hours 63:35, man hours 86:35.

During the year the personnel of the organization participated in maneuvers of the Group and the Philippine Division. The former were held at San Jose, Mindoro, and our share in them called for nine MB3A airplanes with pilots attached. All returned home in the best of condition and there was but one forced landing.

The Division maneuvers were held at Fort William McKinley, and our pilots succeeded in dusting off the foot troops. A mapping detail was sent out by the 24th Field Artillery (P.S.) and the 26th Cav. (P.S.) to sketch the area in and around Capas, Gerona St. Rosario, San Bongabon, Majan and Agri Point, San Jose, Pantabangan, Markit, Bacong, Baler Bay, Cabanatuan, Pura, Nueva. We were assigned to make contact with these parties at least three times a week in order that they might order supplies, rations, etc. A roster was run for these missions and all pilots on the field made at least two trips and upon their return from them they generally had something amusing to report. The doughnut was handed to 1st Lieut. W. A. Maxwell and 1st Lieut. W.M. Lanagan for the first aerial cash and carry bakery in the Islands, if not in the world, as the story comes to me as follows:

They left Clark Field at about 1:00 P.M. with the expectations of making contact with the detachment of the 24th F.A. (P.S.) first. Evidently the detachment changed their route, as they were unable to locate them; so they carried on and made contact with the Cavalry detachment and made their delivery of delicacies, newspapers, etc. and the Cavalry boys displayed a panel calling for 4 loaves of bread on the next trip. Lieut. Lanagan got the panel, and as he was surrounded with fresh beef, butter, lard, cream cheese, strawberry jam, saltine wafers and 4 loaves of bread meant for the Artillery Detachment, the thought hit him why not give these boys some real service. Bill immediately scribbled a note anx slipped it to Buddie asking him about dropping the bread they had abroad. The answer being "Yes", Major Considine and his party had fresh bread for dinner that evening.

The Squadron gave a dinner July 4th for our Commanding Officer, Major John C. McDonnell, known in some parts as JOCKO, who is leaving very shortly on a two months' leave which he is planning to spend in Indo China hunting large game. Upon his return he will assume command of the 4th Composite Group with station at Camp Nichols. The dinner was also in honor of Major R. F. Longacre, M.C., our genial Flight Surgeon, who received orders transferring him to Camp Nichols, and the following enlisted personnel who are to return to the States on the good Transport THOMAS.

First Sergeant B. K. Wonson who is returning to his first love - Lighter-than-air, with station at Scott Field, Master Sergeant W.H. Rice, known to many as RUSTY, who is still awaiting orders for a new station upon his arrival in the states and hoping that they will send him to the 9th Corps, Staff Sergeant C. G. Waters who is striking out for Chanute Field and more radio knowledge, Sergeant W. L. Davidson headed for Selfridge Field and old Pals with the advanced idea of finding out whether or not everything that the Detroit Star Reporter publishes is true, Corporal Changery who is returning as a Buck with the intention of purchasing a discharge on his arrival in S.F., Private E. H. Pace who is getting out on dependency, Corporal P. L. Brown, Privates Joyner and Rady who have completed their tour in the tropics and are looking forward to new assignments upon their arrival at Fort McDowell. Our

Mess Sergeant strutted his stuff in fine style with a barbacue of porkers and all trimmings and a good supply of amber fluid, dinner was served at 12:15 P.M., and the afternoon was devoted to an entertainment by talent of the Squadron and Private Graham of the Q.M. Det., Camp Stotsenburg, who is an accomplished canary and put over a few numbers in fine style. Sergeant Rogers and Private Mann tickled the ivorys on the old music box and the 26th Cavalry orchestra furnished music during the dinner and thru-out the afternoon. Lieutenant F.P. (POP) Kenny who in addition to his other duties took an assignment by himself as band leader and organized an 18 piece band among the enlisted personnel of the Squadron about three (3) months ago showed the Squadron and its guests just what could be done if a man cared to proceed to the bondoks for a few hours daily and practice tooting, beating and blowing by leading his bunch thru a number of very fine selections.

The Squadron had as guests the officers and ladies of the Squadron with a few additional ladies supplied by Kookie Cook and Little Witt of sunshine fame and it was noticed that these dashing bachelors were in a very happy frame of mind thru out the day, so don't be surprised if you should hear of another tie up in the Philippines, 1st Lt. Guy Kirksey and wife of Camp Nichols and an alien enemy in the person of Captain J. D. Cook, 26th Cavalry (PS) who in addition to his other duties as Provost Marshal of Camp Stotsenburg craves to be in the air and is very anxious to get into the only branch of the Army, which is the Air Service. Last but not least comes Soap Suds Row who were among those present and were reported one hundred per cent strong, even to the kiddies, and it must be said that they behaved very well as I never heard a squall or bawl.

Langley Field, Hampton, Va., August 24th.

20th Photo Section.

During the period from August 3rd to 17th this Section had a class of twenty men from the 104th Photo Section, Maryland National Guard, numerous members of which have returned to Maryland sadder but wiser, due to the fact that aerial cameras are not as simple as they look. Besides that, in taking pictures one often gets lots of views that were not intended to be a part of the picture.

Technical Sergeant Vernon H. Merson is on detached service with the International News Reel Company, taking an intensive course in moving picture photography.

59th Service Squadron.

The organization just finished the Pistol Record Course, having qualified four men as experts, ten as sharpshooters and nine as marksmen.

First Lieut. Kenneth N. Walker, assigned to the organization, has taken over the duties of Squadron Adjutant.

Second Lieuts. David L. Behncke and Werner O. Bunge, A. S. Reserve, were assigned to the organization for active duty. Both are experienced pilots.

19th Balloon Company.

During the month Lieut. Kieburtz with a detail of ten men proceeded to Fort Bragg, N.C. to fly an observation balloon, the detail to last about three months.

Captain Charles P. Clark reported for duty from Scott Field and will assume command upon the departure for Brooks Field, Texas, of Captain William O. Butler, who will pursue a course in heavier-than-air training at the Primary Flying School.

58th Service Squadron.

In addition to the organization's various service duties, it also maintains 2nd Wing Headquarters Flight operating six DH4B's and two Loenings - one of the Air Yacht type and the other an Amphibian. The latter arrived August 20th, piloted by Lieut. George C. McDonald, with Mr. Grover C. Loening, the designer and manufacturer of the plane. Both pilot and passenger reported that the ship made an excellent run during the flight from New York in the 2 hours and 40 minutes running time.

This organization also operates and maintains the Model Airways plane for the station. Due to the careful workmanship and close inspections, this plane has made nine complete airways trips without the slightest mishap to pilot or plane, covering 21,600 air miles at an average speed of 88 miles per hour.

11th Bombardment Squadron

During the past week the Squadron flew a total of 32 hours, consisting of 27 flights, most of them cross-country.

The Squadron has a new top kick in Sergeant King, former supply sergeant.

First Sergeant Kendricks was reduced to grade of Staff Sergeant at his own request in order to take the crew chief's course at the Technical School at Chanute Field. The entire squadron congratulates him on his ambition.

2nd Photo Section.

Lieut. C. L. Williams and Staff Sgt. J.J. Barnhill left on a cross-country flight to Dayton on August 13th. Lieut. Foster V. Tompkins, Air Service Reserve, is in command of the organization during the absence of Lieut. Williams.

Privates Wm. J. Scott, Albert E. Bowers and Gilbert Mazer returned from Pope Field, Fort Bragg, N.C., where they were on detached service the past nine months with the Artillery Board and on numerous other photographic projects of the Department of Agriculture.

96th Squadron.

August 20th being Organization Day, the Squadron made plans to have a picnic at Grand View Beach with "much refreshment".

The recently acquired Squadron Boat will be ready for her maiden run by August 31st, after which we hope to supply the whole Post with fresh-caught Bluefish.

Air Service Tactical School.

Due to the great number of officers on academic leave and with more than one-third of the enlisted men of the organization on furlough, the few remaining individuals have had more than their share of work. However, many are beginning to drift back for duty, which means that the School Course is about to open, which it does on September 27th.

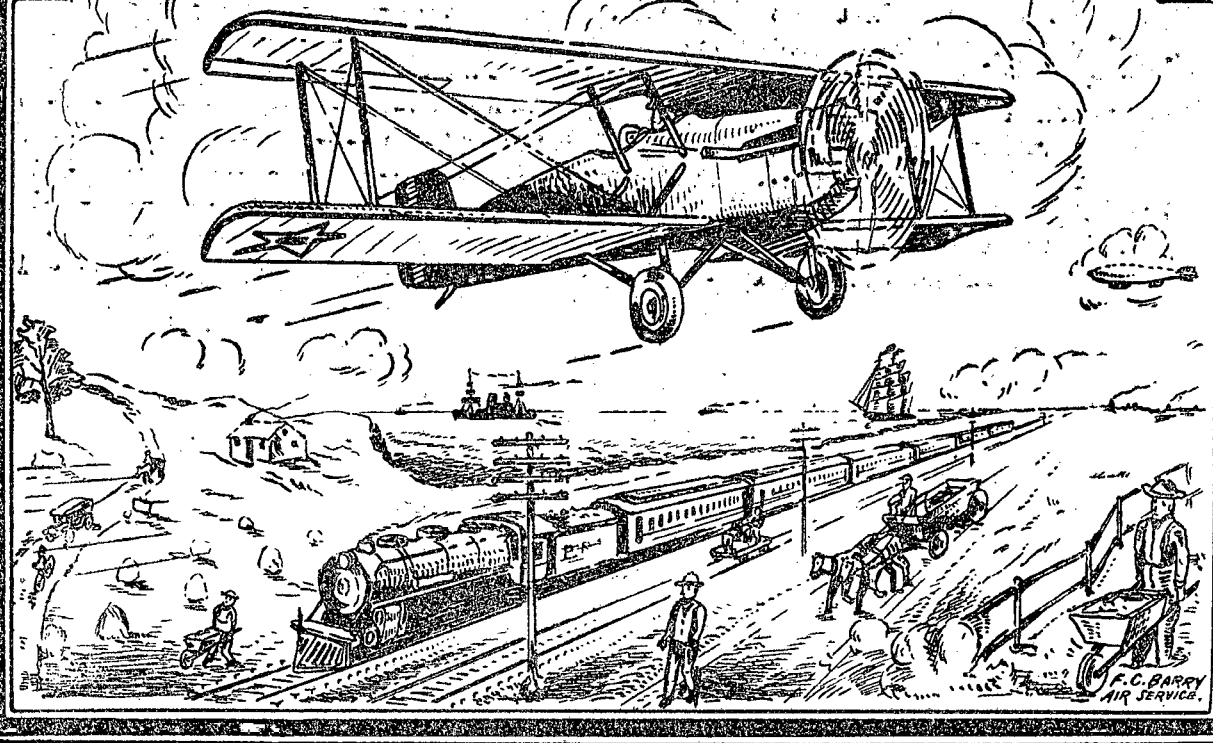
A number of new planes were received, consisting of two Atlantic Steel DH's, two new Voughts, which are a joy to the personnel, as well as several modified Tommy Morses, which are much easier to maintain than their predecessors.

First Lieut. H. F. Rouse was relieved as Secretary of the School, having completed his four years' tour of duty, and goes to Fairfield, Ohio, at the completion of his three months' leave. Judging by the smile he now wears he is not a bit unhappy over his lot. First Lieut. Edwin H. House reported to take Lieut. Rouse's place. Lieut. House is an old friend of ours, as he was with the School in 1921 and graduated with the Class of 1922.

Word was received that our Assistant Commandant, Major E. L. Naiden, who recently won the Virginia State Golf Championship, is gaining new laurels wherever he plays golf while on his leave.

The recently acquired horses for the use of the incoming students are pretty well tamed and saddle wise. In the process, however, there have been many aching backs and bruised elbows, as the animals were all fresh mounts that had not received much training.

U. S. Army Air Service News Letter



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VOL. IX AIR SERVICE NEWS NO. 17

Information Division, Air Service — October 2, 1925. — 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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GENERAL PATRICK'S STATEMENT BEFORE AIR BOARD

In his testimony, delivered September 22nd before the Special Committee appointed by the President to investigate the Air Services of the United States, Major General Mason M. Patrick, Chief of Air Service, stated, in part, as follows:

"I draw a very clear distinction between the work to be done in the air, the work to be done on or under the water and the work to be done on land. If this doctrine be correct it carries with it a revision of our National Defense policy and as equivalent thereto a change in certain of our organizations. Of course, the Committee understands I am presenting my personal opinion on this matter and I can say that I believe very thoroughly in this department of National Defense as an ultimate and ideal solution of the problems that now confront us. At the present time the President, constitutionally, is the Commander-in-Chief of the Army and Navy. He has no time to settle their petty quarrels even in peace. In time of war he is too taken up with other things. I am satisfied a Minister of Defense would be advantageous and such an agency could settle always every question that could arise. The Minister of Defense should have under him an air component, a sea component and a land component. I do not think, however, that the time is yet propitious for so radical a change and I recommend and repeat what I have already recommended to the War Department a step in that direction which I believe to be one which should be taken and should be taken now. I have recommended that the Air Service be given a semi-autonomous status and allowed to develop without the handicap now placed upon it; that it be formed into an Air Corps and that the chief of that corps should report to the Secretary of War, just as at present the Chief of the Marine Corps reports to the Secretary of the Navy but is not under the Navy Department in any other way. I, of course, cannot speak for the Navy but I visualize a similar state of affairs in that department. If this be brought about there would then be an Army Air Corps and a Navy Air Corps. Therefore commercial aviation would be taken care of in the Department of Commerce where it belonged. If as time goes on, as developments come, this Department of National Defense is created, it is a simple matter, or would be a simple matter to take these two entities, the Air Corps of the Army and Navy and combine them. This is a partial solution. There are arguments against it, as well as in its favor. There would still be some possible duplication of effort. That would be rather in the way of technical development of aircraft than any other. The Army Air Corps would proceed with the technical development of its own equipment. Any similar body in the Navy would do the same thing. Now with constant consultation between the heads of these two departments I think we can reduce the duplication to a minimum. There is, also, as has been pointed out, a certain element of competition when you have these two technical bodies working along similar but not identical lines and that is advantageous rather than detrimental. At present the Chief of the Bureau of Aeronautics and myself and the Aeronautical Board practically settle upon experimental developments to be done by each service and while we infringe a little on each other, it amounts to nothing.

But no matter what the organization, there must be this clear definition of the missions of these two or rather of the missions of all of the combat agencies of the United States. I want to say there what I should have said at first that whatever be the organization, whether there be a Department of Aeronautics and all controlled by single heads, whether there be an Air Corps in the Army independent in a way of other combat branches and a similar one in the Navy, there must be assigned certain air troops. Commanders of these two should have absolute control, send them on such missions as they themselves prescribe.

V-5481, A.S.

The only question that would come up would be the strength of these air components. What of the total force should be definitely assigned to us? In my estimation of the situation I visualize the entire Navy Air Force being with the high sea fleet so that there is little or any question. They are under the command of the fleet commander and they do his work. In the Army it is different. We draw a very sharp distinction between Air Service and Air Force. Just what can this air component do for ground troops? It can observe the terrain and can give them information obtained by visual reconnaissance by photography, it can assist them in an attack, it can protect them in case of retreat or in case of ground attack. Its principal function is the securing of information and that is what we call Air Service and to them that particular part of the air component is an auxiliary arm. In addition to that there is the pursuit and the bombardment which constitute the Air Force and which can be sent far behind any front line that may be established, attack enemy objectives, and which may, as Marshall Foch has said, prove to be the deciding factor in some war of the future. These are the matters that demand attention and that must be solved.

Answering specifically your questions under the last head as to whether the present organization should be continued substantially as it now is, I say No. I believe there is a real reason for a change, not change for the sake of change but change in order that the National Defense may be better than it can possibly be under this present organization, and in that I am advocating no more and no less than those other officers who appeared before me. National Defense may proceed upon the best and most economical lines.

Single Air Service - I have already partially answered in the outline that which I believe should be done. Conceding that the Navy air component will be with the fleet, my answer to your question is, in a measure, "yes". That is, there should be substituted for the word "service" the word "force". There should be an air force which should be under the Secretary of War and not under the War Department itself and will be provided for National Defense. Your third question, I likewise answer that I believe it should have an organization somewhat analogous to the Marine Corps. Your last question, I have already answered. I do not believe there should be a Department of Aeronautics with an additional Cabinet member. "

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ENTRIES FOR JOHN L. MITCHELL TROPHY RACE

Ten Air Service pilots, members of the First Pursuit Group stationed at Selfridge Field, Mt. Clemens, Mich., were designated to compete for the John L. Mitchell Trophy, one of the events in the International Air Races to be held at Mitchel Field, L.I., New York, October 8th, 9th and 10th, viz: Captain T.E. Tillinghast, 1st Lieuts. Russell L. Meredith, Frank O'D. Hunter, Alfred J.Lyon, Thomas K. Matthews, 2nd Lieuts. Chas. D. McAllister, Robert W. Douglas, Clyde K. Fitch, Russell J. Minty and George F. Schulgen.

The first contest for this Trophy, which was donated by Col. William Mitchell, Air Service, in honor of his brother who was killed in the late war, was held at Detroit, Mich., in 1922, and was won by Lieut. Donald F. Stace, whose average speed over a four-lap course approximating 124 miles, was 148 miles per hour. The late Captain Burt E. Skeel won the Trophy the following year, when the races were held at St. Louis, Mo. Captain Skeel's average speed was 156 miles per hour, bettering the previous year's mark by 8 miles an hour. Both Lieut. Stace and Captain Skeel piloted MB3 airplanes. Last year, when the International Air Races were held at Dayton, Ohio, a new mark was established in the contest for this Trophy. Lieut. Cyrus Bettis, piloting a Curtiss PW-8 pursuit plane, averaged 175.43 miles per hour, his record being close to 20 miles per hour faster than that of the late Captain Skeel.

Judging from the recent performances of the new Curtiss Racer in practice flights at Mitchel Field, N.Y., Lieut. Bettis, who will pilot the Army entry in the Pulitzer Race this year, will in all likelihood travel over 100 miles per hour faster than he did last year. It is also quite likely that the present high speed record in the John L. Mitchell Trophy Race will be exceeded, for a number of refinements in design have been made in the newest Army pursuit planes making for better performance.

COOLNESS IN EMERGENCY AVERTS CATASTROPHE

Missing his footing while about to step forth from the fuselage of an airplane to make a live parachute jump, Technical Sergeant Harry Wilson's fall through space was intercepted through the rip cord of his chute catching on a projection on the plane, resulting in the chute opening, blowing to the rear and becoming entangled in the tail group, rendering the controls of the plane useless and placing it in such position that a stall and subsequent tail spin and crash seemed imminent. A serious accident was narrowly averted through the presence of mind of the pilot, Lieut. Charles Backes, in sitting tight until again able to use his controls and his skillful handling of the plane thereafter, and through the coolness of Sergeant Wilson in his prompt realization of the emergency action essential to prevent a catastrophe.

Technical Sergeant Wilson, Chief Instructor of the Parachute Riggers' Course, had climbed from the rear cockpit of the DeHaviland which, by the way is equipped for aerial photographic work, onto a step fastened to the left side of the fuselage just below the rear cockpit to enable the jumper to leave the ship more easily when the desired altitude had been reached. As he raised his hand in signal to the other parachute men, his foot slipped, probably caused by the propeller wash together with an air bump. This broke his rather insecure hold and he dropped.

In falling, the rip cord of his main or training chute was caught on a photographic lug fastened to the outer left side of the rear cockpit over which he had been leaning and opened the parachute which blew to the rear and became entangled in the tail group, fouling the rear control or flipper wires. His chest pack, unopened, fell across these wires, and a buckle of his parachute harness fastened itself on one of them. The weight of the Sergeant's body, hanging solely from this control wire, raised the fins to such a degree as to cause the plane to fly almost vertically upwards, rendering a stall imminent. The pilot could do nothing to prevent this probability as his controls were frozen.

The extreme angle of the ship and the rush of air from the propeller slid the imperiled parachute jumper back to the tail group along the wires from which he hung. Grasping the diagonal strut bracing the stabilizer, located beneath the tail group, and supporting his weight on that with both feet and one hand he managed with his other hand to free as much of the parachute as possible from the flipper wires, thus enabling Lieut. Backes to again manipulate his controls, and retained this posture until released by the pilot after the plane had reached terra firma, the pertinacious buckle holding him helpless.

Lieut. Backes lost no time in bringing his plane to the ground and landed so lightly that Sergeant Wilson was uninjured in his hazardous position under the stabilizer. According to Lieut. Backes, the plane zoomed 1000 feet before being brought under control, giving Sergeant Wilson an unusual ride of 5,000 feet beneath the tail group.

This accident, which occurred in the morning, caused a postponement of the five-ship formation until the afternoon. The Martin Bomber demonstration was held immediately after the accident, however, Sergeant Wilson being one of the participants.

Robert R. Aurand.

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BRITISH ENTRIES IN SCHNEIDER CUP RACE

Concerning the Schneider Cup Race, to take place at Baltimore, Md., on Oct. 24th, and in which the Army Air Service entry will be in the capable hands of Lieut. James H. Doolittle, the British Aeronautical publication FLIGHT makes the following observations regarding the British entries in this race, after recounting the results of competitions in previous years:

"This year, fortunately, there is every chance that this country will be worthily represented in the Schneider Cup Race, as two British machines have been entered for the contest. Both of these have been ordered by the Air Ministry for technical development purposes, but the Air Ministry has agreed to lend the two machines to the firms which have constructed them, provided certain specified performances are obtained, the stipulated performances being such as to give, if attained, the machines a reasonable chance in the race. What the stipulated speed is cannot be mentioned at the moment, since publication of the figures would obviously be unfair both to the Air Ministry and the constructors. It may be stated, however, without giving actual figures, that if the machines are, in fact, lent to the constructors for the purpose of being taken to the States, it may be

taken for granted that their performance is such as to give definite promise of a good chance to bring the Cup back to Great Britian.

Concerning the machines themselves, little may be said at the moment, but it is common knowledge that both are fitted with Napier engines. Also that the Supermarine "S.4" is a monoplane, while the "Gloster III" is a biplane. More than this it is not possible to say at the moment. The "Gloster III" was tested by Capt. Hubert Broad on Sunday last (August 30th) and is reported to have flown extremely well and to give very great promise. The Supermarine "S.4" will be piloted by Capt. Biard, who has had it out a couple of times and has found it to be very fast indeed."

It would seem that the Schneider Cup Race has great promise of being a "warm" contest, indeed.

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FRENCH PILOT TO ATTEMPT PARIS TO NEW YORK FLIGHT.

The National Aeronautic Association Contest Committee has accepted the entry of M. Paul Tarascon who, at an early date, will start on his non-stop Trans-Atlantic flight from Paris to New York in a Potez Biplane, Type 25, equipped with a Gnome-Rhone 450 h.p. engine, and carry approximately 800 gallons of fuel. If successful, M. Tarascon will win the Raymond Orteig $25,000 prize award to the first aviator who completes this flight either from New York to Paris or Paris to New York.

Under the Raymond Orteig regulations, the flight will start from a point within 50 miles of Paris and the landing must be made at a point within 50 miles of New York. Gas tanks will be sealed and a sealed barograph will be carried. If successful, M. Tarascon will establish a new World Record for airline distance.

Officials of the Aero Club of France will witness the start of the flight and prepare a report. Officials representing the N.A.A. will officially observe the finish. Note: Late dispatches state this plane was wrecked in a trial flight. It is hoped this will not tend to prevent the flight being attempted.

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SUMMER TRAINING ACTIVITIES AT MAXWELL FIELD

The summer training activities held at Maxwell Field, Montgomery, Ala., which included the training of the Advanced Unit, ROTC (Air Service), Georgia School of Technology; the 306th and 312th Observation Squadrons, Reserve; and the 105th and 106th Observation Squadrons, Tennessee and Alabama National Guard, respectively, were brought to a successful close on August 31st. Each organization rendered the opinion that the 1925 camps were the best ever held at Maxwell Field, and it is believed that these opinions were due to the fact that the training was slightly advanced from previous years. The interest displayed by all in training was gratifying in every respect and served as reward for the regular Air Service personnel who rendered their best efforts for a successful camp. Below is given the man hours of each separate camp:

R.O.T.C. Students, 168 hours, 25 minutes.
Reserve Officers, 4410 hours, 5 minutes.
National Guard, 689 hours, 15 minutes.

The National Guard squadrons of Tennessee and Alabama were in training at Maxwell Field during the month of August. The following is a classification of the aircraft hours flown by these organizations:

Cross-country, 101 hours, 10 minutes; Reconnaissance, 70:10; Photography, 25:10; Infantry Contact and Liaison, 1:10; Formation, 22:15; Observation, 17:10; Artillery Missions, 3:40; Practice and Training (Dual) 219:10; total aircraft hours - 460:10.

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APPRECIATION FROM BIRMINGHAM

The following resolution, passed by the Birmingham Real Estate Board, was recently forwarded to Major H.H.C. Richards, Commanding Officer of Maxwell Field, Montgomery, Ala., by Mr. S.C. Starke, Executive Secretary of the Board:

"Resolved, That the hearty thanks and keen appreciation of the Birmingham Real Estate Board are due, and are hereby tendered Maj. John C. Bennett, of the One Hundred and Fifth Squadron of the Tennessee National Guard, and Maj. H.H.C. Richards, of the regular army squadron, of Maxwell Field, Montgomery, for their

marked recognition of and service to this Board in transportating from Montgomery to Birmingham in approximately one hour and 15 minutes its executive secretary, who otherwise would have been inevitably prevented from attending the board meeting on the above date.

And be it further resolved: That copies of this resolution be sent to Majors Bennett and Richards not only to express this Board's thanks for a noteworthy courtesy extended it, but to show also that it appreciates the fact that this gracious act was due to a recognition of the public service of this Board, and was in line with the Government's policy of demonstrating on occasion the remarkable efficiency of air transportation with the purpose in view of encouraging private enterprise therein for future service in war when the occasion arises."

It might be added that in using the airplane Mr. Starke was enabled to reach his destination over an hour sooner than would have been the case had he been able to use the railroad, as the scheduled time between Montgomery and Birmingham is two hours and about 20 minutes.

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MORE ABOUT THE NEW CURTISS RACER

Pilots who have been testing the racers flash over the Long Island fields so swiftly that observers hearing the snarling noise overhead glance up to find that the thing that made it has almost disappeared from sight on the distant horizon. Those who have been thrilled at the amazing speed wonder why the tiny machine does not tear itself apart and kill the daring pilot who seems to have it under perfect control. To them it represents the last word in concentrated power. Both racers to be flown by the Army and Navy pilots, and the third one to be held in reserve in case of accident to the others before the contest, are identical save for their colors. The Army machine will have a black body with gold wings, the Navy's blue body with gold wings.

During the tests on the flying field the pilots have termed the racers winged projectiles because they are mostly engine and propeller with short wings and a narrow streamlined body tapering back to the tail. The engine is the main thing, and has been since fast planes were built.

When the four Curtiss-built racers appeared on the field for the Pulitzer Race held at Selfridge Field, Mich., in 1922, they were not unlike the present racers in appearance. Lt. Russell Maughan won that race at 205.8 miles an hour and the other three Curtiss machines came in second, third and fourth. All four were powered with a Curtiss D-12 engine developing 460 horsepower. Visiting engineers, including many from abroad, said at the time that under existing methods of construction airplanes had nearly reached their limit in both speed and endurance.

Four days later Col. William Mitchell, then Assistant Chief of Air Service, took Maughan's plane up and established the world's straightway speed record of 224.28 miles an hour. Maughan then went up and demonstrated that the machine could actually be flown through the air so fast that it could fly without wings, for he turned it on edge and maintained his altitude on a straight course. At such speeds the body itself is sufficient to support the machine, the wings serving to take it off the ground and enable the pilot to control and land it.

In spite of this showing and the opinion of engineers, the Curtiss Company, by reason of its wind tunnel and laboratory, was able to better that record the following year. At St. Louis in 1923 Lieut. A.J. Williams in a Navy-Curtiss Racer won the Pulitzer Race at a speed of 243.8 miles an hour. A sister ship piloted by Lt. Harold Brow almost equalled that speed and won second place.

Those Racers were powered with the Curtiss D-12 engine developing 500 h.p., 40 horsepower more than the year before. Williams and Brow at Mitchel Field some days later sent their planes over a straightway speed course, breaking one record after another until finally Williams held the world's record at 266.59 miles an hour.

Neither the Army nor the Navy ordered new planes for the Pulitzer Race held in Dayton last year and that contest developed into a trial of machines which had participated in the previous events. No high speed records were attained compared to those of the year before. The French Government, meanwhile, set out to capture the record and succeeded when Bonnett, December 11th last, made 278.48 miles an hour over a 3-kilometer course at Istres. The French machine was flown, however, without any landing speed requirements. It landed about 25 miles per hour faster than the Curtiss machines. Other things being equal, high speed is directly proportionate to the low speed allowable.

While the Army Curtiss and the Navy Curtiss Racers may be used to regain the records for the United States next month, there is a more practical purpose than beating foreign rivals in a sporting event. To the officers charged with the aerial security of this nation, the new racers mean new fighting equipment swifter and more powerful than any yet flown.

It is from the racing machines that the new fast fighting planes are developed for both the Army and Navy air forces. Chief among the fighting craft are the pursuit machines, the nearest to the racer in design and construction. In war the pursuit squadrons are the first to meet an invading air force or to attack the enemy over his own line.

A race is the most grueling test that can be applied to a flying machine. The pilot must keep his throttle wide open. The maximum strain is laid on every part of the engine and accessories. Every detail in the machine itself must make good or the weak spot will appear before the course is flown; and the engineers are thereby able to judge the qualities which would make that machine ideal for a standard plane to be built in sufficient quantities for the fighting squadrons.

For example, the racer in which Lieut. Maughan won the Pulitzer contest in 1922 was developed into the standard pursuit machine for the Army Air Service. Last year Maughan flew one of these Curtiss pursuit planes from New York to San Francisco in a single day, making 2670 miles in 21 hours, 48½ minutes, including stops and despite fog and rain, headwinds over the Sierra Nevadas which struck the plane at 63 miles an hour velocity, and the necessity of rising to 9,000 feet altitude crossing those mountains.

A few months later an entire squadron flew those same type pursuit planes from Selfridge Field, Mich., to Miami, Fla., thus demonstrating that the advance fighting squadrons of our air forces, if they had the proper equipment, could fly across the continent to meet an enemy. Standard military pursuit planes have been developed for the Army and Navy from Curtiss Racers.

The main object of the Army and Navy air forces engaging in what is virtually a pilot's contest in the Pulitzer Race, because the planes whey will fly are identical, is to test the latest improvements made in this country to date. The new Curtiss V-1400 engine is twenty percent more powerful than that of two years ago. It develops 619 horsepower and is the same size as the other. It weighs thirty pounds less.

An indication of the marked progress made in aeronautical engineering in the seven years since the war is found by comparing the engines. The Curtiss OX motor in 1918 was considered a leader in its class. It weighed 400 pounds and developed 90 horsepower, this giving the engine a weight of 4½ pounds per horsepower. Compared to the power developed the new Racer, including body, engine, pilot, and sufficient fuel for 200 miles of flying, is lighter than that old type motor alone. The Racer, fully equipped and in the air, has a weight of only 2200 pounds. With its motor developing 619 horsepower its total weight is only 3-3/4 pounds per horsepower. The Curtiss V-1400 engine alone weights 660 pounds, or 1.3 pounds per horsepower and is therefore of less than one-third the weight of the best engine built eight years ago. This is believed to be a record achievement in automotive engineering.

The engine, however, does not represent all of the new improvements in the racers which may be applied eventually to all classes of planes, military and commercial. All turnbuckles and other connections on the braces and various parts are built into the streamlined surfaces to eliminate at least fifty per cent of the resistance which they would offer if left in the open. The landing gear is streamlined, the axle between the two wheels forming a small wing surface which adds to the speed. Metals used in the fittings and other parts are unusually strong. The bronze, for instance, which ordinarily has a tensile strength of 60,000 pounds, in the racers has 105,000.

The wing type radiators which are longer than in former Curtiss racers are made of brass between .004 and .005 inches thick, thinner than the average sheet of paper. Through this radiator twelve gallons of water pass at the rate of seventy-five gallons a minute.

The Curtiss-Reed metal propellers are made of special forged duralumin. This propeller has been termed one of the greatest contributions to aviation in recent years. S.A.Reed, after conceiving the idea for a metal propeller, employed the engineering and manufacturing facilities of the Curtiss Company in developing it. Continuous study, research and tests have resulted in securing an air screw that does not warp or deteriorate under varying climatic conditions. It is indestructible in hail, rain or high grass; and can be bent without breaking

and repaired for further use. Such propellers are absolutely essential to the success of fast planes, for they are whirled at the tremendous speed of 2,500 revolutions a minute. Yet in the racers they run smoothly and without vibration.

Bonnett, the Frenchman, made his 3-kilometer speed record with a Reed propeller built by the Curtiss Company. It has also been adopted by the Air Mail Service and the Army and Navy air services. In the new racers the propeller has a ten foot pitch, meaning that with each revolution it forces the machine through space ten feet, not discounting for the slippage, which is slight. It shows the highest efficiency of any propelling screw that has ever been built for either water or air use.

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AIRPLANES AID SCIENTIFIC INVESTIGATIONS OF WHEAT RUST

The Air Service Technical School at Chanute Field, Rantoul, Ill., recently aided the U. S. Department of Agriculture in a scientific investigation for the purpose of gathering information on the origin and spread of epidemics of the black rust disease of wheat, oats, barley and rye. The Technical School was represented by Lieut. John V. Hart, who piloted a DeHaviland airplane, and enabled Mr. Gordon C. Curran, of the U. S. Department of Agriculture, to make observations at several points in the United States to determine how prevalent spores of this disease are in the upper air.

They left Chanute Field for a flight over Iowa and the Dakotas to the Canadian line; thence across Minnesota to Fort Snelling near Minneapolis; from there over Wisconsin, Lake Michigan and Michigan to Selfridge Field, Mt.Clemens, Mich., returning from there direct to Chanute Field.

The trip required a week's time, during the course of which 2,630 miles were covered. More than 100 glass slides were exposed to the upper air currents and excellent rust spore material was collected for study in the experimental laboratories of the Department of Agriculture.

The slides are examined in the government laboratories at St. Paul, Minn. In 1922, some slides were exposed from a Chanute Field airplane at 12,000 feet altitude in Lake County, Illinois, and a number of rust spores were caught.

According to Mr. Curran, in some years the black stem rust disease destroys almost the entire crop of wheat in Montana, the Dakotas and Minnesota. "In fact", says Mr. Curran, "during the past ten years the average annual loss of all grains in the United States, based on December 1 market prices of each year, exceeded sixty million dollars."

It is thought that some of the black stem rust spores may be blown up from the south to the States in the Northwest. With the use of Air Service airplanes the Department of Agriculture has been able to collect plant disease spores in the upper air and thus trace the source of rust infection.

This disease has a complex life history. In the spring each year it lives on a shrub known as the common barberry. From this bush the disease spores are carried by the wind to the grain fields. In an effort to check the enormous grain losses caused by this rust the Department of Agriculture is carrying on a barberry eradication campaign in 13 States in the Northwest.

The airplane is a great aid in studying the distribution of spores of pathogenic fungi. It is likely to be very useful in epidemiology studies and it also may be useful in determining the value of establishing quarantine lines.

-R. R. Aurand.

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NEW INSIGNIA FOR THE 6TH COMPOSITE GROUP

The following General Order recalls adventures of other days along the Spanish Main, when ships of the sea bore ensigns similar to that recently authorized for the 6th Composite Group at France Field, Panama Canal Zone:

HEADQUARTERS FRANCE FIELD
Office of the Commanding Officer

France Field, C.Z.
August 27, 1925.

GENERAL ORDERS)
No. 13)

1. The Secretary of War has approved the following distinctive insignia of the 6th Composite Group, A.S., for wear as a part of the uniform of this organizati

INSIGNIA: A pirate's head and shoulders tatooed on chest with skull and bones proper, garbed and coifed Or and sable, couped at the breast and resting on the propeller of an airplane, the blades bearing the words "Parati Defendere".

The badge is the crest and motto of the Group and will be manufactured in bright metal and enamel in one size as the organization may select but not in excess of 1-1/4 inches in height.

TO BE WORN: By Officers: On the service uniform on the upper portion of the shoulder loops of coat; on the front of the service hat midway between band and crease.

On White uniform same as on service coat.

On mess jacket on both lapels above line of miniature medals.

By Enlisted Personnel: On the service uniform on both sides of the collar, 3/4 of an inch in rear of service insignia; on the front of the service hat midway between band and crease.

By order of Major Jones:

JOHN H. GARDNER,
1st Lieut., A.S.
Adjutant.

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SOLE DAMAGE - ONE BROKEN PROP

By Robert McKnight.

Under the command of Captain Joseph L. Whitney, A.S. Reserve, of Chicago, thirty-five reserve officers from the State of Illinois were mobilized at Chanute Field, Rantoul, Ill., and underwent military training for the period from August 18th to August 30th. They drilled, they shot at targets, they flew; they studied engines, they studied radio. But above all they governed themselves. They maintained their own headquarters, kept their own records, issued their own orders, and their own officers performed all of the administrative functions.

This unit is the 319th Group (Attack), comprising the 467th, 468th, 469th, and 470th Attack Squadrons which, with the 308th Pursuit Group and the 309th Attack Group, makes up the 9th Wing, commanded by Major Philip G. Kemp of Chicago. The 308th Pursuit Group was in camp at Selfridge Field during the period. Major Kemp and his Adjutant, Captain Eben Stanley, divided their time during the 15-day period between Selfridge and Chanute Fields, traveling, of course, by plane in supervising the work of the two groups under their command.

The personnel of the 319th Group flew 400 hours and in that time but one slight accident occurred - a propeller was broken in landing in high grass and the plane was out of commission only long enough to put on a new stick.

Captain Frederick N. Byerly commands the 469th Squadron, with 1st Lieut. Velie L. McElvain as Adjutant. Captain Roy B. Mosher commands the 470th with 1st Lieut. Ralph E. Brown as Adjutant. Regular Army instructors tested the reservists and all of the latter were soloed after short check trips. The first week was devoted to formation flights and solos near Chanute Field.

Cross-country flying varied the second week. On August 25th a formation of three Curtiss JNS-E planes with 1st Lieut. Calvin L. Workman as flight commander, Major Thornton A. Mills, Capt. Roy B. Mosher, 1st Lieuts. Richard N. Beil, Enoch O. Paulsen and 2nd Lieut. Moritz H. Finger flew to McCook Field, returning to Chanute Field on August 26th.

On August 26th another formation of three ships flew to McCook Field and returned the following day. First Lieut. John C. Henderson (commander), 1st Lieuts. Thomas P. Sobota, Marlin C. Moore, Alfred C. Carrier and 2nd Lieuts. John L. Parkhill and Carl R. Russell made up the personnel of the flight.

Captain Kenneth T. Price commanded the three planes which were flown to Camp Grant on August 27th to participate in the manouvers of the 33rd Division, National Guard, and with him were Major Thornton A. Mills, 1st Lieuts. J.Kendall S. Mitchell, John S. Gibbons, Frederick E. Knocke and 2nd Lieut. Royal D. Baysinger. This flight returned on August 28th.

On August 28th three planes were flown to Canton, Ill., carrying Captain Charles W. Richards, 1st lieut. Olin L. Day and 2nd Lieuts. Weikert, Joseph E. Toberok and John H. Reed. Lieut. Weikert was commander of the flight.

"These cross-country flights were made on scheduled time," recited Captain Whitney in his report to his wing commander, "and were accomplished with 100% efficiency. They had a most stimulating effect upon the officers in camp and did much to enthuse them in reserve activities. Captain Kenneth T. Price is Operations Officer and 1st Lieut. Calvin L. Workman, his assistant."

The 319th Group spent considerable time on the pistol range and some time with machine guns and at the traps with shot guns. First Lieut. J. Kendall S. Mitchell is Armament Officer. Two of the Group qualified as pistol experts, Lieuts. John L. Parkhill and Royal D. Baysinger, with scores over 80. Messrs. Marlin C. Moore, J. Kendall S. Mitchell, Calvin L. Workman, Joseph L. Whitney, Floyd R. Clafford, C.W. Feard, John C. Henderson, Ralph E. Brown, Richard M. Beil, Frederick E. Knocke, with scores over 70, were adjudged sharpshooters. And as Marksmen, scoring in the 60's, were Messrs. Roger F. Howe, Alfred C. Carrier, Carl R. Russell, Melville Muckleestone, Thomas P. Sobota, Velie L. McElvain, Roy B. Mosher, Thornton A. Mills, L.W.Colton, Kenneth T. Price, and Enoch O. Paulson.

In his special report of the shooting practice, Captain Whitney urged that at the next camp of his Group provision be made for the actual dropping of small fragmentation and dummy bombs and the actual shooting of machine guns from planes upon designated targets. He believes that this will be valuable added training.

The following are some additional statements and observations from the commanding officer's report.

"It would be desirable to have a few of the latest service attack planes at our disposal at the summer camps. We should fly our tactical problems in modern equipment, simulating as nearly as possible actual conditions in time of emergency, although, in the absence of modern service types, the Curtiss JNS-E is a satisfactory training and cross-country plane for our purposes.

The Group Engineer Officer, Captain Charles W. Richards, took over 14 Curtiss JNS-E training planes equipped with 180 h.p. Hispano motors, and two DH4B planes. These planes were serviced and maintained by regular crews from the 15th Observation Squadron, which were under the direct supervision of the Group Engineer Officer during the training period. The planes were received in good condition and kept so at all times.

The Group Supply Officer, 2nd Lieut. Floyd R. Clafford, took over all flying equipment necessary and issued supplies (which included all parachutes) on memorandum receipt. First Lieut. John S. Gibbons is Transportation Officer.

I must add that the officers on duty in the command were as fine a group as could be assembled. They were there on their vacation time, seriously interested in perfecting themselves to perform their duties efficiently in time of emergency. They worked from 5:25 a.m. until 4:00 or 5:00 and sometimes 6:00 p.m. with enthusiasm and fine spirit.

They worked with what they had to work with and did a splendid job of it."

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LIEUT. TALCOTT P. SMITH UNABLE TO USE PARACHUTE

By Robert R. Aurand

Considerable newspaper publicity was given statements alleging the failure of parachutes on the occasion of the tragic accident to Lieut. Talcott P. Smith, Air Service, and Mr. William L. Heptig, a Reserve Officer, at Maywood Air Mail Field, Maywood, Ill., August 27th last.

The testimony of witnesses and investigation of the parachutes of both Lieut. Smith and Mr. Heptig, his passenger, refute this allegation. When examined after the accident the parachutes were found to be packed and the rip cords were still intact, indicating that neither had attempted to open them. From the evidence presented, Lieut. Smith in all probability was rendered unconscious by the joy stick of the plane hitting him in the abdomen at the time the control wires were severed by the propeller of the PW-8 and while in that condition was thrown out of the plane when it dove for the ground. The chutes were tested after the accident and were found to open easily.

First Lieutenant Talcott P. Smith, Air Service, was born December 11, 1893. A native of Connecticut, inspired with patriotic motives, he joined the forces of his country at the outbreak of the war and served successively as Private, Corporal, Sergeant, and Sergeant 1st Class in the 21st and 85th Aero Squadrons from May 23, 1917, to May 1, 1918, the irresistible urge to try his wings carrying him onward and upward through the Pilot's Training School at Ellington Field, Houston, Texas, from which he graduated and received his commission as 2nd Lieutenant, Aviation Section, Signal Corps, ORC, May 2, 1918. He served in the A.E.F. in France, from October 6, 1918, until late in 1919 acquitting himself with honor.

An experienced war time pilot of splendid record, he was granted a commission as 2nd Lieutenant, Air Service, Regular Army, July 1, 1920, and advanced to 1st Lieutenant March 17, 1921.

The Air Service Technical School, Chanute Field, Rantoul, Ill., was the station of Lieut. Smith at the time of his tragic demise. He held the important positions of Director, Department of Mechanics, and Commanding Officer, Mechanics Section, of the Air Service Technical School, and was Parachute Officer and Aircraft Inspecting Officer of Chanute Field. He was ever a conscientious officer in the performance of his duty, possessing a sterling force of character and personality, winning the esteem of all with whom he came in contact. Lieut. Smith's loss to the Air Service at large and to his home station in particular will be gravely felt.

Lieut. Smith had 1415 hours and 59 minutes flying time to his credit, covering the period from May 2, 1918, until his death.

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PARACHUTE DEMONSTRATION AT CHANUTE FIELD

According to Robert R. Aurand, NEWS LETTER Correspondent from Chanute Field, Rantoul, Ill., the Air Service Technical School again established a record for parachute jumping on September 4th, when at 11:00 a.m. four pull offs from a Martin Bomber flying at an altitude of 3,000 feet were successfully accomplished. The jumps were made simultaneously, and all jumpers alighted within a radius of fifty yards. Again the afternoon at two o'clock a five-ship formation took off and when in line at 3,000 feet altitude a parachute jumper in each ship executed a live jump, all leaving their respective ships at once and alighting with practically no interval in time within a radius of thirty yards. No injuries were received by the airmen. As in the case of the Martin Bomber, this record of mass parachute jumping is unique in the annals of heavier-than-air craft. A representative of the International News Reel Service, in addition to local photographers took photographs of the jumps.

Counting the parachute jumps above mentioned, a total of 76 successful jumps were accomplished at the Air Service Technical School since the first of this year.

The pull offs from the wings of the Martin Bomber were accomplished by Technical Sergeant Harry Wilson, Staff Sergeant Paul B. Jackson and Private 1st Class, Jack Harris of the Air Service Technical School Detachment, and Private Albert Carl, 1st Observation Squadron, a student in the Parachute Riggers Course. The pilot of the bomber was Sergeant Hudson from McCook Field, Dayton, O.

The jumps from the five-ship formation were made by Staff Sergeant Paul B. Jackson, Privates (1st Class) Jack Harris and Jacob Kangas of the Air Service Technical School Detachment, Staff Sergeant Raymond Stockwell, 5th Photo Section, and Private Albert Carl, 1st Observation Squadron. The pilots were Lieutenants Lawrence P. Hickey, Arthur L. Johnson, Charles Backes, Herbert K. Baisley and Technical Sergeant Aaron A. Porter.

The demonstration was under the direction of Lieut. Irvin L. Proctor, Director of the Parachute Course.

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FIRST RURAL FREE DELIVERY BY AIR

Winnipesaukee Lake, N.H., has the honor of being the first district in which Rural Free Delivery of mail has been handled by air. The lake is of considerable size and for some time the summer residents along its shores have been complaining about the slowness of delivery of their mail matter. Through the efforts of the Winnipesaukee Lake Region associates acting through Postmaster W. D. Chandler of the local post office a contract was obtained from the First Assistant Postmaster General at Washington. The route was sponsored by Congressman Fletcher Hale of Laconia snd Senator George H. Moses.

The flying was done by R. S. Fogg in a Curtiss Sea Gull powered with Hispano motor. The run is only some 43 miles in length, but by motor it took over 5 hours. Fogg and his mechanic did it in 1 hour and 10 minutes, including ten stops to discharge and take on mail. All incoming mail was delivered before seven and outgoing mail caught an 8:05 train for Boston. The plane carried from 200 to 400 lbs. of mail and newspapers.

The initial flight took place on August 1st and nearly 150 pounds of letters

and papers were carried. There was no special cancellation or cachet, but covers bore the pilot's signature. The contract was from August 1st to September 7th.

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ROTARIANS VISIT LANGLEY FIELD

On Tuesday, September 15th, over thirty members of Rotary Clubs on the lower end of the Virginia Peninsula, were entertained at Langley Field as guests of Major Westover. The Rotarians displayed keen interest in all demonstrations, and were most appreciative of the opportunity afforded them of learning something of the Air Service and it's activities, "first hand". Excerpts from a full two column article of the Times-Herald of Newport News, Virginia, under a heading corresponding to the above indicates the interest with which the entertainment was received by the Rotarians:

"After seeing Langley Field, the Tactical School and the various departments, as well as witnessing a thrilling "flying circus", members of the Hampton Rotary Club yesterday afternoon enjoyed a most delicious dinner as guests of Major Oscar Westover, Commanding Officer and one of the most popular men on the lower end of the Virginia Peninsula."

"In addition to the fine entertainment, Major Westover gave five Rotarians a real thrill by allowing them to take a flight over the Peninsula in airplanes. Those who 'took the air' were elated with their flight and the sights of the Peninsula."

"Arriving at Langley Field at 4:00 P.M. the visitors were taken to the roof of the Administration Building where they were permitted to witness the splendid flying exhibition. The visitors were given every kind of flying, from dropping bombs to releasing three parachute jumpers. The exhibition elicited the keenest admiration and interest of the Hampton men."

"Leaving the roof of the Administration, the Rotarians were taken to the hangars at the Lighter-than-air Station. Here Captain Clarke, who has recently reached the flying station, had his men ready for action. The Rotarians were taken through the hangar, shown the TC-4 and heard an excellent talk from Captain Clarke on the blimp."

"The banquet, which was served in the beautiful Club House of the Officers', was one of the best and most delightful affairs the Hampton Club has ever attended. Major Westover and every officer at Langley Field gave the Rotarians a real treat in this session, and won the gratitude of the Club members for a visit to one of the greatest flying fields in the world."

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MAJOR HARMON TAKES COMMAND OF 2ND BOMBARDMENT GROUP

Major Hugh J. Knerr was relieved from further duty as temporary commander of the 2nd Bombardment Group at Langley Field, Va., on September 17th, and was succeeded by Major M. F. Harmon, who recently reported for duty in connection with the bombing and gunnery competition to be held at Langley Field during October. Major and Mrs. Harmon are quartered temporarily in Mabry Hall, the Lighter-than-Air Section of the Post.

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FLYING FIELD AT LANGLEY UNDERGOES REPAIRS

A pilot, flying in to Langley Field at any day now would imagine that a new type of wingless ship, in large numbers, was being service tested with but little success, as none would be seen off the ground. However upon flying low over the field, he would learn that the "wingless ships" seen in large numbers were nothing other than the old Liberty Trucks, manned by crews of men, hauling dirt. The dirt is used to fill in holes preparatory to improving the flying field for the fall bombing and gunnery contests. Langley Field personnel hope that the field will soon cease operating as a first class construction camp and resume its usual flying activities. The enlisted men may be assured that if they do not leave Langley Field as excellent mechanics they have had at least some experience in "dirt farming".

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AERIAL MAPS OF PROPOSED NATIONAL PARKS

A section of approximately 1100 square miles in the Blue Ridge Mountains of Virginia, extending from Front Royal to Waynesboro, is being photographed by Lieut. C.L. Williams and Staff Sergeant J.J. Barnhill of the 2nd Photo Section, stationed at Langley Field, Va. In addition to the above photographic work in Virginia, aerial maps will be constructed from photographs taken of proposed National Parks in North Carolina and Tennessee.

Due to the extreme elevations in the area of the Blue Ridge Mountains, the work is being done at an altitude of 15,000 feet. The project has been going smoothly, and if the weather is conducive to efficient photographic work this fall the project will be brought to a successful conclusion in the near future. The film after being exposed is shipped by Lieut. Williams to the 2nd Photo Section where it is developed, printed and the mosaic assembled.

The work in and over the Blue Ridge Mountains is temporarily delayed while Lieut. Williams and Staff Sergeant Barnhill complete the photographs of the boundary around the Great Smoky Mountain Area in the vicinity of Knoxville, Tenn. Upon completion of the work over the Smoky Mountain Area, Staunton, Va., will be again used as a base for the completion of the project in the Blue Ridge Mountains.

Lieut. Williams and Sergeant Barnhill reported in for supplies and overhaul of their plane from Knoxville, Tenn., on the afternoon of Sept. 17th, after a record flight in a DeHaviland over a distance of some 450 miles in four hours and thirty-five minutes.

About 60% of the personnel of the Laboratory of the 2nd Photo Section at Langley Field developing the exposed film and otherwise completing the product into the finished mosaic are graduates of the Air Service Technical School at Chanute Field. A boost for Chanute Field is given when the Commanding Officer of that Section asserts that "it is hoped in the near future to bring the organization up to 100% graduates of the Photographic School at Chanute Field."

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AN ODE TO THE AIRPLANE

The following poem "To An Airplane" was written by Cecilia Parker Marshall of San Francisco, Calif., and presented to the Commanding Officer of Crissy Field:

"O, silver bird, upon which
The sun's rays fall and make
Thee glisten as dost the stars
Upon the blue and purple robes of night!
O, wing-ed triumph of an age of progress!
Messenger of peace, as well as
Demon in time of fight!
Thou dost fly above me as gracefully
As the Sparrow o'er which the Master
Watcheth - and doth mark the fall!
O, silver ship, sailing upon a bed
Of azure blue, and leaving behind
The clouds, as a trail of spray is left behind
Thy sister ship, the liner,
As she plows her way through the mighty ocean
On her mission great as e'en thine own!
Thine greatest achievement is yet to come!
Thou art but an infant in the arms of Destiny!
Thou shalt grow strong and sturdy as the oak!
Thine spread white wings some day
Shall span the ocean as tho' 'Twere
But the crossing of a pond!
And who is there would'st dare to say
That thou may'st not pierce that veil
Known by mankind as - THE GREAT BEYOND!"

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PREPARATIONS FOR THE JACQUES SCHNEIDER CUP RACE

Extensive preparations are being made by the Flying Club of Baltimore, Md..

for the Jacques Schneider Cup Race, to be held at Bay Shore, Md., on October 24th next. The triangular race course is exactly 50 kilometers around, and contestants will be required to make seven laps, finishing at the Judges' stand.

T shaped canvas hangars, 50 ft. front, will be used for housing planes. In two hangars two of the planes can be warmed up simultaneously at the intersection of the runways without interference and slid into the water one by one. Alternate starting lines are planned to provide a take off in any direction directly into the wind and to provide sufficient distance for the plane to obtain flying speed before turning a pylon. First aid patrols are calculated to give minimum risks to ships that may have a forced landing.

The mechanics with the competing teams will be housed in the restaurant building just behind the circle in the center of Bay Shore Park, and restaurant service will be provided in this building as well as sleeping accommodations. The competing pilots will be guests of the Flying Club of Baltimore at the Southern Hotel.

A military guard from Fort Howard will be on duty in the area surrounding the hangars.

It appears that there will be seven entries in the Cup Race, one from the Army (Lieut. James H. Doolittle, pilot), two from the Navy, two from Great Britian and two from Italy. The big race will be preceded by some sort of naval air pageant, the details of which will be decided upon in the near future. The British, Italian and American teams will be at Bay Shore by October 1st, or thereabouts, according to present information, and will be constantly practicing or testing out their mounts.

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GENERAL PATRICK EXPLAINS EXCLUSION OF COMMERCIAL PLANES FROM DETROIT NEWS TROPHY RACE

Complaints have been lodged in the press because of the elimination of commercial airplanes in the contest for the "Detroit News" Aerial Mail Trophy Race, one of the events in the International Air Races. This contest is limited to multi engined capacity planes capable of carrying a pay load of 800 pounds or over and having a speed of over 75 miles an hour.

When interviewed recently regarding the matter, General Patrick said:

"Several years ago when all of the air races were 'open to all' there was much comment and complaint by civilians that in such races they had to compete with military aircraft, government equipment and military flyers. They seemed to think that they were thus unduly handicapped.

I remember the suggestion was then made that certain of these races should be restricted to civilian and certain others to military entries.

The National Aeronautic Association is sponsor for these races and its Contest Committee determines the conditions under which they will be conducted. This Contest Committee consists of 21 members and includes aircraft manufacturers, scientists, three officers of the Army Air Service, and, I think, one officer of the Navy Air Service.

It is my understanding that the conditions to govern these 1925 races were considered and definitely fixed by the Contest Committee. In the Bulletin announcing the air races for 1925, the Contest Committee says:

'The purpose of the Committee is to continue the policy of preceding Committees in the encouragement and stimulation of commercial aeronautics and for that reason a majority of the events have been confined to civilian entries.

At the same time the regulations open to military contestants have been framed with the direct purpose of aiding the Government in testing airplanes designedly built for military purposes.

A study of the rules and awards herein will show the purpose of the events and the types of entries desired.'

The Army Air Service accepts no responsibility for the conditions as laid down by the National Aeronautic Association and its Contest Committee. The Army Air Service merely enters airplanes in the races for which, under the conditions imposed, they are eligible.

It is plainly for the National Aeronautic Association and its Contest Committee to determine what entries will be accepted. And likewise if any change is to be made in the conditions of these races as already fixed and published, this, too, is a matter for the National Aeronautic Association and its Contest Committee.

Whatever action the National Aeronautic Association may take will be perfectly satisfactory to the Army Air Service."

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NEW TYPE OF "JENNY"

The Repair Shops at the Fairfield Air Intermediate Depot, Fairfield, O., are rebuilding a Curtiss "Jenny" with seats designed so that both pilot and passenger can carry parachutes.

Metal seats, of a new design, have been installed for this purpose. As previously constructed, the tried-and-true "Jenny" was not suitable for parachutes. Owing to the extremely large number of these planes in service, particularly in view of the fact that this type is used at training camps by Reserve and National Guard officers and by others not accustomed to continuous flying, the need for parachute seat equipment has been most urgent.

Two thermostatic water temperature controlling devices have been installed. This is a new invention which is being tried out on this plane. It automatically checks the water circulation through the radiator until a predetermined temperature has been attained.

These improvements were made under the direction of Captain Edward Laughlin, Chief Engineer Officer. Other officers assigned to the Engineering Department are Lieuts. C.C. Nutt, L.H. Dunlap and Milo McCune.

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ARRESTED FOR FLYING A PLANE ON SUNDAY

Something new in aeronautics was reported by the Dayton HERALD recently under the caption "Dayton Man Arrested for Flying Plane on Sunday." The news item is as follows:

""Warrant declares he was not 'Conscientiously Observing Sabbath'.

J. W. Hunt, of the Hunt Electric Co., 441 N. Main St. was bound to the grand jury of Auglaize County Thursday by Squire B. G. Belcher of St. Marys on a charge of operating an airplane for profit on Sunday.

The charge was preferred by L.E. Frey, living in the vicinity of a flying field operated by the Dayton man at St. Marys. Frey in his warrant claims that Hunt did not 'conscientiously observe the Sabbath in taking passengers for rides in his airplane on Sunday.

Hunt made the flights to advertise building lots as well as his plans for an airway route between Dayton and St. Marys. He pleaded not guilty in a hearing before Squire Belcher Thursday and was bound to the grand jury."

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NEW CATALOGUE OF PT-1 AIRPLANES

Mr. R. W. McGuffie of the Field Service Section, Fairfield Air Intermediate Depot, recently returned from the Consolidated Aircraft Corporation at Buffalo, N.Y., where he compiled the data for a parts list and catalog of the PT-1 airplane which is being manufactured for the Air Service.

PT means Primary Training. It is the intention of the Chief of Air Service that the PT-1 shall be the means of training our future pilots. Thorough tests have shown the airworthiness and adaptability of this new plane for training purposes, and its many good qualities commend it to pilot and student alike.

The wings and ailerons are of wood construction, but the fuselage, empennage and landing gear, as well as the engine mount, are built of steel tubing. The front and rear sections of the fuselage are held together by twelve bolts, in addition to tie rods. The gasoline tanks and the altimeter are located in the center section.

The catalog will probably contain numerous photographs showing details of different portions of the PT-1.

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OPENING OF NEW FLYING FIELD AT IRVINGTON, VA.

The flying field at Irvington, Va., established through the patriotic efforts of Colonel Newbill, Retired, was the scene of great activity on the morning of September 7th. From the north, east, south and west came DH's, Sperry Messengers,

C04's, "Jennys", and many other types of planes. The Army, Navy and Marine Corps were all represented by planes, officers and men. The delegation from Langley Field, Va., consisted of seven DH's, one C04 and eleven JNS-1's. Ten of the JNS-1's were under the command of Captain Louis Boutwell of the Massachusetts National Guard, and were flown by National Guard officers on duty at Langley Field. A benediction was offered, a few short speeches were made, and the field accepted for use of the Army, Navy and Marine Corps, by Colonel Clagett, representing Major-General Patrick. After formalities, luncheon was served. Fried chicken, and everything that goes with it and more, made up the menu. In the afternoon aerial maneuvers in the vicinity of the field were conducted, and a dance in the evening rounded out the day, most pleasantly spent among most hospitable people, all of whom are Air Service enthusiasts.

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LOENING AMPHIBIAN FLIES TO ELIZABETH CITY,N.C.

Elizabeth City, N.C., on the banks of the Pasqqotank River, just off Albemarle Sound, was the scene of much activity on Thursday, Sept. 24th. The occasion was the opening of two new hard surfaced roads which now connect that city with Norfolk and Suffolk, Va. Visitors came by land and air. The latter were composed of Major Oscar Westover and Lieut. G. C. MacDonald, of Langley Field, who arrived in the Loening Amphibian, and the Commandant of the Naval Base, who landed an F-5L boat. Captain Clark of the 19th Airship Company piloted the blimp to the scene of festivities.

The opening of the two roads are of peculiar importance to Elizabeth City, as heretofore that city has had intercourse with the outside world by rail and water only. The city is the center of large lumber and cotton industries, and the cultivation and marketing of the Soy bean is rapidly gaining in importance.

Speeches, baseball games and music provided the amusement for the day. One of the most entertaining features, however, was a barbecue of extensive proportions which was, needless to say, enjoyed by the aviators.

Army visitors will do well to know that region in case of flights to and from Hatteras. Emergency landings can probably be made in the immediate vicinity, and in the event of forced landing, Albemarle Sound, which is quite shallow, with the exception of a narrow channel cut for purposes of water traffic, could be used as a safe berth for landing in water.

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LANGLEY FIELD BOMBERS RETURN FROM SCOTT FIELD

A roar of motors from a dark sky, flood lights switched on, heralded the return to Langley Field, Va., of the four Martin Bombers from Scott Field, where they were flown to participate in the Army Relief Show at that station. The planes landed with the usual grace of bombers, taxied majestically up to the line, and the four doughty pilots, their stern faces burned by wind and sun and barely discerned through the dim auto headlights were enthusiastically greeted by their loved ones - that is, all except the bachelors. Those greeted enthusiastically by their loved ones will be identified in the following list of pilots by the asterisk:

*Captain E.C. Black, Flight Commander.
*1st Lieut. Wm. J. McKiernan,Jr.
2nd Lieut. E.T. Rundquist
2nd Lieut. Darr Alkire (Reserve

While at Scott Field the Bombers participated in an Aerial Review and demonstrated bombing. The flight each way was long and arduous, as demonstrated by the fact that a rubber cushion, loaned to Lieut. Rundquist by another officer of the post, was severly punctured.

According to a St. Louis newspaper, about 25,000 spectators gathered at Scott Field to witness the various air events. While a big dirigible hung above the field, a tiny Sperry plane accomplished a hook-up. For a few minutes the Sperry held its connection with its overshadowing sister aircraft and then the hook was unsnapped and the Sperry, like an uncaged bird, flew speedily away.

Perhaps the most thrilling moment of the Air Circus came when parachutes were dropped so that their passengers landed directly in front of the main section of the crowd.

Two dirigibles, the TA-4 and TC-7 participated in the program of the day as did two observation balloons, the latter being inflated on the field. The Sperry was demonstrated in various acrobatics, and there was a group formation by 20 planes. The radio control formation contained much that was of value to

students of science. From the radio tower commands, which could be heard by those below, were given to the flying airplanes far away in the sky. The planes turned right as the order rang out; they reversed to left as the change in command was made and they became separated when told to do so. To the order "Straight" they became as a line, while those who looked wondered.

The comedy of the afternoon was the complimentary ride given to the lady who traveled the greatest distance to see the airmen perform for the benefit of the fund that helps the orphans and widows of their comrades. A plane was placed in readiness and a woman in black traveled to its side in an automobile. With feminine fear she hesitated before stepping aboard. Meanwhile the ambulance men were cautioned to be ready for any emergency. They were told "There's a lady in the plane. We must watch it."

The plane stuttered a bit before setting out, the lady waved her hand and all were off for the sky. No screams were heard when the pilot performed some fine flying and the entourage was met with applause when it returned to earth. The "lady" waved her hand and then removed her hat with the black veil, revealing the head of W.E. Allison, to whom flights in the air are not new.

Major Norman W. Peek was the officer in charge of the program and was aided by various personnel of Scott Field.

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PACKING FIRE EQUIPMENT BY AIRPLANE

"A great deal has been said about the use of planes on fires, and I would like to add a little more," writes a correspondent of the News Letter of the California District Forest Service, and he then goes on to say:

"On a recent fire on the Santa Barbara we found it necessary to ask that the plane stationed at Griffith Park be sent here for use on this fire. The plane was piloted by Lieutenant James, and his mechanic, Babcock, came with him to Santa Barbara. Upon their arrival, which was at about 10 o'clock in the morning, we immediately got busy and made a trip over the fire. This was only the second flight I had ever taken with James and I was not altogether familiar with his flying. I never feel exactly safe in the air until I know a man's ability to handle his plane because one might get in a bad jackpot while flying over rough country such as we have on the Santa Barbara, but on this trip I was flying with a very capable pilot who knew what his ship could do and where it was possible to put it.

We went right down into Blue Canyon where the fire was burning and had a good look at it. When we returned I knew exactly what the situation was. In fact I had a better knowledge of the situation than the men on the ground, and so without waiting for any word from them we immediately got busy and sent 25 more men across the mountain, as it was very plain to be seen that they were badly needed. The men had no more than gotten started when Ranger Dunne reached a telephone and notified us that he wanted 25 more men and equipment. He was then told that this number, fully equipped, were already on their way.

Dunne ordered emergency telephone wire sent over the mountain in order that a telephone could be installed at their base camp. There was no pack stock available and Lieutenant James said: "Let's put the wire over with the plane." That afternoon we made a trial trip and put down one coil of wire and found it worked all right, so we immediately started the wire across the mountain with the plane. We found we could put material on the ground with one plane faster than any ten head of pack stock could; in fact, we demonstrated that it was possible to put into a fire camp anything that was needed in the way of supplies or equipment that could be dropped from a plane.

Before this fire was under control, another one started on the Angeles in Ranger Nash's district. He was on our fire in one of our most distant camps when word came at night that he was badly needed on the Angeles. As soon as day broke, Lieutenant James and myself went with the plane to his camp and dropped a note within 20 feet of where he was standing, and he made some twenty-five miles over rough country to Santa Barbara by 12 o'clock that day. If it had not been for the plane a great deal of time would have been lost before Nash could have reached Santa Barbara."

AERONAUTICAL NOTES FROM FOREIGN COUNTRIES

The first regular air service between Munich, Frankfurt and London was put in operation on August 17th last.

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Air Vice Admiral Sir Sefton Brancker, Director of Civil Aviation, England, together with Col. Birchall and Lt.-Col.Minchin, left London recently to survey the proposed air route between Egypt and India.

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The airplane with which the French aviators Coli and Tarascon will shortly attempt a flight across the Atlantic successfully passed tests recently at Villacoublay, France. The machine is a Potez type 25 biplane fitted with a 420 h.p. Bristol "Jupiter" engine.

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The London Aeroplane Club, formed by the Royal Aero Club in connectionwith the Air Ministry Scheme for encouraging the formation of light plane clubs throughout England, was formally declared open by Sir Philip Sassoon, Under Secretary of State for Air, on August 17th. The Club's headquarters have been established at the Stag Lane Airdrome of the DeHavilland Aircraft Company, where a special hangar has been erected for the accommodation of two DH "Moth" airplanes with which the Club commences operations. Two flying instructors have been appointed with the approval of the Air Ministry.

After theClub,wasduly opened, Sir Philip Sassoon was taken for a flight by one of the instructors in the DH "Moth" airplane, and he afterwards expressed himself as delighted with the behavior of the machine and the comfort of the passenger's cockpit. Applications for flights from club members were so numerous that names has to be drawn by lot.

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General Allesandro Guidoni, well known in Washington as former Air Attache of the Italian Embassy, has replaced Capt. Scaroni as Air Attache to theItalian Embassy in London. The latter, it is understood, has been transferred to the Italian Embassy in Washington.

General Guidoni has had a very distinguished career in Italian aviation,and incidentally heis oneof the pioneers of flying, having been actively engaged in aviation since the very earliest days. Until his appointment to the United Kingdom, General Guidoni was head of the Italian government aircraft establishment, and thus had practical experience of aircraft work in its various branches.

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The Roumanian Government had just taken delivery of 50Fokkerairplanes,ordered from Holland.

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The two Japanese aviators, MajorEbe and Mr. Kawachi, flying from Tokio to London on two Breguet biplanes, are reportedto be making progress. Proceeding from Chita, they reachedItkutsk (Siberia) on August 8th. On August 23rd they arrived at Moscow, accompanied by ten Russian airplanes. They were given an enthusiastic reception,and among those present to welcome them were Litvinoff and the Japanese Ambassador.

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Sadi Lecointe, the famous French racing pilot, has volunteered for service with the French air forces in Morocco and recently he, with a number of other aviators, including Americanswho have joined the French forces, were received in audience by theSultan of Morocco.

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TheFokker D.XIII recently established four new world's records. Carrying a useful load of 500 kilograms(1,100lbs.) the machineattained an average speed of 165.7m.p.h., while with the same load and over a distance of 200 kilometers,the average speed was164.7 m.p.h. These speeds are stated also to be world's records for amachine carrying 250 kilograms (550 lbs.) useful load. The pilot was Engineer Grase, theFokker chief test pilot. TheFokker waspowered with a Napier "Lion" engine.

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A new world's speed record over 1,000 kilometers (621.5 miles) was established at Istres (Marseilles) on August 29th by the famous French racing pilot Lasne, who, flying a Nieuport-Delage sesquiplan,fitted with 450 h.p. Hispano-Suiza engine, covered the 1,000 km. course at an average speed of 248.57 kilometers

per hour (154.49 m.p.h.) Lasne flew over the Villesauvage-La Marmogne course, which is one of 50 kilometers, or 100 kilometers for the out and home journey. In his ten circuits of the course, Lasne's fastest time was 23 minutes and 46 seconds, and his slowest 24 minutes, 25.6 seconds. His total time was 4 hours, 1 minute, 38.8 seconds.

The previous world's speed record over 1,000 kilometers was held by Doret on a Dewoitine monoplane, with 300 h.p. Hispano-Suiza motor, his average speed being 221.75 km. p.h. (137.83 m.p.h.).

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On August 29th Capt. Radovitch, flying a Breguet-XIX (400 h.p. Lorraine-Dietrich), accomplished a non-stop flight from Paris to Belgrade, via Turin and Venice. He covered the 1,100 miles in 9 hours, 25 minutes. Another non-stop flight was made on August 31st, when M. Daniel Julien flew from Paris to Madrid (845 miles) in 6 hours, 55 minutes. His machine was a Potez biplane (450 h.p. Lorraine-Dietrich).

- FLIGHT.

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Major the Marchese de Pinedo, who has flown from Rome to Melbourne, and who is now proceeding to Tokio, left Sydney, Australia, August 6th and arrived at Brisbane the same day, having covered 450 miles in four hours. On the following day he flew to Rockhampton, Queensland. On August 10th he arrived at Townsville, August 11th, Innisfail, N. Queensland, and on the 12th Cooktown, N. Queensland. On August 13th he was reported to have arrived at Thursday Island, and the following day Merauke, Dutch New Guinea. A telegram was received in Rome from Amboina, Molucca Island, on August 17th, stating that he had arrived there from Dobo, Aru Islands, and was staying there for three days on account of bad weather.

On August 18th he was reported to have arrived at Menado (Celebes) and on the 19th Zamboanga, on the Island of Mindanao, in the Philippines. On August 22nd he flew from Zamboanga to Cebu in stormy weather, and in alighting collided with a steamer, sustaining slight damage. Repairs were done on the spot.

On August 23rd he left Cebu for Manila. He encountered heavy squalls and was driven down near Eastern Luzon. After an unsuccessful attempt to continue his flight he was forced to shelter at Antimonan, Tayabas.

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Lieut. Fabry, of the Belgian Flying Corps, made a non-stop duration flight of 15 hours, flying a standard military DH9, 240 h.p. Siddeley Puma engine, which had been equipped with additional fuel tanks. He left Wevelghem airdrome at 05.02 hours August 16th and landed at 20.05 hours, having covered a distance of some 1,200 miles.

- THE AEROPLANE.

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WAR DEPARTMENT ORDERS AFFECTING AIR SERVICE OFFICERS

Promotions

Captain George Edward Stratemeyer to Major, with rank from August 28th; 1st Lieut. Oliver W. Broberg to Capt. from Sept. 1st; 1st Lieut. Robert Kauch to Captain from Sept. 5th; 2nd Lieut. Lawrence J. Carr to 1st Lieut. Sept. 2nd.

Changes in Station

First Lieuts. Rudolph W. Probst, Bushrod Hoppin, Paul Evert, 2nd Lieuts. Robert L. Brookings and Don W. Mathew to take course of instruction at Air Service Technical School, Chanute Field; Capt. F.F. Christine from Wilbur Wright Field to Middletown Air Intermediate Depot; 1st Lieut. Silas C. Hindshaw to Letterman General Hospital, San Francisco, for observation and treatment; Capt. Oliver P. Echols from duty in Office Chief of Staff to Bolling Field, D.C., effective Jan. 12th; 1st Lieut. Victor H. Strahm from Middletown Air Intermediat Depot to Selfridge Field, Mich.; 2nd Lieut. Edgar Turner Noyes to pursue primary flying training at Brooks Field, Texas; 2nd Lieut. John S. Griffith from Kelly Field to duty in Hawaiian Department, sailing on Oct. 14th transport.

Upon completion of tour of foreign service in Hawaiian Dept., Capt. Richard J. Kirkpatrick will proceed to Langley Field for duty; 1st Lt. Emil C. Kiel to Kelly Field; 1st Lt. Ned Schramm to Rockwell Air Intermediate Depot.

Upon completion of present tour of foreign service in Panama Canal Dept., 1st Lts. Kellogg Sloan and Levi L. Beery will proceed to Kelly Field, 1st Lt. John E. Upton to Bolling Field and 1st Lt. Warren R. Carter to Brooks Field.

Second Lieuts. Homer W. Ferguson (Langley Field), Clyde K. Rich (Selfridge Field) John A. Austin (Aberdeen); 1st Lieut. Bernard T. Castor (Rockwell Field) to sail on January transport for duty in Hawaiian Department.

First Lieut. James E. Parker (Org. Reserves, Indianapolis), 1st Lieut. Clarence H. Welch, Selfridge Field), 1st Lieut. Don L. Hutchins (Kelly Field) 2nd Lieut. Robert W. Douglas (Selfridge Field) to sail on transport january 21st for duty in Panama Canal Zone.

Major Harold Geiger and 1st Lieut. Langhorne W. Motley to take course at A.S. Tactical School, Langley Field, Va.

First Lieut. LeRoy E. McGraw, Infantry, relieved from detail in Air Service and assigned to 6th Infantry at Jefferson Barracks, Mo.

Leaves of Absence

First Lieut. James B. Carroll, 3 months, effective September 15th; 1st Lt. John P. Van Zandt, one month, Sept. 22nd; leave of 1st Lieut. George E. Hodge extended one month.

Reserve Officers to Active Duty

Following ordered to Brooks Field, Texas, for 6 months' training at Primary Flying School: 2nd Lieuts. Jeffrey R. Starks, Frederick Harper Wilson, Charles Arthur Ross, effective Sept. 12th; 2nd Lieuts. Reuben Kyle, Jr., and Chester Newton Byles, Sept. 19th; 2nd Lieut. Harold Albert Lidster, Sept. 16th.

First Lieut. Leslie Granger Mulzer and 2nd Lieut. Leslie R. Tower to Langley Field for 6 months training, effective October 1st.

First Lieuts. Thomas Ash, Jr., Clarence S. Irvine and 2nd Lieut. Van Hampton Burgin, 6 months, effective October 1st, to Selfridge Field.

Second Lieut. Frank H. Jerdone to Langley Field for six months, effective October 1st.

Following ordered to active duty for period of 15 days: 1st Lieut. Aubrey F. Diamond to Wilbur Wright Field, Sept. 13th; Capt. George R. Gaenslen to San Antonio Air Intermediate Depot, Sept. 14th; 1st Lieut. James R. Homer to Kelly Field, Sept. 14th; Capt. Harry C. Sigourney to Kelly Field, Sept. 13th; Capt. Louis G. Meister to Mitchel Field, Sept. 29th; 2nd Lieut. Albert L. MacClain to Rockwell Air Intermediate Depot., Sept. 20th.

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PARACHUTE DEMONSTRATION IN PHILIPPINES

The Parachute School at Camp Nichols, Rizal, P.I., recently gave a most interesting demonstration of the quick opening of a freshly folded parachute. A bomber, piloted by Lieutenant D.M. Myers, Post Parachute Officer, passed over Camp Nichols from north to south at an altitude of about 150 feet and an air speed of approximately 80 miles per hour. When opposite the 28th Squadron hangar a parachute was released and opened very quickly, being open but in a horizontal position at less than fifty feet from the plane. It was fully open and in a "landing position" when about half way to the ground. This test, although accomplished by a "dummy" jumper, has inspired much confidence in the parachute among the personnel. Sergeant Nichols who is immediately in charge of the Parachute School and maintenance of parachutes here is very interested in all such experiments and is now convinced that the fastest opening parachutes of the standard equipment are those most frequently folded.

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GENERAL OFFICERS INSPECT CAMP NICHOLS, P.I.

During the Philippine Department visit of Inspector General Helmick, Camp Nichols was given one day's inspection. The field and equipment certainly showed the results of the past six months' effort to bring each up to standard. The General complimented the command especially upon the appearance of the flying equipment. A flying demonstration was given, consisting of two formations, one a five-plane bomber formation and the other a five-plane DH formation which manifestly interested him greatly. The General, however, pointed out certain things relative to battalion drills, and squadron administration where improvements could be made and made several constructive suggestions by which the command will profit in the future. Some officers contend that had the inspection taken place on a rainy day when a third of the flying field was under water, as is frequently the case, more everlasting good might have been derived by the

Service. A rainy time coupled with high tide renders the field almost useless to even a half loaded-bombing plane, even though last year's work has helped considerably.

General Weigel, commanding the Philippine Division, also visited the Camp and like the Inspector General admitted a deep interest in the Air Service in its necessity to the Army and in future development.

A few days later General Helmick indicated that he would like an airplane ride to Stotsonburg and return, whereupon the ever ready Air Service rolled out a pair of sleek bombers and all made ready. Lieut. Myers and Lieut. Skanse piloted the party to Clark Field, while Lieuts. Dunton and Snavely piloted them back to Camp Nichols a few days later. The inspection party consisted of General Helmick, Major Babcock, Lieut. McKinley and Capt. Mixon. The General after each landing personally thanked the pilots and spoke most enthusiastically of his trips.

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$5,000 REWARD!

From the Birmingham AGE-HERALD.

Crissy Field, Presidio of San Francisco, Calif., Sept. 19.

Crissy Field is calming down again after the period of unrest caused by the Navy in its preparation for the subjugation of the Pacific. We sympathize deeply with the Navy over its hard luck with the PN-9, and hope that the PB-1, which is still at Crissy Field waiting hopefully for its chance, will be successful.

The last of the 91st Observation Squadron personnel who were on duty at Rockwell Field during the Summer Training Period returned to Crissy Field on August 26, 1925.

Rockwell is fine, and Tiajuana was duly appreciated, but everyone appears to be glad to be back in San Francisco again -- "Old friends are best," maybe, or "There's no place like home."

Preparations are being made for work with the Artillery at Santa Cruz, California, from September 17th to November 1st. It is contemplated sending two DeHavilands, two pilots and four enlisted men to that place for the period. The work will consist of towing targets for anti-aircraft and spotting. God was rather careless when He worked on that Sector of California. He let His contractor get away without finishing it. There are few landing fields.

The personnel here at Crissy is all agog over the Pendleton Round-up. The officials of that famous event have issued a blanket invitation to the pilots here and all pilots are anxious to accept. Unfortunately, there will have to be a few disappointments.

First Lieutenant Jack R. Glascock has just returned from a flight to Modesto, California, where the Stanislaus County Fair is being held. He was singing, almost inaudibly, to be sure, that famous poem of Kipling's which the unwary male persists in rendering when he feels particularly reminiscent, gloatingly so. We judge that Jack had a good time at the Fair, or with.

Maxwell Field, Montgomery, Ala., September 15.

First Lieuts. Benedict A. Coyle and Alvan C. Kincaid have departed for their new stations, Brooks and Kelly Fields, respectively. The command as a whole will feel the inestimable loss of these two officers, both of whom have been with the squadron for four years.

Langley Field, Hampton, Va., September 19.

11th Bombardment Squadron

During the past week the organization did not perform the usual amount of flying that it has always been accustomed to. Lieut. Bunge flew cross-country to Bolling Field and return, bringing back with him Lieut. Behne and Sgt. Bernarde.

58th Service Squadron.

The Model Airways ship returned to the field after a hard trip around the airways. Major Westover and Lieut. G.C. MacDonald made a cross-country trip to Elizabeth City, N.C. in the Loening Amphibian. Lieut. John Drumm arrived on September 13th with a new NBS-1 which he ferried from Fairfield, Ohio.

59th Service Squadron.

"What with" turning over 78 men for special duty, maintaining a hangar housing two Martin Bombers and two DeHavilands, the organization is hard at work as usual.

First Lieut. Wm. A. Hayward took advantage of 30 days' leave of absence, effective Sept. 7th, turning over the command of the organization to 1st Lieut. K.N. Walker.

50th Squadron.

The 50th Squadron defeated the Air Service Tactical School baseball team in two of three scheduled games between them to decide the post championship and thereby achieved the coveted honor. A suitably engraved cup will be presented to the winning team by the post commander in the near future.

Inter-Organization Volley Ball.

The Outlaw Volley Ball Team, composed of Staff Sgt. R.J.Hughes, Sergeant Clyde Smith, Privates P.G. Vrable and George Nichols, all of 2nd Wing Hdqrs., and Sergeant Henry W. Spiller and Wm. Clark of the 20th Photo Section, under the leadership of Sergeant Hughes, came out with the long end of the score in the Volley Ball Tournament just finished at this post. Each game was more or less a one-sided affair, and the players of the opposing teams were no match for the flashy players of the Outlaws.

LANGLEY FIELD WINS BASEBALL CHAMPIONSHIP OF THIRD CORPS AREA.

With no supporters to cheer them on, playing on strange grounds and amidst "hostile" spectators, Langley Field "met the enemy and they are ours". By invading the Corps Area Headquarters at Baltimore, Md., and defeating the fast Tank Corps team two out of three games, the Langley Field team brought home honor glory and a beautiful silk flag with the following emblazoned thereon: "Third Corps Area, U.S. Army, Baseball Champions". The flag was presented to the team by Major General Douglas MacArthur, Corps Area Commander, immediately after the deciding game played on the afternoon of Sept. 1st at Fort Howard.

Plans were made at Langley Field to entertain the team at a banquet and to present to each player a fitting remembrance of membership on the Championship Team.

Throughout the season the playing of the Langley Field team was marked by high morale, clean sportsmanship and a keen desire to bring to Langley the Championship flag. The team was ably managed by Warrant Officer Holmes, while a great deal of credit is due Staff Sgt. Gordon, 11th Bomb. Squadron, for his services as coach. Pvt. "Chink" Brownley of the 11th, the team's star pitcher won 17 out of 22 games which he pitched. Out of 53 games played during the entire season, Langley won 35.

While at Baltimore for the Corps Area Championship games, the team was quartered at Camp Holabird. The Commanding Officer, Col. Gambrill, and his whole command treated the Langley Field team as guests and showed them every courtesy and favor. Langley Field keenly appreciates the splendid treatment accorded its team.

PHOTOGRAPHIC ACTIVITIES

Lieut. C. L. Williams and Staff Sgt. J.J. Barnhill of the 2nd Photo Section, until recently on a photo mission in the vicinity of Staunton, Va., flew to Morristown, Tenn., where they will maintain headquarters while photographing in the vicinity of Great Smoky Mountain Park.

Wilbur Wright Field, Fairfield, Ohio, September 2.

Officers and men of the Indiana National Guard attending the camp at Wilbur Wright Field returned to their homes after a most successful two weeks training period.

A cross-country flight to Mitchel Field, N.Y., was made by Major A.W.Robins and Lieut. H.A. Bartron for the purpose of consulting with officer at that station regarding supplies for use during the air races.

Recent visitors to Wilbur Wright Field were Majors Clarence L. Tinker and Horace M. Hickam.

The Airways Control Office was transferred from McCook Field to Wilbur Wright Field in order that full advantage may be taken of the radio station and of the meteorological office maintained here. Lieut. Lester J. Maitland, formerly of McCook Field, is the Airways Control Officer. He has also been appointed Operations Officer.

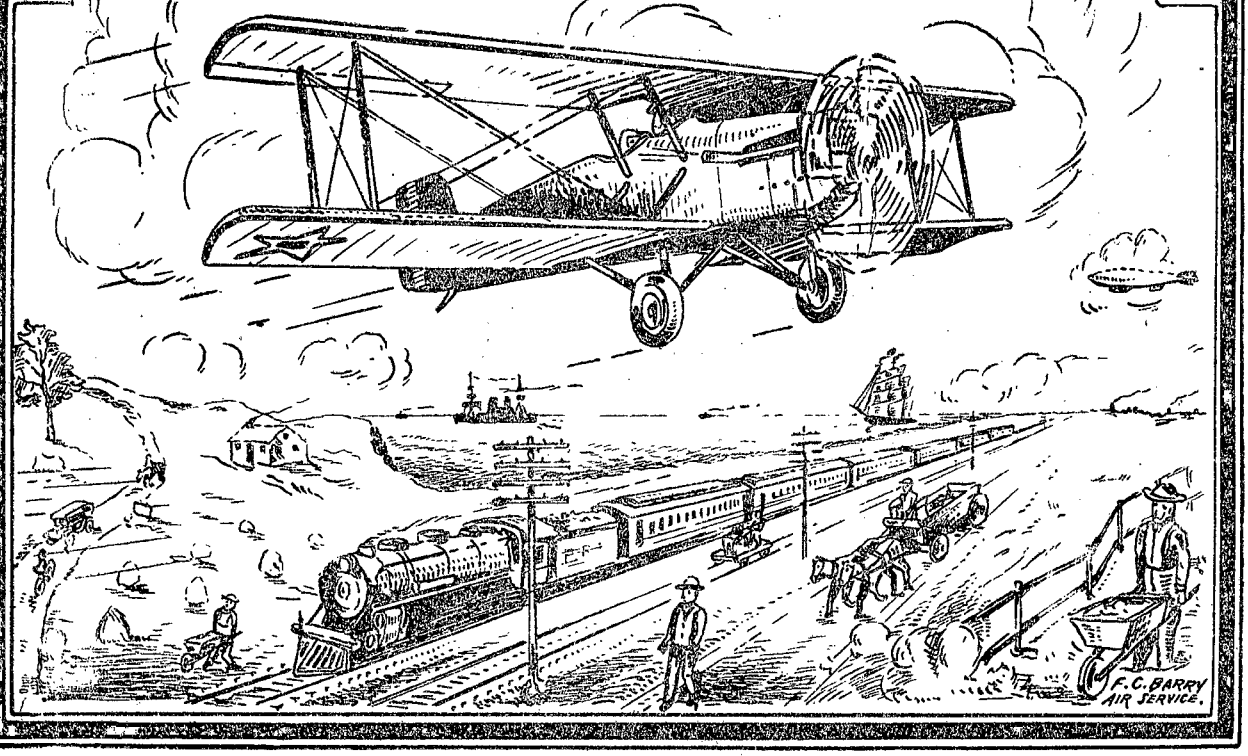
Biggs Field, Fort Bliss, Texas, Sept. 5th - 14th, 1925.

Ten Air Service men were assigned to automobiles owned by members of the American Red Cross to perform rescue work in the flooded area in the vicinity of Fabens, Texas.

Visitors to this station during the above period were: Major Rowell and Captain Presley, U.S. Marine Corps, who arrived Sept. 10th in two Martin Bombers with three passengers each and left the same day for their home station at San Diego, Calif.; Lieuts. McHenry and Martin from San Diego, Calif., arrived Sept. 8th and left the following day for their home station at Brooks Field, Texas; Lieuts. Goodrich, Harbick, Capt. Rehmann and Sgt. Mansfield arrived Sept. 10th, from San Antonio, Texas, and departed for Los Angeles, Calif., on the 12th; Lieut. Strickland arrived Sept. 10th from Muskogee, Okla.; Lieuts. Davies and Stenseth arrived Sept. 10th enroute from Los Angeles to their home station at Richards Field, Kansas City, Mo.; Captain Wright, Lieuts. Richter, Crocker and Sgt. Travis, from Kelly Field, visited here Sept. 12th. Another Kelly Field visitor was Lieut. Williams, who arrived Sept. 10th and returned on the 14th; Lieut. Corkille flew over from Brooks Field on Sept. 13th and returned the following day.

The following cross-country flights were made by personnel of this field; Lieuts. L. D. Weddington and Furnholmen to San Antonio Air Intermediate Depot to have a new motor installed in plane and incidentally participate in a golf tournament; Lieut. Gale and Capt. Howard to Marfa, Texas, Sept. 9th in connection with supply matters, returning same date; Lieut. Clark to Marfa, Texas, Sept. 9th, flying Pvt. Davis to that field for station and returning with Private Laird; Sergeants Tyler and Thile to San Diego, Calif., for cross-country training, returning Sept. 10th; Lieut. Clark arrived Sept. 7th from a cross-country flight to Chanute Field, Dallas, Texas, and Denver, Colo.; Lieut. L. D. Weddington and Master Sgt. W. R. Rhodes on a mission to make aerial photographs of the flood at El Paso for the Reclamation Service, thereby greatly aiding reclamation service in the proposed flood prevention program; Lieut. Gale to Tucson, Ariz. and return, Sept. 13th, flying Lieut. Williams to that station; Lieut. Clark and Sgt. Williamson to San Antonio Air Intermediate Depot Sept. 13th to have plane repaired for the Air Races to/place at Mitchel Field; Sgt. Tyler to Douglas, Ariz., and return, Sept. 1st; Lieut. Weddington to Marfa, Texas, Sept. 3rd to participate in a Rodeo at that place; Sgt. Tyler and Pvt. Griffith to Hatch, N.M. and return Sept. 2nd for cross-country training; Lieut. Douglas returned here with Lieut. Smith as observer on Sept. 3rd from San Diego, Calif.

U. S. Army Air Service News Letter



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Information Division, Air Service — October 24, 1925 — 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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With the passing of the 1925 International Air Races held at Mitchel Field, the Army Air Service can look back with satisfaction over its accomplishments in the various events featuring this big aviation event which takes place every fall. First and foremost was the victory of Lieut. Cyrus Bettis in the Pulitzer speed classic. There was only one other real contender in this race - Lieut. Alford Williams of the Navy. Both piloted identical ships - the new Curtiss Racer. To the casual outsider the odds favored the Naval speed pilot to win the race, since he established a new mark in speed over a closed circuit in the Pulitzer Race in St. Louis in 1923 of 243.8 miles an hour, a high speed mark of 266.59 miles per hour over a straightaway speed course at Mitchel Field shortly thereafter, and in trials at Mitchel Field shortly before this year's race he was timed in the practice ship at the startling speed of 302 miles per hour. But it was fated that the Army should win this year, and Lieut. Bettis established a new mark over a closed circuit of 248.99 miles an hour - a world's record.

In the race limited to observation type airplanes, the Air Service won second place, first honors going to France. It was the first time in the history of the International Air Races that a foreign country was represented, so that this year the title given to this annual air meet was wholly justified.

It seems that it generally falls to the lot of an officer stationed in the Office of the Chief of Air Service in Washington to win at least one event each year during these races. Lieut. T.J. Koenig won the observation type race at Detroit in 1922; Lieut. Donald G. Duke won the Liberty Engine Builders Trophy Race at Dayton last year. This year Lieut. Ernest E. Harmon won the Detroit NEWS Trophy Race, piloting the Huff-Daland XLB at an average speed of 119.91 miles per hour. The Navy won second place in this event, but third place also went to the Army.

In the John L. Mitchell Trophy Race Lieut. Thomas K. Matthews, piloting a Curtiss PW-8 plane, flew over the 120-mile course at an average speed of 161.5 miles an hour. Last year's record of 175.43 miles per hour was established by Lieut. Cyrus Bettis. In the matter of speed, therefore, this race was a disappointment, though why the record this year fell off to the extent of some 13 miles an hour has not yet been explained.

The attendance at the races was a disappointment, due to wretched weather conditions. Saturday, October 10th, the day of the Pulitzer Classic, when all previous attendance records were expected to br broken, was so cold and windy that flying was rendered extremely hazardous, and postponement was made to Monday. Deprived of the large Saturday half holiday crowd, the attendance on Monday fell off considerably.

Among the interesting features of the Air Races was the Exhibition Department. In and around one of the hangars at Mitchel Field were collected many curious looking paraphernalia of flight. There were new engines, starting devices, tricky-looking scout planes, heavy bombers, luxurious transports, and flying salesrooms. A striking example of a flying salesroom was the giant Remington-Burnelli airplane, which contained an Essex automobile, together with the wicker chairs, fern pot, and advertising literature that are always found in automobile salesrooms.

The public was very much attracted by the small, light airplanes flying on next to nothing horsepower, and also the Pursuit planes with the high compression motor diving across the field with a mighty roar and terrific speed. The flying men themselves were very much attracted to the French Breguet Observation and Light Bombardment plane, which won the Observation Race, and gave a remarkable exhibition of maneuverability. This plane is all-metal, and in the words of one aviator who looked it over carefully: "It is one of the neatest jobs I have ever seen." This is the first time the French company has entered the

Races in this country, and its first appearance made a profound impression upon aviators who fly observation and bombing planes.

Another spectacular plane around the Air Races was the Fokker Monoplane, which will neither spin nor nose dive - yet flies. This plane has three 200 H.P. Wright air cooled Whirlwind Motors, and will fly on any one. The secret of the non-spin and dive feature is the thick wing, together with the placement of the center of gravity. It cruises at around 100 miles an hour, according to its pilot. If this plane proves as good as its early demonstrations show, there will undoubtedly be a revolution in design for commercial airplanes, for if the spinning and diving be taken out of flying casualties will be reduced by at least 85%.

Still another striking machine at the exhibition was the giant Sikorsky Transport, which is reputed to fly with a full load on only one motor. It is powered with two Liberty motors. The business of flying on one motor is a great step towards making aviation safe, for in so doing forced landings due to motor trouble will be greatly reduced.

The races opened on Thursday, October 8th, with the largest assembly of military and civilian planes ever brought together in this country. The day broke crystal clear, but even before dawn mechanics had turned out and, working by electric light in their hangars, they made final adjustments to the mechanical birds. With the break of day the planes were wheeled out on the field. So numerous were they that they looked like a flock of birds alighted in a cornfield. The crowd was not a large one, not more than 5,000 being inside the field, but as it was the first day those in charge of the races were not disappointed.

The day was marred by a crash in the first event, the Free-for-All Race over a 100-mile course for two-seater low horsepower airplanes. Clarence D. Chamberlain, piloting a Bellanca CE-2, was late in starting and just before he taxied out to the line, Lawrence Burnelli, brother of Vincent Burnelli, one of the designers of the Remington-Burnelli airplane, ran out and jumped in the extra seat of the plane. There were not supposed to be any passengers in this race, the pilots having been requested to carry ballast to avoid the extra hazard. Chamberlain's plane had been wing heavy in tests, the right wing having shown a tendency to pull down. Before completing the first lap the plane began to wobble, no doubt caused by the downward pull on the wing. He was flying at an altitude of only 300 feet and when he lost control there was not sufficient altitude left to regain mastery of his craft. The machine nosed down sideways until a wing hit a telegraph wire. Then, after a short wavering course, it crashed to the ground. Burnelli was thrown fifty feet and was instantly killed. Chamberlain was caught in the ruin of his cockpit, and when rescuers ran up to him he was still dazed. His right ankle was broken and his back badly hurt. He was taken to the post hospital in an army ambulance.

Announcement was made that Kenneth W. Montee, of Santa Monica, Calif., was the winner of the "On-to-New York" Race. He arrived Wednesday afternoon, October 7th, at 5:48 o'clock in a Montee special biplane with a Curtiss OX5 engine, carrying one passenger, Peter Marashi. Second place was awarded E.L. Remelin, also of Santa Monica, who arrived on October 6th in a Curtiss training plane, with C.E. Pyle as passenger. Both men flew the same distance with one passenger, but the first prize went to Montee because of the lower horsepower of his engine. His time was 9 days, 1 hour and 18 minutes.

There were fifteen entries in the Free-for-All Race. Twelve of the planes were powered with Curtiss OX5 motors, two with the Wright L-4 and one, a Thomas Morse S4E, with the Aeromarine B engine. Mr. Basil L. Rowe, who piloted this last mentioned airplane, won the race with an average speed of 102.9 miles per hour and received the prize of $1,000. Second honors went to Mr. E.P. Lott, who piloted a Thomas Morse S4B airplane with a Curtiss OX5 motor, at an average speed of 100.7 miles per hour. He received a prize of $600.00. Mr. C.D. Emrick won the third prize of $400, his average speed being 94.3 miles per hour. He piloted a Hartzell FC-2 with Curtis OX5 motor.

As soon as this race was finished, a big Martin Bomber went aloft with three men standing on its wings, preparing to drop with parachutes. When several thousand feet above the field, Lieut. James Clark and Corporal James Mercer pulled the rip cords of their chutes and were yanked off into space. They swung dizzily back and forth a few times and then straightened out for the long trip

down. As soon as they were well started, Private Arthur Bergo jumped and opened his parachute after dropping a few hundred feet. His descent slowed up with a jerk and then he joined the others in their lazy drift towards earth.

The second group of planes in the Free-for-All Race for two, three and four seater civilian planes proved a little more exciting race than the other, for in it the best time of the day was made. "Casey" Jones won a very popular victory in this event, which was over a 100-mile distance for a trophy offered by the Merchants' Association of New York. The speed made by Jones proved one of the sensations on the first day of the meet. While it had been expected that these commercial and sporting planes would prove slower than the army planes, "Casey" actually beat the average of the winning Breguet in the Liberty Engine Builders Trophy, for his Curtiss Oriole, powered with a Curtiss C-6 engine, averaged a speed of 134.2 miles an hour and gave him the $1,000 prize. His nearest competitor, Frederick H. Becker, piloted his Wright-Bellanca plane at an average speed of 121.8 miles per hour, and he won the prize of $600. Third place with $400 went to Basil L. Rowe, winner of the first race. This time he piloted an SVA with Aeromarine USD engine and averaged a speed of 121.5 miles per hour.

Then came the real thrill of the day, for the First Pursuit Group of Selfridge Field took the air, six planes in two groups of V formation, to go through combat maneuvers. They sped away to the east and then came back high in the air. They drifted two or three times over the field and then from one end suddenly dropped, each plane becoming a shrieking howling thing as it dove nose down toward the ground, so low that those beneath could hear the song of the wind in the wires. When it seemed that they would never stop, when each sharp point on the propellers could be distinguished, a glistening brass point, they straightened out, and with a roar that shook the stand each motor opened wide, they zoomed up again and in a moment they were mere specks in the sky, softly purring along. They did this twice, then turned away again and, after gaining altitude, rolled and banked and changed formation with the ease and precision of a marching unit on the ground. Three of them came down, leaving the other three to do all the tricks taught in the Army. A plane seemed suddenly to run amuck and rolled over and over sideways as if boring its way into the air. Then it straightened out and fell in the odd helpless swinging, known as the "falling leaf". It came out of this and looped, a twisting sideways sort of a loop and then swung into an Immelmann turn.

Following the acrobatics came the Liberty Engine Builders Trophy Race, limited to military airplanes. Sixteen planes were entered in this race, ten by the Army Air Service, four by the Navy and two by France, represented by Captain H. LeMaitre and Captain Pelletier D'Oisy, of the French Army, the latter of whom flew from Paris to Tokio last year with an average speed of 127.4 miles per hour. The Navy was represented by Lieuts. George R. Henderson, T.P. Jeter, Ford O. Rogers and one other pilot whose name is not available at this time, and the Army by Major H.A. Dargue, Lieuts. E.B. Bayley, E.R. McReynolds, E.P. Gaines, R.H. Clark, H.C. Kincaid, Victor H. Strahm, H.B. Chandler, W.B. McCoy and Martinus Stenseth.

The race, over a 12-mile triangular course of 15 laps, total 180 miles, was started in three sections. Captain LeMaitre, the winner, whose average speed was 129.1 miles per hour, piloted a Breguet XIX with a Renault 463 h.p. engine. American airplanes of the military observation type in previous meets had made better speeds, but the best record amongst them was made by Lieut. E.B. Bayley of Crissy Field, flying a Douglas Observation plane, his average speed being 128.3 miles per hour. Lieut. Henderson piloted the Navy O2B-1 (Boeing DH) into third place with an average speed of 127.9 miles per hour. Fourth place with an average speed of 127.4 miles per hour was won by Capt. D'Oisy in the same type of plane as that of Captain LeMaitre. The remaining entrants finished in the following order: Lieuts. McReynolds, Clark, Kincaid, Strahm, Rogers, Major Dargue, Lieuts. Jeter, Chandler, McCoy and Stenseth. Lieut. Gaines, flying a DH4B with inverted air cooled Liberty motor, was forced to drop out of the race just at a time when he threatened to make things pretty uncomfortable for the leaders. Motor trouble robbed him of a possible chance to come in a winner. Lieut. Henderson and the two French pilots were in the first section. All of the planes flew at about 100 feet altitude in order to round the three pylons, and whenever the two French Breguets came

along Lieut. Henderson was either ahead or sandwiched in between. Towards the end of the race, however, Capt. LeMaitre put on more speed and settled the issue. First prize was $1,000; other prizes, in order named, were $700, $400, $250, and $150, all in Liberty Bonds.

A misty lowering day, with rain falling at intervals, made necessary the postponement of the Air Races scheduled for Friday, October 9th, after the first event, the race for the Aviation Town and Country Club of Detroit Trophy, had been completed. Mr. C.S. (Casey) Jones again appeared in the limelight and crossed the finishing line a winner, his Curtiss Oriole circling the 100-mile course at an average speed of 128.4 miles per hour. Basil L. Rowe, in his SVA plane came in second with an average speed of 119.8 miles per hour, while Fred H. Becker, in his Wright-Bellanca, finished third with an average speed of 112 miles per hour. These three men put up a consistent performance in all the events they entered and always finished in the money. Of the 14 planes entered in the above race, five failed to finish. The race was divided into two parts for $2,500 in prizes. One half of the prize money went to the six planes making the highest speed, and the other half to the six planes finishing with the highest order of merit based upon the load carried at the speed he made in the contest according to horsepower. While Jones finished first in the speed contest, he had to be content with second place in the efficiency test, being credited with 394.8 points. Becker won first place with 602 points and Depew, piloting a Sikorsky S31A plane, came within two points of the mark awarded Jones in the efficiency test, although he finished last among the contestants who completed the entire race.

What was counted upon as the big day of the Races, Saturday, October 10th, was spoiled by impossible flying conditions, necessitating postponement to Monday with consequent financial loss due to greatly curtailed gate receipts.

Monday was far from being a perfect flying day because of the haze. A crowd of about 25,000 paid admission, and at least 10,000 more were gathered in automobiles around the flying field. Box seats quoted at $6.00 went begging at $2.00, and when the Pulitzer Race started the price dropped to $1.00 with few takers.

The race for the John L. Mitchell Trophy was by far the most spectacular feature of the day. In thrills it exceeded even the Pulitzer Trophy Race in which, because of the distance between the two contestants, there was little suggestion of racing.

The first event of the day was a fifty-mile race of ten laps over a five-mile course for the Scientific American and Aero Digest Trophies. The planes were of low power, four of them having motorcycle engines. Their speed was from 60 to 70 miles an hour. The fastest time was made by Terry U. Dack in a Powell Racer, powered with a Bristol Cherub 16.7 h.p. engine - 76.1 miles per hour. Clyde Ernick took second place with 67.5 miles per hour in his Johnson Bumble Bee, powered with a Henderson motorcycle engine. E. Dormoy was third with 52.2 miles per hour. His plane was also powered with a Henderson engine. The prize money amounted to $2,000. Dack and Ernick also won first and second places, respectively, in the efficiency contest.

After this race there was a thrilling exhibition of stunt flying by Lieut. James H. Doolittle, alternate pilot in the Pulitzer Race and the Army entry in the Schneider Cup Race for seaplanes to be held at Baltimore, Oct. 24th. Some small balloons were released, and Lieut. Doolittle chased them back and forth over the field until they were caught by the wing or propeller and burst. Three planes of the First Pursuit Group, piloted by Major T.G. Lanphier, Lieuts. F.O'D. Hunter and Robert Douglas demonstrated formation flying. They circled about the field and dove and looped as a unit and separately.

The John L. Mitchell Trophy Race followed, and Lieut. Thomas K. Matthews was the winner, his average being 161.5 miles an hour. This race was over a distance of 120 miles in ten laps. Lieuts. G.F. Schulgen and A.J. Lyon were tied for second place with an average of 158.7 miles per hour; Lieut. Frank O'D. Hunter was fourth with 157.5 miles per hour; Lieut. C.K. Rich, fifth, with 157.2 m.p.h.; Lieut. R.L. Meredith, sixth, with 156.3 m.p.h.; Lieut. R.J. Minty, seventh with 156.1 m.p.h.; Lieut. R.D. Douglas, eighth, with 154.8 m.p.h.; and Capt. T.E. Tillinghast, ninth, with 154 m.p.h. Lieut. C.D. McAllister dropped out of the race after the third lap. All of these pursuit pilots from Selfridge Field piloted the Curtiss PW-8 Pursuit plane, powered with the Curtiss D-12, 400 h.p. engine.

victory. No one likes to be a loser, of course, but much of the sting of defeat is lost when losing to an opponent like Bettis. He is a fine sportsman - displayed it all during those tense moments of preparation leading to the moment of the starting gun - and just as good a pilot. He handled his ship beyond criticism and his conscientious work and constant attention to the making ready of his plane, I feel, make him very worthy of the honor of carrying off the Pulitzer Trophy."

The prizes, amounting to $4,000 in Liberty Bonds, were distributed as follows: Lieut. Bettis, $2,000; Lieut. Williams, $1,000; Lieut. Dawson, $750, and Lieut. Norton, $250.

Tuesday, October 13th, the last day of the International Air Races, furnished the greatest thrills of the entire meet. During the race for the Detroit NEWS Trophy, Capt. Earley E.W. Duncan, of Langley Field, piloting a Douglas Transport plane, suffered a mishap which but for his superb judgment, skill and coolness in the face of danger might have resulted disastrously. During the heat and "smoke" of this big bombing race, Captain Duncan swiped a telephone pole with a loss of one left wheel and its attendant landing gear complete. He immediately swung back towards the field, where most of the spectators did not see anything wrong, but the flying men got excited and sent the little police plane (one of the PW-9's) up to tell the pilot of his predicament. This was unnecessary, however, as Captain Duncan knew he had lost a wheel. He circled a few times as if making up his mind whether to land or stay up in the air, but finally cut his motor away back and, accompanied by the little PW, flying almost within the outer bay, glided slowly towards the center of the field, while aviators held their breath and spectators looked on as if some great tragedy were about to take place. In the meantime all the ambulances, together with doctors, surgeons, dentists, chemical wagons, hook and ladder brigades, a platoon of heavily armed guards, all got warmed up and set on the mark, ready to pounce out and render first or last aid to the pilot of the crippled plane. But Captain Duncam cheated them, like most of the veteran aviators felt he would. Just before leveling off, he lowered his right wing and he touched the ground at about 35 miles an hour and rolled along on the right wheel and with tail skid dragging, until the speed had been still further reduced. Then the left wing slowly dropped, dragged the ground and the whole plane slid forward and stopped. Neither Captain Duncan nor his mechanic were injured in the least, but the lower wings and landing gear of the Douglas were washed out.

Lieut. Ernest E. Harmon, on duty in the Office Chief of Air Service, piloting the Huff Daland XLB with 800 h.p. Packard engine, won the Detroit NEWS Trophy Race with an average speed of 119.91 miles an hour. Second place was taken by Lieut. C.S. Schilt of the Navy, his Douglas T-4 averaging 118.15 miles an hour, and Lieut. K.B. Wolfe, of McCook Field, in a Douglas C-1 finished third with an average speed of 113.58 miles an hour. Lieut. J.D. Barker, stationed at Aberdeen Proving Grounds, Md., piloting a Martin Bomber, finished fourth with a speed of 112.47 miles per hour. Lieut. Harmon was in the lead throughout the race, making his fastest time, 121.01 miles per hour, in his first lap.

Another tragedy was narrowly averted when Private Carl Gunther of the 5th Observation Squadron was caught in a wing strut by the buckle of his parachute as he started to make an exhibition parachute leap. He struggled hand over hand up the parachute rope toward the plane, but the buckle controlling the opening string was torn off and he fell. His emergency parachute opened after he had fallen about 800 feet and he made the ground in safety.

Three Dayton, Ohio, pilots again won the "flivver" aircraft race, duplicating their Monday performances in an identical event. Terry Dack took first place in the tiny biplane built by Prof. C.H. Powell, of Detroit, at 71.6 miles an hour; Clyde Ernick was second in his monoplane propelled by a motorcycle engine, at 64.80 m.p.h., and E. Dormoy, in another monoplane with a similar engine, was third at 52.88 m.p.h. Later Dack took the Powell plane up for an altitude record for small machines when he drove his "Skeeter" plane up to 9,800 feet in the air in thirty-five minutes.

The New York Air Races marked the lowest point that these races have reached in the last four years. The speeds that were expected did not materialize and the bad weather greatly curtailed the attendance. The unfavorable weather could not have been foreseen, but the retrogression in the matter of speed will no doubt have a far reaching effect which will make itself manifest in next year's races.

V-5489, A.S.

TESTIMONY OF MAJOR W. G. KILNER BEFORE AIR BOARD

Judging from press reports and from testimony before this Committee there seems still to be a great misconception and misunderstanding of what the airman means by AIR SERVICE and AIR FORCE.

These terms are not interchangeable but each has a separate and distinct meaning.

From the arguments advanced, one gathers that the eyes of the Army are about to be put out andthat no longer will the Navy have her spotting planes to direct her guns, if the plan as suggested by General Patrick should be placed in effect. This alarm indicates clearly the thought in these services. It is apparent that they are concerned about one minor phase of air power, observation aviation or, as we term it, AIR SERVICE. By all means let them have their observation and let it be assigned to divisions, corps, armies, ships or fleets as the tacticians may determine. Let this aviation train with the ground troops and live with them so they will understand each other. This is not a new idea, it was recommended by the Air Service itself during the late war. Their job admittedly is to aid directly the ground troops. However, this kind of aviation constitutes only 25% of an adequate flying force.

When airplanes were first used in war they had no guns or bombs. They were incapable of harming anyone except their occupants. Their business was to collect information concerning the enemy. Soon, however, someone concluded that if the plane could be shot down, no information would get back. This conclusion led to the development of a fast maneuverable plane for the sole purpose of shooting down observation planes. If planes, therefore, were to get any information of the enemy, this new menace had to be met and the race was on to see who could produce the superior fighting plane in the greatest numbers - the pursuit plane of today. In the presence of hostile pursuit observation planes cannot work, as they are inferior in speed, climb and maneuverability and will be shot down or driven off.

Higher powered and lighter engines came into being as a result of this race, and it was found that by putting on bigger wings, a very substantial load could be carried. This suggested the idea of hurling down unpleasant missles on the ground troops. Two, three and four engines were mounted and the weight-carrying ability was increased. Efficient containers of explosives, called bombs, were attached to the plane and we had the third class of aviation, usually called bombardment aviation.

Near the end of the war, fast low-flying planes were used to machine-gun troops on the ground and also to drop small bombs on them. This is what we call attack aviation - the fourth class.

Other witnesses will describe in detail these various classes. It is these last three types, Pursuit, Bombardment and Attack that we designate as AIR FORCE.

The Pursuit pilot's job is always the same - it is to shoot down enemy aircraft. He is not concerned in any way with ground troops, it makes no difference to him whether his job is over land or water, fleet or army. His training is exactly the same, his tactics are identical. He has nothing to do with spotting for the fleet nor adjusting the army artillery. He is concerned with an air job only.

Bombardment is directly against land or water targets. It makes no difference to the bomber whether he drops his bombs on a battleship, on an ammunition dump, on a concentration of troops or on a city far in the rear of the lines of battle. He may work on targets near the lines or two hundred miles away. His mission is quite apt to be entirely independent of ground troops.

Attack aviation may be used directly on troops or it may be sent to clear the way for the heavy bombers to attack naval vessels many miles away.

Thus, it follows that Pursuit, Bombardment and Attack aviation make up an air power which may be mobilized and applied quite independently of the actions of the troops. Neither the Army nor the Navy has shown any alarm that these might be taken away from them. In fact, the development of these three types of aviation is an air problem which can be understood only by airmen and if there is to be any progress, can and must be developed by them alone. The only aviation the division commander worries about is his observation; the fleet commander thinks only of someone to spot for his guns and to keep him informed of the enemy movements. As a result, stress is laid on observation and the AIR FORCE developed only by airmen has been gradually reduced to a skeleton of what

Again, I quote a recent very distinguished witness before this Committee,- "The argument advanced by so many young inexperienced Naval aviators that they desire a separate Air Corps, analagous to the Marine Corps, is based on utter fallacy and complete misunderstanding". Thus, you see the thought has not changed much in the past twelve years.

In 1913 an officer could not be detailed to the Aviation Section of the Signal Corps unless he was below thirty years of age. An officer, therefore, who learned to fly at the maximum age would now be only 42 years old. I contend that officers about forty years of age, who have been connected with aviation for some ten or twelve years are not handicapped by extreme youth and inexperience and should, other things being equal, be more capable of supervising and directing flying than those whose associations and experience have been with ground troops or battleships only, no matter how ancient they may be. Today the average age of the First Lieutenants of the Air Service is over 33 years; there are 118 over 35 years old and 11 over 40. The bulk of air experience rests with these men and they are still young enough to be mentally and physically active. It seems to me that the ideal man to exercise executive functions in any institution is one who is comparatively young in years but old in experience. I have heard that it is now the tendency in business to seek just that type of man.

Our pilots have had the best possible training - a war, and most of them have been flying since 1917. They consist of highly trained specialists and during the war many of them, even now under forty years of age, had under their control commands greater than the entire Army Air Service of today. If they could do it then, why not now?

The fact is that aviation isyoung and the people who have developed with it from the beginning may still be under forty years of age but they, and they alone, are the ones who have the ripe experience to deal with the manifold technical and complicated air problems of today.

The Air Corps idea as advanced by General Patrick has been bitterly opposed on the ground that it would seriously interfere with "unity of command" which all military men feel is indispensable for a successful prosecution of military operations. Roughly, this proposed Air Corps organization is based on the present Marine Corps of the Navy. General Lejeune, the present Commandant, submitted to the Chairman of the Naval Affairs Committee of the House a statement, January 28, 1924, containing a summary of the "organization, development, history and mission of the Marine Corps". I quote from that statement:-

> "One of the principal reasons forthe efficiency of the Marine Corps is that it had, in the major general commandant (who is appointed by the President for a four-year term), a single head and that he is charged with the duty not only of building up its efficiency, and of conducting its affairs economically, but also is regarded by all officers and enlisted men as their natural protector and friend. In this regard it is well to remember that unity of administrative control is as essential to success as is unity of command, that both are in accord with the principle of simplicity, and that, conversely, a division of authority spells confusion, demoralization, and disaster."

If this works so well in the Navy Department, why shouldn't it also in the War Department?

Admittedly there is no such thing as unity of command in any joint Army or Navy action against our coasts. There is no supreme military commander who can direct the action of both our Army and Navy in the field. The terrible strain placed on the words "coordination" and "cooperation" during the recent Hawaiian maneuver is but a fraction of that which would occur in a serious national emergency. Other witnesses are prepared to treat in detail of the recent joint maneuvers. The proposed Air Corps does not preclude the Secretary of War directing the Air Force commander to report to the Commander-in-Chief of either the Army or Navy, to be used as that official sees fit.

In conclusion, I should like to trace briefly the history of Army aviation. The United States was the first country to contract for a military airplane. For this unique device, in 1908, the Army paid $30,000, on condition it could be easily taken apart and packed for transport in Army wagons and should be capable of a minimum speed of 40 miles per hour. In order to insure careful development, it was assigned to the Signal Corps upon the recommendation of that arm. I should like to quote briefly from the testimony of General Scriven, then Chief

Signal Officer of the Army, who appeared, in 1913, before the Congressional Committee investigating the Hay Bill, in order to show what the Signal Corps thought of the possibilities of aviation at that time,-

"Whatever may be the ultimate future of aeronautics in the United States Army, it appears certain that the immediate future should rest with the Signal Corps. Not only is the scientific knowledge of members of that corps necessary for the development of the science, but under the law the Signal Corps supervises the services of communication, observation, and reconnaissance as effected through wire and wireless telegraph and the telephone. Aeronautics and aviation in military affairs are merely an added means of communication, observation, and reconnaissance, and ought to be coordinated with and subordinated to the general service of information, and not be erected into an independent and uncoordinated service."

In 1913, the War Department asked Congress for $125,000; France appropriated $7,400,000; Germany $37,500,000, to be spent over a period of five years; Russia $5,000,000; England, $3,500,000, and Mexico $400,000. The founders of military aviation, five years after they founded it, asked for a little less than one-third the sum that our powerful neighbor to the south spent on her AIR FORCE.

From 1913 to 1916, with a war raging in Europe, the War Department asked Congress for a total of $925,000, or $308,000 a year.

As to personnel, in 1913 the Army had 7 rated military aviators. General Scriven, then head of the Signal Corps, was called before Congress and was asked - "Under the law at present the War Department is authorized to detail how many officers for the purpose of flying?"

General Scriven replied - "Thirty authorized. We have authority from the Chief of Staff for twenty."

On our declaration of war, April 1917, the Signal Corps had ready for the emergency, thirty-five flyers and fifty-five training planes unsuitable for war use. This, in spite of the fact that in 1913 General Scriven admitted that France had 611 planes and 620 pilots; Germany had 428 planes and 300 pilots; Russia 200 planes and 80 pilots; England 168 planes and 135 pilots, and yet four years later, with the war lesson of Europe before us, we had 35 pilots and 55 training planes.

To bring the picture up to date, on July 1st, 1920, the Army Air Service had 858 rated flyers; on July 1st, 1925, we had 832. We are, therefore, slowly progressing backward.

We believe that those who have aeronautics most at heart, who have lived with it longest, who have done most of the flying, who have had the aeronautical experience and who believe an AIR FORCE vital to National Defense, should be charged with its control and development. These are the reasons why we advocate an AIR CORPS headed by an Air Chief who knows air business and who has the power to make his own decisions.

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FORT LEAVENWORTH STUDENTS VIEW AERIAL DEMONSTRATION

The annual demonstration flight left Kelly Field, Texas, September 29th for Fort Leavenworth, led by Major Carlyle H. Wash and Captain A.B. McDaniel. This flight, which has become an annual affair, is for the purpose of demonstrating to the students of the Command and General Staff courses at Fort Leavenworth some of the technical possibilities of an Air Service and an Air Force. This demonstration will be repeated this year for the first time at the Cavalry School at Fort Riley. The flight consisted of six Headquarters and Staff planes six pursuit, six bombardment, one observation and nine attack planes. An explanation of the small representation of observation aviation isthe fact that planes and personnel for the demonstration of latest developments in aerial photography and communications will be sent from Chanute and McCook Fields to join the expedition at Fort Leavenworth. Upon the completion of their work at Fort Leavenworth and Fort Riley, many of the pilots, and all of the 3rd Attack Group, proceeded to the Air Races at Mitchel Field and participated in the Air Force Demonstration held there immediately following the Races.

CRISSY FIELD FLYERS SPEND STRENUOUS WEEK AWAY FROM HOME
By the News Letter Correspondent

The latter part of the month of September was for Crissy Field a real touch of the old days when men were men and the Adjutant and Supply jobs went to the ground officers - Long may she wave. Anyway, all of Crissy Field that could possibly leave on September 15th tied their hats on and headed for Portland, Oregon, where 1st Lieut. Oakley G. Kelly was opening his new field, named after the late Lieut. Alexander Pearson, Jr. The flight was composed of: Pilots - Lieut.-Col. F.P. Lahm, Major Delos C. Emmons, Captain C.E. Griffin, 1st Lieuts. W.R. Taylor, H.A. Moore, W. Morgan (Reserve), Staff Sgt. Fred Kelly and Master Sgt. T.J. Fowler; Observers - Capt. J.P. Beeson, M.C., Lieuts. C.V. Haynes, E.C. Warren and Ray Little (Reserve Corps), Master Sgt. Wm. L. Klutz, Staff Sgts. John W. Yates, J.R. Lessels and Corp. George P. Watson.

On September 16th all the Reserves and Regulars, consisting of some forty-five DeHavilands and the well known Jennies participated in an aerial circus at Portland. The circus consisted of a DeHaviland race, a Curtiss race, bombing, landing for the mark, stunting, parachute jumps, etc. Crissy Field came in for the lion's share of the loot. First Lieut. C.V. Haynes won the DeHaviland race, for which he received a beautiful wrist watch. To 1st Lieut. W.R. Taylor, with Staff Sgt. T.J. Fowler, as pilot, went a beautiful cup for the bombing prize. The Crissy Field formation, consisting of 1st Lieuts. J.W. Benton, C.V. Haynes and Staff Sgt. Fred Kelly, won first place in the competition, each pilot participating receiving a watch. Staff Sergeant Fred Kelly also won second place in the landing for the mark contest. The 91st Observation Squadron was presented with the Portland Chamber of Commerce award for having the largest number of planes present, said award being a large 9-day mantel clock, suitably engraved. Your Crissy Field Correspondent might add at this moment that the above mentioned prizes were won in competition with a flight from Rockwell Field and a flight from Kelly Field.

In the evening the Chamber of Commerce of Vancouver, Wash., gave a stag dinner for all the visiting aviators. This was followed by a dance, attended by all the social elite of Portland and Vancouver. About the time that the dance broke up numerous parties were formed to go to places and see things.

On the morning of September 17th, practically all the pilots and passengers left for Pendleton, Oregon, to attend the "Round-up", as the guests of the City. The Pendleton Round-up, which takes place once a year, is the gathering place for all the Western cow-punching and bull-dogging talent, the Western thoroughbred horses and the Western corn-fed (?) - (Two guesses). Pendleton is where they award, yearly, in competition, the Roosevelt Trophy for the World's Champion All-Around Cowboy. Arriving at Pendleton, we all went in to the "Round-Up" headed by Captain Lowell H. Smith and Lieut. Leslie Arnold in "five-gallon sombreros." In the evening, as guests of the City, all the visiting aviators attended a pageant depicting the historical advance of the West. This feature of the "Round-Up" was wonderfully done and elaborately staged. After the pageant a '49 dance was held on the same grounds, known as Happy Canyon. September 18th was spent at Pendleton in a similar manner.

On Saturday, the 19th, everyone but the cripples shoved off for Spokane, Washington, to participate in an Aerial Show to be held there on Sunday, the 20th. Arriving at Spokane, we were all met by a delegation of the local Washington National Guard Squadron and taken to the best hotel in town where we refreshed (that is the word I've been trying to think of) ourselves prior to attending a banquet that night. The banquet was attended by all the loveliest young ladies of Spokane - and - Oh, yes, also the aviators. On the same evening a very unfortunate thing occurred. It seems that the President of the Spokane Ministerial Association wired the War Department objecting to Regular Army participation in the Air Meet on Sunday. It being a War Department policy, orders were received directing the Regular Army not to participate on Sunday. The Spokane National Guard Squadron decided, however, to continue with the Meet on Sunday, and it was a success in all ways, including the financial end of it. The success of the Meet was marred, however, by the death of Lieut. S.D. Priestly, A.S.R. andPrivate Avey, also of the Organized Reserves, who were killed when their Curtiss airplane went into a flat spin at a low altitude and crashed. No cups came to the 91st Observation Squadron at Spokane as they were

not permitted to participate - besides, they had all they could carry anyhow.

I think it is only right that here in our official organ we, as a representative gathering of Regular Army Air Service officers, should state to our Service at large that we have never had a better time or received a more royal welcome in any of our cross-country flights than we received at Spokane. This was, in a large measure, due to the personal efforts of Major Jack Fancher, Commanding Officer of the Spokane Air Service Washington National Guard Squadron, and Lieut Jack Allenburg of the same Squadron, who constituted the entertainment committee. After all this, what more can be said than that we returned home.

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NEW AMBULANCE PLANE RECEIVED AT FRANCE FIELD

The Cox-Klemin XA-1 type machine, the very latest word in ambulance aircraft, was on exhibition recently at Albrook Field, Balboa. There are only two ships of this type now in operation, the other one being at Dayton, Ohio. Capt. Andrew W. Smith, Flight Surgeon, Air Service, brought this plane over to Albrook Field from France Field, carrying as passengers Major MacDonald, Provost Marshall; Staff Sgt. Walter J. Cullinane and Private DeVine.

A distinguished group of spectators showed keen interest in the ambulance plane which Captain Smith demonstrated to all of them. Dr. Alfonso Preciado, Supt. of the Santo Tomas Hospital and Dr. Augusto B. Boyd, Chief of the Clinic, were among those who examined the plane and praised its facilities for carrying patients in the utmost of comfort. The crowd was rather surprised when Captain Smith climbed into the big white plane and, without having to crank it by twisting the propeller, started it off as one starts an automobile - by stepping on the self starter. With his three passengers aboard he left Albrook Field at 25 minutes later landed at France Field.

The plane has a speed of 120 miles an hour while carrying two patients and an attendant, in addition to the pilot. It is equipped with the very latest facilities for caring and sttending the sick and injured. This is the first time in the history of aviation that an ambulance has been assigned to air forces of the Canal Zone, though it has long been felt that some means of modern conveyance was urgently needed, as during the past few years many urgent emergency demands have been made upon the authorities at France Field to rush airplanes to some remote place in the Republic of Panama for the purpose of administering first aid or conveying persons on the point of death to the Ancon Hospital where in many cases the patient arrived just in time.

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KELLY FIELD PILOTS FLY TO PACIFIC COAST

A flight of four airplanes from Kelly Field, piloted by Captain B.S.Wright, 1st Lieut. John P. Richter, 2nd Lieut. J.S. Griffith and Sgt. Travis recently completed a successful trip to the Pacific Coast and up through San Francisco, Calif., Portland and Pendleton, Oregon, and Spokane, Washington, and participated in a series of exhibitions sponsored by the Commanding General of the 9th Corps Area. The personnel report a successful trip and splendid hospitality at all stops.

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PILOT HURLED FROM AIRPLANE DESCENDS SAFELY IN PARACHUTE

It often occurs that it is difficult to properly classify an occurrence such as happened at Langley Field, Va., on October 1st last, as an accident or merely an incident. Whizzing through the clouds in a "Tommy" (Thomas Morse plane) at an altitude of several thousand feet, Lieut. Rogers, Marine Corps, was about to look at his watch, when he noticed that his safety belt was unfastened. In trying to fasten it, he lost control of the stick and the "Tommy" made an made an abrupt nose dive. Lieut. Rogers, following all the natural laws of Physics, continued his forward horizontal flight alone.

Having his presence of mind, however, as well as a parachute, the Lieutenant drifted back to earth safely. The pilotless "Tommy", in its unholy "Back to the land movement", described a straight and swift line to terra firma and upon impact with mother earth, instantly metamorphosed into a mass of junk.

SANTA MONICA CELEBRATES FIRST ANNIVERSARY OF WORLD FLIGHT

A crowd, variously estimated at 15,000 to 25,000 persons, gathered at Clover Field, Santa Monica, Calif., on September 27th to witness an Aero Meet staged by the American Legion to commemorate the first anniversary of the completion of the Around-the-World Flight. The principal event was a race around a 100-mile circle course for the $10,000 American Legion Trophy. The Navy stepped out and won first honors in this event amongst a field of 24 competitors. Lieut. E.B.Wilkins of the Naval Air Station, North Island, San Diego, Calif., piloting a Vought fighting plane, completed the course in 40 minutes, 35-3/5 seconds, or at an average speed approximating 150 miles per hour.

Additional thousands watched the roaring planes at Long Beach, Griffith Park and Van Nuys, judging stations on the course. Echoes of the greeting shouted by 100,000 wildly enthusiastic watchers when the world flyers came home a year ago - September 24, 1924 - rolled up with the clouds of dust in cheers for the pilots of the racing planes. The race was only one feature of the big day. Nearly 100 planes of virtually all types were on the field. The sky was dotted with maneuvering ships from early morning until the last spectator's car plowed its way from the fields to the crowded boulevards.

Aviation celebrities were here in force. Captain Lowell H. Smith, world flight commander, paced the racers over the 100-mile course. He thrilled the throng with his handling of a Santa Monica-made Douglas Air Mail plane. Three of the five members of the Navy's attempted San Francisco-Hawaii flight were guests of honor at the field. The heroes of the trans-Pacific-flight and rescue, Aviation Pilot Skiles R. Pope, Chief Radio Operator Otis G. Stantz and Aviation Mechanic William H. Bowlin posed for pictures with Captain Smith; Lieut. Horace S. Kenyon, Jr., Commanding Officer of Clover Field, and Mr. Donald Douglas, President of the Southern California Chapter of the National Aeronautic Association and builder of the world flight planes.

Flyers of the Army, Navy, Marine Corps, National Guard, Forest Service and civilian pilots vied for honors in the race commemorating the successful completion of the world flight at Clover Field. Planes were entered from Rockwell Field and North Island at San Diego, Crissy Field at San Francisco, Kelly Field, Texas, and from nearly a dozen Southern California cities.

A pretty turn that saved seconds gave Lieut. Wilkins a start that enabled him to win the race. His Vought plane was under way as the starter's white flag hit the ground and was roaring wide open down the take-off straightaway. At the judges stand, midway down the field, Lieut. Wilkins shot his ship up and banked his nose for Long Beach. His clever flying brought the crowd to its feet. Lt. Wilkins' observer was F.W. Watson, Machinist's Mate, 1st Class. The winner of the $10,000 trophy was presented the cup Monday evening, September 28th, at a banquet and ball in the La Monica Ballroom. His name will be inscribed upon the permanent cup which is to be in possession of the Aeronautic Association Chapter.

Lieut. C.V. Haynes, with Staff Sergeant John W. Yates as observer, won second place in the century circuit. Their time, in a standard Army DeHaviland with a Liberty motor, was 40 minutes, 51-1/5 seconds. Lieut. Haynes and Staff Sergeant Yates flew down from Crissy Field to take part in the contest.

Lee Shoenhair, also piloting a DeHaviland, owned by D.E. McDaniel of Pasadena, took third place. His time was 41 minutes, 46-4/5 seconds. Fourth in the event for planes of Class 1 machines of 150 horsepower or more went to Lieut. F.R. Buse, piloting a Vought from the Naval Air Station at San Diego. His time was 42 minutes, 12-4/5 seconds. He was the first pilot to take off in the 100-mile dash. Charles N. James, flying a DeHaviland entered by the U.S. Forest Service, took fifth place, time 42 minutes, 21-4/5 seconds.

The results of the winners of places in Class 2, 150 h.p. or less, was as follows:

1st Place	Earl Daugherty (Fokker)	Long Beach	Time 46 Min. 7-4/5 sec.
2nd Place	E.F. Montijo (Fokker)	Long Beach	" 49 Min. 39 sec.
3rd Place	Lt. F.H. Barber, AS Res.(JNS-1)	Army	" 53 Min. 8-2/5 sec.
4th Place	Lt. "Bob" Lloyd, AS Res.(JNS-1)	Army,	" 54 Min. 2-4/5 sec.
5th Place	Lt. H. Claiborne, C.N.G. (TW-3)	Army	" 54 Min. 48-2/5 sec.

Besides the American Legion trophy, thirteen awards of merchandise orders, totalling several thousand dollars, were given to the winners following the banquet at the LaMonica Ballroom. The meet was held under the auspices of the So. California Chapter of the National Aeronautical Association, in cooperation with

Clover Field and the Santa Monica Post of the American Legion, together with city officials. It is planned that the world flight celebration will be an annual event in commemoration of the achievement of the World Flyers.

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LIGHTER THAN AIR AT LANGLEY FIELD

The Airship TC-4 made a special cross-country flight to Elizabeth City, N.C., for the purpose of participating in ceremonies incident to the opening of the new hard road through North Carolina. Leaving Langley Field at 11:30 a.m., the flight was made to Elizabeth City in one hour. The ship stood by at low altitudes until 1:00 p.m., when it cruised over the city and water front, giving persons on the ground an opportunity to see it, until 1:30 p.m., when it headed toward Langley Field, arriving at the hangar at 3:00 o'clock. The crew were Lieut.-Col. Ira F. Fravel, Capt. Charles P. Clarke and 1st Lieut. W.J. Read, pilots; Staff Sgt. George A. Triplett, radio operator; Tech. Sergeant Chester H. Johnson, engineer; and Sergeant John Vischovich, rigger.

On October 5th Col. T.A. Baldwin with Lieut. R. Kieburtz took the TC-4 for routine training flights. Weather in the morning was good for flying, with a wind velocity of not more than twelve miles per hour, but about 11:10 a.m. a strong cross hangar wind came up and the situation became rather serious. The TC-4 was brought to the ground and a good landing was made in spite of the wind. Every available man on the company area was called out and, after a real struggle in a near gale of thirty-seven miles per hour, the ship was taken into the hangar. The only damage sustained in the half hour fight with the storm was the loss of a pontoon.

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NIGHT FLYING IN THE PHILIPPINE ISLANDS

Night flying, using DH4B's and Martin Bombers, was the feature of the air work recently performed by the 28th Bombardment Squadron stationed at Camp Nichols, Rizal, P.I. Lieuts. Delmar H. Dunton, A.A. Kessler and H.P. Rush acted as instructors in checking off the various pilots and in night formation and tactical maneuvers. This work was carried out with the new landing light equipment, field light sets being installed only for use in case of failure of the flying equipment. The Martin landings were apparently as good as those made in daylight. The night landings in DH4B's were slightly more difficult, but no trouble has yet been experienced. Lieuts. Myers, Skanse, O'Connor, Gross and Snavely soloed on Martins while Captains Beam, Eagle, Lieuts. Harper, Powers and Landers flew DH's at night. When the "moon is right" and a thin wisp of white cloud hangs at about 10,000 feet a most picturesque effect is produced in this vicinity. Eastward Manila Bay is transformed into a shimmering sea of silver with a barely discernible white phosphorescent line marking the shore. Then, for a few miles extends the dimly lighted territory of the McKinley Reservation with here and there the reflection from the water covered surface of a rice paddy. Continuing toward the east the shore lines of Laguna de Bay become more pronounced and soon we gaze upon a still silent sea of silver with a blue black guardian range of mountains slightly to the left while ahead and a little to the right the silver expanse seems to continue without end gently absorbed by the cloud diffused white light of a friendly moon.

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SHIPMENTS BY AIR FROM MIDDLETOWN AIR INTERMEDIATE DEPOT

A total of 2808 pounds of miscellaneous spare parts and supplies were shipped by air from the Middletown Air Intermediate Depot during the months of July, August and September. Of this total, 2600 pounds were shipped in Martin Bombers in five trips, the loads comprising 425, 395, 280, 680 and 820 pounds, respectively, thus demonstrating the utility of the Martin Bomber in the matter of transporting supplies. Of the remaining 208 pounds of supplies, 200 were carried in DH4B's.

looks into the case from a Europeam view point he will undoubtedly be able to hand out something in Black & White. & so the delegation returned to the colledge & attacked their work with renewed hope.

Wishing Maj. Curry a safe return

yrs truly

Ed.

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MAJOR C.J. BROWNE ASSIGNED AS AIR OFFICER IN PHILIPPINES

Major C.J. Browne, Air Service, was recently relieved as Commanding Officer of Camp Nichols, Rizal, P.I., and assigned as Department Air Officer. Although this new position carries with it no extra rank, it is nevertheless considered a real promotion and it is the most important position held by an Air Service officer in the Islands. His assistant is Captain L.B. Jacobs, Air Service. During Major Browne's administration of the 4th Composite Group since last November much progress has been noted. The field at Camp Nichols has been very greatly improved and is much better adapted to its purpose, especially as concerns the operation of bombing planes. Aeronautical equipment, buildings and grounds present a very good appearance, and Major Browne may well look with satisfaction upon his assignment.

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AIR SERVICE AND ARTILLERY IN PHILIPPINES INTERCHANGE IDEAS

A most interesting and profitable interchange of ideas recently took place between the 60th Anti-Aircraft Artillery at Fort McKinley and the Air Service officers of Camp Nichols. Lieuts. A.G. Liggett, D.H. Dunton and E.G. Harper gave lectures, respectively, on the following subjects: "Pursuit and Attack Aviation", "Bombardment Aviation", and "Observation Aviation" at Fort McKinley. In return, three very able lectures on anti-aircraft equipment were given at Camp Nichols,- "Introduction", by Major Meyer; "Organization and Tactical Employment of an Anti-Aircraft Regiment and its relation to the other component arms of an Army Corps", by Captain W.M. Cravens, C.A.C., "What Air Service Officers should be familiar with in regard to the Technique of Anti-Aircraft instruments and their employment in the gun battery, the searchlight battery, and the machine gun battery; the assumptions made in anti-aircraft work in regard to enemy anti-aircraft operations", by Lieut. J.E. Harriman, C.A.C., and "Development in Anti-Aircraft Artillery", by Lieut. E.A. Kleiman, C.A.C. The lectures on the Anti-Aircraft Artillery equipment were supplemented by display and demonstration of practically all apparatus used and proved most instructive. These two branches have many problems, a knowledge of which should be possessed by each. A considerable amount of night flying has been done, as practice in range finding, gun pointing, searchlight operation and dodging of searchlight rays. Lieuts. Dunton, Rush and Kessler have the most local night flying time to their credit this season, although several other pilots qualified on DH4B's and NBSI's. By assigning Air Service officers to observe actual operation of anti-aircraft equipment, especially at night, and Artillery officers as observers in night flying planes, a very close cooperation of the Services will be developed for the general good of the Service.

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SCORE ANOTHER ONE FOR THE PARACHUTE

Probably the shortest parachute jump on record, with the jumper escaping to tell the tale, belongs to 1st Lieut. Fred C. Nelson, Air Service, Instructor of the 110th Observation Squadron, Missouri National Guard. His passenger, 1st Lieut. Clarence Boehm, failed to use his parachute, although instructed to do so by Lieut. Nelson, and in the crash of the DH which followed he was burned to death before he could be rescued.

The two airmen, flying over the Lambert-St. Louis Field, were at an altitude of 1,000 feet and the pilot was preparing to land when the plane became unmanageable, the controls having become jammed due to the collapse of a rear strut, or wooden brace, on the left side of the ship extending from the lower to the upper wing.

Lieut. Nelson's story of the accident in the St. Louis POST-DISPATCH of October 1st is as follows:

"We had come across the field from the south and I had intended to turn back into the south wind to set the ship down. I banked the plane at a right angle to the ground just north of the field to swing into the wind. It failed to respond when I tried to set it back on an even keel. The controls had jammed. I looked out to the left wing, then pointing toward the ground, and saw that the rear strut in the left outer bay had broken and fouled the aileron. I knew then that there was no hope of setting the ship down safely, but I was not worried for our lives because both of us had new type parachutes and they are absolutely reliable. I cut the motor and stood up in the front cockpit. We were sailing with one wing down rapidly losing altitude. I turned around to Boehm who was also rising from his seat.

'Let's get out of this,' I called to him. 'This is just what parachutes are made for.' He stood up then in the cockpit and I could see him reaching for the ring on the end of his parachute rip cord. I made sure that I had a grip on my rip cord and swung one leg over the edge of the cockpit. The ship had settled then to less than 200 feet altitude. I jumped and when I was clear of the ship, I pulled the rip cord. The chute opened at once but I was so close to the ground that I did not have time to flex my knees and I landed stiff-legged, getting a pretty good jolt. My first thought was to look up and see if Boehm was coming down. When I did not see him in the air I looked around thinking he had jumped ahead of me. It never occurred to me that he had failed to go over on the side.

I landed about 100 yards north of the National Guard hangar and the ship crashed down a short distance from me. A bunch of men came running toward the plane. 'Where's Boehm?' I shouted. He landed somewhere around here.' Someone called out that he was in the wreck and then for the first time I realized that he had not jumped. Several of the men made an effort to pull him from the wreck, but fire burst out as soon as the ship crashed and it was impossible to reach him.

One of the enlisted men reported that Boehm was apparently dead before the fire burst out. His body was still in the cockpit of the ship when it crashed."

Second Lieut. E. R. Alexander, Specialist Reserve, of the News Department of the POST-DISPATCH, in a letter to the Editor of the NEWS LETTER, states that the story was given him by Lieut. Nelson a short time after the crash and is entirely correct.

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WAR DEPARTMENT ORDERS AFFECTING AIR SERVICE OFFICERS

Appointments

Major General Mason M. Patrick reappointed Chief of Air Service for period of four years beginning October 5, 1925.

Major H.A. Strauss designated as Asst. Commandant, Air Service Balloon and Airship School, Scott Field, Ill., vice 1st Lieut. H.H. Holland, relieved.

Promotion

First Lieut. Clinton F. Woolsey tp Captain with rank from Sept. 17, 1925.

Changes in Station

First Lieut. Rowland C.W. Blessley from Middletown Air Intermediate Depot to McCook Field, effective Nov. 1st, for duty with Industrial War Plans Section.

First Lieut, Ward F. Robinson from Maxwell Field, Montgomery, Ala., to Pope Field, Fort Bragg, N.C.

First Lieut. Benj. F. Griffin from Marshall Field, Ft. Riley, Kansas, to Anglum, Mo., for duty as instructor, Missouri National Guard.

First Lieut. Fred C. Nelson relieved as Instructor, Missouri National Guard, and assigned to duty at Marshall Field, Fort Riley, Kansas.

First Lieuts. David R. Stinson, Richard K. LeBrou, Frank L. Cook and Edward H. Wood relieved from assignment and duty with Industrial War Plans Section, Middletown Air Intermediate Depot, and to report to the C.O. of that depot for duty.

Second Lieut, Frederic Wieners to San Antonio Air Intermediate Depot.

First Lieut. F.O. Carroll relieved from Kelly Field Nov. 15th and assigned to McCook Field for duty.

First Lieut. James E. Adams assigned to Pope Field, Ft. Bragg, N.C., upon completion of tour of foreign service.

First Lieut. Byron T. Burt, Jr., to proceed from Langley Field, Va., to Walter Reed Hospital for observation and treatment.

Capt. Gilbert T. Collar relieved from Kelly Field and assigned to Organized Reserves, Third Corps Area, with station at Harrisburg, Pa.

First Lieut. Edward E. Hildreth from Phillips Field, Md., to Chanute Field for course of instruction in communications.

Leaves of Absence.

First Lieut. John P. Van Zandt's leave extended 2 months, 10 days; leave of 1st Lieut. James B. Carroll extended one month.

Following leaves of absence granted on or about dates indicated: Captain Oliver P. Echols, 5 days, Oct. 7th; Capt. John W. Signer, 10 days; Major Gerald C. Brant, 22 days, Nov. 12th; 1st Lieut. Don L. Hutchins, 2 months and 23 days from Oct. 24th.

Reserve Officers to Active Duty

Second Lieut. Victor E. Showalter to Scott Field, Ill., 15 days, Oct. 4th.

First Lieut. Hubert E. Willson to Chanute Field, Ill., 15 days from Oct. 5.

Second Lieut. Donovan R. Berlin to Chanute Field, 15 days from Oct. 4.

Capt. Louis McComas Young and 2nd Lt. Frederic E. Flader, 15 days from October 4th, to McCook Field, O.

Lieut.-Col. Harry C. Fry, Jr., Major John H. Larned, Capt. Edgar R. Thiess, 1st Lieuts. Wm. F. Gerhardt, Jesse S. Joseph, Glenn R. Lassiter, Louis R. MacDonough and Stratford D. Mills to Office Chief of Air Service for 15 days from October 4th.

Second Lieut. Roland C. Barrett to Office Chief of Air Service, 15 days from October 5th, and 1st Lieut. Walter M. Moore 15 days from Oct. 11th.

Capts. Charles O. Dost, Arthur W. Duckstein and 2nd Lt. John J. Kelly to Mitchel Field for 15 days from October 5th.

Major Wm. H. Garrison, Jr., to active duty for 15 days from Oct. 13th to Langley Field, Va.

Second Lieut. Harvey M. Cronk for 15 days from October 18th to McCook Field, O.

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COLONEL MITCHELL AIDS FAMILIES OF VICTIMS OF SHENANDOAH DISASTER

Colonel William Mitchell, who was recently awarded a prize of $1,000 by the LIBERTY Magazine, has donated the entire sum to the dependents of nine of the enlisted men who lost their lives in the Shenandoah disaster, each family receiving the sum of $111.11. The check from the Magazine was turned over by Mrs. Mitchell to Mrs. Zachary Lansdowne, widow of the Commanding Officer of the ill-fated airship, for distribution.

LIBERTY Magazine awarded the prize to Colonel Mitchell for distinguished moral courage, which it contends is as high, and may often be a higher type of daring than physical bravery, adding that the award was given because it took courage of sounder fiber than any born of impulse to speak his mind as he has done concerning the Air Service and its needs.

NOTES FROM AIR SERVICE FIELDS

Kelly Field, San Antonio, Texas, Oct. 5th.

19TH School Group

The 68th Service Squadron was recently host at luncheon to a group of distinguished visitors, including Congressman Harry M. Wurzbach, Chief Justice W.S. Fly, State Senator Cobb, Judge Wood, Mr. Robert Michaels, Mr. P.D.Mathis and Col. H.A. White, Corps Area Judge Advocate. Col. Culver, Post Commander, Majors Andrews, Wash, Captains Doherty, Candee, and Lieut. Gillespie were also guests. Col. White acted as Master of Ceremonies, and many inspiring talks by the visitors were made and enthusiastic sentiment in favor of a bigger and better Air Service was expressed.

The 41st School Squadron closed its rest camp at Sadler, Texas, until next Spring. The camp was a great success and about 90 percent of the personnel of the Squadron, both commissioned and enlisted, spent pleasant and beneficial week ends there during the summer months.

Captains W.E. Lynd, G.T. Collar, R.S. Scribling and 1st Lt. C.R. Evans made a flight to Carlsbad, N.M. recently and visited the interesting caves just lately discovered near that place. They all state that these caves are well worth the visit of anyone interested in natural history.

Lieut. Russell L. Maughan just completed a cross-country flight to Salt Lake City and San Francisco.

3rd Attack Group

Sept. 14th being Group Organization Day, all officers and men of this Group attended a picnic at Landa Park, New Braunfels. There were sports and swimming in the afternoon, followed by a barbecue supper and dancing in the evening. Second Lieuts. Frost and Murphy, formerly enlusted pilots of the 8th Attack Squadron, who were commissioned on Sept. 4th, were presented with sabres by the men of the 8th Squadron, with best wishes for their success at their new station, Brooks Field, Texas. Trucks were used for transporting the Group to Landa Park, and this proved a very good test for the Group transportation facilities. The entire Group, over 300 men, were moved from Kelly Field to the Park (40 miles) in about two hours.

Four new officers were recently assigned to this Group - 2d Lts. Partridge, Booth, Greene and Greig, and one reserve officer, 2nd Lt. Yantis H. Taylor, is here for two weeks' active duty from Sept. 13th.

Staff Sgt. C.K. Travis, pilot, with Sgt. Jack McCluskey, mechanic, ordered to Portland, Oregon, to take part in the dedication ceremonies at Pearson Field, Vancouver, returned Sept. 25th and reported a very pleasant trip. No trouble was encountered on the entire trip, the DH4B working smoothly throughout.

Orders were received by radio from Washington for flights to Mitchel Field to attend the air races. Demonstrations of Attack Aviation are to be given during this flight at Ft. Leavenworth, Ft. Riley, Mitchel and Langley Fields. Maneuvers to be demonstrated are attack on machine gun nest and attack on truck trains. The Group has been very busy for thenlast two weeks preparing for this trip, and no stone has been left unturned to make the flight a success.

Extensive training of personnel in tourelle gun work and testing of long range sights were carried on both by commissioned and enlisted gunners.

The following cross-country flights were made -

Lieut. Crocker with Shepherd Culver to El Paso, Texas, Sept. 12th. Returned solo, Sept. 13th. - Capt. Childress with Pvt. Land to Muskogee, Okla., Sept. 13th. Upon landing at Waco for fuel the field was found very wet, so take-off was postponed until the 14th when return flight was made to Kelly Field, the flight to Muskogee being abandoned. - Staff Sgt. Paul E. Johnson to Muskogee, Okla. Sept. 12th, returning the 14th. - 2nd Lieut. Milton M. Murphy, recently transferred to Brooks Field, made a flight to Dallas, Texas, Sept. 15th in one of the 8th Squadron planes. - Lt.-Col. Culver, post commander, with Corp. Griffin to Kennedy and return Sept. 17th. - Lieut. Crocker with Pvt. Henry to Wapanubka, Okla., Sept. 19th, returning the 20th. - Major Andrews with Lieut. Sterling to Ft. Clark and return Sept. 20th. - 2nd Lieut. Y. H. Taylor with Sgt. Young to Waco and return via Belton, Sept. 23d. A tire blew out on the return trip while in the air, but Lt. Taylor landed without trouble

and without damage to the plane. - Capt. Childress with Pvt. Rice to Laredo and return Sept. 19th. - Staff Sgt. Johnson to Fort Worth and return Sept. 22d. Lieut. E.V. Harbeck (DOL) stationed at Houston, Texas, with the Texas National Guard, flew an 8th Squadron plane Sept. 23d with Lt. Mansfield, Texas National Guard, as passenger.

Three parachutes were completed and drop tested recently and found satisfactory.

Brooks Field, San Antonio, Texas, Oct. 6th.

With the return of Major Royce from testifying before the President's Board of aeronautical inquiry, Capt. Oldfield from cross-country, instructors on temporary duty at Kelly Field and those fortunate enough to be granted leaves or cross-countries, the Primary Flying School is again well under way. The excitement attendant with a new class of students is not yet in evidence, for with the exception of one or two holdovers none of the students have time enough to qualify for solo flying, though the biscuit gun is being overhauled and repaired at present in anticipation of an urgent need for it in the near future.

Several visitors honored us the past few days. Lt. Macready and Capt. Stevens dropped in on us for a couple of days. The latter, now Photographic Officer at McCook Field, will be down again on Oct. 15th to take the flying training course. Capt. Sigourney from the Office Chief of Air Service was here on an inspection tour and Lt. J.G. Williams, once one of the mainstays of the Primary School, now of Rockwell Field, also made us an informal visit due to a forced landing between Del Rio and Ft. Clark in one of the Douglas Transports he was taking to Mitchel Field to the races. Brooks Field itself has two pilots flying in the races, Lts. Chandler flying a DeHaviland and Wolfe a Douglas Transport. Lt. Wolfe is also attending the engineering conference at Mitchel Field Oct. 12th. We also feel as if Lt. McCoy, flying a DH, is one of our representatives, having been here so long and only revently ordered away.

Mr. Ruggles, designer of the Orientator, is back at the Field trying out two brand new orientators on those of the new students who are not as yet assigned to instructors. Due to a large class and a shortage of instructors there are at present six students assigned to each instructor and even with that excessive number some thirty students are left over waiting on a vacancy among those assigned at the present time. Lieut. Brookley, late of McCook Field, now at this station, has also been reported as an orientator pilot, testing it out with barrel rolls and true Immelmans.

Langley Field, Hampton, Va., October 3.

The 11th Squadron regrets to announce the death of their beloved comrade, Marvin G. Scott, Pvt. 1st Class, A.S. who, while in the execution of his duties as mechanic on a ship, was killed by a blow on the head from a revolving prop.

Right on the heels of the above accident, Tech. Sgt. Frank G. Gardner, AS, was knocked down while standing by his car on Langley Field road by another car which was being rapidly driven. He sustained severe cuts on the back of his head but is now progressing rapidly on the road to health.

Lieut. Green, Squadron Commander, wishes to express his appreciation of the courteous reception accorded him and his crew while on a recent cross-country to Pitcairn Field near Philadelphia, Pa. In appreciation, Lt. Green stated that that kind of treatment tended to create a feeling of cooperation between the Army Air Service and civilian aviation and helped to foster a fraternal unity between communities.

Numerous changes, both in personnel and executive, occurred the past month. When one returns from a rather extensive furlough he notes the changes quicker and in some instances they seem drastic. For the first two or three days everything seems muddled and topsy turvy, but after that one usually gets back into the ordinary hum-drum, if you prefer, life of the Air Service. It is naturally true that the Air Service offers more to the man who would desire a little excitement along with his daily portion of beans, and therefore one could not very well say that the Air Service life was hum-drum. Why, there is more excitement piled into one day in this Service than there is in a year in other branches.

The Eleventh now is so far ahead of any one other squadron on this Field for flying time that there is little or no competition. Competition to the 11th

is like the elixir of life to a feeble and decrepit man of eighty. The natural thought of being in a race of any kind exhilerates, and there is no squadron more perfectly at home when in a race than the Eleventh.

Spectators at the Portsmouth Amateur Park witnessed one of the most furiously fast and hardest fought games ever staged, the combatants being elevens representing Langley Field and the Sewanee Athletic Club. Both teams made two touchdowns, the final score being 14 to 14.

Under the supervision and most expert tutelage of Lieut. Kenneth N. Walker, Recreation Officer, a nucleus of men, recruited from the various organizations, are being trained in the manly art of boxing.

Langley Field, Hampton, Va., October 9th.

11TH. Squadron.

The Eleventh has reason to be proud of the fact that nearly all of their ships were at Mitchel Field participating in the races. With the absence of so many ships, in fact all but one, the hangar seems to have been swept by a tornado. One does not realize the immensity of the hangar until it is emptied.

59th Squadron

Lt. Wm. A. Hayward returned from 30 days' leave and assumed command.

The Langley football team is showing great improvement under the coaching of Lt. Rundquist and everyone is expecting them to carry off the laurels of the Third Corps Area. On October 6th Langley defeated the Hampton High School by the one sided score of 26 to 7.

ACTIVITIES OF THE 19TH AIRSHIP COMPANY

During the latter part of September training flights were made by the Airship TC-4 and Captive Balloon R-25-21. Enlisted personnel of the company were given hops for sight seeing and flights for instruction. The commissioned personnel of the flight surgeon's office here, Major B.B. Warriner, Captains S.B. Clinard and D.R. Blakley, Medical Corps, were given flights for training and observation. A training flight was made to Richmond, Va., for the purpose of testing radio communication with the home station. At all times during the flight the crew were in touch with the hangar station by both phone and key. The return trip was made by way of Yorktown.

Lieut. Rowland Kieburtz, who was on temporary duty at Fort Bragg, N.C. with a detail of specialists, flying an observation balloon, returned to the company. While at Fort Bragg he made several flights in the captive balloon, observing practice on the range of the Regular Army Artillery.

Capt. Charles P. Clarke assumed command of the Company Aug. 31st, relieving Capt. Wm. O. Butler, detailed as student at the Primary School at Brooks. Capt. Butler was in command of the company for more than 3 years, and to show their appreciation, the company gave a farewell dinner to him and Mrs. Butler. In behalf of the company, Capt. Clarke made a short speech, presenting to Capt. and Mrs. Butler a beautiful mahogany Seth Thomas clock, with candlesticks to match. Capt. Butler replied with a few words of thanks and commendation to the men. The mess hall was decorated with palms and ferns, all tables having floral pieces.

Now that the season for hunting and fishing is opening, the company boat is being tuned up, rifles are being put in trim, fishing gear repaired and preparations are being made for a big season.

The company is gratified to learn that the street railway from Hampton to the main gate of the field will be shortly extended to the Lighter-than-Air Area. This gives trolley service to Newport News, Hilton, Phoebus, Buckroe Beach and Fort Monroe.

During the month of August and September several instruction flights were given to officers from units of the Maryland, Pennsylvania and Massachusetts National Guard Air Services. These organizations were detailed to this field for a few weeks of intensive training.

The summer training period for the company included two weeks of instruction for six Reserve officers (L.A.) Flights were made in the Airship TC-4 for training in flying and in ground maneuvering. An observation balloon was flown for practice at flash-at-bombing, and free balloon flights were made to give each Reservist opportunity to try his skill at piloting free balloons.

Crissy Field, Presidio of San Francisco, Calif., Sept. 28th.

First Lieut. Frank D. Hackett left for Santa Monica, Calif., from which place he ferried a Douglas Transport to Dayton, O. On Sept. 29th Capt. C.E. Giffin left Santa Monica with a Douglas Transport for the Air Races at Mitchel Field, On the same day 1st Lieut. Eugene B. Bayley, the West Coast's participant in the "Observation Type" Race, left for Mitchel Field in a DeHaviland. He will, however, fly the Army XO-2 entry in the Race and should bring home the bacon. (He almost did, being barely beaten out by the Frenchman LeMaitre). We of the West Coast are hoping the Crissy Field will ferry a lot more of the Douglas output east.

First Lieuts.C.V. Haynes and John W. Benton are "priming" themselves for the gunnery competition to be held at Langley Field in the near future.

Hqrs. 2nd Div. Air Service, Biggs Field, Ft. Bliss, Texas, Sept. 28th.

Lieut. Weddington and Mr. Henning made a cross-country photographic flight to Van Horn, Texas, and vicinity of Guadalupe Mtns. Sept. 24th to make oblique photographs ofnthe country to locate a route for projected road north from Van Horn.

Visitors arriving at this field via air were as follows: Lieuts. White and King Sept. 19th from Kelly Field, the former returning the following day and the latter by train Sept. 22nd; Lieuts. Harbeck and Mansfield from San Diego, Sept. 20th en route for Kelly Field; Lieut. John S. Griffith and Sgt. Fowler from San Diego Sept. 21st en route to Kelly Field, their home station; Lieuts. Williams, Ryan, Chester, Thomas and Farren from San Diego Sept. 22nd in a Douglas Transport en route to Kelly Field; Sergeant Travis Sept. 23rd from Kelly Field, returning same date; Capt. B.S. Wright from San Diego Sept. 23rd en route to Kelly Field; Lieut. R.L. Maughan from San Diego Sept. 24th en route to Kelly Field; Lieut. Hackett, Capt. Fry and R.B. Van Dorsen from San Diego Sept. 24th in a Douglas Transport en route to Kelly and McCook Field; Lieut. Richter and Sgt. Crevier from San Diegp Sept. 27th en route to their home station, Kelly Field.

Following cross-country flights were made by personnel at this field: Lieut. Clark and Sgt. Williamson to Mitchel Field Sept. 28th to participate in the Air Races; Lieut. Gale to Marfa, Texas, Sept. 28th to ferry enlisted man to this station; Major Reynolds and Lieut. Hunting to Tucson, Ariz., Sept. 26th on business connected with movement of airdrome at that city; Lieut. Hunting and Pvt. Donnelly to Ft. Stockton, Tex., and return, Sept. 27th; Lieuts. Weddington and Thompson to Albuquerque,N.M. Sept. 25th on business connected with landing fields at that city and to make oblique photos of area west of Albuquerque, returning following day; Lieut. Gale and Sgt. Livesay to Duncan Field, San Antonio, Sept. 20th in connection with supply matters, returning the 22d; Lieut. Douglas to Douglas, Ariz. and return Sept. 21st; Sgts. Tyler and Simpson to Tucson and return Sept. 23rd to arrange details of change of station of noncommissioned officers; Lieuts. Weddington and Furnholm returned Sept. 18th from flight to Duncan Field; Lieut. Clark and Sgt. Williamson from flight to Kelly Field on Sept. 19th.

Rockwell Air Intermediate Depot, Coronado, Calif., Oct. 3rd.

Lieut.-Col. Harry Graham, C.O., Capt. Lowell H. Smith, Lt. Leslie P.Arnold, wing-mate of Capt. Smith on Round-the-World Flight, with Lt. Jack Greer, Lt. B.T. Castor and Samuel Hudson (Mechanic) returned Sept. 25th from a cross-country flight to Pendleton, Oregon, where they attended the annual Round-Up for which that city is noted. The flight also visited Vancouver and Spokane, Wash; Eugene, Oregon, Mather Field and Crissy Field.

Col. Graham and Capt. Smith flew to Clover Field, Santa Monica, Calif., on Sept. 27th to participate in the First Annual Celebration of the finish of the World Flight, which was held at Clover Field that day. A large turn out was made by the Air Service Reserves and friends of the Service from Los Angeles, and a very fitting ceremony marked the first anniversary of the World Flight.

The Forest Fire Patrol, which has been operating in this State during the Summer, using Air Service planes, is drawing to a close, and two planes have been turned back to this Depot. It is expected that the remainder of the planes will be back in our hangars by the 15th of October.

Lieut. J.P. Richter, formerly stationed here and now at Kelly Field, dropped in to pay a visit to old friends and then departed for San Francisco. He returned here en route to his home station. Needless to say, we were all glad to see "Ric" once again.

Lieut. John A. Macready, who has recently performed considerable flying over the country in connection with aerial mapping, landed here Sept. 17th for a few days' visit with old acquaintances and, incidentally, for a new engine.

Capt. Lowell H. Smith left Oct. 2nd for Omaha, Neb., to attend the American Legion Convention. From there he will go to Chicago where he will be presented with a medal by the Geographic Society of Chicago, after which he will continue on to Mitchel Field to attend the conference of Engineer officers there.

Capt. Ezra Davis, Post Q.M., was the speaker at the weekly meeting of the Reserve Officers' Mess last week. Capt. Davis, who spent five years in the Office of the Q.M. General in Washington, spoke on "Rail Transportation". This is the first of a series of talks which he will give on transportation from a military standpoint. In his succeeding addresses he will deal with the phase of motor and water transportation. These talks should prove very interesting, as Captain Davis is considered an expert on the work of the Quartermaster Corps.

Fairfield Air Intermediate Depot, Fairfield, Ohio, Sept. 25th.

Capt. E.E. Adler, organizer and first officer in charge of the Field Service Section from 1921 to 1924, left for his new station in the Philippines. He is well known for his unfailing courtesy, his tireless energy, enthusiasm and splendid administrative capacity. Well liked by both officers, enlisted men and civilians, his departure from this post is keenly regretted, and his many friends wish him the best of luck and good fortune in his new assignment. During recent months Capt. Adler continued to make his residence at Wilbur Wright Field, although his entire time was occupied at the Engineering Div., McCook Field. Capt. and Mrs. Adler were honored at several entertainments which were given in their honor just previous to their departure for the Philippines.

Lt. J.L. Grisham, accompanied by Mr. W.W. Wood, recently returned from a flight to Little Rock and states that much interest is evident throughout the State of Arkansas in commercial aviation, The air squadron which has been authorized is now being organized as rapidly as practicable. The officers are ex-Army pilots holding reserve commissions and in a short time it will be an established organization. Lt. Grisham's home is at Monticello, Ark., and as this was his first trip to his home for several years he found much of interest. Little Rock has grown in population and so many new bridges have been built across the river that he scarcely recognized the town from the air. He made six addresses before Chambers of Commerce and other civic organizations on the general subject of aviation. Among the prominent societies addressed were the Lion's Club and the Rotary Club of Little Rock and Rotary Club of Pine Pluff.

Lieut. A.E. Simonin of Langin Field was a recent visitor and conferred withnofficers of the Field Service Section regarding supply problems.

A number of commanding officers and supply officers from various points visited the Field Service Section recently for the purpose of conferring on supply problems. Major B.Q. Jones, Chief property Requirements Section, outlined the policies of the Supply Division to the visiting officers, particularly the use of the new Allotment Tables. Among those present were Major F.D. Lackland, Major W.R. Weaver, Lt. J.M. Clark, Capt. H.W. Flickinger and several others. The Allotment Tables, recently prepared at the Field Service Section, are tabulations which show in considerable detail the supplies available for use, including those to be procured for the ensuing year. The Allotment Tables have been distributed to all supply activities of the Air Service.

Lieut. W.J. Hanlon returned from leave of absence at Chicago, New York and Saratoga. He reports the horses did not interest him a bit, but that the metropolis is as gay as ever. Lieut. Hanlon has just been assigned as the new Cost Officer in the Field Service Section, replacing Lieut. Sharon who is now Executive Officer and Assistant to Major Brett.

Lieut. C.A. Cover and Mr. Wesley F. Longletz left by rail for Mitchel Field to attend the Air Races.

Lieut. Leon E. Sharon, accompanied by Mr. O.J. Neff flew to Chanute Field and return Sept. 24th; on the following day Maj. G.H. Brett flew to Cleveland and return in one of the new AT-1 planes.

Fairfield Air Intermediate Depot, Fairfield, O., Sept. 30th.

Five Martin Bombers stopped at Wilbur Wright Field enroute to Scott Field, Ill., to attend the aerial demonstration at that place. The pilots were Capt. E.C. Black, Lts. W.J. McKiernan, E.T. Rundquist, Alkire and Wilson. The same planes made a brief stop here on the return trip to Langley Field, the entire trip being accomplished without special incident. Two or more enlisted mechanics were carried in each plane; and among the passengers on the return trip were Majors F.H. Coleman and M.F. Davis.

Capt. Edward Laughlin, Engineer Officer, was appointed Operations Officer at the Air Races at Mitchel Field and left for that station to remain until the conclusion of the Races. During his absence Lt. C.C. Nutt is acting Engineer Officer.

Visitors to the field were: Lieut. Lee, commanding the Pittsburg Airdrome; Major E.A. Lohman, C.O. of Phillips Field, en route to Kelly Field; Lieuts. R.D. Knapp and B.F. Griffin of Fort Riley, Kansas.

Cross-country flights were made as follows: Capt. Edward Laughlin to Columbus, Ohio; Lieuts. L.D. Maitland and S.G. Frierson to Scott Field.

After 4 years of successful administration of the Q.M. Department at this field, Capt. C.O. Thrasher, our popular Q.M., was transferred to the 3rd Corps Area at Baltimore, Md. Many informal social events for Capt. and Mrs.Thrasher took place before his departure. Capt. Thrasher's successor is 1st Lieut. Lawrence Savage, who came from Fort D.A. Russell, Wyoming.

A DH Messenger plane was groomed for the Air Races with the expectation that the pilot, Lt. E.P. Gaines, would win the Liberty Engine Builders' Trophy Race. He made things rather uncomfortable for the leaders and was gaining every minute until for some unknown cause his motor cut out causing a forced landing.

A conference of supply officers was held at the office of Lieut. C.E. Thomas, Depot Supply Officer, for the purpose of putting into effect the new Allotment Tables. Among those present were Capt. B.F. Giles, Lieuts.A.J. Lyons, E.M. Morris and B.F. Griffin. The visitors were entertained at a dinner and dance at the Old Barn Club of Dayton by the officers of the field.

Camp Nichols, Rizal, P.I., August 20th.

Amid the strains of "It ain't goin' to rain no more", the July THOMAS slowly backed away from Pier 1, turned about, and with one deep throated blast headed out beyond the "Rock" and into the China Sea. Standing beside the rail and waving farewells were a hundred or more officers and families and several hundred sun browned soldiers all with their Philippine Tour behind them, and filled with strangely mixed sensations of joy and sadness. About midway along the deck, a figure of medium height, stocky built and with light curley hair could be seen receiving an unusual variety of goodbyes. Army folks of all stations and many citizens of Manila, both white and Filipino, were shouting "Happy landings, Major", until even the uninitiated knew that the Air Service was losing its popular Air Officer, Major Geo. E.A. Reinburg. For two years this officer has held positions of responsibility as Commanding Officer of Camp Nichols and Air Officer of the Department, respectively. With the new location of Camp Nichols already selected for him, he had set to work to make the field as safe and useful as its location would permit. Much grading and construction has taken place here especially by the soldier personnel, and a complete change of flying equipment has been made. Perhaps one of Major Reinburg's most valuable qualities to the Air Service has been that of developing and fostering a deep interest in Air Service activities by other branches of the Army and even among the civilian population. He has encouraged cooperation of the units among themselves and their cooperation as a whole with the various branches of the Army and Navy and even with local civil and commercial problems. Major Reinburg, upon arriving in the States, will take a short leave and then report to Chanute Field. In honor of the departure of the Air Officer, a grand group maneuver was staged in the nature of a most complete aerial escort. Fast pursuit planes in three ship formation darted here and there, DH4B's zoomed and dove while the Martin Bombers executed time and again that new "Filipino Shift" which transforms a Vee formation into column and back again, with lightning like rapidity.

And now could be seen those new winged steeds who dwell up the "Rock" - a quartette of Douglas Cruiser Sea Planes. Due to the new "one thousand foot rule"

the sight was more impressive than spectacular to the departing, as no one on deck was obliged to duck this time. After "seeing the Thomas thru" the group formation split up and the units reqtired each to its own base of operation.

Sailing also on the THOMAS was Capt. and Mrs. "Sam" Brown, returning to the scene of a previous assignment, Kelly Field. For a period of many months Captain Brown has fulfilled the duties of both Flight Surgeon and Post Physician. Sometimes giving "609's", sometimes examining Filipino kitchen boys or sometimes inspecting Squadron Mess Halls, this versatile Air Service Medical Officer was "up and at 'em". With the exception of one three weeks' visit to China last winter we cannot find that "Sam" Brown ever left the Post when flying was in progress. Such faithfulness to a trust goes too often all but unnoticed but is appreciated deeply by those of us with whom he has served. Good Luck, Captain - Congratulations, Kelly.

Lieut. Milo McCune and family, Lieut. and Mrs. Brophy, Lieut. and Mrs. Dinger, and Lieut. Sam Carter left our midst at this time. The farewell party or Transport Hop in honor of the departing was a grand success. It was held in the bamboo house of the Polo Club. Good music, dancing and a good dinner featured the evening and the new arrivals, Lt. and Mrs. Kauch, Lt. and Mrs. Koontz and Lt. and Mrs. Lundberg were properly welcomed in real tropical style.

Capt. R. Beam, who commanded the post upon several occasions during absence of Major Browne, assumed command until his return to the States on the October Transport. Major John C. McDonnell, formerly C.O., 3rd Pursuit Squadron at Clark Field and now on a two months' hunting trip in Indo-China, will relieve Captain Beam.

Lieut. S.P. Mills was transferred to the detachment recently and will be our new Supply Officer and Athletic Officer.

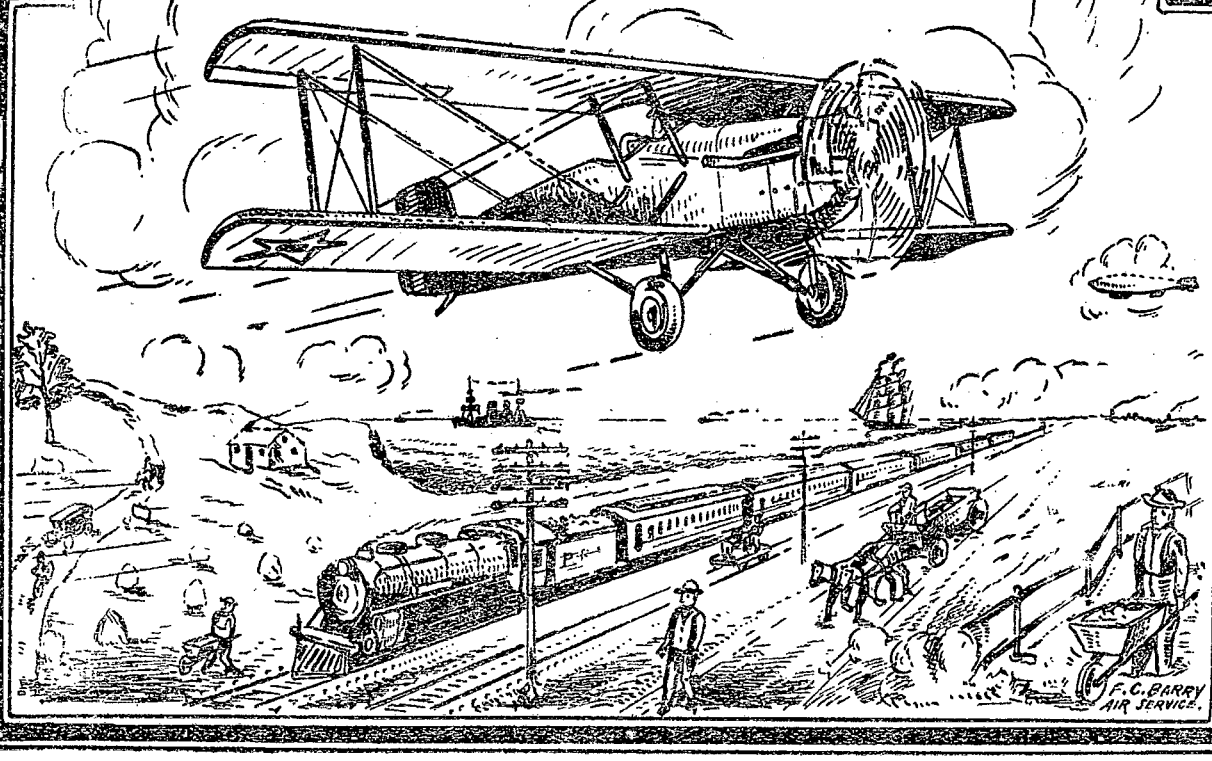
The July transport took from our midst several members who will be greatly missed. They are Privates A.R. Alvis, L.A. Ayotte, T.F. O'Connor, J.F. McGrew and C. Thompson.

It is an ill wind that blows no one good and we find several new arrivals who will add greatly to our outfit. Staff Sgt. Russell H. Frick will be our new "top kick" and we hope a valuable addition to our baseball team. Other soldiers assigned to us are Private P.H. Butler, S.K. Kitchen, E.B. Meredith, G.O. Hatfield, P.H. Murphy, J. Puhr and W.B. Williams.

Today practically every man on the post is at work upon the flying field which is the scene of much activity. Tractors, mule teams, and dozens of picks and shovels are going strong. One large detail is forcing the brush, old wells and mounds from the land south of the field proper, while another detail is repairing the soft places in the field itself. A third, smaller and possibly less active, though a heavy thinking group, is scanning the land between the field and railroad track figuring on ways and means of filling the soft depression. Some believe the hydraulic method is the best, others that a temporary railroad is advisable, while a third party swears by an endless line of Filipino operated carabao carts. At any rate, our goal is a good field bounded upon the East by the railroad.

In order that the cultural development of Air Service officers be not slighted amid the technical atmosphere which hovers about a flying field, a series of lectures upon Chinese History is in progress. Lieut. Myers tied up the early history of China with the murkey period of myth of legend in the first class, while "Sam" Mills followed in the next with the fifteen hundred year struggle with the Tartars of the North. The Manchu Conquest by Lieut. Rush, the "Boxer Uprising" and "Results", by Captain Eagle and Lieut. Skanse, respectively, and "Present Policies of China" by Lieut. Whitney will follow immediately. Hon. Lingoh Wang, the Consul General of the Republic of China stationed in Manila delivered an address on China, its problems and present conditions. The class will be supplemented in many cases by individual visits to China.

U. S. Army Air Service News Letter



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VOL. IX AIR SERVICE NEWS NO. 19

Information Division
Air Service

November 16, 1925

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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LIEUT. "JIMMY" DOOLITTLE WINS SCHNEIDER CUP RACE

This year can strictly be termed the Army's year in so far as speed performances in aircraft are concerned, for in the space of two weeks pilots of the Army Air Service established three new world's records. Following the triumph of Lieut. Cyrus Bettis in the PulitzerRace on October 12th, when he established a new record of 248.99 miles an hour over a closed circuit with the new Curtiss Army Racer, Lieut. James H. Doolittle, already well known for his one-stop flight across the American continent, took the same ship piloted by Lieut. Bettis, but transformed into a seaplane by having pontoons fitted to it, and not only won the Schneider Cup Race in the record time of 232 miles an hour but the next day broke another record when he flew a three-kilometer course at 245.71 miles an hour. As one newspaper put it, "The Army beat the Navy at its own game". There is no doubt that Lieut. Doolittle proved himself to be a better "sea dog" than the best the Navy could boast of.

The Army pilot's competitors were Lieuts. George T. Cuddihy and Ralph A. Ofstie, of the U.S. Navy, Captain Hubert Broad, representing Great Britain, and Lieut. Giovanni De Briganti of Italy. Captain Broad, piloting the Gloster-Napier, finished second place with an average speed of 199.16 miles per hour. The Army Air Service had never before entered the Schneider Cup competition, and the fact that it did have an entry in this year's seaplane classic served to eliminate whatever chance England had of permanently winning the Trophy by a victory in 1926. Great Britain's last victory was in 1922 and had it won the race this year it would have had an equal chance with America to win the Trophy permanently next year.

Misfortune attended both of the U.S. Navy entries, neither pilot being able to finish the race. The "dog ship" Curtiss, in which Lieut. Alford Williams, prior to the Pulitzer Race, speeded along at the rate of 302 miles an hour, and piloted in the Schneider Race by Lieut. Cuddihy, developed motor trouble on the last lap and came down spouting flames from the intake manifold. The other Navy hope - also a Curtiss Racer, flown by Lieut. Ofstie, ran out of fuel on the sixth lap and was forced to land far from the sight of the crowd.

Lieut. De Briganti's sturdy monoplane, which was hopelessly outclassed from the beginning by her fast seaplane rivals, had only finished the third of the seven laps when Lieut. Doolittle flashed along the final tape.

Great Britain had hoped to have at least two entries in the race, but a series of misfortunes reduced her list to but one. On Friday, October 23rd, Capt. Henry C. Biard, pilot of the Supermarine Napier S-4, on which lay England's fondest hopes for victory, crashed his ship in landing during a practice flight, while on the morning of the race Pilot Bert Hinkler, in Brotain's reserve plane, a Gloster Napier III, went through his pontoons in landing on the Chesapeake at the start of his third attempt to qualify his plane for the race in the afternoon. Captain Biard's ship, in an official flight on September 13th last, under the supervision of the Royal Aero Club, attained an officially recognized average speed of 226.752 miles an hour on a straightaway 3-kilometer course, so there would appear to be no reason for England bewailing her ill luck because of the elimination of that particular ship from the race. Lieut. Doolittle's record over a closed circuit, totalling 350 kilometers, bettered Captain Biard's record by 5.873 miles per hour, and over a straightaway 3-kilometer course by almost 19 miles per hour.

It is interesting to note that when Captain Biard made his record on September 13th it eclipsed the previous high speed mark for seaplanes over the same distance by 38 miles an hour.

The Schneider Cup Race was scheduled to start from Bay Shore, Md., on Saturday, October 24th, but the day was a wretched one for flying, rain falling continuously, and so, like the Pulitzer Race, it was postponed until the following

Monday, which was an almost perfect day for the race. There was only a mild breeze of from 15 to 20 miles an hour, and the sun shone down between ragged clouds on the blue gray Chesapeake. There was a small crowd along the shore and on the big pier which held the reserved seats and the judges' stand, for Bay Shore Park is nearly 20 miles from Baltimore and the postponement to Monday had the same effect of cutting down the size of the crowd as did the postponement of the Pulitzer Race.

The maneuvers of the Navy bombing squadron did not take place, as the big seaplanes anchored along the river shore were, due to the terrific storm of Sunday, piled up on the shores far from Bay Shore, most of them completely wrecked. Lieut. Frank H. Conant, of the Navy, in a pursuit plane, performed some excellent acrobatic flying and dropped two men with parachutes. A Navy Blimp, the TC-5, came drifting up the Bay just as the race started, and those aboard her had the best view of the race.

The English Gloster-Napier, a beautiful ship with white wings and a light blue body, was the first to reach the starting line. She was towed out by a boat, and floated like a white bird, lifting with the waves, until a few minutes before the start. After she was in position, Lieut. Doolittle taxied past the end of the pier to the line, his plane being almost covered with spray. These fast Curtiss boats proved that they are also sturdy seaplanes. They made good time taxying on the water and lifted quickly despite the waves. They seemed almost buried in water at times, and it cascaded from their wings like water from the scuppers of a ship.

Doolittle was a minute or two late in getting to the line, but he more than made up for it when he turned about and started. There was a roar from his motor, the nose of the plane came up slightly, lifting the front end of the pontoons, and the tiny black and gold ship, glittering wet in the sun shot across the line, leaped into the air and in a minute was a speck in the distance There was beauty and grace as well as power in her flying.

While Lieut. Doolittle had been getting ready Captain Broad had been warming up the motor of the Gloster. He did as little taxying as possible, and when he got his starting bomb, opened wide and shot over the line. There were the same ease and power of movement in the Gloster as in the American plane, and she left the water quickly, but despite the great horsepower of her motor she did not seem quite so fast in getting away.

Lieut. Cuddihy, piloting one of the Navy Curtiss Racers, flew far back of the line and had to taxi for about a mile before starting. He was followed by Lieut. Ofstie, piloting the other Navy plane, and then by Lieut. De Briganti of Italy, flying the Macchi-Curtiss monoplane. This plane was to have been flown by Lieut. Riccardo Morselli, but at the last moment Lieut. De Briganti's plane developed motor trouble and he took Morselli's. The Italian plane is an odd looking machine. The wing sits almost on the water, on either side of a boat-like fuselage, and the motor is on struts over the pilot's head. The Italian pilot drifted about for some time, his motor idling, and when he started the waves broke over his craft so heavily that he had a good deal of difficulty in leaving the water. Part of this was due to his slower speed, for he only made 168 miles an hour in the race.

The Italian craft had barely started when a tiny speck out over the water could be seen, flying low and with great speed to the home pylon at one side of the pier. It was Doolittle, streaking his way through the air at 223 miles an hour. Just before he reached the pylon he banked sharply, holding his machine far on her side and keeping her in tightly to the course. His skill was shown here, for instead of trying to level his ship out as soon as he got around the held her on her side until he had almost reached the pier, so as to recover the speed he lost in banking. He slowly straightened his plane up to a level position and gave her a slight lift to increase his margin of safety in clearing the pier, but he came so close that those below him had the thrill of their lives and got some idea of what a speed of 232 miles an hour means. The ship approached as fast as the eye could follow, and when it reached a point about fifty feet away all details of it were lost. It was just a black shape crashing by and vanishing, the sound hitting the ear like a blow.

Any novice could see that it was real flying, but when Capt. Broad and Lieut. Ofstie hove in sight a moment later there was a better appreciation of what Doolittle was doing. The English machine soared by high in the air in a wide, sweeping turn that took him over the land instead of the end of the pier,

a turn which added miles to the distance to be traveled in the race. Lieut. Ofstie followed almost the same course and so did Lieut. Cuddihy when he came by.

The Italian plane followed almost the same course as Doolittle's when it came by, for despite its slower speed Di Briganti was doing some pretty flying. He came over like a stormy petrel clinging to the tops of the waves, and as he approached the pylon lifted slightly and came around in a sharp bank. He also took his time in seeking a level position, with the result that he passed over the pier almost directly in the course set by Doolittle.

By the time the race was half over it was seen that Doolittle was running away with it. His speed jumped from 223 miles an hour to 228, 230, 231 and then 232. His motor was running with an even song that did not seem loud until it went by 30 feet away. As he came by on the pier on his last lap, having flown faster than at any other time, he pulled back on his stick and sent the little craft zooming almost straight up. He then circled around, came down in a long glide which landed him far out in the bay, and taxied back in a shower of spray. When he got nearly into the pier he shut off his motor and climbed down on a pontoon. A rope was thrown to him and made fast to the plane, and it was towed toward the pier.

There was a burst of cheering when Doolittle got near enough to hear, and the boyish looking pilot, with a smile, took off his leather headgear and bowed somewhat shyly. Major General Mason M. Patrick, Chief of Air Service, was at the end of the pier with some staff officers, smiling broadly and waving his clasped hands in congratulations.

"I am very glad, naturally, at the result," said General Patrick. "He flew a good race and got the utmost out of his machine."

"I simply had the fastest machine, said Doolittle in talking of his victory. "I passed one of our machines on the stretch and could see that I was pulling ahead easily. The machine handled perfectly and the motor was in good shape. The other fellows had tough luck."

But for all Doolittle's modesty, there was no doubt among other flyers that much of his speed was due to the way in which he took his curves.

Captain Broad in the English machine flew a steady consistent race, but despite his 700 horsepower motor his speed never quite reached 200 miles an hour. His speed in the first lap was 194.275, and the average rose after that to 196, 198 and 199.16 for the entire course.

The Italian plane made its first lap at a speed of 166 miles an hour and the last at 168.44. The two American planes which were forced down rose from 207 and 211 to 218 and 220 miles an hour.

It may be of interest to give a brief history of the Schneider Trophy competition. The Trophy, which is valued at 25,000 francs, was offered in 1913 by Mr. Jacques Schneider, an aviation enthusiast of France, with the purpose in view of fostering international maritime aviation competition. He also offered a cash prize of 25,000 francs yearly for the first three years of competition. In all eight competitions were held to date, France winning one, England two, Italy two and America two. No award of the cup was made in 1919. The first race in 1913 was held at Monaco and was won by the French pilot M. Prevost, flying a Deperdussin float monoplane, powered with a Gnome 160 h.p. motor, at an average speed of 44.7 miles per hour. The following year the race was also held at Monaco and was won by the British pilot Howard Pixton, flying a Sopwith float biplane with a 100 h.p. Gnome engine, at an average speed of 55.3 miles an hour.

Due to the World War, no competitions were held from 1915 to 1918, inclusive. Although the Italian pilot Janello was the only competitor to finish the race in 1919, when he piloted his Savoia biplane flying boat with Issota-Frash. 260 h.p. engine, at an average speed of 124.9 miles an hour, the officials in charge of the competition decided to make no award that year, claiming that Janello did not follow the course as marked for the race.

The following year at Venice, Italy, Ed. Bologna, the Italian pilot, flying a Savoia biplane flying boat, with Ansaldo 450 h.p. engine, won the race with an average speed of 102.5 miles per hour - a decided falling off in speed from the mark set the previous year.

Naples, Italy, was the scene of the Schneider Cup Race in 1921, when Italy gained her second consecutive victory, De Briganti, flying a Macchi biplane flying boat with Fiatt 300 h.p. engine at an average speed of 117.4 miles per hour.

The race in 1922 was also held at Naples, and England won her second victory when Captain H.C. Biard, in a Supermarine biplane flying boat, powered with a Napier-Lion engine, raised the high speed figure to 146.5 miles per hour. By

virtue of England's victory, the race in 1923 was held at Cowes, England. The U.S. Navy entered the competition that year for the first time and its representative, Lieut. D. Rittenhouse, won the race, piloting his Navy-Curtiss float biplane with Curtiss D-12, 465 h.p. engine, at an average speed of 177.38 miles an hour.

Last year the race was scheduled to be held at Baltimore, Md., but in view of the fact that the European competitors had no suitable seaplanes to pit against the American speed ships, there was no contest.

It is interesting to note the steady increase made in seaplane speed performances since the first year of the Schneider Cup Race in 1913, when the high speed record was only 44.7 miles per hour. In a period of 12 years seaplane speed performance has become five times as fast. The most notable increase in speed over a previous year's competition was made in 1919 - 69.6 miles per hour. Next comes the race this year, when Lieut. Doolittle's record eclipsed the one made by Lieut. Rittenhouse in 1923 by 54.62 miles per hour.

Under the rules governing the Schneider Cup competition, the country winning the Trophy three times within five consecutive years gains permanent possession of it. As the situation now stands, America has the best chance of any of her rivals to win the Trophy, for only one more victory is needed. But it must be gained either next year or in 1927. Italy's last victory was in 1921, so she would have to start all over again with a clean slate. The same situation confronts England, since her last victory was in 1922.

The day following his victory in the Schneider Trophy Race, Lieut. Doolittle the man whose name belies his deeds, catapulted his black Curtiss Racer across a 3-kilometer course in the fastest time ever made by a seaplane - 245.713 miles per hour. This mark will become the official world's record for maximum seaplane speed when recognized by the Federation Aeronautique Internationale.

Lieut. Doolittle, under the regulations of the F.A.I., took the 3-Kilometer course with a 1300 ft. diving start. His official record was computed as the average of four consecutive flights across the distance, two in each direction, to eliminate wind advantage or disadvantage. The figures were 244.473, 244.830, 245.098 and 248.455 miles per hour. Lieut. Doolittle was quoted as saying that the last mark is about the limit of the performance of the Curtiss Racer with pontoons attached.

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AIR SERVICE ENLISTED MEN RECEIVE COMMISSIONS

The following enlisted man of the Air Service recently received commissions as 2nd Lieuts. with rank from June 15, 1925:

Master Sergeants Walter L. Wheeler and Benjamin T. Starkey; Staff Sergeants Norme D. Frost, Milton M. Murphy, Lee Q. Wasser; Technical Sergeants Linus D. Frederick and George C. McGinley; Flying Cadets Otto Wienecke and Willard L. Harris. Lieuts. Frederick, Murphy and Frost were assigned to Brooks Field, San Antonio, Texas; Lieuts. Wasser, McGinley and Wienecke to Kelly Field, Texas; Lieut. Wheeler to the Hawaiian Department; Lieut. Harris to Langley Field, Va.; and Lieut. Starkey to Phillips Field, Md.

Three civilians also received commissions as 2nd Lieuts. in the Air Service and were assigned to the Primary Flying School at Brooks Field, Texas, viz: Aaron Jackson Yauger, Charles H. Valentine and Joseph K. Gibson.

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WACO, TEXAS, HAS NEW FLYING FIELD

A number of officers from Kelly Field attended the opening of Rich Field at Waco, Texas, on October 28th, and were guests of the Waco Flying Club and the Chamber of Commerce. The new field is up-to-date in all respects and has oil and gas of government specifications. Although it rained nearly all the way, the personnel reported that the trip was worth while, due to the reception and good time had by all at Waco.

AIR SERVICE REORGANIZATION

NOTE: The study on present conditions in the Air Service, with recommendations as to certain changes therein, was submitted to the NEWS LETTER by an Air Service officer who has made a study of the problems of the service in the capacities of Station Supply Officer, Commanding Officer of a Service Squadron, and as Post Adjutant of two large Air Service stations. He has also interviewed various officers who are confronted with the daily problems to be solved as squadron officers, engineering officers and supply officers.

Believing that other officers in the Air Service may have something to say on the question of reorganization, the NEWS LETTER invites comments thereon and an endeavor will be made to publish as much thereof as is consistently possible.

A resume of present conditions as they actually exist will show the outstanding faults of the present plan of organization as it actually works out in the service, and the inevitable results of these weaknesses.

a. Service squadrons were organized at the various posts from personnel available, and in most cases the personnel assigned were men that tactical organization commanders were not anxious to keep. The personnel since assigned have in most cases been recruits who claimed to be acquainted with some specialist trade. Very few old trained noncommissioned officers have elected to transfer to these organizations because the work has been easier, the opportunities for time off greater, and the promotion much more rapid in tactical squadrons, due to the much greater percentage of high ranking noncommissioned officers allowed. Practically no trained personnel has been assigned from the Air Service Technical School to stations the writer has been directly acquainted with. The result is that engineering and supply officers have been seriously handicapped in performing the functions allotted and the morale of the men in these organizations is a problem that is a serious concern to the squadron commander and the post commander. The greatest problem confronting supply and engineering officers is the securing and retaining of qualified personnel for the duties they have to perform.

b. Recruits are received at posts in small lots of from one to five or ten, and the custom on most posts has been to assign these men directly to organizations to fill existing vacancies. These men are soon absorbed into the organization and their identify as recruits lost. The result is that they do not receive a definite course of recruit training, and are assigned to one detail after another, and often never receive an opportunity to learn a specialist trade unless they have enough personality to make themselves known individually to the organization commander. At best the organizations have no facilities to give the recruit the basic instruction in motors, radio, armament, airplane repair, and other technical subjects that are essential if he is ever to be of any value except as a laborer in the organization. He must be sent to a school or detailed to the service squadron doing the major overhaul and repair to get an apprentice course to be of any value as a specialist.

c. The Air Service Technical School has failed to supply even a small percentage of the specialists required by station and tactical units. The result is that units have had to do the best they could to train these men. The shortage of officers has been a great handicap. The lack of proper training of men has reduced the efficiency of many units to a great extent. The situation has been very serious in the insular possessions where practically all the replacement personnel received have been recruits, with no previous training.

The functions of a service squadron are defined in Circular 65-11, O.C.A.S. A service squadron is a part of a tactical organization, the group, which should be ready for active service at any time. The station is permanent, and the equipment required for its operation and functions are permanent. The movement of a group from a single group station would cause either a complete reorganization and reassignment of personnel, or the abandonment of the post with its supplies, equipment and buildings. At stations where two groups are stationed, like Langley Field, and where there are facilities for only one station supply and engineering organization, the movement of one group with its service squadron would not be so serious. However, the problem of utilizing the personnel of the two service squadrons in peace time is a serious one, as it has been found to be almost impossible to divide the work between two organizations so that the personnel of each gets the proper training to perform its functions.

A lack of interest in their work is noticeable when men of two organizations are on the same job, and the constant petty frictions lower morale and efficiency, and greatly increase the burdens of the supply and engineering officer.

The present organization of groups with the tactical squadrons and service squadron is probably well suited to war purposes where a group would not be permanently situated for a great length of time, and would be supplied with only mobile equipment. In peace time there is very little probability of entire group movements unless for a permanent change of station. The Air Service stations are now probably permanently situated for peace operations, and logically will be the basic mobilization, training and supply points in case of an emergency. They have permanent equipment, and facilities for the necessary supply and engineering functions, but under the present plan no permanent or basic personnel is provided for the maintenance and operation of these station facilities. The movement of a group would leave a station without personnel of any character except the Quartermaster and Medical Detachments.

The present plan of organization has been in operation approximately six years and the main difficulties and faults of the plan as noted have not improved to any great extent. It is believed that a reorganization somewhat similar to the following would correct the main faults and greatly increase the efficiency and morale of the personnel.

a. Organize airdrome squadrons of appropriate strength for permanent assignment to the stations where more than one squadron is stationed, with the proper allotment of personnel by grades to operate the functions assigned in d below.

b. Reduce the peace strength of service squadrons to a smaller organization capable of rapid expansion when required in case of emergency. Provide that in peace time when a group is serving on a post which has an airdrome squadron the service squadron should be attached to the airdrome squadron for duty and administration, directly under control of the post commander. If the group were ordered into the field the service squadron would go with it, leaving the post to function with the airdrome squadron.

c. Reduce the allotment of high noncommissioned officer grades and specialist ratings in Tactical units and proportionately increase these allotments to the airdrome squadrons and service squadrons to approximately balance the ratings according to the technical requirements of each organization.

d. Make the functions of the airdrome squadron (with attached service squadron) include the following:

(1) Major overhaul and repair of aircraft, aircraft motors and aviation equipment in stock and used by the tactical organizations at the station.
(2) Operation of station Air Service supply system, including signal, ordnance, engineer, chemical warfare, and quartermaster when no officer or personnel of one of these branches is assigned.
(3) Maintenance and operation of post transportation and fire departments when proper personnel are not assigned by the Quartermaster Corps.
(4) Maintenance and operation of station radio and equipment, and station telephone system when adequate Signal Corps personnel is not assigned.
(5) Operation of station utilities department when Quartermaster Corps personnel is not available.
(6) Training of recruits for basic military duties and technical Air Service duties before assignment to tactical organization for duty, and special technical training of partially trained enlisted personnel of tactical units.
(7) Furnish proportionate share of personnel for guard and police.
(8) Supply personnel for headquarters when required.

The advantages of this plan of organization are briefly as follows:

a. A uniform plan of organization for all large Air Service stations.

b. Adequate station personnel for the requirements of permanent posts, which can be easily increased or decreased as required, without a complete reorganization of other units.

c. Better trained, and more mobile tactical squadrons and units.

d. More efficient use of personnel and a uniform system of training of recruits and specialists.

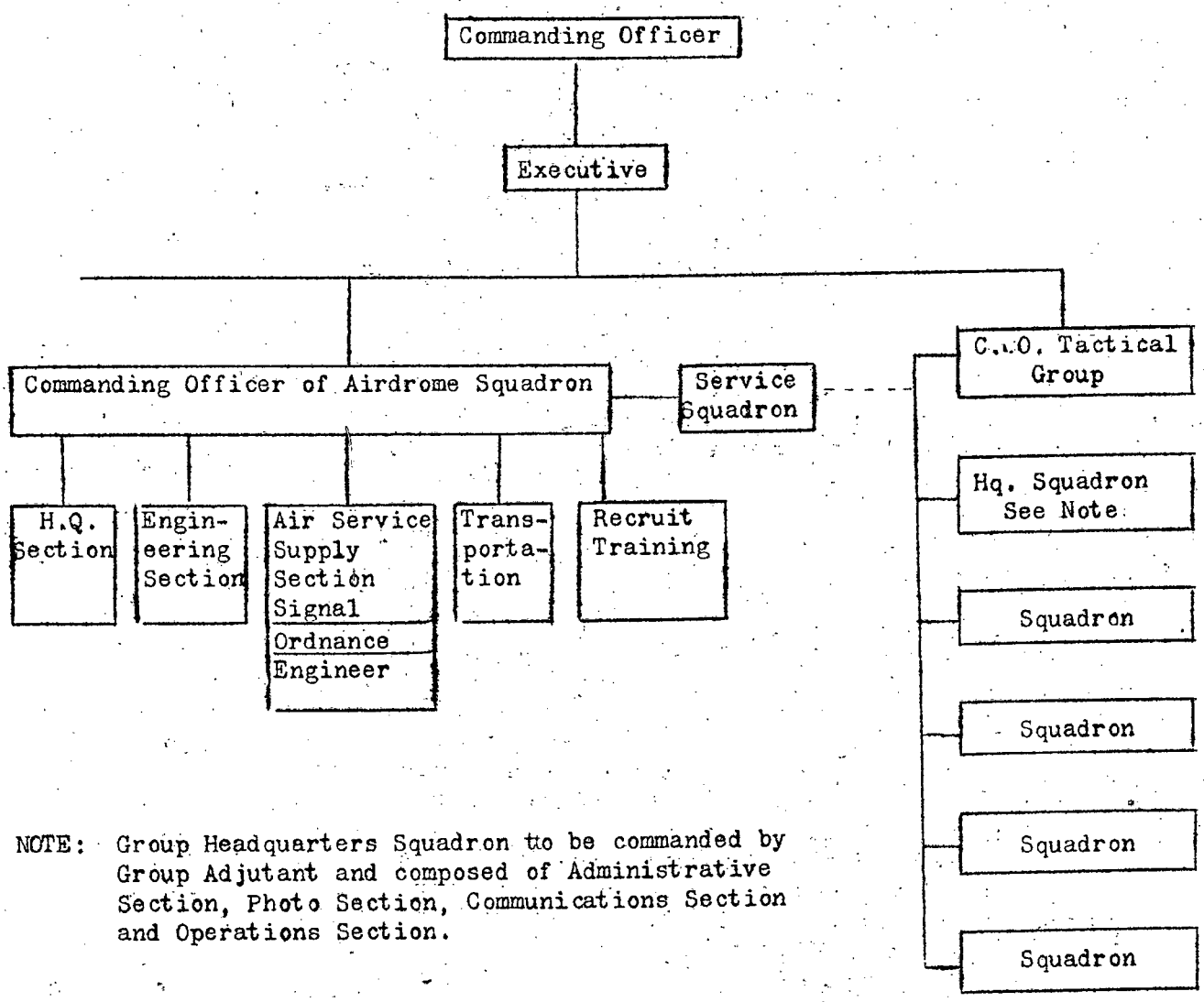
NOTE: The complete system in mind contemplates frequent short courses for selected specialists and noncommissioned officers from airdrome and service squadrons, to be given at repair depots and at the Engineering Division, so that the instructors can keep up to date on latest methods and equipment.

e. More interest in their work, more efficiently operated station supply and engineering departments, and a higher morale throughout the service.

f. Basic organizations that are capable of immediate expansion and operation on "M" day.

Organization.- The adoption of this plan of organization would result in the organization of single group Air Service stations somewhat like the chart given below. From this chart it is clear that the station would be divided into two principal parts with respect to functions. Either or both parts is capable of rapid expansion or reduction, independent of the other, and both are under commanding officers directly responsible to the post commander. The addition of one or more groups to the station would not change the organization, but would only add a percentage of strength to the airdrome squadron while on duty at the post.

The above is the outline of a plan of organization that one person in the Air Service believes will be an improvement on the present scheme of things. It is up as a target, so take a shot at it. Maybe if enough shots are taken someone will make a bulls-eye and advance a perfect organization scheme that will operate perfectly and satisfy everyone.



NOTE: Group Headquarters Squadron to be commanded by Group Adjutant and composed of Administrative Section, Photo Section, Communications Section and Operations Section.

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FAST FLIGHT FROM DETROIT TO NEW YORK

It is reported that a record flight was made on November 10th by Major Thomas G. Lanphier, C.O. of Selfridge Field, who covered the distance of 550 miles from his station to Mineola, L.I. in 3 hours and 20 minutes, or at the rate of 165 miles an hour. This is said to be an hour faster than the trip had ever been made before. The flight was made in a PW pursuit plane. Major Lanphier's flying visit to New York was for the purpose of attending Armistice Day dinner of the American Legion.

THE HAMILTON RICE EXPEDITION IN SOUTH AMERICA

Sometime ago Captain Albert W. Stevens, Air Service, submitted his report on work accomplished with the Hamilton Rice Expedition in the Amazon Basin near the equator, which started in May, 1924, and lasted over a period of ten months. The publication of the report was delayed on the recommendation of Captain Stevens that it be considered confidential until such time as Dr. Rice has had an opportunity to publish his notes in geographical journals.

Dr. Rice, in reply to a communication sent him asking when the report could be published, stated that he had no objection to the publication of same at such time as was deemed best, and added:

"It is worth while, it seems to me, to bring out clearly two points: first, that the plane was successfully flown during a period of ten months over what is one of the most savage wildernesses of the world, and where there are constant adverse conditions to be overcome, from meteorological, topographical and hydrographical standpoints; second, that the purposesfor which the plane was employed were in each case carried to a successful conclusion, i.e., aerial surveying and photography,- two reasons that distinguish the important results of the expedition from those of merely the display, das , or "stunt" variety of which, it seems to me, there is at the present time a surfeit. Both Hinton and Stevens deserve the highest praise and meritorious recognition for their brilliant andinstructive achievements."

The airplane used was a Curtiss Sea-Gull Hydroplane, pusher type, powered with a 6-cylinder, 160 h.p. Curtiss C-6 engine. The gasoline capacity was 42 gallons, and since the rate of consumption at cruising speed was from 11 to 12 gallons per hour, it was possible to make flights of over three hours' duration. The maximum time actually covered on one flight was 3-3/4 hours, with 5 gallons remaining in the tank after the flight. The speed of the plane is about 70 miles per hour. Only two persons were carried in the plane, although its capacity is three persons, including the pilot. However, the weight of one person was carried in camera, food and supplies.

The wings and control surfaces of the plane were covered with aluminum dope which resisted the action of the sun's rays very successfully, and the fabric retained its life and did not become inert even with 9 months of constant exposure to tropical rains and sunlight. It must be borne in mind that the plane had no protection whatever, being anchored in rivers all the time. It was pulled out at intervals for a few days whenever opportunity came, to dry out the hull, on a sand-bar or on a sloping bank. The plane was in the water at least 80 percent of the time. The bottom of the hull was covered for the most part with two layers of planking with canvas and marine glue between. The tail section, however, was originally covered with veneer, and after four weeks of use this became so soft that some of it came off during a take-off of the plane. It was necessary to replace the tail veneer with planking. This was done at a place called Sirorrocco, a collection of huts about 1½ degrees north of the equator. This work had to be done under particularly unfavorable conditions, on a muddy bank, with frequent rains, and with swarms of piumes and mosquitoes present. In two days the plane was ready for use again, and the tail section thereafter proved to be as tight as the balance of the hull. Marine glue and canvas are invaluable for repair work of this nature.

Under constant exposure to the sun, the woodwork apparently shrunk a trifle and after two months of use it was necessary to take up half a turn to a turn on most of the turnbuckles. Part of the slack may be accounted for by strains in flying and by fittings pulling into place. It was not necessary to replace any flying or control wires.

The magnetos (Splitdorf) required practically no attention beyond oiling and inspection of the contacts. The spark plugs were BG, and it was not necessary to remove or clean a single plug on either of the two engines during the whole flying time of 174 hours.

Two engines were provided. The first engine was replaced at a settlement called Vista Alegre, 2 degrees north of the equator, after it had 65 hours' use. While this motor was running perfectly, the spare engine was at hand, and it was considered advisable to change while there was good opportunity. The magnetos were transferred to the second engine. Up to the time the plane reached the Parima River the second engine had been run 88 hours and at the time the plane returned to Manaos it had a total of 109 hours' service. The total flying time of the plane was therefore 174 hours. At 60 nautical miles per hour

this gave 10,400 miles, or at its equivalent of nearly 70 land miles per hour, a total of 12,000 land miles.

The lubricating oil used was a mixture of 50% castor and 50% mineral oil, and was furnished by the Curtiss Company. It was transferred to 5-gallon tins for convenience in transportation. In ordinary weather there was no trouble in starting the motor from normal temperature condition. As the plane began to get up into the mountains, at elevations over 800 feet above sea level, the nights became sufficiently cool to cause the oil to thicken. This thickening made it impossible to spin the motor fast enough to cause ignition. It was therefore necessary to heat water in the early mornings with which to fill the radiator and engine.

Early morning take-offs were the rule, for the hydroplane climbed much better in the comparatively cool morning air, and did not overheat the engine as in the middle of the day. Furthermore, the air was comparatively calm and free from bumps. For photographic purposes early morning work was necessary, for clouds were certain to form between 8:00 and 8:30 a.m. During the middle of the day clouds always were present. Often there was a clear period after 4:00 p.m., but as the air was then hot, it was seldom advisable to take off unless conditions were especially favorable, such as a pronounced breeze up or down the river Practically all the photographic work was done, therefore, in the early morning, and it was only possible to secure sufficient exposure in these early morning hours by making use of hypersensitized panchromatic film, which is sensitive enough to other light than blue to permit good exposure at the hour of 6:30 a.m.

The gasoline was supplied from Para in 5-gallon tins, two to the case, by the Anglo-Mexican Petroleum Co., Ltd. The cans were inspected to see that each was full before shipment and the cans were given an outside coat of black asphaltum varnish to prevent rusting, and also to prevent confusion with cans of kerosene used for launch propulsion.

No trouble was experienced with the gasoline. While reports have been made of trouble from moisture in gasoline in the tropics, it was found that no water was present in the plane tank in quantity large enough to detect (although the tank was drained several times in search for water). It is true that a tank like that of the Curtiss "Sea-Gull" is protected from extremes of heat by its location within the hull and is not liable to acquire moisture through breathing action, A chamois strainer of the "sock" type was always used to strain all gasoline into the tank. Entering this was a metal funnel, with fine brass strainer and grounded to metal tank before pouring. It was found that a certain amount of chipped varnish from the cans, and some particles of sand, were always caught by the chamois. The metal screen of the funnel caught globules of solder from the cans. The gasoline furnished was not aviation gasoline, but was nevertheless superior in quality to ordinary bulk automobile gasoline. No water whatever was found in any can, even in those which had leaked part of their contents of gasoline out while partly in water in canoes. After much handling, about a third of the cans were found to leak; in one case, in a consignment of 28 cans that had been transported by canoe several hundred miles, only about 50% of the original contents were recovered. It had been necessary to remove the cans from their wooden cases to get them readily into the bottom of the canoe, where the center of gravity must be kept low, especially in rough water. Because of frequent collisions with rocks, the canoe leaked so badly that it was necessary to remove the entire load, including gasoline, each night to prevent the canoe from sinking while the crew were asleep. These frequent removals, over a period of forty days traveling, causedthe cans to leak. In another instance, three cans of lubricating oil were sent by pack horses from one settlement on the Rio Branco to another some 25 miles higher up. The constant movement of the sides of the tins, from the slopping of the oil within, cracked them in several places, and much of the oil was lost.

Where the tins stay in their wooden cases they hold out much better, but it is difficult to convince native carriers that the extra weight and bulk of the cases are paid for in the greater certainty of the tins arriving with their original contents at the final destination.

The consumption of oil was very small, less than a pint per hour. A practice was made of changing the oil in the engine completely every 12 or 15 hours of flying, and sometimes as often as every 10 hours. It required 5 gallons to fill the engine base. The old oil was saved for possible use again in the plane, or was used in launch engines.

A small patent folding anchor weighing a little over 3 kilos was carried. Other anchors were available but were considered too heavy to carry constantly in the hydroplane. In very swift water this light anchor was sometimes found to be too small to hold well unless the bottom happened to be rocky; if doubt was felt about the anchor holding, two courses were open; if the supply boat was near, a 75 point anchor was brought out to the plane; if no assistance was near, the plane was taxied into a place where thick foliage overhung the bank, and the bow pulled in and made fast. In getting clear of such a place, the anchor was thrown out in mid stream as far as possible, the bow line loosened, and the plane pulled clear of the bank. Usually this involved a systematic inspection of the wings for possible damage, and particularly to see that no twigs or vines were caught in the pulleys carrying the control cables, especially those on the top wings. One advantage of the light anchor was that the plane could be maneuvered by throwing the anchor some 30 feet, letting it strike bottom and then pulling the plane to it; by repeating this procedure some forty times, the plane was once successfully taken without power or outside assistance a distance of nearly a mile down a section of river fairly bristling with rocks. To get out of the same place the engine was throttled down to the lowest speed and the plane taxied very slowly against the current. As the engines got quite warm during taxying, it was necessary to anchor for half an hour when clear of the rocks before it was safe to attempt a take-off on the clear stretch above. About thirty meters of 18 thread Manila line was carried for anchoring purposes, and this was changed three times in eight months because it went bad so quickly in the warm river water.

The instruments consisted of air speed meter, gasoline pressure gauge, oil pressure gauge, engine water thermometer, clock, curved bubble tube, and compass (G.E. compass). So much trouble was experienced with the long tachometer drive that the tachometer was finally removed from the plane to save bother and weight. The wind shield was removed, with a slight increase of speed and ease of take-off. The seat cushions, even, were discarded to save weight. It was necessary to inspect the venturi or vacuum tube on the wing strut daily, for it was almost certain to be made the temporary home of a spider. Unless the insect was poked out, the air speed meter was sure to register zero. This happens in the States occasionally, but in the tropics it is a daily occurrence.

An air pressure system for gasoline feed is far from desirable. It was the system furnished with the plane, however, and it was necessary to make the best of it. It may be noted that the only mechanical trouble with either of the two engines used was that due to the air pumps. First, while in flight, the pressure suddenly rose from 5 to 8 pounds, and the tank came within one of bursting before the pump was shut off; the top of the tank bulged so badly that the filler head came clear up through the veneer top of the hull. On landing, a safety valve was secured from extra parts, and tapped into the filler cap; set at 5 lbs. this made high pressure in the tank impossible. This safety valve should have been added by the plane manufacturers. The regulating valve on the pump itself is not enough.

This was the most serious trouble due to air pump; on three occasions afterward the pump failed to function at all. Each time it was found that the pin holding the drive gear to the pump shaft had sheared. The pin was renewed at the first opportunity, the hand pump being used while flying, in the meantime, sometimes for an hour until a landing could be made.

In this Curtiss pump, the closed end of the cylinder points downward, and there is a supplementary piston in the end of the cylinder working against a spring; this supplementary piston comes into play when the pressure exceeds a certain amount. A small hole in the cylinder cover was supposed to permit breathing action, but this was sometimes prevented by the heavy oil which leaked by the supplementary piston. A hole considerably larger, or of 5/32 inch diameter, was drilled in the cylinder cover or head, and the pump trouble ceased from that time on.

Two oak propellers were furnished by the Curtiss Company. Both proved satisfactory. A walnut propeller furnished by another company was tried but was found to have too great pitch. A duralumin propeller made by Curtiss was furnished, but was found to be somewhat out of track. Efforts were unsuccessful to straighten it at Manaos, and shimming it at the hub was not satisfactory. The propeller was used for three flights and was found to be very effi-

cient, pulling the plane off the water much quicker than an oak propeller. The engine, however, vibrated so badly with the metal propeller that the oak ones were used after leaving Manaos.

The radiator was made by the Curtiss Company especially for the tropics, with the idea of providing 25% more radiating capacity than the one regularly provided with the "Sea-Gull". It was reported on test to keep the engine 20 degrees cooler. The radiator was built from drawn copper tubes which were of circular cross section with hexagonal ends. It is possible to draw a defective tube by heating both ends until the solder loosens and replace it with a new tube. The regular size radiator case was used. It was unnecessary to do any repair work on the radiator; a small leak developed at the top, but it practically closed itself and the daily loss was so small as to be almost negligible. The leak occurred where the radiator is braced to the top wing, and some canvas washers served to close off practically all the loss.

The pilot was provided with D & P control. Provision was made for stick control by the observer; the latter feature was occasionally useful when the pilot required for a few minutes the use of both hands, or to relieve him for an hour on long flights. The ailerons were of the balanced type, and provided on the upper wings only. The same control wires were used throughout eight months. Regularly greased and inspected, they gave no trouble.

Whenever the chance occurred, the hydroplane was beached to permit the hull to dry. In the Rio Nigre and the lower Rio Brance the water was at high stage, but on the upper Rio Brance it had begun to drop and a few spots were found where there was not too great a slope to the bank to haul the plane out. Later on the river dropped much more, and sand bars appeared; it was much easier to beach the plane on these bars. Usually the plane was headed tail to the beach. Enough Indians could usually be found to push and lift it ashore, though hardly ever did they get the hull completely clear of the water. With a falling river it was only a day or two before the plane would be entirely out of water. Care was taken to remove sharp rocks from the sand or clay bank before beaching the hull. On one occasion it was necessary for the two occupants to beach the plane alone, due to striking the hull on a submerged rock while taxying after making a landing. The plane was taken off at once, before much water leaked in, and was headed back to camp, but darkness forced a landing short of camp. A landing was made next to a low sand bar and the plane pulled by power on the bar as far as it would go. Here it was necessary for the men to wait several days until fluctuations of the river level allowed them to get at the bottom and make temporary repairs, which sonsisted of replacing two strips of planking on the outside and applying marine glue outside and inside the hull. On a previous occasion it was necessary to replace three triangular pieces of outside planking which proved to be soft. These pieces were of veneer and were originally fitted by workmen for small areas as being apparently stronger. As stated before, veneer will not stand up under continued immersion. Strips of mahogany were carried in the tail section for repair purposes, and marine glue, canvas and screws were carried under the seat in the cockpit at all times. Once it was necessary to use a piece of gasoline tin to complete repairs to the tail. After repairing the tail it was necessary for the men to wait several days more until it rained and the river rose high enough to permit them to work the hull off by digging around it. Altogether they were absent eleven days.

At Manaos, about 90 feet above the sea, there was no difference in the take-off, nor was there any difference noted up to Boa Esperanca, 250 feet elevation. At Kulekaleima Rocks, 800 feet above the sea, it seemed that a longer time was required for take-off; the plane took off from the latter location eight times. So many conditions are changing, however, that it is hard to judge; the plane may be taking off with or against a stiff current of the river, the atmosphere may be hot or cool, and there may or may not be wind. The highest point at which landing was made above the 4-mile caxoeira on the Parima River, where the level is probably in excess of 1000 feet above the sea. The occupants of the plane were the first white men to gaze upon this region, as the formidable four mile canyon had caused the only previous explorers to take the "Aracasa" branch to the north, rather than the Parima branch to the south, although the Parima is by far the largest stream. The expedition following will cut a five-mile path around this canyon and carrying their lightest canoes overland will embark again above the canyon; average readings of mercurial barometer will give the level above sea fairly closely.

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It may be noted that the last flight of the plane in this region was made from the junction of the Aracasa and the main stream. To this point, with great labor, 70 gallons of gasoline had been taken by Chas. Bull and four Indians, with a lead of about two weeks over the main party. Forty gallons were used for a flight to the headwaters of the Parima, a distance of 120 miles as the river goes. The plane followed the bends going south at an elevation of 6400 feet, but to save gasoline, cut the bends coming back. In one place a flight was made directly across 30 miles of dense tropical forest, where a forced landing meant that the aviators, even if uninjured, would have a long job cutting their way to the river. To land in a short clear stretch of river looked often possible, but even there the situation was bad, for the river below had many high falls and rapids. Tools were carried with which to cut away the wings and remove the engine, with the idea of proceeding as far as possible in the hull. Whether the hull would have stood the rough journey through a rapids is uncertain; fortunately, the engine gave no trouble whatever and so it was not necessary to change from air to water transportation. On this trip, as on other trips, a complete sketch was made of the river and its tributaries, and aerial photographs were made of features of importance. These sketches were tied in to positions to be determined about every 30 or 40 miles from night observations with theodolite, by surveying party in canoes following. This stretch of river proved to be the most deserted of all, for the entire distance of 120 miles separated the only visible signs of human life - Indian "Malocas" and clearings, located at the headwaters, and at the 4-mile canyon. It was quite impossible to land at the upper Indian camp, for the river was too small - being very narrow and crooked; the channel was so small that unless the plane were directly over it, the trees on its banks hid the stream completely from view. In such a region one has to fly at times by the general lay of the land and the slope of the canyons, for the stream is lost for minutes at a time. Furthermore, it would have been inadvisable to land, for these Indians are at war with those below, and are almost certainly hostile to all intruders; it is likely that they would have retreated into the forest during the day, only to appear with the earnest intention of messing up the occupants of the plane in case the plane stayed over night. Just above this Indian clearing and Mulocca (large hut), the stream, hardly bigger than a good sized creek, tumbles down a canyon a mile in length - a mass of rushing water that shows white from one end of the canyon to the other. Evidently this is the end even of canoe travel; from this point it is likely that the famous "Guahariba" Indian trail leads across the divide to the Orenoco headwaters. To this point the main expedition is traveling; whether it will get there, considering the dense forest, the steep hills, the high falls and long stretches of rapids, is problematical. To make progress in such a region requires a fairly large band of whites and Indians, equipped with ropes to pull their canoes through the rapids, and with axes and machetes to cut away along the steep slopes over which to carry the canoe in case the river is quite impossible to travel. It is not known that even the native Indians attempt river travel. It is more likely that during past decades parties from down river have met Indians from up river, both exploring through the woods, and that fights have always ensued. At least, the down river Indians, friendly toward whites, hold the others in great dread.

The plane proceeded for ten minutes beyond the upper Indian camp, but there was nothing more to see except the ridges of the dividing range, and as the gasoline was half used up it was necessary to head back for the "Aracasa Junction". On getting back, the remaining 30 gallons of gasoline were put aboard, and two days later the plane was headed down river to meet the main party and deliver copies of the sketches of the previously unknown Parima.

On this trip and on the remaining flights which eventually took the plane back to Manaos, heavy rains were passed through, and clouds and mist sometimes forced the plane down to within a hundred feet of the tree tops. Under such circumstances it is vitally important not to lose sight of the river, for a short distance away its wooded banks hide it completely and the country then becomes an unbroken sea of forest in whatever direction one looks.

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To be continued in next issue.

CAPTAIN EAGLE DEMONSTRATES HIS EFFICIENCY AS PISTOL SHOT

By the News Letter Correspondent

Geck-oo! Geck-oo! Geck-oo! floated a typically Filipino greeting through the open shell windows of the Sanctum-Sanctorium of Headquarters building of Camp Nichols. Clearly and distinctly this call was repeated seven times and then silence again. The seven officers in conclave assembled in the Sanctum, to whom the call was apparently directed, ceased their soul stirring business of Air Service reorganization and peered as one toward the baseball diamond.

There, just behind the pitcher's box, moved a lone Iguana headed fifteen degrees east of north and moving from the noisy region of the Officers' Row toward the Post Hospital where kids, house boys, and pet monkeys rarely haunt and where Major Longacre stands ever ready to render aid. Ordinarily the seven calls would merely indicate that their author was seven years old but the fact that an insulting greeting had been given to each of the seven members of this August assembly was more than Captain A. I. Eagle could endure. In a moment Captain Eagle had swooped down upon the diamond, automatic in hand and attacked from the rear. Now an Iguana is an animal about two feet long, dark brown in color and resembles to a great extent in appearance a young alligator. A shot rang out and then another and another until the new permanent guard was as completely up-set as if fire and prisoner escape signals had been repeated, but the Iguana moved steadfastly on. Only once amid the volleys did he hesitate, turning momentarily to give his now seven pursuers a look of appraising friendliness and then continuing indifferently beyond third base and into the tall grass beyond, where the camouflage was perfect and where the sickle of some ambitious young soldier was the only hazard. "I sure hit 'im, alright, and he has crawled off to die," commented Captain Eagle as the other six, Missouri like, gazed first at Eagle and then toward third base where the Iguana disappeared. In another moment the party had retreated into the sanctum to again continue that important work on Air Service reorganization. Late that afternoon, the guard reported an Iguana, stiff and cold, found just beyond the third base vindicating the Captain's claim to pistol expert. Such therefore is the state of the minute-man preparedness among those who serve in the Islands.

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LIEUT. ANDREWS TELLS OF HIS TRIP TO SOUTHERN ISLANDS

Lieutenant W. V. Andrews, Adjutant at Camp Nichols, Rizal, P.I., just returned from a very interesting and instructive trip to the Southern Islands, having gone to the extreme end of the Sulu Archipelago. He reports scenery and customs quite different from Manila, especially among the Moro tribes. He writes as follows: "I left Cavite on the U.S.S. "HERON" as a guest of Captain Farrell, Naval Air Service, who was going down to Zamboanga, Island of Mindanao, to take command of Naval Air Service summer maneuvers. We had a delightful two-day trip, sleeping out on deck at night with cooling breezes, enjoying the absence of the ever-present mosquito of Manila, and under the gorgeous full moon of the tropics. Zamboanga is quite a port for shipping vessels of all sizes and the wharf presented a busy scene on our arrival. The lack of any garments of the native children, the gaudy and elaborate silk sarongs and flowing trousers of the Moros, the busy Chinese coolies and toiling carabaos, with here and there a cool, lazy looking figure in spotless white, with the ever-present white helmet adding the European touch to the moving throng.

Pettit Barracks, now reduced to two companies of Philippine Scouts, occupies a beautiful location along the Bay and the well constructed quarters, kept in excellent condition, and the waving palm trees make it one of the most attractive Posts in the Islands. In Zamboanga I had the privilege of attending a Moro wedding, the marriage of the daughter of a Datu, and the ceremony was most elaborate, unusual and interesting. One is impressed with the good roads of Mindanao, the civic improvements and the apparent florid condition of the various cocoanut groves.

From Zamboanga I went on a twelve day trip on the "Avarua", a two-masted trading schooner, touching at the following points:-

At Jolo, Jolo, the center of so much of the former insurrections of the Moros, we visited the famous Chinese Pier, the palace of the Sultan of Sulu, the College of Agriculture, and enjoyed a motor trip around the Island in a well-known and ever-present make of automobile of four letters.

The beetle nut chewing of the Moros here is especially noticeable and the bloody-looking expectoration therefrom leads one to believe at first that murder has just been done. One cannot leave Jolo without one of the brass boxes in which is carried the necessary adjuncts to this habit and some of these are of excellent workmanship, especially the silver ones.

From Jolo we went to Siassi which seems to be noted for great quantities of dried fish and the weaving of beautiful mats of colored patterns.

Then came Bongao, the port for Tawitawi and the surrounding islands. The cattle industry is picking up here, due to the excellent pasturage throughout the year. Sebutu we had to view from a distance because of the extremely low tide and the freight for this point was left on a platform supported by piles at least a half mile from shore.

Sitanki was the apparent headquarters for a large fleet of sea gypsies, a queer tribe of Malays who live entirely on the sea in small native boats. They are reported to never go ashore but make a livelihood from fishing. The weaving of Moro cloth is carried on here and beautiful patterns and colors in silk are made. We met a Moro Chief and eight or nine of his wives, any one of which he expressed a willingness to sell, as he had other "beauties" to take their places.

I rode through the streets of Cagayan on a sacred cow of India, but would have preferred to walk except for the heat. We were entertained by the resident Governor and spent an interesting day of sight seeing.

I returned to Zamboanga by way of Jolo in time for the visit of Governor-General Wood and his party, and enjoyed being present at the luncheon and tea dansant in his honor.

The return trip to Manila was broken by one stop, Gebu, possibly the largest city south of Manila. The contrast between the few cities with modern improvements, large buildings, streets, water and light systems, etc., and the native barrios is great indeed, and one realizes after touching at a few of the many islands and getting a glimpse of the many different tribes what a vast problem is involved in a thorough understanding of the question of the future for the Philippines."

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CUMBERLAND WELCOMES AVIATORS

Cumberland, called the Queen City of Maryland, is another community where aviators are welcomed with open arms. The Mayor and City Commissioners, realizing the military and civil necessity of adequate development of air transportation, wish to extend the general freedom and courtesies of the city to those who are pioneers in this cause.

Visiting aviators are extended the following special courtesies upon presentation of a card issued to them:

Reduced rates at following hotels: Fort Cumberland, Wills Mountain Inn (American Plan), Boulevard, Queen City (American Plan), and Windsor.

Reduced rates at following cafes: Arey's Cafeteria, Southern Cafeteria, Spiker's Cafe, Maryland Restaurant, Reese's Chop House and Golden Gate Tea Room.

Free admission to Liberty, Strand, Capitol and Belvedere theatres.

Open invitation to luncheon at Ft. Cumberland - Kiwanis Club on Thursday and Rotary Club on Tuesday.

Courtesies of following clubs free: Admission to grounds of Cumberland Fair Association, admission to games of Mid-City Baseball Association, use of courts at Dingle Tennis Club, use of shooting range at the Pistoleers Club; Golf, Tennis, Pool, etc. at Cumberland Country Club.

Uniforms pressed free at Miller's Dye Works.

Special rates and service, McElfish Taxi Co.

Pilots are given the following instructions: At any time it is necessary to reach a point in the city with the least possible delay, fly west along the main business street crossing Wills Creek, halfway up the hill are two churches directly opposite each other, make two left hand circles above and including both towers at an altitude low enough to promptly attract attention, then proceed to the field. A "71" taxi will immediately be despatched to the field, a saving of about 20 minutes time. Note: Pilots are requested to use due caution and not to construe this as an invitation to "Jazz" the city.

Government specification fuel and oil are available at the flying field, and an attendant is always present.

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THE LOS ANGELES - SAN DIEGO AIRLINE

An airline operating on the Pacific Coast between Los Angeles and San Diego which bids fair to develop into a larger and more prosperous business venture is the Ryan Airlines, Inc., owned by Lieut. T.C. Ryan, Air Service Reserve Corps, and Mr. B.F. Mahoney.

A daily schedule is maintained between Los Angeles and San Diego, an airline distance of 120 miles. Operations started on March 1st last and the consistency in operation is due to the extremely favorable weather conditions in Southern California and to the care exercised in maintaining planes in flying condition at all times. Only one round trip per day is made. Leaving Los Angeles at 9:00 a.m., the plane arrives at San Diego at 10:30 a.m. The return trip is made in the afternoon, leaving San Diego at 4:00 o'clock and arriving at Los Angeles 90 minutes later. The fare one way is $17.50. or $26.50 for the round trip. Tickets include motor car transportation from the Hotel Biltmore at Los Angeles and the U. S. Grant Hotel at Los Angeles.

Passenger traffic on the airline averages four passengers a day. The patrons are tourists for the most part, although quite frequently business men avail themselves of this rapid means of transportation between these two Southern California cities, since it means a saving in time of three hours, the trip taking four and one-half hours or more by train or auto stage.

In addition to the airline business, local sight-seeing flights are made over Los Angeles and San Diego. Twenty-mile trips in four-passenger cabin planes or smaller planes are made at any hour from either air terminal at $5.00 per passenger. It goes without saying that the largest amount of revenue is derived from these sight-seeing trips.

The equipment of the Ryan Airlines, Inc., comprises ten airplanes, four being cabin planes accommodating four passengers each. Four pilots are employed, of whom three are Reserve officers, two Army and one Navy, also a corps of twelve mechanics. Repair shops are maintained at the San Diego field in two buildings, each 30 by 50 feet. One of the buildings is utilized for both motor overhaul and wing covering work, while the other houses the wood-working machinery and other equipment necessary in the repair and maintenance of airplanes.

The air terminal at San Diego is 15 minutes by automobile from the heart of the city, while the one at Los Angeles is 20 minutes from the business district. The larger field is at San Diego, measuring 2500 by 1,000 feet, while the one at Los Angeles is a one-way field, 2500 by 300 feet.

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WAR DEPARTMENT ORDERS AFFECTING AIR SERVICE OFFICERS

Changes of Station

Captain Lorenzo L. Snow to Hawaiian Department, and to sail on or about January 6, 1926.

Captain Karl H. Gorman to Langley Field upon completion of tour of duty in Hawaiian Department.

Captain Frank H. Pritchard from McCook Field to Langley Field.

First Lieut. Earle G. Harper to Kelly Field upon completion of tour of duty in Philippines.

First Lieut. Byron E. Gates to Philippines, sailing about January 27.

First Lieut. Albert J. Clayton relieved from assignment as student at Balloon and Airship School and assigned to Scott Field for duty.

Captain Paul T. Bock relieved from observation and treatment at Walter Reed General Hospital and to return to McCook Field for duty.

Captain Calvin E. Giffin, Crissy Field to Rockwell Air Intermediate Depot.

First Lieut. George A. McHenry from Brooks Field to Kelly Field.

First Lieut. Fred C. Nelson to Brooks Field, Texas

Second Lieut. Sheldon B. Edwards from Kelly Field to Scott Field.

First Lieut. Ronald A. Hicks from Mitchel Field to duty with Organized Reserves, 2nd Corps Area, New York City.

First Lieut. Gilbert S. Graves, Jr. from duty with Organized Reserves, 2nd Corps Area, to Mitchel Field.

First Lieut. Frank M. McKee from Scott Field to Norton Field, Columbus, Ohio, to assume command.

Reserve Officers Ordered to Active Duty

Major John H. Larned, for 15 days from October 25th, to Office, Chief of Air Service.

Resignations

Second Lieut. John R. Armstrong.

Promotions

2nd Lieut. Harry C. Wisehart to 1st Lieut. with rank Sept. 30, 1925.
2nd Lieut. John F. McBlain to 1st Lieut. with rank October 2, 1925.
Captain Paul T. Bock to Major, with rank from October 20.

Appointments

Major Millard F. Harmon detailed to General Staff Corps, effective October 17th.

First Lieut. Malcolm N. Stewart designated as Model Airway Communications Control Officer.

Details to Air Service

Second Lieut. Wm. L. Cornelius, Field Artillery, October 13th.

Leaves of Absence

First Lieut. Don L. Hutchins, 2 months, 23 days, from October 24th.
Major General Mason M. Patrick, six days, Nov. 16th.
Captain Lorenzo L. Snow, one month, 15 days, from Nov. 20th.
Leave of 1st Lieut. George E. Hodge further extended one month, 17 days.
Leave of Major Leonard H. Drennan extended 7 days.

Camp Nichols, Rizal, P.I. Sept. 1.

Headquarters Detachment.

The recreation room built beneath the north-eastern corner of the barracks, largely as a result of Sergeant Master's perserverıng efforts, is being well patronized. A table of up-to-date magazines, a victrola and a good pool table feature this detachment activity. In fact there are few reasons left "why a boy should leave home."

An organization baseball league schedule will start soon. The Headquarters Detachment, aided greatly by the Quartermaster, Medical Detachment, and the Sixth Photo Section, will place a team upon the field to do battle with the 28th Bombardment Squadron and 66th Service Squadron. Much interest is apparently present and a lively competition for first place is assured. Volley ball, tennis and, possibly, basket ball will also be given a good try as soon as the rainy season is over.

Lieut. and Mrs. Mervin E. Gross recently returned from a month's honeymoon trip in the cool quiet atmosphere of Baguio, Mountain Province. Touring the famous mountain trails in Gross' lively maroon roadster, following the little known mountain paths a-foot and playing frequently a healthy game of golf before breakfast, to say nothing of Polo, poker, and bridge, certainly has furnished a thrilling vacation. Upon their return to Manila, a cute little cement bungalow was selected in the new and exclusive Air Service Barrio on Penn. Avenue (Lieuts. Liggett and Lumberg formed the nucleus around which this rapidly growing Air Service village or settlement has developed). And now Lieut. Gross must worry about Chinese rugs, Bilabid furniture, Canton, China, and ice bills just like the rest of us. We do feel deeply though that Lieut. Gross is to be very much congratulated and we welcome warmly into the arms of the Air Service Mrs. Mildred L. Gross. All good wishes from the 4th Composite Group.

Sixth Photo Section.

Lieut. H. K. Ramey and various members of the Section were kept quite busy during General Helmick's recent inspections in Manila vicinity. If argument arises later as to whose row of "pup" tents was straightest, it is only necessary to consult our files. Even a single man slightly out of line shows clearly in some of the photos.

Lieut. Ramey and Staff Sergeant Michler recently photographed the Martin Bomber which was forced to land in the Bay. Very fortunately, no one was injured and all members of the crew are accounted for. The photos are interesting in that they will show how a Martin rides in the water.

Each morning at 5:30 A.M. one may see the entire Section on the drill field for fifteen minutes of snappy calesthenics followed by an equally snappy fifteen minutes period of close order drill.

During the rainy season very little mosaic work can be accomplished and a good opportunity is afforded to arrange, label, file, and study all Philippine photographs made up to date.

Sixty Sixth Service Squadron.

Lieut. Harry A. Dinger, our commanding officer for over a year, who was assigned to Bolling Field, Washington, D.C. left Manila with Mrs. Dinger on the PRESIDENT MADISON in time to visit China and Japan before boarding the THOMAS at a Chinese port enroute home. Judging from reports of strikes, riots, etc. they must have had an exciting time and will likely be mighty glad to see the Golden Gate again.

During Lieut. Dinger's administration of the 66th Service Squadron, a genuine period of achievement has been experienced. The building of steel hangars quarrying stone for road construction, and pouring of vast amounts of concrete have taxed the strength of the squadron almost at times to the breaking point. Lieut. Dinger always matched an hour's work with that of the squadron and then usually added a few extra hours at night.

He always knew our outfit was the best in the Islands and was always ready to defend this belief against all comers. His interest in making the quarters as comfortable as possible for the men and in maintaining a good mess proved his deep regard for the 66th Squadron.

So much construction work was necessary that it was only shortly before Lieut. Dinger's departure that the Squadron was able to start functioning as a Service Squadron. The motor test blocks are now completed, the oil reclamation house is nearly ready to refine the used lubricating oil and the shops are ready

to handle a complete overhaul of airplanes or engines.

Lieut. Dinger will undoubtedly look back over this assignment as one of hard work and of many little vexing problems, but we are sure that the feeling of satisfaction of seeing the squadron firmly established in excellent cement quarters and being provided with the necessary equipment to carry out its duties will be reward sufficient. The 66th Service Squadron extends its appreciation to him for his heartfelt interest and activities for the Squadron's good and extend to him and Mrs. Dinger, one hundred and seventy-six good wishes for success and a happy assignment in the Capital City.

The Squadron received a welcome addition to its ranks in the transfer of Lieut. Omar O. Niergarth, who will become our New Adjutant, Mess, Athletic, and Range Officer. Lieut. Niergarth served at Kindley Field for several months and as Post Ordnance Officer at Camp Nichols. With a total of only five officers in the outfit, Lieut. Niergarth will find plenty of work.

Harmony is reported to again prevail between the Engineering and Station Supply Offices. In all probability this unusual condition is due to both offices being moved from the northeast corner of the main hangar to the new oil house where there is little noise or dust and few visiting loafers to interfere with family business.

Lieut. S. P. Mills, was transferred to the Headquarters Detachment where he will be detachment Supply Officer. Since November, last year he has been Squadron Mess Officer.

It is reported that blue prints pertaining to airplanes, engines, and various items of equipment may be procured at a moment's notice at our Engineering Office. The new "system" developed by Sgt. Douglas, it is believed, has effected this condition.

The Engineering Department of late has taken on the appearance of an up-to-date real repair depot. The rebuilding of the original Photographic plane is now complete and a second DH4B is now undergoing repairs and remodeling for use as a reserve "big tank" photographic plane. Four MB3A airplanes are in process of complete overhaul, with four new DH4B's awaiting assembly. Six Liberty engines were completely overhauled, ten top overhaul and all block tested. Gasoline pumps were transferred from the tanks to the new oil house and the oil reclamation plant will be ready to function by September 15th. Lieut. S.A. Blair, Commanding Officer of the Squadron and Lieuts. E.M. Powers and H.Z. Bogert, Engineering and Assistant Engineering Officer, respectively are in charge of this work.

Our First Sergeant L.W. Warren, Privates Erwin and Kelley are preparing to take examinations for the cadet flying course at Brooks Field, San Antonio, Texas. Private Oliver hopes to take the entrance examinations for West Point this year. Here's hoping all make the grade.

Brooks Field, San Antonio, Texas, October 19th.

Openings of new commercial aviation fields surrounding San Antonio are getting quite common. Considering all avaiiable shipe were at Little Rock, Arkansas, this past week-end, nine ships are going to Waco next week-end, and all available DH's to Tucson, Arizona the following week-end, commercial aviation business in the South seems to be looking up.

Two new men reported to Brooks Field this past week; Captain Albert W. Stevens, premier photographer of the Air Service, to take flying training and Captain Andre Grima, Spanish Air Service, to take a refresher course before going to Kelly Field for advanced training.

The balloon hangar, long an empty land mark for this field, is about to be used for a dance, welcoming the student officers to the Field. A good hardwood dance floor was installed in the south end of the hangar last year and an excellent time is expected. Good music and circus entertainers have been obtained. New uniforms will also probably be in evidence as uniforms are to be worn and a copy of the new regulations arrived today.

Our first crack up is here. Cadet Hall, soloing for his third time, made the mistake of landing ten feet in the air with a fairly high wind blowing. Only a slight damage to the extent of a landing gear strut was done. One other crack up by an officer of this station was reported by telegraph from Duncan, Okla., though this one was in an automobile. Lieut. Steer trying to drive to Oklahoma City and back over the week-end had the misfortune to wreck his car and sustained broken legs and an arm. Lieut. Corkille and Hine flew up to investigate.

Lieut. Wolfe, who took third place in the Liberty Trophy Race, is from this station and not from McCook as New York and Chicago Newspapers reported.

Daily aircraft hours for this station for the past week were 944:35, daily man hours 2,003:20, daily cross-country hours 76:15, daily cross-country man hours 152:30.

Langley Field, Hampton, Va., October 20th.

The 11th Squadron prides itself on doing its share of hustling during the activities this week and being able to meet all emergencies promptly. It was represented at the Pulitzer Races by planes 64210, an NBS-1, piloted by Lieut. E. V. Tompkins and crew chief, Sgt. Yonkese; 68488, piloted by Lieut. Bunge, with Sgt. Meier as mechanician. This ship on arriving at Mitchel Field had completed a cross-country run of 32 hours and covered 1743 miles with a full useful load. No. 68492 was piloted by Lieut. Green, C.O. of the 11th, with Sgt. L. McKenna.

Among the pilots here from Selfridge Field for the Air Service maneuvers are Major T.G. Lanphier, Capt. T. E. Tillinghast, 1st Lts. R.L. Meredith, F.O. Hunter, A.J. Lyons, 2nd Lts. C.D. McAllister and C.K. Rich. The following officers will remain for the bombing and machine gun practice: 1st Lt. T.K. Matthews, 2nd Lts. R.W. Douglas, R.J.Minty and G.F. Schulgen.

The following visiting pilots came from Kelly Field: Capt. J.H. Davidson, 1st Lieuts. R.F. Cole, R.C. Zettle, C.W. Davies, 2nd Lts. E.F. Booth, A.B. Greene, E.E. Partridge and N.D. Frast. Officers remaining over for the Machine Gun and Bombing Competition are: 1st Lieuts. F.C. Carroll, H.G. Crocker and 2nd Lt. H. S. Vandenberg.

The following officers from Langley Field attended the Pulitzer Races at Mitchel Field: Majors Oscar Westover, F.H. Coleman, H.M. Hickam, L.G. Heffernan, Harold Geiger, Captains G. Kenny, F.M. Brady, Lts. H.F. Sessions, J.T. Morris, J.A. Kase in DH4B's; Major Ira A. Rader, Capt. F.E.Galloway, Lt. W.J. McKiernan and Private S.W. Brown in CO-4's; Corporal Angell in an SE-5; Lieut. G.O. McDonald in DH4MP-2.

The Langley Field football team played three games on consecutive Saturdays, starting October 3rd, and won one contest, lost one and tied one. The game with the Sewanee Club of Portsmouth on October 3rd resulted in a 14 to 14 score; the Naval Aircraft Squadron at the Naval Base won the October 10th game 18 to 6, and on October 17th Langley defeated the team of the U.S.S. TEXAS 21 to 0.

Langley Field, Hampton, Va., October 27th.

19th Airship Company

During the past week the Airship TC-4 made its routine training flights every day for the purpose of training officer personnel attached to this organization from the Office of the Chief of Air Service.

On the 16th one special flight was made to take pictures of the bombing targets used in the bombing practice at this field.

Second Lieut. W. L. Harris was assigned to this company for active duty.

11th Squadron

We have almost been stumped by a question put to us last week; it is: How does the 11th keep up its efficiency, its high standard of morale amongst its members and how does the Organization as a whole come through when asked to do anything?

To begin with, there is always that cheerful spirit of comaraderie around the outfit between officers and the men, and between the non-coms and their inferiors. The organization is based on the principle "All for the Air Service."

The men are divided into crews for the various ships that are assigned to the Organization. These crews are headed by a crew chief who, besides being a mechanic, is a popular and esteemed non-com, well liked not only by his crew but by the pilots of the organization and by pilots of other organizations as well.

It is needless to go any further in this matter, for it is well known, in the Air Service at any rate, that a ship is known by its crew chief, the crew chief is known by his crew and the crew is known by its work in the organization.

Regardless of details, fatigue, night flying, rain or cold, sunshine or snow, the men of this organization come through when desired. They work with a will, are untiring in their efforts, foregoing their own pleasures for the sake of their outfit. One would say that this is a lot of bunk, but I must say, that like any other outfit, one can always find here the pest who is a Chronic Kicker. This man, however, is the one who is always transferring from one organization to another and is not satisfied unless he has something to kick about.

We stand on the platform and say that the Eleventh Bombardment Squadron at Langley Field is the best equipped, has the highest morale, highest efficiency and is the most popular Organization on this Field. It has in its organization intrepid fliers and brave and courageous men.

Hdqrs. 2nd Div., Air Service, Biggs Field, Texas, October 9 - 19.

Capt. Bender and Lieut. Douglas took part in a liaison problem with the 1st Cavalry Division on Cavalry maneuvers on October 8th. On October 14th Capt. Bender, Lieuts. Douglas, Hunting and Neill flew to Fort Huachuca, Ariz. for the purpose of operating with the 10th Cavalry and 25th Infantry.

Lieut. Weddington and Capt. Pollock flew to Langley Field to compete in aerial machine gun competition there.

Cross-country flights by personnel of this field were as follows: Capt. Johnson and Lieut. Hunting to Kelly Field Oct. 3rd, returning the 5th; Sgts. Tyler and Rhodes to Mitchel Field Oct. 3rd to observe the Air Races; Lieut. Weddington to Deming, N.M. and return on Oct. 5th, flying Capt. Shumaker there; Major Reynolds to Tucson, Ariz. and return, Oct. 7th, to inspect airdrome there; Lieut. Gale to Tucson and return Oct. 3rd.; Capts. Bender, Johnson, Lieuts. Hunting and Weddington, 30 miles north of Fort Bliss for cross-country training on Oct. 9th, and repeated the performance on the 11th, Sgt. Pierce being a member of the party instead of Lieut. Weddington; Lieut. Hunting to Fort Huachuca, Ariz. and return, Oct. 13th, ferrying Pvt. Land to that place.

Lieut. Cronau visited here from San Diego, Calif. Oct. 1st and departed the following day for Kelly Field, his home station.

Second Lieut. Ernest L. Neill, Reserve Corps, served on active duty at this station from Oct. 4th to 18th.

Biggs Field, Fort Bliss, Texas, October 24th.

During the week October 18th to 24th inclusive the following items of interest occurred at this Field:

During the week Major General ERNEST HINDS, Commanding General, 8th Corps Area, inspected all troops at this Post, On Tuesday, October 20th the 12th Observation Squadron and 1st Photo Section at this Field were inspected by the Commanding General and Staff -- we hope with satisfactory result.

On Wednesday the 1st Cavalry Division, stationed at this Post, engaged in maneuvers in the vicinity of Courschene Bridge, assisted by ships and personnel for liaison and reconnaissance purposes from this Squadron. Captain Walter Bender, A.S., with Lieut. Guy H. Gale as pilot left the Field on this mission in a DH4M at 6:00 A.M. and returned at 9:30 A.M. A number of field messages were dropped. The result of this mission was later proven eminently valuable. During these maneuvers Staff Sergeant Fred I. Pierce as pilot with Staff Sergeant Willie H. Markel, 1st Photo Section, as photographer, in a "Photo DH" took a number of photographs of the troops engaged, in their positions at the times of greatest strategical and tactical interest.

On October 20th Lieuts. Charles Douglas and Lloyd E. Hunting as pilots with Privates Blase and Donnelly, 12th Observation Squadron, as observers, departed for Fort Clark, Texas, to participate in Cavalry and Artillery maneuvers at that Post. Lieut. Douglas returned at 5:00 P.M. October 23rd reports a successful conclusion of this mission. Lieut. Hunting proceeded from Fort Clark to San Antonio, Texas, in connection with business at the Air Intermediate Depot, Duncan Field.

This organization is now making determined efforts to establish an "Information Office" with the extent of activities as near as practicable as contemplated in O.C.A.S. Circulars published last year. Up to the present time this activity has necessarily had to be greatly curtailed due to lack of space for such an office and suitable personnel. We are endeavoring, with the assistance of the Office of the Chief of Air Service, to establish a Technical Library in connection therewith -- such a library would fill a long-felt want as this Field is rather isolated from what might be called the "Center of aerial activity" in this Corps Area -- San Antonio, Kelly and Brooks Field, where they, of course, have up-to-date Technical Libraries. When consideration is given the large number of Reserve Officers, Air Service, living in and around El Paso, who from time to time receive their training under the seven (7) Regular Air Service Officers permanently stationed at this Field, the need of a good Technical Library can be better appreciated. We hope to report good progress in this respect in the near future.

Rockwell Air Intermediate Depot, Coronado, Calif., Oct. 24th.

It is only once in a great while that this quiet, hard-working bunch of indoor aviators gets upset, as we try not to let any thing but the extraordinary throw us into confusion, but the extraordinary hit us a hard wallop this week - Captain Bill Ocker lost his dog. Now lots of people in the vicinity of Rockwell Field have experienced the pleasure of losing their dogs and things have run on just the same, but their's was not Capt. Billy's dog, and for two days the activities of the Depot were almost at a standstill as every one was wondering if the dog had taken a hunch and pulled stakes to prospect the wild regions of Coronado with a view of finding a better home or whether some low-down villian had enticed this beautiful piece of dog-flesh away and was holding him for ransom. Captain Ocker, broken-hearted, watched the mail bus each trip, expecting to find a note asking him to leave a large sum of money under a certain pepper tree on the Coronado Golf Course, but no message came so, after two days of untold torture, Capt. Bill, with the aid of a powerful reading glass, started on the trail and by pursuing real Sherlock Holmes tactics he soon got the trail which landed him right into a Marine Officer's home. Now Capt. Bill is happy, and his only regret of the whole affair is that it was not a Navy Officer instead of a Marine, as it is much easier to get dog robbers in the Navy than in the Army or Marine Corps.

The duck season is on again, and the ducks are on to the fact that the duck season is on, for they are sure flying high and although we have some high fliers at this depot they do not seem to be able to have any duck dinners regardless of the fact that they have put forth condiderable effort in that direction. Captain Davis, Q.M.C., Chief gunner at this depot, and Lieut. Jack Greer, Chief gunner's mate, assisted by Lieut. Castor, who still acts as gun pointer on duck drives, are not giving up hope yet, and as the season is still young we may be able to have a few canvas backs to tell about later.

The only thing the writer of this letter regrets is that there is no one here now to row the boat for Warrant Officer Chas. Payne, and Charlie is itching to get on one of our mountain lakes and show the boys how to bring them down. The War Department sure did Charlie a bad turn when they took Warrant Officer Jimmie Corcoran away from here, as he was the only one who could pull an oar to suit Charlie.

Captain Lowell H. Smith returned last night from Mitchel Field where he has been attending the conference of Engineer Officers.

Lieut. Leslie P. Arnold, one of the World-Flight officers, left this morning by air for Kansas City, Mo., via El Paso, Sweetwater and Muskogee (Southern Airways) to deliver a lecture before the National Convention of the Chamber of Commerce to be held in that city next week. Lieut. Arnold will use the War Department Motion Picture Reel of the World-Flight to illustrate his talk.

Major Emmons, Commanding Officer of Crissy Field, and Lieut. H.A. Moore, Lieut. Taylor, and Lieut. Glasscock flew down from Crissy Field last week. On their return trip to the northern field they took back two night flying planes which had been overhauled and remodeled at this Depot.

Lieut. Arnold, and Captain L.M. Field, M.C., flew to Clover Field last week where Captain Field gave a physical examination to Reserve Officers.

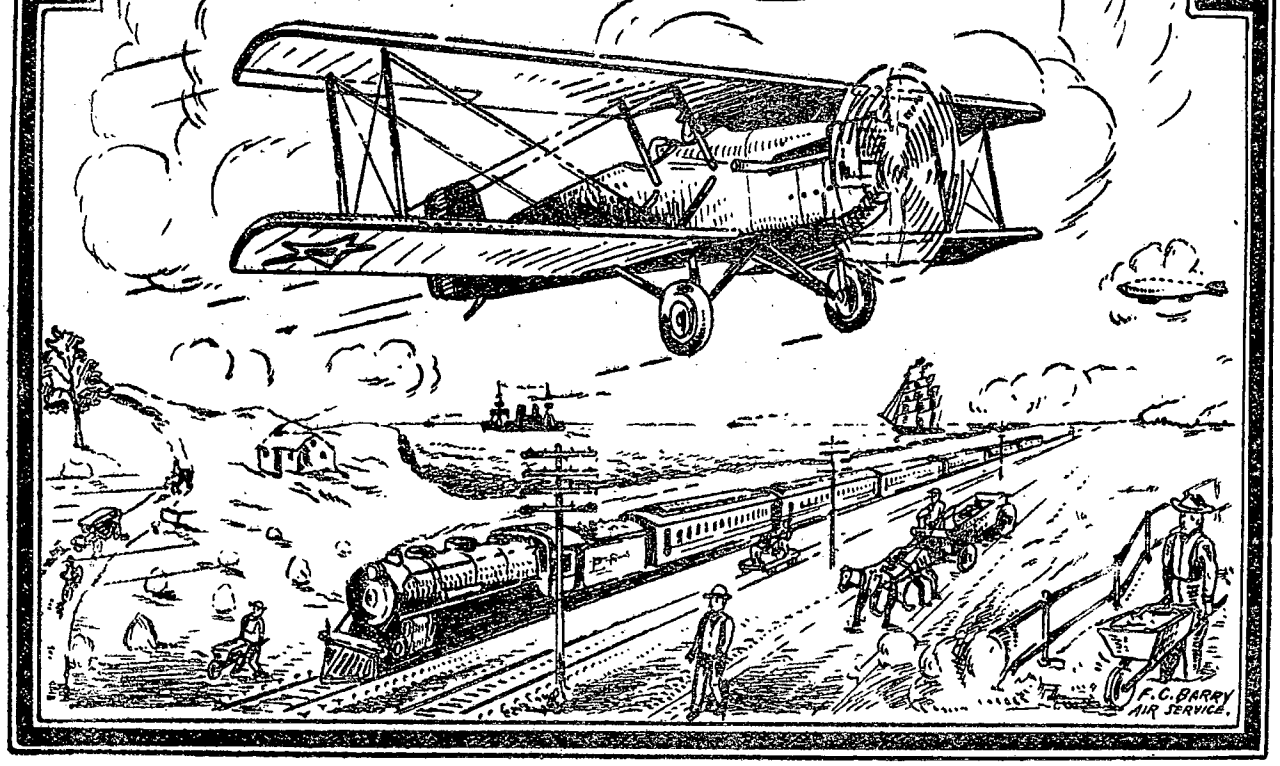
Kelly Field, San Antonio, Texas, October 30.

Practically all of the new class of cadets have reached the solo stage and planes are to be seen making a pass at the "solo stage circle" during all hours of the morning.

Lieut. E.W. Dichman returned from the East after attending the Air Races. He was unfortunate in being held up by bad weather but would hardly consider it unfortunate when held up at Cumberland, Md., as the town is wide awake and knows the full meaning of hospitality when Air Service personnel arrive there.

The new Douglas Transport brought in by Lieut. Carr is being tested by Major Brown who reports that Kelly Field is very fortunate in getting this ship, since it could be used occasionally on the airways to relieve congested condition caused by students traveling to and from Chanute Field.

U. S. Army Air Service News Letter



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EXTRACTS FROM THE ANNUAL REPORT OF THE CHIEF OF THE AIR SERVICE (MAJOR GENERAL M. M. PATRICK) TO THE SECRETARY OF WAR. FISCAL YEAR ENDING JUNE 30,1925.

Summary of Estimates and Allotments.-- When I submitted estimates for this year, I gave $43,486,000 as the minimum sum which would be sufficient to replace worn-out or obsolete war stocks and provide the full amount of equipment as authorized by Tables of Organization for the Air Service as now constituted and to permit its efficient operation. This estimate included $30,133,000 for the purchase of new heavier-than-air craft.

The War Department approved an estimate of $12,836,000 to include $2,646,000 for the procurement of aircraft. The Bureau of the Budget, in considering this estimate, reduced it to $12,435,000., plus a re-appropriation of $1,000,000 of the unexpended balance of the Air Service appropriation for the fiscal year 1922, with the proviso that this sum was to be spent exclusively for the procurement of heavier-than-air craft. This increased the total sum available for the purchase of such aircraft for 1925 to $3,646,000. The sum recommended by the Bureau of the Budget was appropriated. This amount was supplemented by an Act approved December 6, 1924, for the purpose of adjusting the compensation of civilian employees in accordance with the classification of salaries under the act approved March 4, 1923 which operated to increase the "Appropriation Air Service, Army" for the fiscal year 1925, to a final total of $14,113,043.80.

Condition of Buildings.-- The Air Service being a new arm is garrisoned for the most part in temporary buildings of war-time construction. These buildings when erected were intended for occupancy for only from three to five years. They have long since passed the peak of their useful life. Their foundations are rotting away, floors are sinking, and it is impossible, with the funds available for repair, to keep them in a sanitary or livable condition. Expecially does the personnel at the northern fields suffer during winter months. Little provision has been made for heating hangars, workshops and other technical buildings. This makes it impossible to secure maximum effort from personnel in cold weather. Structures at Air Service stations would not now be habitable at all were it not for the large amount of soldier labor which has been diverted from Air Service tactical units for their repair. I believe that no wiser step can be taken for promoting the efficiency of the Air Service than to erect permanent construction at the principal stations. I recommend, therefore, that every effort be made to push the War Department housing program and that the Air Service be placed high on the construction priority list.

Civilian Personnel.-- Necessity for such personnel. - In the Air Service, as in other technical and supply arms, such as the Ordnance and Signal Corps there is a real need for civilian personnel for two principal reasons. They fill specialist vacancies for which officers in sufficient number have not been trained and they perform clerical duties for which combat troops are not qualified and for which enlisted men can never be secured in sufficient numbers.

Reduction.- The roll for Air Service civilian employees has been reduced 5.6% during last year, a saving of $138,340.00 being effected. I have pointed out earlier in my report, however (page 12), that any further reduction must seriously affect the volume and character of the work which the Air Service can perform.

The effect of the Reclassification Act. - The reclassification of employees under the system provided, has not worked out well in the Air Service. I believe the principle is sound but the method employed in putting it into effect has not been successful in this arm. I think the principal trouble is the fact that the board charged with final classification is composed of individuals unfamiliar with the work being done by the civilian employees in the Air Service and the probable necessarily rapid survey made usually resul ts in an erroneous impression being gathered of work being done by the employees and as a consequence, in some cases, their unfortunate and unjust classification. I recommend that the division chiefs, under whom these employees work and who know personally

of the character of work done, be consulted and further that the recommendation of such officers be given greater weight in the final decision.

Helium Supply-- During the year an important change was made in the administration of the production of helium. Heretofore, the helium plant at Fort Worth, Texas, which was constructed by the United States government has been operated under the direct control of the Army and Navy Helium Board, by appropriations contained in the annual appropriation bills of the War and Navy Departments.

All matters involving expenditure of the funds appropriated, extension of activities, developments (both commercial and experimental), have been subject to the approval of the Helium Board. Research has been carried out by the Bureau of Mines of the Interior Department in its cryogenic laboratory, the funds for which were supplied by the Army and Navy jointly, in equal amounts as directed by the Helium Board.

The helium produced was at first divided equally by the Army and Navy, but when the Navy Department desired to inflate the large rigid airship, they requested loans of army helium. The Army in order to assist in the experiments with lighter-than-air equipment loaned to the Navy the helium which they had requested.

The foregoing procedure under which three governmental departments were charged with various responsibilities in connection with the production of helium was deemed uneconomical and inadvisable, and the last Congress passed a bill (approved March 3, 1925), the passage of which had been recommended several years ago to The President by the Secretaries of the War, Navy and Interior Departments, and which charges the Bureau of Mines of the Interior Department, with everything in connection with exploration for, production of, and experimentation with helium, and directed that all existing government plants, projects, etc., be transferred by the War and Navy Departments to the Bureau of Mines. This was accomplished as of midnight, June 30, 1925. Under this law, the Army and Navy and other branches of the government service requiring helium may requisition it from the Bureau of Mines, and make payments therefor by transfer of funds on the books of the Treasury from any applicable appropriation at actual cost of said helium, to the United States.

Operations.

Improvement in aerial gunnery. -- Machine guns are carried by all military airplanes in war time. On some planes they are largely defensive weapons, on others they serve as both offensive and defensive weapons. However, even on aircraft whose primary purpose is observation, photography, or bombing, machine guns are carried. Realizing the importance of bringing personnel up to a high point of efficiency in the use of this weapon, this form of training has been stressed during the past year. The result has been a marked improvement in aerial markmanship. In the First Pursuit Group alone, the figures show that the improvement has been over 300 percent. As an incentive to further effort in this regard, the Annual Machine Gunnery and Bombing Matches were devised. The first of these matches held the past year is discussed in detail on page 161.

Cross country and night flying. -- These types of flying have been engaged in more during the year than in the past, with consequent improvement on the part of pilot personnel. Outstanding accomplishments in these regards are the "Around-the-World" Flight and the Night Flight of the Bombardment Group from Langley Field to Mitchel Field. Some valuable practice in night flying has also been secured in connection with the night tests with the anti-aircraft units.

Forest patrol. -- For the past several years, the Air Service has been assisting the Department of Agriculture in locating forest fires by providing daily patrols of the larger forest areas in the west. The Department of Agriculture again requested this cooperation during the past year. The shortage of flying personnel combined with heavy training programs made it impracticable to carry out this forest fire patrol program on the same basis as in past years. An alternative method was suggested, however, whereby the Army Air Service should furnish ten DH4B airplanes with adjunct equipment to be flown by Reserve officers hired for this duty by funds of the Department of Agriculture. The planes were transferred and the system installed. At the close of this fiscal year, it had not been in operation long enough to determine its feasibility definitely. The Bureau of Forestry has often expressed satisfaction at the saving effected by this method of preventing forest destruction by fire.

Boll weevil fighting. -- During the year the Air Service continued to maintain a detachment at Tallulah, Louisiana, cooperating with the Department of Agriculture in the destruction of boll weevil by spraying from the air. This

experiment has met with such success that requests have been received by the War Department for additional assistance, such as pecan tree and fruit tree spraying. A civilian aircraft manufacturer has been attracted to this field and is building and operating airplanes equipped for this particular purpose.

Radio activities. -- During the year new radio equipment under development for several years by the Signal Corps has been issued and is now in use. This includes a transmitting and receiving airplane set for observation airplanes and a transmitting and receiving set for bombers. It includes also a 400 watt constant frequency telephone-telegraph ground set for use with planes & for point to point communication in the Air Service net. An additional type, telephone only, for pursuit planes, is now being manufactured. The transmitters for all of the air sets are different. The receiver is universal type, with a wave band sufficiently great to be used with all three sets. In this way, intercommunication between planes of all types is permitted. These sets are now being used in service with much greater efficiency than the ones formerly issued. Reliability and ease of operation have fostered an interest in radio on the part of the average pilot which hitherto did not exist.

During the fiscal year there has been a great increase in the demand for aerial photographic work for military and map-making purposes by the War Department. The Air Service, in addition to the routine necessities of training, has cooperated with all other combat branches of the service in carrying out operations and maneuvers in the field under the various corps area commands. Although the reconnaissance value of aerial photography has long been recognized, considerable skepticism has prevailed as to its worth in making maps of sufficient accuracy for militarypurposes of inaccessible areas. The feasibility of making accurate military maps by aerial survey of areas of which there were none or only inadequate maps was convincingly demonstrated in several instances during the fiscal year.

By far the greatest demand for aerial photographs during the fiscal year, however, has emanated from federal agencies outside the War Department, practically every federal bureau being represented in these requests.

A study of the projects carried out during the fiscal year for these departments shows that there is a great increase in the variety of uses for which the aerial photographs are desired. The greatest demand, however, has been for photographs for purely map-making purposes. The methods of utilizing aerial photographs in map-making have become standardized during the past year to an extent that makes for greater economy in the production of maps from data provided by unassembled multi-lens photographs. Under the old system elaborate nets of primary control spread by ground work over the areas to be mapped were considered necessary preliminary to the photographic work. By the new and more economical method, a net of secondary control is established from points located in the photographs themselves, which is satisfactory for standard practice where there are a moderate number of primary control points available.

Aerial survey, based on extensive projects that have been carried out during the past year, is estimated by the U.S.Geological Survey to create a saving of from thirty-five to seventy-five percent in the cost of making and revising maps as compared with the cost by ground survey alone, and cuts the time required more than fifty percent. The decision of the Topographic Branch of the U.S.Geological Survey to give preference to aerial photographic mapping so far as possible in carrying out the provisions of the Temple Bill program for mapping the entire area of the United States within twenty years, is the most noteworthy evidence that aerial survey has passed from the experimental stage. The degree of perfection which this development has attained is due almost entirely to the experimental development work carried on by the Army Air Service in cooperation with the Corps of Engineers.

During the fiscal year approximately 15,000 square miles were photographed for the War Department and federal bureaus for map making purposes alone. By virtue of this continuous peace time aerial survey service, the Air Service obtains valuable and necessary potential training for war, develops and perfects equipment and methods, and supplies aerial photographs for mapping purposes at an annual saving to the government of thousands of dollars over the cost of maintaining the photographic sections.

Airways. -- No form of individual training is more valuable to pilot personnel than long cross-country flights. Such flights combine many forms of training. They throw pilots on their own initiative in the maintenance of equipment; they serve as navigation flights and give valuable experience in the handling of a plane at strange fields and in all varieties of weather. Every move-

ment of a tactical unit and practically every flight of military aircraft on a war mission demands this experience. Realizing the necessity for this type of flying and in order to combine it with productive work, the military airways were established. Since nearly all pilots have now flown the present airways and are familiar with the terrain and because of the advisability of connecting up the geographical extremities of the country with well defined airways, it is planned to expand gradually during a five year period. The map on page 147 outlines this program and also lists all landing fields in the United States on which the Airways Section of my office has secured information.

National Guard.--During the year two additional Air Service units were federally recognized. These units, together with the number formerly recognized, bring the total number of squadrons to fourteen. Four more are yet to be recognized under the original Militia Bureau policy which contemplated the formation of 18 complete divisions.

Michigan and Illinois have both asked for federal recognition for their units. Such recognition has not been extended due to shortage of funds which has made such recognition impossible.

The units which have been recognized have operated throughout the year with commendable efficiency. The pilots in all units are thoroughly imbued with the thought of the flying efficiency of the units. Mechanics for the most part are efficient and the operation of the units has generally been very satisfactory.

These units are still using obsolescent training type planes. They should be replaced as rapidly as possible by more modern planes whose performance will be nearer to that of the planes to be used in a future emergency. This will necessitate a greatly increased appropriation however.

Interest in the Air Service on the part of reserve officers has revived in a most gratifying way during the past year. The spirit of our reserve is very high; the interest that they are taking, both in flying and other matters has become great. Many requests have been received from large cities throughout the country for the organization of reserve airdromes, but due to limited funds it has been impossible to provide any new ones. The airdrome at Pittsburgh, started sometime ago, has been completed and is now in operation.

Anti-aircraft Defense project. -- A very complete study has been prepared and submitted to the War Department regarding anti-aircraft defense. It is indisponsable that the aviator, as well as the personnel on the ground operating anti-aircraft equipment should know the probability of being shot down by anti-aircraft fire. The surest defense against aircraft is other aircraft and great care should be exercised that the limited appropriations shall be spent to provide the greatest protection possible. Undoubtedly a small amount of anti-aircraft equipment, consisting of guns, machine guns, searchlights, and listening apparatus are an important part of the defensive measures to be taken, but these should be limited to certain fixed localities and reduced to a minimum in favor of the far more mobile and effective defense provided by the airplane.

CONCLUSIONS AND RECOMMENDATIONS

In my annual report for last year, I recommended specifically, the following:

Provision for an increased Air Service;

Correction of the unsatisfactory condition with reference to commissioned personnel.

Legislation for the development of civil aviation.

During the year just passed, not one of these recommendations has been followed by tangible affirmative action. I have had an additional year in which to observe the operation of the Army Air Service and I am still convinced that every one of these recommendations should be at once approved and carried out.

Below I repeat these recommendations and add others based upon another year's experience and upon the facts set forth elsewhere in this report, and once more I urge their approval and the necessary steps to put them into effect.

Organization.-- Authorize an Air Corps, giving the Air Service a status in the Army similar to that of the Marine Corps in the Navy Department.

Either revise existing Tables of Organization for the Air Service component to provide for Quartermaster and Signal units, or so increase those branches of the Army until they can do this work so that it will no longer be necessary for Air Service men to be detailed to perform these duties.

Increase the Air Service to that recommended by the Lassiter Board.

Finance.-- Provide sufficient funds to supply safe flying equipment

for at least existing units and personnel.

Authorize a separate budget for the Air Corps to embrace under one appropriation title, the entire cost of the Air Service.

Stations.-- Provide funds and adopt a definite and adequate housing program to take the Air Service out of the present temporary structures, which are inadequate, unhealthy, and unsuited to the purposes they are serving.

Personnel.-- Authorize a separate promotion list for the Air Service, with a proper system for the procurement, assignment, promotion, elimination and retirement of Air Service personnel. This to be peculiar to the Air Service on account of the heavy casualties as compared with other branches of the Army and the nature of the qualifications required in Air Service personnel.

Recognize the importance of an Air Force and increase the ratio of Air Force over Air Service units in its present strength.

Allot more warrant officers.

Increase the number of flying cadets.

Effect no further reductions in civilian, technical personnel.

Engineering and Research.-- Provide funds to complete the construction and removal to the new site and for carrying on the much needed and important work.

Supply and maintenance.-- Adopt a definite aircraft building program to cover a period of years.

Provide sufficient funds to put in service new equipment as it is developed and standardized.

Training.-- Base the training and all other activities upon the amounts of flying equipment and supplies available.

Make provision for increasing the output of the special service schools, particularly the advanced and primary flying schools.

Operations and Special Projects.-- Move the Attack Group from Kelly Field, San Antonio, Texas to Rockwell Field, San Diego, California.

Authorize the projected Panama Flight.

Conclude all training programs of tactical units with combined Air Force Maneuvers.

R.O.T.C., National Guard and Organized Reserves. Increase allotments so that additional National Guard squadrons may be provided in the states desiring them.

Train proportionally more territorial and less branch assignment officers.

Increase allotments for one year's training of Reserve Officers with tactical units.

Increase the number of R.O.T.C. units.

Civil and Commercial Aviation.-- Secure suitable federal legislation for the proper control of commercial aeronautics.

Summary.-- In preparing this report I have endeavored to do three things: To show the work done during the past year; To stress the real importance of the Air Service as a combat arm; To set forth its present condition and what must be done for its betterment; To make recommendations which will improve existing unfavorable conditions with the general purpose ever foremost of making proper provision for a well balanced and adequate National Defense.

During the past year much has been done to better the Air Service, its training and its equipment. The spirit which animates it is evidenced by the fact that more flying was done than in any previous peace year with a resulting improvement in the effectiveness of this arm, in its readiness to do its part in any emergency.

I commend the greater part of my personnel for its loyalty and for the hard work done under trying conditions.

END

VOL IX AIR SERVICE NEWS NO. 20
Information Division Munitions Building
Air Service December 8, 1925 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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MAKING THE MODEL AIRWAYS SAFE

By Lieut. Donald G. Duke
Chief, Airways Section, Office Chief of Air Service

Although a total of almost a million miles has been flown on scheduled operations over the Model Airways since their inception in 1922, without a fatality, efforts are continually being made to safeguard as well as expedite military personnel flying these routes. A retrospection of the "rabbit's foot" flying of early days brings forcibly to minds of many the resulting progress in air navigation through systematic endeavor.

Recognized as an important link of our national defense, the Model Airways were made an instrumentality of the War Department this year. The five-year extension program, linking up practically all centers of military activity in the United States, with necessary additional meteorological and communications facilities, is now under consideration by the War Department. The consummation of this project will, largely through utilization of existing facilities, convert a great amount of the present sporadic flying into systematic scheduled operation, with further greater benefit to the military service, and at the same time afford flying training of the highest standard on an economic basis.

Rather than hasten extensions prematurely, efforts are now being concentrated on making more secure the routes already established. Cooperation of municipalities and civic and industrial organizations has been generous, the most recent manifestation being Uniontown, Pa., where Burgess Field, prepared at considerable expense, was donated for use of military and commercial aeronautics. This field, together with Cumberland, Md., will shortly be equipped with meteorological stations, providing advanced information on weather conditions through the Alleghenies. Additional well-marked fields are also being established along this section to aid pilots in distress.

The awakening interest among pilots generally and station commanders in particular is being progressively evidenced through the desire for more sincere consideration of benefits to be derived. Better facilities have been provided for visiting personnel, resulting not only in a substantial saving of per diem expense, but making these too numerous flights on the part of some officers a profitable investment of time through personal contact and exchange of ideas at stations visited.

While a large percentage of passengers transported is military personnel, it is no longer a surprise to meet individuals of prominence in Government and civilian pursuits stretching their legs between hops. This method of transportation is becoming more and more popular with every branch of the service, affording many individuals their first favorable impression of the Air Service and its functions. Reservations for passage over the Model Airways are now arranged through application to the Model Airways Control Officer, stationed at Fairfield Air Intermediate Depot. Here a complete hour by hour record of all planes in transit is maintained facilitating a satisfactory and equitable arrangement for the assignment of space in accordance with the priority list.

The by-products of Airways operations are numerous. Not only has the Airways Section developed the only air navigation maps in existence, and secured meteorological and other navigating data of great value, but is assisting in the development of more dependable and practical aircraft instruments as aids to navigation. The Airways Section of the Office, Chief of Air Service, is recognized as the official agency for the collection and dissemination of landing field data throughout the United States. Records on available fields are constantly being verified and corrected, maps showing these fields and Aeronautical Bulletins describing them, and literature to aid in their development are in daily demand. The campaign for aerial identification of cities and towns along established air routes has received considerable impetus recently

through the cooperation of Air Service Reserves, municipalities, civic and industrial organizations and public spirited individuals.

With the passage of federal legislation for the control of commercial aeronautics, and arrangements for the administration thereof, many phases of the activity now carried on by the Airways Section should be taken over by the new Bureau, and such phases of future development as affect national defense be coordinated with the various air services.

Airways of the Future

Looking ahead, the purposes of Airways may be outlined as follows:

a - To meet the need for rapid transportation of military personnel and supplies and thus maintain a closer contact between centers of military activity.

b - To facilitate, through the establishment of adequate landing, servicing and meteorological stations, the rapid and safe movement of tactical Air Service units by day or night.

c - To encourage the practical and profitable operation of civilian aircraft enterprises in the interest of national defense through the eventual development of a sound industrial reserve of aircraft and aircraft engines.

d - To afford training of great value to Air Service personnel both in the air and on the ground.

e - To aid the development and testing of dependable air navigation maps, airplane instruments, equipment and other aids to navigation.

To expedite the movement of tactical units with a maximum of safety and with equal facility by day or by night may be stated as the final objective. Facilities established to accomplish this end will likewise make possible the accomplishment of lesser adjuncts indispensable thereto.

Regardless of the development of commercial air traffic - which passage of the Kelly Bill has made possible and probable - military airways as such must be maintained, not only because commercial traffic will not extend its activities to isolated districts of strategic importance, but more essentially for the reason that highly specialized and well trained ground organizations to facilitate servicing and maintenance of rapidly changing military equipment must be ever available, less the very advantage possessed by these "wing defenders" be lost through inability to reach their objective. The 1st Pursuit Group, in their recent flight over the Air Mail Route from San Francisco to Chicago, learned the valuable lesson that despite splendid facilities, expert mechanics and excellent cooperation, an average of two hours elapsed at each service station before the six planes were again in the air. It has also been shown, and sometimes at considerable expense, that landing and servicing facilities established for commercial air traffic, and meeting their requirements for types so employed, are inadequate for military use. The flight of Lieuts. Whiteley and Smith in a Martin Bomber over the Air Mail Route, in 1923, demonstrated the necessity for larger landing fields for this type plane, although Air Mail fields are adequate for mail planes. A constant vigilance must therefore be maintained wherein facilities on air routes will keep pace with improvements to military aircraft. The need for concerted action in this respect is apparent and subsequent developments will dictate the policy necessary for the best interests of national defense.

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BIG NAVY PLANE MAKES LANDING AT BIGGS FIELD

Lieut. B. H. Wyatt, U.S.N., of the Naval Air Station, San Diego, Calif., arrived at 5:00 P.M., November 10th, at Biggs Field, Fort Bliss, Texas, from Dallas, Texas enroute for his home station, piloting a "SDW" land plane. This is a large ship, similar in design to the famous Douglas Cruisers. It is powered with a 760 h.p. Wright engine, equipped with a three-bladed steel propeller; has a fuel capacity of 400 gallons and can remain in the air for 13 hours at a cruising speed of 100 miles per hour. Lieut. Wyatt was in Western Colorado on a mission of photographing and mapping the Naval Oil Shale Reserves in that State. The area covered is in a very rugged mountain region, the altitude varying from 8,000 to 10,000 feet above sea level.

The Naval officer and his mechanic departed for their home station at 8:30 a.m. November 11th, accompanied as far as Tucson, Ariz. by Lieut. H.B. Clark of Biggs Field, in a DeHaviland. The NEWS LETTER correspondent states "our little DH didn't look like much compared with the great 'SDW' - but she took the lead through the mountain passes."

THE HAMILTON RICE EXPEDITION IN SOUTH AMERICA
By: Albert W. Stevens.
(Continued)

The Amazon River, near Manaos, is so wide that a plane may take off in any direction, and the same thing is true of the Negro River for a distance of at least four hundred miles above Manaos. The Rio Branco is narrower and landings and take-offs must be made largely up river, against prevailing winds from the north-east. There is plenty of room, however, on the Brance, up to the small town of Boa Vista, for handling a hydroplane. Twenty-five miles above here the river forks and loses its identity as the "Rio Branco". A landing was made in the smaller branch, the "Tacutu", about 30 miles from the junction, and had it been necessary, it is likely that a landing field could have been made at least a hundred miles higher on this branch.

Vertical aerial photographs were made of the lower section of the Tacutu and the series was continued down to Boa Vista. The other and larger branch, the Uraricoera, was used thereafter, as the expedition's progress was to the west up the headquarters of the largest and supposedly longest tributary, known to Indian tribes as the "Parima".

In the next 120 miles of the Urariceera many rocks appeared, but still there was frequent landing places, and it was found possible to handle the plane with full load of gasoline, from the river opposite the two-house settlement of Boa Esperanca. At Boa Esperanca the river divides around an island known as "Maraca Island" - about 50 miles long and 30 miles wide. Both channels were followed at different times and on the South Furo, as it is called, no landing places at all could be seen. Rocks filled the channels between countless islands. The north furo, or "Santa Rosa Furo", was better and a landing was made near the western end. The take-off was with such a narrow margin of safety that it was never repeated at this point. From the head of Maraca Island some forty miles west, the main river was found to be divided into many narrow channels by islands, and these channels were thickly spotted with rocks over which the water poured in white foaming masses. At one place a series of three falls (Pumame Falls) had a total drop of 80 feet. The canoes of the expedition, following later, were from 8 to 16 days passing this 40 miles stretch, depending on cargo carried, and stage of water. A rise of 6 feet, which occurs after a few days of rain, makes progress doubly difficult. In the true rainy season, from May to August, the river rises from 15 to 20 feet, and progress against it is quite impossible; even though many of the caxoeiras are buried deep beneath the waters, the current is too strong to work against. Also, it is then practically impossible to find a camping place anywhere along the banks, for the river penetrates the forest and canoes cannot be worked through the dense foliage to higher spots that may be back at a distance from the stream. For these reasons, certain tribes living on tributaries of the Uraricoera, in making their yearly voyage down stream for the purpose of trading at Boa Esperanca, choose the month of February, when the water is the lowest. Altogether, the Uraricoera bears the reputation in South America of being one of the most difficult rivers to travel on. Up to the time of the Rice Expedition, one Brazilian had gone about half way up it, and two Germans had gone as far as the Parima Junction, finally taking the Aracasa Fork as being easier. It is perhaps interesting to give the impressions of the aeroplane observer, in his report to Dr. Rice on the first flight over this region:

"Having filled with gasoline and oil the night before (Nov. 3rd), we left Boa Esperanca at daybreak and flew up the southern channel (Maraca Furo), getting an altitude of 5400 feet (nearly the maximum that is possible with the hydroplane with full load of gas). The river under us became very wide, some four miles, and was divided by islands into so many very small streams that landing places were non-existent. The last outpost to the west of the open cattle grazing country, over which roam thousands of half wild cattle, was now behind us. The landscape changed from open campes to dense tropical forest, and from our elevation the palms below, scattered through the forest, looked like hundreds of star-fish at the bottom of an ocean, their lighter green bringing them out in strong contrast against the darker green of the jungle. Before us at this time (6:30 A.M.) the streams or waterways over a tremendous expanse of country were indicated by a thin

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white vapor that hung at perhaps a thousand feet or less. Three quarters of an hour later this vapor was burned off by the hot sun, but for a time it enabled us to get the compass bearings of the general directions of streams and to note them on our sketch.

"A tail wind swept us along rapidly - how rapidly we had no way of judging until our return trip. Except for the spirals, blankets and clouds of mist-like emanations ascending from numerous hidden streams of water, there was nothing in sight but the sombre, seemingly endless forest, premonitory in its silence and vastness. One cannot help but be impressed with some feeling of awe, created by the aspect of savage wilderness and spirit of eerie presentation that dominate this region.

"We passed in half an hour the end of a large island, formed by the South Furo, over which we had just passed, and a northern furo; ahead of us was the full flow of the main river, and we flew in an almost westerly direction for half an hour more. The stream was still divided by jagged edged islands and out-cropping rock; in the narrow channels, caxoeira appeared under us, marked by boiling, foaming masses of white water.

"We had agreed to go only an hour, because of the high wind behind us, but ahead appeared a sharp elbow in the river, where its course was at right angles for a few miles. So we flew for five minutes more, and sketched to this point, which proved to offer a chance for landing, and apparently a good place to make a cache of gasoline. Turning, we made slow progress against the wind, and were forced immediately to drop down to a thousand feet in order to insure that our gas supply would hold out for the return trip. Reaching the head of the island, we took the northern channel, and found landing conditions on this fork much better, although the river bed was badly broken in half a dozen places. After a total of 3 hours 10 minutes flying, we saw the first sign of human life, a hut on the bank about 5 miles above Boa Esperanca. We landed and measured our gasoline, and found we had 6 gallons left. After making some Graflex pictures of the natives, we flew on to Boa Esperanca, completing our sketching as we went. In this country no one lives, not even Indians, it is said; we saw no huts, no clearings, and no signs of men or canoes."

Just below the right angle elbow in the river, above noted, is a rocky point, opposite which are several islands of granite, washed bare yearly of all vegetation by the flood waters that pour over them. The place is known as Kulekaleima by the Indians; above it the river becomes free from islands and from rocks to some extent, and in the next 125 miles there proved to be nine places large enough to take off from, from observation from above. The difficulty with some of these places is that a sketch of rock-free water ended at a bend in the river; at two places where take-offs were made this bend had an angle of 90 degrees. The very high forest, growing right to the banks, makes it impossible to get off over the trees, and the plane must be banked, at low elevation, to follow the channel. In these narrow channels, between heavily and highly wooded banks, there is very little wind, and the air at mid-day is very hot, making climbing difficult. By following the channel for perhaps a mile, the elevation of the tree tops is reached and here the air proves to be very rough and "bumpy", except in early morning or late afternoon. In the entire basin of the Rio Brance the wind was almost always from the northeast. At a mile elevation the velocity varied from 15 to 45 miles an hour. There were days when the velocity must have been much higher, but no flying was then attempted.

With full load of gasoline and equipment it was possible to get to 6000 feet in a little over half an hour, and most of the photographic work was done from this altitude. On one occasion, with a half tank of gas, photographs were made from 8400 feet, and the plane could have been pushed higher as the gasoline load lightened. When flights were made at the higher elevations with the wind, it was always necessary to drop to less than a thousand feet in order to make the return trip with the gasoline remaining. On several occasions the plane returned with 5 or 4 gallons only remaining, and once the engine stopped from lack of gasoline directly over the landing place.

Coming up from Manaos, the plane used a small river steamer as a base. Flights were made ahead 75 miles and the plane was anchored beside the steamer at night. Sketch maps and photographs were made on these flights. The steamer left gasoline and oil at several points to provide for the plane flying back. When the head of steamer navigation was reached it was necessary to send gasoline and oil ahead to small settlements by light

draft launches. Later the launches were stopped by rocks and rapids; the supplies then went forward by canoe entirely to locations designated as landing sites on the sketch maps prepared by the men in the plane. Finally, the canoe progress became so slow that the plane made a last reconnaissance trip ahead, and was then forced to wait for nearly two weeks until the limited supply (70 gallons) on hand could be pushed ahead 125 miles, and until 35 gallons could be brought from Pumame Falls to Kulekaleima Rocks to fill the then empty tank.

Up to the time that canoes were used there was little trouble from loss of gasoline by leakage. The rough handling in the rapids, or caxoeiras, and frequent unloading, caused the cans to leak, and often the cans would be found to be less than half full, when opened, up river.

For the radiator there was no trouble in getting plenty of clean water, free from sand. In fact, the river water was always clean enough to drink, though often containing considerable vegetable matter in suspension. The Rio Negro water, in masses, is black in color, and the Rio Brance light brown. In making landings on the mirror surface of the black Rio Negro water, it was sometimes necessary to land in the wake of the supply steamer, as otherwise it was very difficult to determine the level of the water.

While the densely wooded banks, with high trees, made take-offs difficult on narrow streams, this feature helped where the river channel was cross wind, for there was usually little breeze below the tree tops where the width of the channel was small.

Sometimes, when the current exceeded three knots, it was difficult to hold the plane at anchor and when the supply boat was near a much heavier anchor was dropped. The problem of approaching the plane in a swift current was considerable and in one instance a heavy canoe was capsized while trying to get an anchor line aboard. The men clung to the plane, but the canoe was swept under the bow and disappeared entirely, never being recovered. Several men, by very energetic paddling, managed to work against the current up to the tail of the plane in another canoe and took the first crew of the plane ashore, two at a time.

There are many small stretches of water on these rivers where a hydroplane may be landed without injury, but where there would not be room to take off again. A new landing place must be studied carefully from the air, particularly for ripples that indicate rocks just below the surface. In landing, the anchor must be kept ready to throw out quickly, if the plane is near the wooded bank or above rapids. In one case the plane, after landing, was worked downstream to an island, through scattered rocks, some of which were just below the surface, by alternately throwing the light anchor some 30 feet and pulling the plane to one side. The plane would then drift until it was necessary to avoid other rocks by the same process. It is particularly necessary to watch while drifting, that a wing does not get caught by some projecting branch; in such case the nose of the plane turns in to the bank, the hull is broadside to the current, and there is a tremendous pull at the point where it is caught.

The presence of large buzzards at an elevation of a thousand feet or less made it desirable to keep a very close watch, particularly on take-offs, for these large birds are liable to fly in any direction. It was sometimes advisable to reduce throttle and dive the plane to avoid hitting them. Other birds, such as the brilliantly colored Macaws, would strike a bee-line course when alarmed by the noise of the plane, and would hold this course regardless. Birds were seen at elevations of 3,000 feet, but in general they flew over the rivers and forests at less than a thousand feet.

Needless to say, in a pusher plane, the occupants must be very careful that there is nothing loose that may blow back into the propeller.

Where the plane is nosed in to a bank to avoid swift current, ants pour aboard by the hundreds, wherever contact is made with foliage. Although ants caused much trouble, ashore, through eating clothes and shoes, the fabric of the plane did not meet their taste; there was no sign of damage from these insects. The termite, or wood borer, would be a bad insect to have aboard, but fortunately he does not travel along the twigs and leaves as do the ants; furthermore, he likes to work in the dark, and is less likely to do damage to a hull that is outdoors than to one that is inside a building. The plane, even if moored in mid-stream, often was covered with spider-webs over night, and there was almost sure to be a spider lodged in the venturi tube of the air-speed meter.

To be continued in next issue.

THE SECRETARY OF WAR LOOKS IN AT LANGLEY FIELD

By the News Letter Correspondent

On November 10th, lined up on the airdrome at Langley Field, Va., ready to take off at a signal, was a formation consisting of the Loening Amphibian, three DeHavilands, two Fokkers, five SE-5's, eleven Martin Bombers and five MB-3's, a total of twenty-seven planes. Two DH's appeared in the northern sky, circled the field and landed. Major General Mason M. Patrick, escorting the Honorable Dwight F. Davis, Secretary of War, had arrived at Langley Field.

Shortly after landing, the inspecting party, headed by the Secretary of War and General Patrick, drove out on the airdrome and inspected the Wing Formation, plane by plane. Mr. Davis displayed keen interest in the orderly, though obsolescent (with the exception of the Loening Amphibian) array of ships. Immediately after the inspection of the planes, the Secretary of War and the Chief of Air Service were escorted by Major Westover and his Staff to the Wing Operations Office where they reviewed the planes which took off in formation, circled the airdrome and passed at a low altitude before the reviewing party.

The distinguished visitors were then taken to the Lighter-than-air Section of the Post where the Airship TC-4 was maneuvered and explained to the visitors. Mr. Davis and General Patrick were then given the opportunity to look in at the various Post activities,- The Engineering Department Shops, the Air Service Warehouses, Post Headquarters, Air Service Tactical School and other points of interest.

The officers of the Post reported to the Lecture Room of the Air Service Tactical School where an informal reception was given and an opportunity afforded the officers of the Post to meet personally the Secretary of War. A short informal talk was made by Mr. Davis. He assured his audience that he was keenly interested in the activities, accomplishments and aims of the Air Service and that in the endeavor to perfect themselves in the use of their arm, the Air Service personnel had in him a "friend at court".

A number of interesting stories were told by Mr. Davis, all of which are worthy of retelling, one in particular. To use Mr. Davis' own words:

"I accompanied General Patrick to Boston to greet the World Fliers. While there I inquired from my pilot, Lieut. Maitland, as to the use of the stick and rudder and their respective functions in maneuvering the plane, which was carefully explained to me. Upon preparing to return to Washington, immediately before taking off, Lieut. Maitland turned from his cockpit before me and offered the information that when he put his hands in the air, it meant that he had released the controls and turned the plane over to me and I was to fly the ship. Before I had an opportunity to protest or climb from the ship, the blocks were pulled and the plane took off. After flying for some time in the air, Lieut. Maitland raised both hands and turned to me. I knew then that it was up to me to fly the ship. Needless to say I was exceptionally nervous, and on looking back at the incident I find the things which run through a person's mind at such a time are rather odd. I knew that Lieut. Maitland had been married only a year or so and had a child and it occurred to me that certainly he would not permit the ship to be placed in such a position that he could not right it, but my second thought was not so reassuring. Was the young man happily married?"

After the reception at the Lecture Room, Mr. Davis and General Patrick were taken to the quarters of the Commanding Officer for an informal tea, where the field officers of the Post were afforded the opportunity of meeting the Secretary of War and General Patrick. That evening the distinguished party left the Post to return to Washington by boat.

That the Secretary of War is keenly interested and conversant with Air Service matters was evidenced by his interest in all activities of the Post. He assured the officers that they could well be proud of their field and the activities were carried out on a scale larger than he had supposed. All officers of the Post were quite pleased that the Secretary of War honored Langley Field in personally visiting and inspecting its activities and hope that he may again find an opportunity to visit here.

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BROOKS FIELD ACCUMULATES CONSIDERABLE FLYING TIME

For the period ending November 9th the records at Brooks Field, San Antonio, Texas, showed 808 daily aircraft hours, 1,537 daily man hours, 341 daily cross-country hours and 603 daily cross-country man hours.

For the week ending November 16th the daily aircraft hours were 653.55, daily man hours, 1121:50, daily cross-country hours, 65:10 and daily cross-country man hours 129:20.

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PRODUCTION WORK AT SAN ANTONIO AIR DEPOT

During the period July 1 to October 31, 1925, the Engineering Department of the San Antonio Air Intermediate Depot under the direction of 1st Lieut. Clements McMullen completely overhauled and repaired a total of 133 airplanes and 248 engines, as follows:

Airplanes - 13 DH4B, 7 DH4B-1, 33 JN, 2 DH4B-P-1, 17 MB3M; 44 DH4M-1, 4 NBS-1, 1 VE-9, 1 CO-4, 5 AT-1, 2 TP-1, 2 PT-1, 1 Douglas C-1, 1 TA-6; Engines - 124 Liberty, 102 Wright-E, 15 Wright-H, 3 Wright H-3, 4 Wright A-2.

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DISTINGUISHED VISITORS AT WRIGHT FIELD

Distinguished visitors at Wright Field, Fairfield, Ohio, recently were Major-General Mason M. Patrick, Chief of Air Service, on November 5th and Commander John P. Rogers, of the Hawaiian Flight, on November 10th.

Commander Rogers is no stranger in Dayton and vicinity; in fact, he was one of the first to receive flying instructions from the W4ight Brothers away back in 1911. A dinner in honor of Commander Rogers was given by the Dayton Chapter of the National Aeronautical Association on the evening of November 9th. Several hundred prominent citizens of Dayton and vicinity attended.

Commander Rogers gave an interesting talk telling of the thrilling experiences on the PN-9-1. Among those from Wright Field who attended the dinner were Major A. W. Robins, Captains Henry Pascale, John G. Colgan, Lieuts. C.E.Thomas, J.L. Grisham and B.M.Giles.

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NEW AIRPLANES FOR KELLY FIELD

Kelly Field will soon be the proud possessor of 19 of the new Douglas O-2 planes. Six of these planes will be assigned to the 3rd Attack Group and fifteen will be allotted to the Advanced Flying School. Four of the latter will be equipped with dual control.

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PILOTS - BEWARE!

Those men who may be intending to visit Brooks Field, San Antonio, Texas, by air in the near future are reminded that an oil derrick has been erected just across the road from the airdrome and that, though it has been painted and has a light on it, it is difficult to see when the air is foggy and unlooked for in such an unexpected place.

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CRISSY FIELD FLYERS COOPERATE WITH COAST ARTILLERY

Four pilots from the 91st Observation Squadron at Crissy Field, Presidio of San Francisco, Calif., - First Lieut. Wm. R. Sweeley, Staff Sergeants Fred Kelly, Cecil B. Guile and Tech. Sergeant Thomas J. Fowler, have been working with the 63rd Coast Artillery, towing a cloth sleeve target at various altitudes from 1,500 to 8,000 feet for the Anti-Aircraft Batteries to fire at. They also performed night flying for searchlight practice. Incidentally, the cooperation was done at Santa Cruz, Calif., from a 900-foot field for both day and night flying. - Try a night landing in a 900-foot field some dark Thursday night.

First Lieut. Lloyd Barnett and Staff Sergeant Guile, of the 91st Squadron, on the night of October 27th, flew to San Jose, Calif., a distance of 50 miles, and successfully worked a night problem with the Anti-Aircraft and Searchlight Batteries. Very pistols were used to simulate bomb dropping. They used the new night-flying DeHavilands equipped with wing landing lights which had just arrived.

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MORE PARACHUTE JUMPERS GRADUATE AT CAMP NICHOLS

Eight men from the graduating parachute class at Camp Nichols, Rizal, P.I., earned the right to their diplomas by making jumps from the rear cockpit of a Martin Bomber. The NEWS LETTER Correspondent remarks that somehow or other you never hear any more of a pilot ridiculing the parachute wearer or complaining of the discomfort of wearing one. It has proven its worth many times, and Master Sergeant Nichols has developed, here in the Philippines, many good parachute men as the result of his parachute classes.

The parachute fever spread and before it was checked five others had caught it - Lieuts. Beverley, Haddon, Staff Sergeant Salter, Privates Grundy and Henneck.

While on the subject of parachutes it may be of interest to readers of the NEWS LETTER to know that, so far as available statistics show, twenty-three men owe their existence today to the use of the parachute. There may be other cases where men jumped to safety with this aerial life belt not included in the tabulation given below. If any reader of the NEWS LETTER knows of such a case and the facts pertaining thereto, the submission of same to the Information Division of the Air Service would be greatly appreciated.

Saved by the Parachute

1922	October	20	1st Lieut. Harold R. Harris	McCook Field
	November	11	1st Lieut. Frank B. Tyndall	Seattle, Wash.
1924	May	13	1st Lieut. E.H. Barksdale	Wilbur Wright Field, O.
	June	5	2nd Lieut. W.W.White	Kelly Field, Texas
	June	13	2nd Lieut. Walter E. Lees, ORC	Johnson Field, Dayton Ohio
	June	18	1st Lieut. John A. Macready	Dayton, O.
	July	11	2nd Lieut. A.R. Crawford	Kelly Field, Texas
	August	29	1st Lieut. L.L. Koontz) Private W. E. Coggin)	Bolling Field, D.C.
	October	16	Gunner W.M.Coles, U.S.N.	Coronado Beach, Calif.
	November	4	Capt. Wm. E. Lynd	Kelly Field, Tex.
1925	March	6	2nd Lieut. C.D. McAllister	Kelly Field, Tex.
	March	6	2nd Lieut. C.A. Lindbergh ORC	Kelly Field, Tex.
	March	20	1st Lieut. Frank O'D Hunter	Dayton, O.
	April	6	Gunner-Sgt. L.E. Mix, Marine Corps	Quantico, Va.
	April	10	1st Lieut. J. Thad Johnson	Eagles Mere, Pa.
	May	22	Lieut. C.H. Schildauer, U.S.N.	Lakehurst, N.J.
	June	2	Lieut. C.A. Lindbergh, ORC	Anglum, Mo.
	August	17	2nd Lieut. K.J. Gregg	Lavernia, Texas
	October	1	Lieut. Rogers, Marine Corps	Langley Field, Va.
	October	10	1st Lieut. Fred C. Nelson	St. Louis, Mo.
	November	8	2nd Lieut. J.R. Hawkins) Peter Varlashkins)	Merchantville, N.J.
	October	27	Machinist Mate Taylor, U.S.N.	Coronado, Calif.

It will be noted from the above that Lieut. Lindbergh twice resorted to the parachute to save his life.

Accounts have appeared in past issues of the NEWS LETTER giving the details of these supreme adventures in the lives of these airmen. Beyond question an absorbingly interesting book could be written on these different parachute jumps.

In the list given above there were several instances where one of the occupants of the disabled airplane failed to use his parachute and was killed in the crash which followed. So far as is known there is no record where the Army parachute failed to function once the jumper got clear of the airplane and pulled the rip cord.

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EXCELLENT PROGRESS AT BALLOON AND AIRSHIP SCHOOL

The members of the present class at the Balloon and Airship School at Scott Field, Ill., have nearly completed instruction in free ballooning. Sixteen students have been qualified since the commencement of the course. Two hundred man-flights have been made with total time of 387 man-hours.

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ANOTHER ONE-WHEEL LANDING

Lieut. C.J. Kenney, A.S., narrowly escaped wrecking a DH and perhaps seriously injuring himself and his passenger, Lieut. L.F. Watson, Q.M.C., while flying around Post Field, Ft. Sill, Okla., on the morning of Nov. 14th.

The pilot was flying a few feet above the ground, and in attempting to bank steeply, hooked the right wing skid in the ground, twisting the right axle until the wheel leaned almost parallel with the right landing strut. Realizing instantly that he had badly damaged the landing gear, Lieut. Kenney opened the throttle wide and succeeded in getting into the air again.

The accident was seen by many people, who gathered on the field to see the crack-up which seemed inevitable.

After flying for a few minutes, Lieut. Kenney brought the plane down, and displaying wonderful nerve and precision, landed gently on the good wheel, taxying up to the line amid the shouts of applause and congratulations of the spectators. This was the first real thrill furnished by the pilots at Post Field for many a day.

The above incident recalls to mind the successful one-wheel landing made by Captain Earley E.W. Duncan at Mitchel Field during the International Air Races.

"Captain Duncan, shake hands with Lieut. Kenney!"

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THE NEW ALLOTMENT TABLE

By News Letter Correspondent from San Antonio Depot

A weeping, a wailing, a gnashing of teeth! Good friends turned enemy! Supply Officers with sawed off shot guns leaning against desks! Engineer Officers moving about muttering to themselves and with dark and brooding scowls on their faces! Operations Officers alternately pleading and threatening! Commanding Officers swearing that it is a personal thrust at efficiency of their fields and schools! Mechanics, who formerly threw away spark plugs that were slightly soiled by a thin film of carbon, used a clean piece of cheese cloth every time they wiped their hands, put on a new distributor head rather than wipe out the old, changed radiators because it was too much trouble to solder up a pin hole leak, swept out cotter keys which had dropped on the floor, drew a new screw driver because it was too much trouble to put a new edge on the old one, threw away a paint brush because they had allowed some paint to dry on the hair, used safety wire for everything but what it was intended for, hoarded up supplies that they could never use, are now beginning to realize that the days of war time supplies are no more.

What is the cause of all this disturbance? Where have you been? Haven't you seen these same Supply Officers, Engineer Officers and Commanding Officers with heads bowed over a big book made of blue-print paper. Well, that is the cause of all the trouble. That book will eventually break up homes, strain the veracity of the former truthful, crack the ties of old friendships, cause resignations, Class B's, and divorces, divert attention from radio and ginger ale, cross-country flights will be requested and granted in fear and trembling. No longer will Engineer Officers go through life with care free mein and with no thought of where the next cotter key is to come from. From now on you will find these chaps clearing their pockets, after a day on the line, of articles they have picked up from the ground,- these same articles to be later returned to stock.

What is this book referred to above? My boy, have you never heard of "The Allotment Table"? One ambitious Supply Officer from a neighboring field paid us a visit very recently and attempted to ease his disturbed mind on this particular subject by exclaiming - "Think it is high-handed impudence and presumption incredible to entertain the preposterous and incongruous

supposition that this happy metamorphosis will in any way approach the bliss and prosperity of the fabled Ethiopians, or mythological Hyperboreans of storied antiquity are reported to have enjoyed and, so far as concentrated economy goes for our outfit, we are simply dehydrated". He having finished that oratorical outburst, we promptly proceeded to let out our new gold trousers belt, tilted our cap and exceeded present allotment table allowances by nearly twenty cotter pins.

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BALLOON AND AIRSHIP SCHOOL STUDENTS GRADUATE

Fourteen students of the 1924-25 class of the Air Service Balloon and Airship School at Scott Field, Ill., (9 officers and 5 cadets) successfully completed the course and received their diplomas. The instruction of the class commenced on September 15, 1924, with a class of 26 - 12 officers, 13 flying cadets and one Master Sergeant. Of the 12 students who failed to complete the course, three cadets received their discharge by purchase and the remaining nine were relieved because of lack of flying ability or professional qualifications.

The commissioned officers who graduated were Majors Fred H. Coleman, Michael F. Davis, Captain Ivan B. Snell, 1st Lieut. Neal Creighton, Wm.J. Flood, Albert J. Clayton, Lawrence A. Lawson, Paul Evert and 2nd Lieut. Willard L. Harris. The last named officer was a flying cadet who passed the examination for a commission in the Regular Army. The cadets graduating were Bayard A. Carpenter, Frank G. Coover, Homer E. Fackler, Harrison C. Finley and Albert C. Stewart.

In his report on the conduct of the Balloon and Airship School for the past term, the Commandant Lt.-Col. John A. Paegelow, makes various recommendations looking towards the operation of the School on a more efficient basis, viz: a modern set of cadet barracks, recreation equipment for the use of cadets, a distinctive uniform for them, proper films for exhibiting moving pictures in conjunction with the course of instruction given at the School, and a permanent school staff, selected and detailed for periods of from two to four years.

He also recommends the establishment of a definite policy in the tactical use of airships, stating that operations with non-rigid airships of greater efficiency and volume, between 350,000 and 400,000 cubic ft. will be necessary in order to definitely determine a policy for the employment of the various functions of airships in peace and war time.

With regard to the development of non-rigid airships for training and instruction purposes, the following program, divided into three classes, is recommended for adoption:

(a) A very small ship for primary training and for use in coastal patrol and probably for observation purposes should be developed, having a volume of approximately 75,000 cubic feet.

(b) The second class should be a ship of intermediate size of approximately 250,000 cubic ft. capacity, to be used for intermediate instruction, and in practical operation for patrolling, convoying transports and similar uses.

(c) A non-rigid airship of the largest practical size and of the greatest possible efficiency should be developed for advanced training in the school. This ship could be used in tactical missions for long distance reconnaissance and for rapid transportation of important supplies and personnel to points which might be inaccessible to airplanes on account of poor landing facilities such as those encountered in mountainous country.

The Commandant of the School further recommends that an engine of heavier duty than those now in operation should be developed for lighter-than-air work. It should be capable of harder and more extended use and so constructed as to answer all requirements for long distance tactical missions.

While the supply of helium and hydrogen for work in the school was satisfactory, there is a necessity for added storage facilities to properly take care of the output of the Gas Plant. Insufficient storage space for hydrogen is frequently the cause of delays in the operation of free and observation balloons. Recommendation is made that a hydrogen holder of at least 300,000 cu. ft. be constructed at the field, as this will greatly facilitate the training of observers and free balloon pilots at the school.

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FIELD SERVICE SECTION GIVES SPECIAL STUDY TO MAINTENANCE AND ENGINEERING PROBLEMS

Lieuts. C.A. Cover and L. E. Sharon, Messrs. W.D. Kennedy and G.O. Noville, of the Field Service Section, Fairfield Air Intermediate Depot, left recently for an extended series of conferences with Air Service personnel at various stations. They proceeded by air, using the Douglas Transport C-1. Among the stations to be visited are Post Field, Kelly Field, San Antonio Air Intermediate Depot, Brooks Field, Air Service Detachments at Laredo, Fort Clark, Dryden, Marfa and El Paso, Texas; Douglas, Ariz., and Tucson, Ariz. The party will then proceed to the Rockwell Air Intermediate Depot and from there to Crissy Field, after which they will return to Fairfield. Capt. Edward Laughlin, Engineer Officer at Fairfield Air Intermediate Depot, accompanied them as far as San Antonio, after which he expects to go on leave for several weeks.

Lieut. Cover and Mr. Kennedy will give special attention to maintenance engineering problems at all Service Squadrons and Engineering Departments of Air Intermediate Depots. A detailed study of maintenance methods will be made at San Antonio and Rockwell. Lieut. Sharon is particularly interested in the operation of the Air Service Cost Accounting system and he will also investigate such supply problems as are brought to his attention. He will make a special study of the present methods of disposal of non-expendable Air Service property; initial equipment for tactical organizations; reclamation and salvaging of Air Service property; report of supplies issued to various components of the Army; the proper use of the Stores Credit; and the cost of overhauling airplanes and engines.

Mr. Noville is the aeronautical representative of the Vacuum Oil Co. and he will study the needs of the different Stations in regard to suitable lubricants for aviation engines.

This inspection trip will require from four to six weeks.

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LANGLEY FIELD STAGES AERIAL CARNIVAL FOR ARMY RELIEF FUND

An aerial demonstration, such as was held at Langley Field, Va., on November 11th (Armistice Day) cannot be had every day for the asking. Careful preparation of details and much laborious energy contributed to making the event a huge success.

Beginning with a take-off in formation, the planes went through various acrobatic maneuvers, chased toy balloons all over the sky, and the new planes were demonstrated and put through their paces. Visitors were given a chance to get a ride for 25¢, chances being sold on a wheel for that purpose and one in every ten was a winner. The wheel was well patronized and a large number of riders were women.

A dummy battleship was built on the field which was bombed and wrecked by Thomas Morse and Martin planes. A smoke screen was laid by a DH which was a delight to everyone. The parachute jumpers next gave the crowd a thrill, and the last and most awe-inspiring spectacle was the destruction of a sausage balloon with incendiary bullets from the machine gun of a Thomas Morse. The plane swooped down on the huge bag and with a few well placed shots sent the balloon to earth in a mass of flames and smoke.

The concensus of opinion of all the civilians who witnessed the demonstration was very favorable and all agreed that the price of admission of fifty cents was money well spent.

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METAL LANDING GEAR FOR DEHAVILAND AIRPLANES

The Field Service Section, Fairfield Air Intermediate Depot, and the Engineering Division, McCook Field, are cooperating in the development of a metal landing gear for the DeHaviland airplane, similar to the type used by the Air Mail Service. The old DH axles, wheels, and brace wires are used, but the wooden struts are superseded by tubing; the axle streamlining is the only wooden part that is retained. This metal landing gear has given excellent satisfaction to the Air Mail Service, and it is expected that it will be in great demand at Air Service stations. It is the hope that the first lot of these new undercarriages will be manufactured without delay.

NEW LANDING FIELDS DEDICATED IN ARIZONA

Within the space of ten days two landing fields were officially opened in the State of Arizona, one at Tucson and the other at Phoenix.

The dedication of the landing field at Tucson took place on November 1st. In the presence of a crowd estimated at about 5,000, a 14-year old Tucson girl, Sheila Moore, crashed a bottle on the nose of Army Air Service plane 23-448 from Biggs Field and christened the new field with the following words:

"I christen this field Davis-Monthan Field and we pray God that He will bless this field and that He will protect all who come to or go from it.

We do this commemorating Samuel Howard Davis and Oscar Monthan, two sons of Tucson, who gave their lives in the service of their country.

This field we hope will be like a nest, and the aviators and their planes will be like the birds. When the birds see the Catalina snd the Rincon mountains, the Santa Rita and the Tucson mountains, they will have these as landmarks to guide them to their nest.

Here, they know, they will find safety, rest and recreation."

Standing at the side of the platform from which the youthful speaker dedicated the field, the mother of Oscar Monthan and the father of Samuel Howard Davis heard the words which placed the names of their sons on record as men who died that their country might live. Both men, from Tucson, died in the Air Service. Lieut. Davis was killed in a crash at Arcadia Fla., in December, 1921. Lieut. Monthan died in the line of duty in Hawaii, March 27, 1924.

Governor G.W.P. Hunt of Arizona extended the congratulations of the State to Tucson for the progressive spirit shown by the city in obtaining and developing first municipal aviation field.

Mrs. L.H. Bender, wife of Captain Bender, Executive Officer of Biggs Field, Fott Bliss, Texas, spoke from the angle of the airman's wife, stating that this field and all others like it were a godsend to the men of the Air Service. They were also a matter of importance to the women who are married to the men of the Service.

It means much to the women who wait for them to know that the fields along the route over which they fly are close enough to be a haven in time of need, a place of refuge in case of trouble.

Mr. Kirk Moore, Chairman of the Aviation Committee, speaking last, expressed the appreciation of the aviation committee and thanked the airmen who had assisted the people of Tucson in making the first Borderland Airway a success.

Prior to the dedicatory ceremonies, the program arranged by Major John Reynolds of Biggs Field was held. The first event was a relay race covering a distance of 225 miles over a triangular course. Lieut. Hunting of Biggs Field won this event, time 2 hours, 5 minutes, 41 seconds.

Private Donnelly of Biggs Field won the parachute jumping contest. He jumped from the ship piloted by Lieut. Charles Douglas at an altitude of 2500 feet and landed within 96 paces of the designated mark at the center of the field.

In the short landing contest, Biggs Field again carried off the honors, Lieut. Hunting winning the decision, while Lieut. Douglas, also of Biggs Field, won the message dropping contest with Lieut. Hunting riding as observer. Their message landed 11 ft. 6 inches from the flag in the center of the field.

Lieut. Hunting and Staff Sgt. Tyler marked up a 100 percent score for Biggs Field by winning the final event, the trouble shooting contest, in 14 minutes and 49 seconds, making the Fort Bliss flyers first in each of the day's contest in competition with flyers from Kelly Field, Brooks Field, Camp Travis and Rockwell Field.

The following airmen participated in the various events: Kelly Field - Lieuts. Aldworth, Weikart and Cadet Sparkhawk; Brooks Field - Captain Oldfield, Lieut. Greenlaw, Corporal Gurley, Corporal Gershon; Camp Travis, Lieuts. Weyland and Williamson; San Diego - Lieuts. Marley and Wyman (Navy), Lieuts. Gunnery, Christian, Wallace, Sergeant Wodarccyk, Corporal Anderson (Marines); Biggs Field - Lieuts. Hunting, Douglas, Weddington, Staff Sergeants Pierce, Tyler, Private Donnelly.

The dedication of the flying field at Phoenix took place on November 9th. Three pilots from Biggs Field were present, representing the Army Air Service - Lieut. Lloyd E. Hunting and Staff Sergeants Fred I. Pierce and Fred O. Tyler.

They flew DeHavilands and performed formation flying. The Field was named "Luke Airport" in honor of one of its sons - Frank Luke, Jr. - one of the most famous war pilots, who was born in Phoenix, Arizona. This boy died, fighting single-handed against ten German planes over the enemy's lines in France, but before being himself brought down he shot down three German planes and three observation balloons. At the time of his death he had officially eighteen German planes and balloons to his credit - and probably many more that could not be officially accounted for, because this daring pilot chafed under the restrictions of discipline and often, when the fancy took him or he thought a good opportunity for damage to the enemy presented itself, he loaded a ship up with gas and ammunition and "took off" - orders or no orders. He was on such an "unofficial" mission when he met his death, but the particulars of what took place on that occasion has since been verified. Lieut. Frank Luke was the first American flyer to win the Congressional Medal of Honor, which was awarded him posthumously. Lieut. Luke was not yet twenty-two years old when he died.

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THE ROME-TOKIO-ROME FLIGHT.

The NEWS LETTER Correspondent from the Philippines states that during the month of September, Manila, the Army and Navy, and particularly the Air Service, have been excited over the visit of Commander Francesco DePinedo, R.A.I., who successfully accomplished the Rome-Tokio-Rome flight.

The world-wide interest in this flight was particularly acute in the Far East. The special interest which this flight aroused was due to the fact that this Italian Aviator flew on his own hook. Gasoline and oil were disposited at certain designated points, and he and his mechanic flew to the supplies. No provision was made for their rescue in the event of a forced landing, and much of the distance they covered was over land and water areas, having but little commerce and inhabited by savages. One noteworthy bit of flying was a leg of 500 miles flown across India in a seaplane with no chance of landing. Another creditable leg was flown in typhoon weather from Apparri on the north coast of Luzon to Tan Sui on the Northwest coast of Formosa across the notorious Bashi Channel.

The airplane used is a Savoia Seaplane, pusher type, powered with a 450 H.P. Lorraine-Dietrich engine of 12 cylinders, 3 banks of 4 cylinders each. The four-bladed propeller is of wood and of conventional design. Lubrication is accomplished by the well known Castrol, about 80% castor oil and 20% mineral oil to prevent gumming. The plane itself is of a usual seaplane type but quite fast and very rugged. Dual Deperdussin controls are used with single lower wing ailerons. No new or unusual instruments are installed. A complete sailing equipment is carried, and in case of a forced landing at sea the wings and engine can be dropped and the fuselage sailed to land, as it is an excellent sea boat. Gas and oil are carried for eight hours which gives a cruising radius of 800 miles since the cruising speed is close to 100 miles an hour.

While in Manila, the Army extended Commander DePinedo every possible courtesy and his appreciation is evidenced by the following letter received by the Air Officer:

"My dear Major Browne -

Your many attentions for making a success of my flight thru the Philippines have deeply impressed me and I find myself quite unable to express to you my appreciation for your interest toward me.

My impressions of the Philippines are great and exceedingly pleasant, but the facilities afforded me by the American Army and in particular by the Department under your command shall always be remembered by me and your personal and friendly interest never forgotten with the sincere hope of having you some day in Rome, thus affording me the opportunity of reciprocating as many attentions.

Shall esteem it a favor if you will carry to the Commanding Officer and Officers of Camp Nichols the expression of my appreciation for all that they have done to make my staying in Manila a very pleasant and enjoyable one. My visit to the Camp has been quite interesting and certainly did enjoy and admire the maneuvers with skill and daring ability performed in my presence.

To you personally, I again express my thanks and if I am not abusing please express to Mrs. Browne how deeply I appreciated the refined treatment by her accorded to me.

Sincerely yours,

Francesco DePinedo,
Commander, R.A.I.

Major Charles J. Browne
Air Service,
Department Air Officer
Manila, P.I."

A few days prior to the departure of Commander DePinedo from this port, the good ship "Heron", a Naval Air Service Tender, shoved off for Aparri, the scheduled refueling place for the Italian flier. Among the passengers aboard was Major C.J. Browne, our Air Officer, who wished to obtain additional data on flying fields and conditions in that part of the Philippines. Shortly after the "Heron" had stuck her nose into the China Sea, an unfriendly typhoon came circling around and then the argument started. The "Heron", being of good fighting stock, did battle and finally won thru with a few odd scars and some very uncorfortable passengers. This typhoon delayed DePinedo's departure a day and when he did take off, he encountered bad weather and had to land and remain three or four hours in a friendly little cove along the northeastern coast of Luzon. He did get thru later on in the day, landing at Aparri about eight hours after his departure from Manila. There are some good unimproved landing fields around Aparri, (which is situated at the extreme north end of the island of Luzon), and it would not be at all surprising if the Air Service didn't put on some tactical missions, centering on that place. Major Browne looked a little bit the worse for wear on his return and seemed to be under the impression that, if the "Heron" had a little larger rudder and a pair of flippers, she could do an excellent "Barrel Roll."

In conclusion, the NEWS LETTER Correspondent states that "at this writing our Brother Aviator of the Royal Air Force of Italy is in Tokio. We wish him well, happy landings and a safe return to Rome."

The November 5th issue of the British Aeronautical publication FLIGHT states that Marquis DePinedo and his mechanic Campanelli made rapid progress on their return flight, in the Savoia S.16 flying boat (400 H.P.Lorraine-Dietrich) from Tokio to Rome. On October 28th the Marquis flew from Rangoon to Calcutta, landing at Akyab enroute. At Calcutta they were entertained at dinner by the Italian colony, in the course of which the Marquis pointed out that he had already covered a distance of 28000 miles, and had therefore beaten the American round-the-world record by over 1,200 miles. The following day he proceeded to Benares, and next day arrived at Delhi. By November 2nd he had reached Bandar Abbas, via Karachi.

The public at large, particularly those interested in aeronautics, is no doubt aware of the fact that Commander DePinedo completed his flight on November 7th last, landing at Rome at 3:06 in the afternoon. It is reported that he covered more than 34,000 miles, establishing a world record in distance for a solo flight.

In a statement to the Press, the Italian flyer stated: "I made a desperate effort to reach Italy for the November 4 celebrations, but a storm in the Persian Gulf prevented me. I have been over strained during the last two days, for I have flown 2,930 miles and have only slept two or three hours. I had a wonderful flight back from Tokio and during the entire flight didn't even change my propellers or make any wing alterations.

I am delighted at having completed this trip and I think I have established a new record by flying from Tokio to Italy in 19 days, for I am under the impression that the previous record for this flight is 40 days."

More than a hundred thousand persons, according to press reports, headed by Premier Mussolini, tumultuously welcomed Commander DePinedo and his assistant Campanelli when he landed his hydroplane on the Tiber near St. Peter's,

After Governor Cremonesi of Rome had voiced his pride in the aviator's achievements, DePinedo and Campanelli entered Premier Mussolini's automobile and were escorted by mounted troops through lanes of cheering people to the Chigi Palace. Here Premier Mussolini addressed the crowd from a balcony overlooking the Piazza Colonna. He lauded DePinedo as an ideal type of Fascisti - a man who could do and dare for Italy without counting the cost.

DePinedo was visibly moved by Mussolini's tribute, and in response expressed gratitude for his reception and pledged his life to the service of Italy. Premier Mussolini then embraced DePinedo, whose aged father, looking on at the ceremonies, broke into tears.

DePinedo and Campanelli were guests of honor that night at a banquet at the Grand Hotel.

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THIRD ATTACK GROUP PARTICIPATES IN LANGLEY FIELD MANEUVERS

During the October Air Force Manouvers at Langley Field, Va., the Third Attack Group, Kelly Field, Texas, furnished four flights of three airplanes each. Three of these flights, designated by this Group as the Composite Attack Squadron, departed from Kelly Field on September 29th, scheduled to arrive at Mitchel Field, N.Y., on October 7th. Demonstrations were given enroute at Fort Leavenworth and Fort Riley, with bombs and machine guns, and an Aerial Demonstration was given at Omaha, Neb., for the Annual National Convention of the American Legion. The following route was taken: Waco, Texas - Dallas, Texas - Muskogee, Okla. - Kansas City, Mo. - Ft. Leavenworth, Kansas - Fort Riley, Kansas - Omaha, Neb. - Iowa City, Iowa - Chanute Field, Ill. - Wilbur Wright Field, Ohio - Moundsville, West Virginia - and Bolling Field, D.C.

The remaining flight, designated as the Special Attack Flight, departed from Kelly Field for Mitchel Field on October 3rd and was scheduled to arrive there on the 7th. The Special Attack Flight arrived at Bolling Field on October 8th, and there awaited the arrival of the Composite Attack Squadron, which arrived on October 9th. The flights then proceeded as a unit to Mitchel Field. The following route was taken by the Special Attack Flight to Bolling: Dallas, Texas - Muskogee, Okla. - Kansas City, Mo. - Scott Field, Ill. - Chanute Field, Ill. - Wilbur Wright Field, Ohio - Moundsville, West Va., and Bolling Field, D.C.

The Group arrived at Mitchel Field on October 11th, joining and becoming a part of the 1st Provisional Air Brigade. On October 12th an aerial demonstration was given by three flights of three planes each. The Group proceeded to Langley Field on October 13th, landing at Phillips Field, Maryland, for fuel and to make the necessary arrangements for a demonstration to be given at that place upon completion of the Air Force Maneuvers. All planes arrived at Langley Field on October 13th. On October 14, 15, and 16, several simulated attacks were made and one attack with bombs and machine guns was made on a target representing an airdrome. All attacks, both simulated and actual, were timed to perfection.

On the afternoon of October 16 the Group departed Langley Field for Phillips Field, rendezvousing over the Washington Memorial, Washington, D.C., at 1:15 with the 1st Pursuit Group and the 2nd Bombardment Group. On October 17th two attacks were made with bombs and machine guns at Phillips Field, Md.; one on a target representing a Truck Convoy, and the other on a target representing a Company of Infantry scattered over a 200 yard area. Both attacks were successful, although the high winds were a great handicap. A number of officers of the General Staff, and General Patrick, were present.

The Group departed Phillips Field, Maryland, October 18, for Bolling Field, D.C. Four planes left Bolling on October 20th, for Langley Field, for the Annual Competitive Machine Gun and Bombing Matches. The rest of the Group came back to Kelly.

By November 1st, all airplanes of the Group had returned to this Station, none having required major repairs. During the entire trip no airplanes of the Group were forced to land, due to motor trouble, but several forced landings were experienced due to snow, rain, and fog. A total of 710 hours, 30 minutes was flown in connection with the Air Force Maneuvers; i.e., in reporting at the concentration, during the maneuvers, and return to Kelly Field. A total of 121,420 man-miles were flown in connection with the Air Force Maneuvers.

The following personnel formed the Composite Attack Squadron:

Pilots	Observers
Captain Davidson	Sergeant Peck
Lieut. Carroll	" Manning
" Frost	" Mooney
" Zettel	" Laza
" Crocker	" Simmons
" Booth	" Hill
" Partridge	" Chowaniec
" Vandenberg	" Baros
" Greene	Private Ward.

The following personnel formed the Special Attack Flight:

Pilots	Observers
Lieut. Cole	Sergeant McDonald
Sergeant Johnson	" Lipp
" Ertwine	" Lutes.

The officers who remained at Langley Field for the Annual Competitive Machine Gun and Bombing Matches were Lieuts. Crocker, Carroll, Zettel and Vandenberg.

The team consisting of Lieuts. Crocker and Carroll made high score in the individual low altitude bombing, while the Vandenberg-Zettel team took fourth place.

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MAKING THE MODEL AIRWAY SAFER

A considerable amount of cross-country flying by Air Service pilots is from Bolling and Langley Fields to Dayton, Ohio via the Model Airway. As is well known to pilots, there is a bad stretch of territory,- some 127 miles of it, over the Allegheny Mountains. Going to Bolling Field to Dayton, the stretch of 35 miles to Leesburg, Va., is level. From Leesburg to Cumberland, Md., a distance of 73 miles, hills are encountered, the highest elevation being about 2800 feet. The "bad lands" is the stretch of 54 miles from Cumberland to Uniontown, Pa., where the highest elevation is about 3200 feet. The remaining distance of 55 miles to Moundsville, West Va., (the pilots "half-way inn") is fairly level.

The advantage of a landing field at Uniontown has always been readily appreciated, for with one at that point and the one at Cumberland, a pilot flying along the Model Airway in either direction learning that meteorological conditions over the mountains were unfavorable could make a stop over at one of these fields and remain there until flying conditions in the mountain region were more favorable.

The much needed landing field at Uniontown became a reality when Burgess Field was dedicated on Saturday, November 21st, in the presence of approximately 8,000 persons. More than twenty planes assembled at the Field before the dedicatory exercises took place, with Brigadier-General James E. Fechet, Assistant Chief of Air Service, occupying the principal part on the program. The honor of flying the longest distance to the ceremonies went to Lieuts. McAllister and Collins of Selfridge Field, Mich., who covered more than 500 miles in two hours and 50 minutes. Other visiting pilots were from Langin Field, McCook Field, Longview, Latrobe, Brier Hill, Pa., Rodgers Field, Pittsburgh, Pa., and Bolling Field, D.C.

Congressman Samuel A. Kendall, of Meyersville, Pa., made the presentation address, in the course of which he told of the cooperation of all local, organizations in establishing the Field and the splendid unity which prevailed once the local committee was organized to secure the Field. He then offered the Field to the Air Services of the Army, Navy and Marine Corps, as well as to commercial flyers, assuring all they would be welcomed at any time they landed there.

General Fechet in response pointed out the value of such a field not only to flyers but to the community as well, asserting that the local field was the key position of a system of fields in the mountainous districts and would no doubt become one of the most important on the Model Airways System.

Lieut. Donald G. Duke, Chief of the Airways Section, Office Chief of Air Service, who was instrumental in having the various organizations of Uniontown cooperate with the view of establishing the landing field, touched upon the importance of the Airways and the policy being pursued by the

government in perfecting present airways before adding new ones. He touched especially upon the importance of Burgess Field in the airways system and added that air traffic of the present and future will continue to parallel the important highway and rail lines of communication.

Following the conclusion of the dedicatory exercises, the various visiting pilots performed acrobatic flying to entertain the spectators.

There have been a number of new landing fields established in the mountainous district of Pennsylvania. The maps of the Model Airway System are being revised to show all of these fields. An endeavor is being made to secure funds to establish meteorological stations at these fields, a most pressing need in all sections of the country flown over by pilots, but particularly in mountainous districts such as the one in the State of Pennsylvania which forms a sort of barrier between the East and the Middle West.

The Airways Section, Office Chief of Air Service, has also made arrangements to have gasoline and oil facilities at the landing fields in the mountainous region of the Model Airway as well as arrangements for assisting stranded pilots.

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A FEW CORRECTIONS

It is regretted that, in the absence of an official report covering the International Air Races at Mitchel Field, several errors crept in the account of the Races published in the NEWS LETTER of October 24th. Readers of this story may have gained the impression that this year's Curtiss Racer was timed at 302 miles an hour on a straightaway flight. As a matter of fact, this rate of speed was made down wind with a diving start over a very short course and should not be considered at any time in connection with the real speeds in these planes.

In commenting upon the drop in speed of the PW-8's in the Mitchell Trophy Race from 175.43 of last year to 161.5 of this year it was held that this was a disappointment. The fact is, however, that this year the pursuit planes were not allowed to be specially streamlined or fixed up for the race in any way and had the full military equipment, including bomb racks.

In the account of the observation type airplane race, it was stated that Lieut. Gaines was forced to drop out because of motor trouble and that he piloted a DH4B. Lieut. Gaines, as a matter of fact, was flying a C0-6 airplane, and the reason he was forced to drop out of the race was that his motor ran out of gas.

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WAR DEPARTMENT ORDERS AFFECTING AIR SERVICE OFFICERS

Changes of Station: 1st Lieut. Frank M. Bartlett from Kelly Field to duty with University of California, Berkeley, Calif. - 1st Lieut. Thomas K. Matthews from Selfridge Field to Seattle, Wash., for duty as government representative at Boeing Airplane Corp. - 1st Lieut. Orvil A. Anderson from Kelly to Scott Field - 1st Lieut. Robert V. Ignico to Scott Field upon expiration of leave of absence - 1st Lieut. Gilbert S. Graves from duty with 77th Div. Organized Reserves, New York City to Mitchel Field, N.Y. - 1st Lieut. Ronald A. Hicks from Mitchel Field to duty with 77th Div. Organized Reserves, New York City - 1st Lieut. Kellogg Sloan to Bolling Field upon expiration of foreign service tour - 1st Lieut. Lewis A. Dayton from San Antonio Air Intermediate Depot, to Hawaii, sailing on or about April 2, 1926 - 1st Lieut. Floyd A. Lundell to Kelly Field upon expiration foreign service tour in Hawaii - Capt. T. E. Tillinghast from Selfridge Field to McCook Field - 1st Lieut. Walter R. Peck from Kelly Field to Schoen Field, Indianapolis, Ind., to assume command - Capt. Vincent B. Dixon from McCook Field to Selfridge Field - 2nd Lieuts. Robert E. Burns and Lewis A. Riggins from Brooks Field to duty with 2nd Div. Fort Sam Houston, Texas - Capt. Edward F. French, 1st Lieut. C.F. Gee, 2nd Lieuts. Donald F. Bratton, George W.M. Dudley and A.W. Farwick relieved from training at Brooks Field and attached to duty with 2nd Division.

Leaves of Absence: 2nd Lieut. Laurence C. Craigie, 2 months, from Dec. 1st - 2nd Lieut. David M. Schlatter, 2 months from Nov. 5 - 1st Lieut. Thomas K. Matthews, 10 days, upon relief from Selfridge Field - 1st Lieut. Solomon L. Van Meter, Jr. 3 months from Nov. 11, on account sickness - 1st Lt. Robert E. Selff, one month; Col. Chalmers G. Hall, 21 days, from Nov. 25.

Appointments: 2nd Lieut. Philip H. Downes, Air Service Reserve, reappointed in his grade from Nov. 16th.

Promotions: 2nd Lieut. Harlan T. McCormick to 1st Lieut. Oct. 20th; 1st Lieut. Ross F. Cole to Captain October 2nd; 2nd Lieut. John Lament Davidson to 1st Lieut. October 20.

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NOTES FROM AIR SERVICE FIELDS

Kelly Field, San Antonio, Texas, Nov. 12.

Six NBS-1 planes from the 40th School Squadron participated in the Fort Leavenworth Demonstration, which was held on October 2nd. One DH plane from the 40th Squadron was piloted by Lieut. James M. Gillespie and was later turned over to Captain F.I. Eglin, who made a cross-country flight on to New York. The Leavenworth flight was accomplished with no trouble, with the exception of NBS-1 #11 being forced down near Dallas by motor trouble. This plane was piloted by Lieut. Hawkins, who stated that in landing a few fences were knocked down, but that no damage was done to the plane. NBS-1 planes were flown for a total of 150 hours.

Pilots and passengers who went to Waco, Texas, on Oct. 24th to participate in the opening of Rich Field and attend the Cotton Palace were as follows: Pilots - Major R.S. Brown, Capts.R.C. Candee, W.E. Lynd, 1st Lts. J.B. Patrick, C.E. Duncan, O.A. Anderson and 2nd Lt. J.M. Weikert; passengers Capt. R.S. Stribling, 2nd Lt. Chas. P. Cabble, F.A., Sgts. Fowler, Maxwell, Corp. Hughes and Private Vickery.

First Lieuts. G.E. Rice and I.J. Williams left Texas (the State of "Eternal Sunshine") for Butte, Mont., for an elk hunt, but after spending a couple of days on the mountain in a blizzard they decided it would be a shame to kill the elk and returned, catching nothing but a cold. After being held up three times on the return trip by snow, they reached the decision that Texas is not half bad.

First Lieut. L.J. Carr piloted the Douglas Transport into Kelly Field after a three weeks' absence in the East.

Master Sergeant Edward W. White, of the 10th School Group Headquarters, retired from the service on October 27th. The good wishes of his comrades in the organization accompanied Sgt. White in his well earned retirement.

Kelly Field polo fans received their heart's desire Sunday afternoon, Oct. 18th, when they had the pleasure of seeing the Pilots defeat the 12th Field Artillery at their own game to the tune of 15 to 3 on the Kelly Field Polo Field.

First Lieut. J.S. Griffith cleared the post preparatory to his departure for service in Honolulu.

Second Lieut. J.R. Hawkins, after a hard and strenuous trip from Fort Leavenworth, and after having a forced landing at Denniston, Texas, arrived at Kelly Field Oct. 7th.

Lieut. Walter T. Meyer, piloting a DH plane on Oct. 6th, dived down over the hangars and crashed into a plane standing on the line. He suffered a broken nose in the crash, while the mechanic, Sgt. Anderson, 41st School Squadron, escaped with only a scratch.

Major C.H. Wash was transferred back to the Group and designated as Executive Officer.

Capt. B.S. Wright, 1st Lts. R.L. Maughan, J.S. Griffith and J.P. Richter, with respective mechanics - Crew Chief Jack Graves, Tech. Sgt. Bihami, Sgt. Fowler and Sgt. Crevier, visited the Pendleton Roundup held at Pendleton, Oregon, recently. On account of a wet landing field the runway was used for landing on the return to this station.

The 41st School Squadron closed its rest camp at Sadler, Texas, until next spring. The camp was a great success and about 90 percent of the personnel, commissioned and enlisted, enjoyed week ends there during the summer months.

Second Lieut. L.C. Craigie returned from a cross-country to Boston, Mass., with Sgt. Gossett as mechanic. He reported weather conditions good, both coming and going.

Brooks Field, San Antonio, Texas, Nov. 2.

The past week end saw three ships going to Tucson, Ariz., for the opening of a flying field, and seven ships to Shreveport, La., for the same reason. Bad weather was experienced both ways, Friday being cold and rainy, and Sunday, the scheduled day of return, being so bad that most of the ships were held over to return with better weather. Monroe, La., opened a field on Armistice Day, where two or three ships were scheduled to be in attendance, while Dallas, Texas, was to draw several ships for the aerial exhibition there on November 7th.

Saturday, the Officers' Club received detail telegraphic reports of the Army

Yale football game, followed by a tea dance. The dance was very enjoyable and well attended, but the reports of the game were not so enjoyable and put a damper on the after events to a certain extent. The day being Hallowe'en may have been the reason for the upset dope for other strange pranks as equally unlooked for occurred that night, especially down town. Numerous cars returned with the stain of ancient eggs bespattering their windshields and bodies, and strange obstructions barred many of the roads.

Two casualties were suffered by the command this week, Capt. Thorne, medical officer, being sent to Mitchel Field with no one as yet ordered here in his place. Capt. Hart, already here, will act in Capt. Thorne's place. The other casualty, this one from the ranks of the bachelors, is that of Lt. Schlatter, who is to be married. Many parties are being given in their honor and the bachelors regret the loss of a valued member and the whole field the loss of our flight surgeon.

Brooks Field, San Antonio, Texas, Nov. 10th.

Capt. Grima, of the Spanish Army, who has been at this station for a short course before going to Kelly Field to take the advanced flying course at that school, was ordered back to Spain and left here. Capt. Oldfield seems lonesome since he left, having no one to whom to teach American slang.

Lieut. McHenry left for Kelly Field. Lieut. Nelson of the field at Bridgeton, Mo. will be here Nov. 30th for assignment to duty.

The past week end a few ships went to Dallas, Texas, for an aerial carnival, returning home Sunday. Several officers went to Rockport, Texas, for duck hunting, the party bringing back a total of 300 ducks. Lieut. K.B. Wolfe had to be called in at the last minute, being given a bribe of ten percent to bring home the unexpectedly large amount of game. One can't seem to satisfy Corkille where hunting is concerned, for he reported hunting just fair.

Several officers, among them Major Royce, the C.O., motored up to Austin for the football game there.

Brooks Field, San Antonio, Texas, Nov. 17th.

Brooks Field officers and men contributed $625 to San Antonio's Community Chest Fund, $300 of which was given by the officers and $325 by the enlisted personnel. This fund is a combined one for all charities, some 37 in number, for each of which a separate drive had been made in the past. It is a relief to get them all off our minds at one time.

Several deer hunting parties are planned for this week-end now that the season has opened. Last year venison was a common occurrence at the club and judging from the numerous hunting parties planned this season it will also be plentiful this year. General Fechet and Col. Gillmore are expected through here en route to a hunting leave at King's Ranch if they find they are able to leave Washington during the trial of Colonel Mitchell.

Since the transfer of Lieut. McHenry to Kelly Field, Lieut. Perrin was assigned as Hqrs. Stage Commander, Lieut. McKinnon relieving him as Utilities Officer, and Lieut. Greenlaw taking Lieut. McKinnon's place as Police Officer. Lieut. Greenlaw, by the way, was recently transferred to the Air Service, having been detailed from the Cavalry two years ago but just now getting a permanent transfer. Lieut. Hodgson's transfer from the Infantry was also received only a short time ago.

The latest General Court-Martial convened at Brooks Field was composed of 13 officers. Some four or five of these, however, are junior officers with little experience in this line but who are finding beneficial experiences and training by this duty.

Biggs Field, Ft. Bliss, Texas, Nov. 2 - 14.

Lieut. Eric Nelson, one of the famous "Around-the-World" flyers, landed at this field at 4:50 p.m. Oct. 27th, with Staff Sgt. A.H. Miller as mechanic, in a Douglas "O-2-A" observation plane, very much resembling the Douglas Cruisers in which the world flight was made. The ship has a cruising speed of 130 miles per hour. Leaving Kansas City at 7:30 a.m., Lieut. Nelsom landed at Post Field, Okla. at 11:40 a.m. At 12:50 he left Post Field and covered a distance of about 850

miles in approximately 8 hours. After spending the night as guest of Capt. Walter Bender, Adjutant of the Field, he left at 6:30 a.m. Oct. 28th for his station at Clover Field, Calif.

Lieuts. Campman and Wallace, U.S.N., with two passengers, in DH4B planes, from the San Diego Naval Air Station, arrived here at 4:00 p.m. Oct. 26th en route to Kelly Field, Texas. They departed the following day at 7:30 a.m.

Lieut. Gale, pilot, with Staff Sgt. Markel, 1st Photo Section, as observer, and photographer, departed at 7:00 a.m. Oct. 26th in DH4B Photographic Plane for Albuquerque, N.M., for purpose of locating, photographing and measuring a landing field at that city.

Lieut. Charles Douglas, pilot, with Pvt. Donnelly as observer, flew to Ft. Clark, Texas, in DH4M to participate in Cavalry and Artillery maneuvers in the vicinity of that post in connection with liaison and reconnaissance work.

Major John N. Reynolds, C.O. of this field, left Oct. 28th in a DH for Tucson, Ariz., to inspect the airdrome there and make necessary arrangements for the aerial exercises to be held there Nov. 1st on the occasion of the dedication of the new municipal landing field.

October 30th was a day of unusual activity at this field. The following-named pilots arrived from Kelly Field: Major R.S. Brown, Lieuts. Weikert, W.B. Clarke, Flying Cadet Sparhawk and Staff Sgt. Travis, all carrying passengers. From Brooks Field we had Capt. Oldfield and Lieut. Greenlaw with observers. From Ft. Sam Houston four DH's with Lieuts. Hoakum, Weddington, Weyland and Williamson and from San Antonio Air Depot Lieut. Aldworth in a DH. All these ships were en route to Tucson, Ariz., for the purpose of participating in aerial exercises on the occasion of the dedication of the new municipal flying field at that city. In addition to these pilots, the following-named pilots and passengers departed from this field: Major John N. Reynolds, Capt. Walter Bender, Capt. Johnson, M.C., Lieuts. Hunting and Douglas, Staff Sgts. Pierce and Tyler, Master Sgt. Thile. All these pilots left this station at about 1:30 p.m. October 31st. When Major Brown from Kelly Field landed here on the evening of Oct. 30th he disdainfully ignored our handsome flying field and hangars with the name "Biggs Field" in twenty-foot letters and set his crate down at an old abandoned balloon hangar several miles out on the prairie. There we found him, looking very forlorn and sad alongside that big wreck of a hangar. We do not understand how the Major could make such a blunder unless the atmosphere here, being so close to the border, was too "heady". We rescued him, however, also forgave him.

Pvts. G.A. Laird and M.O. Holmes, 12th Obs. Sqdn., departed Oct. 25th for Chanute Field, Ill., to attend course of instruction in Radio Mechanics and Aerial Photography at the Technical School there. They are expected to be at this school for about six months.

Staff Sgt. F.O. Tyler, pilot, and Master Sgt. Wilber R. Rhodes, returned here Oct. 24th in a DH from Mitchel Field, after having witnessed the air races. They reported having encountered exceptionally rough travel both ways, being delayed by fog, severe storms and rain at various points on their route. On their return trip they were forced down at Altair, Texas, by a defective motor which had to be replaced from Kelly Field. Despite several forced landings during this trip on account of bad weather, no accidents to passengers or ship, with the exception of a "burnt-out" motor at Altair, Texas, occurred.

Lieut. L.P. Arnold, of Rockwell Field, with W.J. Little as passenger, arrived in a DH4B en route to Kansas City, Mo. The pilot made an exceptionally good landing under the circumstances, as a heavy fog was entirely obliterating the field from aloft, the ceiling being only 150 feet. The fog lifted at noon and they departed.

To us in the Air Service out here in "the great open spaces" it is very gratifying to note the intense and active interest that the citizens of the municipalities take in aviation; landing fields are provided in almost every little town through the unselfish assistance of its citizens.

Lieut. L.D. Weddington with Capt. Ralph Pollock, QMC, as passenger, returned from a three weeks' absence in the east on Nov. 8th. Lieut. Weddington was at Langley Field, Va. and Washington, D.C., in connection with aerial machine gunnery and bombing training.

Lieut. W.B. Clarke of Kelly Field arrived here Nov. 9th from Crissy Field, Calif., en route to his home station. Staff Sgt. Biscarra, mechanic, was his passenger. They remained here overnight and left early following day on their last 500-mile lap.

Staff Sgt. Pierce ferried Pvt. Latil on Nov. 12th to Rantoul, Ill., where the latter will pursue the Armorers course at the Technical School.

Capt. Ira C. Eaker, with Brig. Gen. John B. Bellinger, Asst. to the Quartermaster General, as passenger, arrived here in a DH from Washington en route to San Francisco. The General apparently had enjoyed the trip for he seemed somewhat loath to leave his comfortable seat in the rear cockpit. The General remained in El Paso overnight as guest of Brig. General C.D. Rhodes. Capt. Eaker, however, did not linger long. He took the opportunity to visit his home at Texico, N.M., and "took off" immediately after a hasty lunch, returning the following afternoon. The General and his pilot resumed their journey at 6:55 a.m. the following day, Rockwell Field being scheduled as their next stop.

Major John N. Reynolds departed in a DH with Pvt. Yocum as mechanic on Nov. 12th for Duncan Field, San Antonio, on official business.

Field Service Section, Fairfield, Ohio, Nov. 13th.

The following officers of the Field Service Section attended the International Air Races at Mitchel Field: Lieuts. L.E. Sharon, C.A. Cover, W.J. Hanlon, J.L. Grisham and B.M. Giles. Messrs. W.D. Kennedy, Wesley Longletz, Leon W. Armour, Miss Cleona Kittinger and Miss Annabel Boyd, civilian employees, were also in attendance. Lieut.-Col. B.D. Foulois spoke in the highest terms of the work of all members of the Field Service Section who were ordered there for official duty and wrote individual letters of commendation to them. Those who were on duty were Lt. Cover, who was in charge of airplane inspection in connection with the Races; Mr. Armour, in charge of all arrangements connected with the reception and housing of visiting personnel; and Misses Kittinger and Boyd who were assigned to the Operations Office.

Major Geo.H. Brett spent several days at the Office Chief of Air Service during the last week, and returned to the Field Service Section Nov. 11th.

Lieut. B.M. Giles and Mr. W.D. Kennedy represented the Air Service at the production meeting of the Society of Automotive Engineers at Cleveland, O., in September.

Lieut. J.L. Grisham was appointed Executive Officer of the Field Service Section during the absence of Lt. L.E. Sharon. Lieut. Grisham also retains his position as Chief of Material Branch. In absence of Lt. C.A. Cover, Lt. B.M. Giles is acting officer in charge of Maintenance Branch. Lieut. W.J. Hanlon is the new chief of Cost-Requirements Branch.

Wright Field, Fairfield, O., Nov. 13.

The repair shops are as busy as ever. During the temporary absence of Capt. Edward Laughlin, Lt. C.C. Nutt is Acting Engineer Officer.

Airplanes and engines of all kinds are being overhauled, the biggest job, perhaps, being the reconditioning of eight Martin Bombers, four of which will go to Langley Field and the other four to Luke Field. Each Bomber requires a complete overhaul, and the work must be done in buildings which were not designed to hold such large aircraft. It is expected, however, that all of them will be completed during December. The four that are to go to Luke Field must be crated for overseas shipment - a considerable job in itself.

Practically the entire officer personnel attended the International Air Races at Mitchel Field early in October. In the absence of Major A.W. Robins, Major Geo. H. Brett acted as C.O. of Wright Field.

Lieuts. L.E. Sharon and B.M. Giles flew to Moundsville, W. Va. and return on October 27th.

On Armistice Day the Dayton Post #5 of the American Legion and the Officers' Association of Dayton gave a Military Ball at the Miami Hotel. A number of officers from Wright Field were in attendance.

On Friday evening, Nov. 13th, the Wright Welfare Association gave a "Hoo-Doo" Dance at the Officers' Club - the first get-together party of the autumn season.

Lieut. H.A. Bartron returned Nov. 2d from a hunting trip in Maine. As usual, he was successful in bringing down a deer.

Among the recent visitors arriving by air, some of them on airways trips and some on cross-countries, were as follows: Capts. Floyd E. Galloway, C.H. Reynolds, Lieuts. Frank M. McKee, Raphael Baez, Jr., Ward F. Robinson, R.J. Whatley, B.R. Dallas, E.R. McReynolds and Major H.H.C. Richards. Lieut. R.B. Hill

from the Pittsburgh Air Port called on Nov. 5th accompanied by Lieut.-Col. H.C. Fry of the Organized Reserves.

The new Post Store, under the direction of Lieut. Winfield S. Hamlin, to be operated in connection with the Post Exchange, was opened on Nov. 13th.

Crissy Field, Presidio of San Francisco, Calif., October 31.

Crissy Field is about back to normal again, the several officers who ferried the Douglas Transports to Dayton, O., having returned.

The flying field is being regraded and the hills and valleys smoothed, a $10,000 appropriation having been received for that purpose. The leveling of the field is going to make it tough on some of the boys who have sworn at this hollow and that bump after landing in a series of graceful leaps and bounds.

Lieut. "Cy" Marriner, our handsome Adjutant; Lieut. Frank Hackett, our aerial gunnery officer, and Lieut. W.R. Taylor, commonly known as "Photo Taylor" took off for Los Banos, Calif., on a week-end duck hunt not so long ago, after promising the Post duck dinners (it is estimated that 127 ducks were obligated between them). After sitting in a rain barrel for eight hours they returned with two ducks between them and three limits in alibis.

Crissy Field is, as an item of news, engaged in preparing for the Annual Inspection by the Commanding General, and the soap, paint and metal polish are flying in all directions.

Scott Field, Ill., November 20.

The various organizations at the post are now engaged in their annual pistol practice. The 9th, 12th and 24th Airship companies completed firing. Members of the 12th Company made the highest averages so far, the first four men being Master Sgt. Mansfield, Corporal Theck, Staff Sgt. Strickland and Sgt. Coffey, with averages of 94.5, 93, 91 and 90.4, respectively. Lieut. Johnson holds the record for firing in the 24th Company, score 89.2. Staff Sgt. Adams, with 85.5, was high man for the 9th Company. The 8th Company at this writing is using the range and will be followed by the 21st Photo Section and the 21st Airship Group Hqrs.

The post football team won two out of the three games last played, losing to Central Wesleyan College of Warrenton, Mo. 9 to 6, but defeating the Carbondale Normal School 6 to 0 and Jefferson Barracks (the big game) 19 to 0.

The post basketball league, made up of teams from the several organizations at the field, is being organized and games will be scheduled shortly after the football season.

On the night of Nov. 11th Staff Sgt. Jack Adams, Army Heavyweight Champion, added an important victory to his string when he obtained the decision over Quentin Remero Rojas, Champion of South America, in a ten round bout in St.Louis.

On Nov. 14th the Cadets of the Balloon and Airship School gave a dance at the club. Arrangements were in the hands of Cadets Deerwester, Finley, Wheeler and Willis, and the list of Chaperons included Lt.Col. and Mrs. John A. Paegelow, Major and Mrs. Norman W. Peek, Major and Mrs. H.A. Strauss, Major and Mrs. John F. Duckworth, Capt. and Mrs. R.K. Simpson, Lt. and Mrs. Neal Creighton and Lt. and Mrs. H.H. Holland.

Langley Field, Hampton, Va., Nov. 7th.

19th Airship Company

During the past week this organization completed a model dirigible, mounted upon a silver covered trailer, and exhibited it in the Booster's Parade at Newport News, Va. This model is complete in every respect. The framework, ten feet long, was constructed similar to those used in rigid ships and covered with aluminum paint. A small car was suspended from the envelope by wire cables and contained motors, props and all accessories. The whole thing was supported by the nose and tail by small wooden supports. The trailer was covered with silver painted linen with the organization name in blue on the outside. The whole ship was illuminated from below by thirty-two small electric lights.

96th Squadron

While there has not been much going on in this organization the past week, the other organizations, as usual, were left behind as far as flying time is con-

cerned. There were a few cross-country flights to Mitchel and Selfridge Fields during the past month.

Night flying is getting to be a habit around here and we wish to tell everyone that we are doing our share of it.

Other Activities

Langley Field is again operating under normal conditions. During the summer training of National Guard and Reserve officers took precedence over all other duties. A large number of officers and men were on detached service at Mitchel Field in connection with the anti-aircraft firing during the summer. A short interval after the summer training, and the personnel of the field devoted their major energies to repairing the flying field and making ready for the Air Force Maneuvers under the direction of General Fechet.

Close on the heels of the Maneuvers, the annual Aerial Machine Gun and Bombing Matches were held, and the greater portion of the permanent personnel were assigned to the many staff duties necessary to make the matches successful, and be it said to the credit of all concerned, the summer and fall season was a complete success. Letters from Reserve and National Guard Officers indicate that their time devoted to the several camps was well spent, and that they left Langley Field a great deal better prepared to assume their duties in the event of an emergency than they were prior to their training this summer.

The Air Force Maneuvers which were carried out with neatness and dispatch, owe not a little of their success to careful preparation of the details at Langley prior to this event. Notwithstanding the many and variegated difficulties encountered by a large number of entrants without proper equipment, and more or less unversed as to their duties in the Matches, operation of the Aerial Machine Gun and Bombing Matches progressed smoothly. This is demonstrated by the fact that only five days of flying time were taken to finish the Matches, with the exception of about three flights, and nearly fifty hours a day were flown by the contestants.

And now Langley Field has a breathing spell. The Air Service Tactical School continues to function in its customary efficient way. The Second Bombardment Group, under Major Brereton, is preparing for intensive tactical training this winter. The 19th Airship Co. is planning several extensive cross-country trips in the TC-4. The 50th Observation Squadron which has borne the brunt of training during the summer and during the Matches can at last polish up the DH's and put them in their usual good shape.

Langley Field now can and will proceed to devote its efforts to the solution of its own problems and accustomed routine - and routine in the Langley vernacular means excitement and lots of it.

Langley Field, Hampton, Va., Nov. 17.

In one of the hardest fought football games ever played by Langley, the team came out victorious in the contest with Fort Monroe by the score of 6 to 2. This was one of the elimination games and gives Langley the right to play the champions of the Northern Division of the 3rd Corps Area for the Corps Area Championship.

On the following Saturday, Nov. 14th, Langley played Fort Eustis a practice game and came out with the long end of the score - 20 to 7.

11th Squadron

If an outsider saw the hustle and bustle around the squadron's hangar last week, he would have thought that the President of the United States was coming to inspect, But no, it was only the usual cleaning up that the Squadron does every week.

When the hangar looked spick and span, it was decided to have a snappy looking office to coincide with the rest of the outfit. Everyone pitched in and the operations office was thoroughly renovated by the simple expedient of cleaning floors, polishing desks and painting the walls and ceiling.

Ambition runs high in this outfit. The operations officer, Lt. Green, had his name engraved on a neat sign for his desk, and speaking of evolution, the clan clerk must needs ape this with a sign on his own desk also. Barring the possible advent of an Oriental rug which someone threatened to get, this office is a model army office; neat, clean, orderly and not too effeminately ornate. Other organizations please copy.

96th Squadron.

Outstanding among the events on the squadron calendar for the week were the review formations held on the afternoons of the 10th and 11th, in both of which the 96th furnished the largest unit. The first was in honor of the Secretary of War Davis who, accompanied by General Patrick and Major Westover, made a personal

inspection of each unit before the review. The Secretary was particularly interested in the Martin bombers and ascended into the bombing cockpit with Capt. Black who explained the various instruments and controls.

On Armistice Day we participated actively in the aerial exhibition for the benefit of the Army Relief Fund by furnishing formations, carrying parachute jumpers and destroying the dummy battleship with small bombs. During the week, day and night tow target missions were flown for the anti-aircraft batteries at Fort Monroe.

Our basketball team is rapidly whipping into shape under the skillful coaching and expects to bowl over all contestants this coming season. If the esprit de corps counts, and we feel sure it does, then we will finish right on top of the heap.

19th Airship Co.

Our radio station 2 GC, Airship Hangar, turned into a real broadcasting station on a wave length of 410 meters. Corp. E.F. Schneider took the opportunity to announce every evening during the past week the aerial exhibition which was held at Langley Field, Nov. 11th, Armistice Day.

Camp Nichols, Rizal, P.I., October 8.

Even with a number of typhoons circling around, causing much rain, the 4th Composite Group flew 468 hours, 27 minutes (aircraft hours), divided as follows: Camp Nichols, 216:05 hrs; Clark Field, 156.10 hrs; Kindley Field, 91:12 hrs. Not bad - eh, what?

On September 26th; Flight B of the 2nd Obs. Squadron consisting of one officer, Lt. H.W. Beaton, and 30 enlisted men, were transferred from Kindley Field to Camp Nichols. Lts. E.G. Harper, Courtney Whitney, Guy Kirksey and G.G. Lundberg were transferred to Flight "B" from other organizations at Camp Nichols and upon arrival in this Department on Sept. 30th, Lt. E.B. Bobzien was also assigned to this flight. The flight has had six DH4B airplanes assigned to it and, in addition, it will maintain two special photographic ships. This flight will perform all observation missions called for by the Artillery and Cavalry at Camp Stotsenburg and by the Infantry and Anti-Aircraft at Fort William McKinley and Post of Manila. Three DH4B airplanes were transferred to the flight from the 28th Bombardment Squadron and the remaining three are now being assembled by the 66th Service Squadron and should be ready for test in the near future.

The Transport THOMAS slid in alongside of Pier #1 at 8:00 a.m., Sept. 30th amid much shouting and waving of arms, bringing to our midst many old friends, among them being Major and Mrs. Clinton W. Howard, Capt. and Mrs. Louis R.Knight, Lieut. and Mrs. E.B. Bobzien, Lieut. and Mrs. J.P. Hodges and Lieut. and Mrs. Harry H. Mills, and they were assigned to organizations as follows: Major Howard to Hqrs. 4th Composite Group, Camp Nichols; Capt. Knight to Philippine Air Depot; Lieut. Bobzien to Flight "B", 2nd Obs. Sqdn., Camp Nichols; Lieut. Hodges to 6th Photo Section, Camp Nichols, and Lieut. Mills to 3rd Pursuit Sqdn. Clark Field.

Lieut. H.K. Ramey, one of our brother officers plowed and waded his way thru to victory in the Manila Golf elimination tournament, thereby assuring himself of a place on the team which is trying to wrest the Far East Golf Championship Cup from the Hongkong Golf Club of Hongkong, China, the present holders of this coveted honor.

The elimination tournament was held during the rainy season, which added considerably to the difficulty of obtaining low scores, but this in no sense served to bother our skinny brother (late from Bolling Field), as he not only played his way thru to a berth on the seven-man team, but his playing moved him up to the number three position.

The invaders (the Hongkong Golf Team) arrive here on the PRESIDENT WILSON on October 18th and the tournament is scheduled for October 20th, 21st and 22d. The playing should be of a high grade as the course is now in excellent condition, and with four members of our team, who are again on their games and playing pen golf, we should be able to make a good showing against the Britishers.

A return match is scheduled to start on the Chinese New Year (Jan. 11,1926) at Hongkong regardless of the outcome of this match, so Ramey also secured for himself a trip to China. IT's the old Air Service Spirit "Up and at 'em."

The Air Service held their regular Transport Party on the evening of October 2nd at the Polo Club, in the nature of a Dinner Dance. These parties are held as a reception for the newly arrived officers and wives and as a despedida for those departing from our midst. The table seating about ninety

people was in the shape of a horse shoe, completely occupying that side of the Club nearest the Bay. There was still plenty of room left for dancing which every one took part in, among those seen on the floor being Lieut. D.M. (Chief) Myers doing his Philippine adaptation of the Indian War Dance. When "Home Sweet Home" was played, everyone was loath to leave, so evidently this was another of those popular and successful Air Service Parties, bidding a welcome to our new arrivals and a bon voyage to those departing.

In honor of those sailing on this Transport, the 4th Composite Group put on a group formation, consisting of MB3A's, DH4B's, NBS-1's and Douglas Cruisers, escorting the THOMAS thru the breakwater and nearly half way to Corregidor.

The Air Service lost many of its popular officers on this sailing of the THOMAS, among them being Capt. Rosenham Beam, Group Operations Officer, who goes to Kelly Field for duty; Lieut. R.V. Ignico, who held down the difficult post of C.O. of the Philippine Air Depot, who goes to San Antonio Air Intermediate Depot; Lieut. R.E. Selff, Post Exchange Officer and C.O. of the 6th Photo Section, who goes to Wright Field; Lieut. P.E. Skanse, of the 28th Bomb. Sqdn., who goes to Bolling Field; and Lieut. W.A. Maxwell, Supply Officer at Clark Field, who goes to Kelly Field. We all wish them luck and happy landings at their new stations.

The Group Operations School graduated another class during the month, and let loose on the Service another bunch of parachute enthusiasts, for each man tested a chute out in "thin air" and happily found that it works. Besides the students of the class, Lieut. George Beverly and Corp. Buelow made live jumps.

Master Sgt. Nichols, the Crusader for the parachute, is the Chief Instructor and takes a great pride in the students he graduates and those who succeed in finishing the course are instructed in every phase of parachute rigging and repair work which can be done in the field. The following men graduated: Corp. Chas, W. Bedell and Pvt. Earl C. Knight, Hqrs. 4th Composite Group; Pvts. Forest J. Tigner and L.W. Gambell, 2d Obs. Sqdn.; Pvts. Clyde Tenney and Eugene B. Blair, 66th Service Sqd. and Pvt. Leonard K. Deeds, 28th Bomb. Squadron.

Clark Field, Pampanga, P.I.

The month started with an air carnival, staged to give the officers of the other branches stationed at Camp Stotsenburg an opportunity to learn at first hand just what the Air Service is doing in the Islands. General Symonds, the C.O., declared a half holiday in order that all officers might have the opportunity of seeing the demonstration. Various pursuit maneuvers were carried out in formation, and the crowd seemed very enthusiastic, especially over the simulated machine gun attacks upon ground targets and the low altitude bombing.

Having heard that Lieut. "Buddy" Maxwell was leaving for the States on the October Transport, the officers of the field threw a surprise party for Buddy and Mrs. Maxwell. Needless to say, it was a good party, and as Bud was heard to remark LATE the next day, it was a party that he wouldn't forget in a long while.)

One of our supposedly staid old bachelors deserted the ranks of the bachelors, when on the eleventh of this month Lieut. O.R. Cook and Miss Minna Edwards were married in Manila. The newlyweds beat a hasty retreat for Baguio and when they came back we met them at the station with Lieut. Kenny's Brass Band et al. A right royal reception it was, and no mistake -- As Lieut. Haddon was heard to remark, "All the bachelors are getting to be regular dare-devils, some of them make parachute jumps and others get married.

A new arrival reported at our field the other day. Her name is Miss Jane Isabelle DeFord, and if you don't think she makes an efficient little officer you just ask her proud Mom n' Pop.

Captain DeFord had motor trouble about half way between here and Manila the other day and had to make a forced landing in a canefield near San Fernando, Pampanga. Luckily, neither he nor his mechanic were injured, although the plane was nearly a total washout.

First Lieut. H.W. Beaton was transferred to Flight "B" at Camp Nichols, leaving this station on Sept. 26th. First Lieut. J.G. Taylor was transferred to the 3rd Pursuit Squadron at Clark Field, and left this station on Sept. 23rd. First Lieut. P.L. Williams was transferred from the 3rd Pursuit Squadron at Clark Field to the 2nd Observation Squadron, and joined this station on Sept. 24th.

On Sept. 29th First Lieuts. Thomas, Williams, Redman, Finley, Burgess and

Umstead with two mechanics in four Douglas Cruisers made a formation flight to greet the personnel aboard the Transport THOMAS which was located at about 2:30 p.m. near Verde Island.

On Sept. 26th Flight B of the 2nd Observation Squadron was formed at Camp Nichols, where they will operate DH4B's. Flight "B" is now composed of six officers and 30 enlisted men.

The 2nd Observation Squadron lost one of its best men on Sept. 30th when Corp. Ives J. Histed upset in a banca and was drowned before aid could be gotten. The banca upset off Monkey Point, Corregidor Island.

San Antonio Air Intermediate Depot, San Antonio, Texas, Nov. 9.

Major Lackland and Lieut. McMullen returned from a cross-country trip to Mitchel Field on administrative and inspection purposes in connection with air work and to attend the Commanding Officers' and Engineering Officers' conference, and the Air Races held there. On their return they were delayed at Tallulah, La., from October 30th to Nov. 1st by very inclement weather, but they enjoyed the hospitality of the Bear Lake Club while waiting for the rain and fog to partially clear away.

Lieut. R.T. Aldworth made a cross-country flight to Tucson, Ariz., where he attended the dedication of the new landing field at that place.

Lieut. Lewis A. Dayton, Post Adjutant, made an extended cross-country flight to Buffalo and Mitchel Field, N.Y., returning Oct. 19th. On the flight east he visited Muskogee, Kansas City, Scott Field, Dayton, Cleveland, Niagara Falls, Buffalo and New York, returning via Washington, Fairfield, Columbus, St. Louis, Muskogee and Dallas.

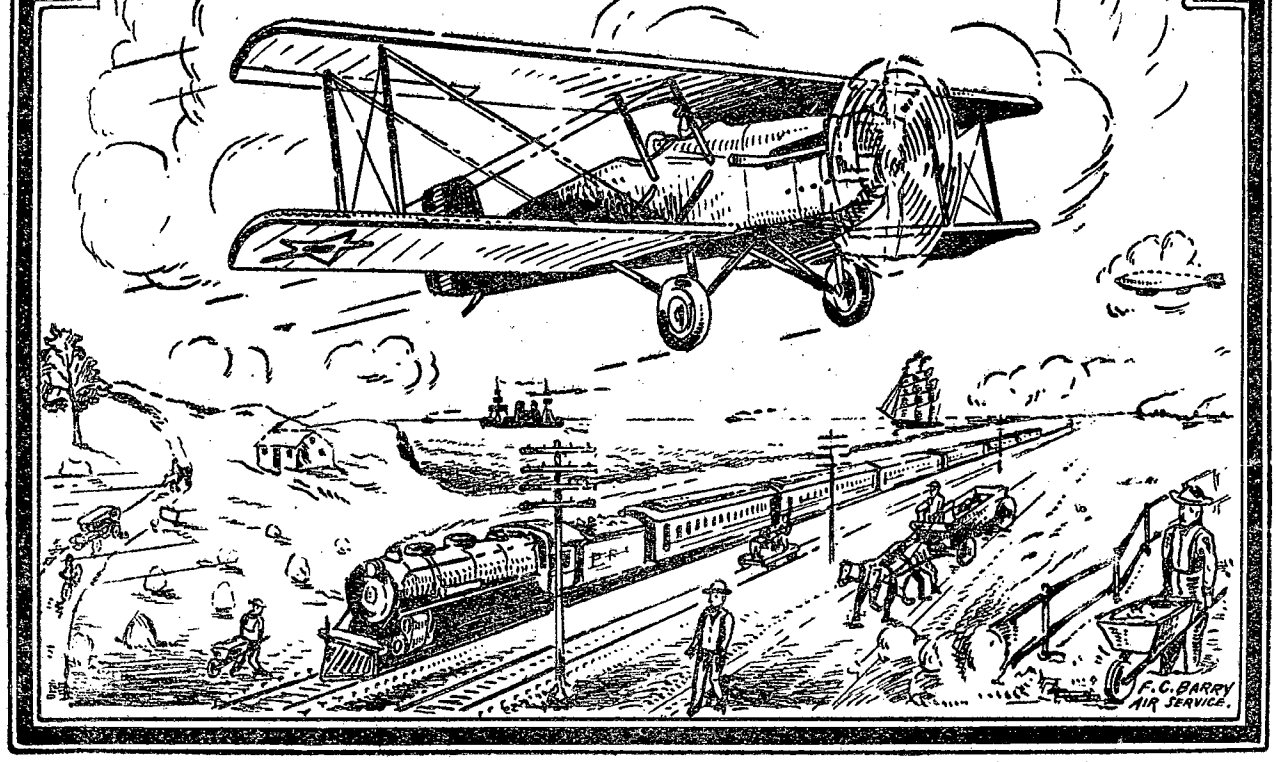
Lieut. Frederic B. Wieners, who reported from Hawaii on Oct. 6th, was assigned to duty as Executive Officer.

Two of our three bachelor officers jumped the traces and took unto themselves the added responsibility of a wife and budget. First Lieut. James E. Duke, Jr., committed the deed on Sept. 7th and1st Lieut. Thomas H. Chapman became afflicted on Sept. 22nd. Both of these officers have been close buddies for a long time, and investigation develops the fact they married two charming young ladies who have likewise been close companions. The board appointed to "investigate the circumstances under which the accident occurred" has been unable to come to a finding in the case to date.

Capt. Otto J. Langtry, QMC, Post Quartermaster, returned to duty after a four months' leave during which he made an extensiwe automobile tour throughout the United States.

WAR CLAIMS AND WAR
DISPOSAL SECTION.

U. S. Army Air Service News Letter



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VOL. IX AIR SERVICE NEWS NO. 21

Information Division
Air Service

December 23, 1925

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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AERIAL FOREST FIRE PATROL ON THE WEST COAST

In the forest fire patrol operations on the West coast during the past summer, utilizing ten airplanes, 217 new fires were discovered, and 61 fires were discovered and reported by airplane observers before any other agency was able to do so. Altogether 421 patrol flights were made, totalling 909 flying hours and covering 76,715 miles, without accident to the personnel engaged therein. There were but three forced landings. Two planes were forced down within two hours of their delivery at Sacramento, Calif., from the Rockwell Air Intermediate Depot, to the Forest Service, one with a leaking carburetor float and the other with broken oil gears. The third forced landing was at Spokane, a newly overhauled engine which was installed in the plane having run out of oil after 3¼ hours of flying.

There were four major accidents to airplanes, as follows:

1. As a result of failure of welding on the landing gear, a landing gear and propeller were broken on a metal fuselage plane on its second landing at Fresno, Calif., after delivery to the Forest Service.

2. A plane was wrecked beyond repair at Medford, Oregon, due, it is believed, to lack of judgment on the part of the pilot.

3. A landing gear and propeller were broken at Salem, Oregon, due to landing in a very rough field.

4. A plane was wrecked beyond repair at Hayfork, Calif., when some cattle ran suddenly from under some trees directly in the path of the plane which was taking off. The pilot turned to avoid the cattle and struck the trees.

First Lieut. Lloyd Barnett, Air Service, stationed at Crissy Field, Presidio of San Francisco, Calif., prepared an article giving the details of last summer's forestry patrol operations, which is quoted below as follows:

"Aerial forest fire patrol of the forests of the West Coast during the 1925 season was a departure from the patrol work of previous years in that it was an experiment by the Department of Agriculture in the employment of Air Service Reserve Officer pilots and civilian mechanics.

The patrol was financed by a Federal appropriation of Fifty Thousand dollars. The War Department cooperated to the extent of loaning the Department of Agriculture ten DeHaviland planes, furnishing spare parts and supplies to maintain these planes in operation for the summer, and detailing one Regular Army Air Service officer, 1st Lieut. Lloyd Barnett, to assist the Department of Agriculture in such matters as selecting pilots and mechanics, compiling a list of spare parts and supplies needed to maintain the planes in operation, preparing forms for patrol reports and drafting a Manual of Instruction for Forest Patrol Units. The Air Service Liaison Officer also supervised flying operations during the patrol season.

The Fifty Thousand dollar appropriation was made available to cover salaries and expenses of patrol personnel - pilots and mechanics (except those of the Air Service Liaison Officer), the purchase of gasoline and oil for the airplanes, and for automobile transportation, the conditioning of a few landing fields, reimbursing the War Department for nine extra reconditioned engines at a cost of $450 each, and other miscellaneous expenses.

No regular patrol was planned. After a sufficient number of reconnaissance flights (three) had been made by each pilot to familiarize him with his territory, the planes were held in readiness for:

1. Reconnaissance of large fires;

2. Confirmation of reports of fires on which it might be difficult to obtain reliable information from other sources;

3. Flights after lightning storms, and when the atmosphere might be too smoky for effective detection of fires from lookout stations.

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The foregoing plans were carried out throughout the season. The instructions issued at the outset were found workable and were continued in force until the close of the forest patrol operations.

It was the aim of this year's patrol satisfactorily to meet patrol requirements by making all patrols for which requests were made, and that were considered necessary and, at the same time, to conserve $10,000 of this year's appropriation with a view to having this saving available for beginning next year's patrol during the latter part of the Fiscal Year 1926 before a new appropriation for the work could be available. A saving slightly larger than $10,000 was effected.

Following is a Table of Organization of the 1925 patrols:

Bases	Territory	Dates of Operation	Personnel			Airplanes
			Pilots	Mechs.	Ch.Obs.	
#Spokane, Washington (Nat.Guard Flying Field	NE Wash., Idaho NW Montana	7/1-9/20	2	3	1 (FS)	2
Vancouver Barracks, Wash. (Pearson Field) (See)*	Western Wash.	7/1-9/10	2	3	0	2
Eugene, Oregon (Municipal flying field)	Oregon	7-1-9/10	2	4	0	3**
Sacramento, Calif. (Mather Field)	Northern California	7/1-10/12	2	3	1 (FS)	2
Los Angeles, Calif. (Mat.Guard Flying Field)	Southern California	7/1-10/21	1	2	0	1
Total			9	15	2	10

NOTE:

\# One pilot, one mechanic and one plane from the Vancouver Base were transferred and loaned to the Spokane Base from July 22nd to the close of the season.

** One of the planes and one of the mechanics listed opposite Eugene were assigned to the Air Service Liaison Officer, who established this base as his headquarters.

* Pearson Field is used as an engine changing base for Spokane, Vancouver and Eugene.

At the beginning of the season it was recommended that a Chief Observer, preferably a Forest Officer familiar with his particular territory, who knew fire fighting from the ground and who desired to fly, be detailed to each patrol base, but due to the shortage of personnel during the fire season, only two bases - Spokane and Sacramento - were assigned such observers. The results obtained during the season show that these two bases accomplished far more than the other three bases. Experience and training are highly essential to successful work as an observer. Intimate knowledge of the ground, such as most Forest Service men have, is a very desirable qualification for a Forest Observer; but, if the best results are to be obtained, this must be accompanied by absence of fear when flying, a knowledge of fire fighting and considerable skill in map reading. It is useless for an observer to sight a fire unless he can describe its location in such a way as to enable others to find it.

Considerable success was attained during the past season in placing detailed information concerning fires in the hands of ground forces, by message dropping. The only places where any real difficulty was experienced in dropping messages were those stations that were situated in narrow, deep canyons, where it was not safe to get down close to the ground due to lack of room in which to maneuver. Approximately two hundred messages were dropped during the season and reports indicate that of these only two were not recovered promptly by ground forces.

It is impossible to state accurately how many fires were discovered first by the patrol airplanes, but the figures given below are approximately ninety percent correct. In this connection it must be remembered that the planes were usually working in localities in which there were very intensive lookout systems.

kept alert and built up on an emergency basis for a large part of the season. Also, during the early part of the season Forest Supervisors and other Forest officers failed to take full advantage of the planes. This was due, in some localities, to ignorance of the possibilities of the patrol airplane and, in others, to lack of confidence in its usefulness. Later in the season there was a marked tendency away from these attitudes, except by a very large percentage of U.S. Forest Officers in District Six (Oregon and Western Washington), confidence in the patrol plane and appreciation of its worth following quite naturally as the result of the broader and more complete realization of its value that was developed through its use.

No definite statement can be made, either, as to the monetary saving or the acreage saved by the work of the planes. It is certain that they furnished first reports on a number of small fires. Every large fire was at one time small and every small fire during the danger season is a potential large one. The following is quoted from the report submitted by District One:

'The Potlatch Timber Protective Association in Idaho made an effort to use aerial patrol of its territory in the summer of 1923. This pioneer effort in the northern Rocky Mountain region was a failure after a few flights chiefly because of lack of suitable equipment and preparation. The field in this locality was therefore a virgin one on July First, 1925.

'In District One there was a number of fires, each of which cost more than the entire expenditure of aerial forest fire patrol. If the use of the planes prevented the escape of one small fire from the Class "A" size into the $8,000 class, the service paid for itself directly, disregarding the damage due to such fire.

'In accuracy of location the reports by plane on small fires probably compare favorably with those furnished by lookouts, As is the case with lookouts, much depends on the skill and training of the observer and on the accuracy and the completeness of the maps used.

'Of 150 messages dropped this season, only two were not picked up promptly by the ground forces.

'Aside from the discovery of small fires, considerable valuable service was rendered by the planes in scouting going fires of all sizes, and furnishing information and, in some cases, progress maps, to the ground forces. This again is a service which it is impossible to express in dollars."

Following is a tabular statement of the results of aerial forest fire patrol for the 1925 season:

Base	No. Planes	No. Patrols	Hours Flown on Patrol	Miles Covered	Number New Fires Discovered	Fires discovered and reported by Plane before any other agency.
Dist.No. 1 Spokane,Wash	3	179	398	34,000	66	12
Dist. No.6 Vancouver, Washington.	1	18	61	5,870	5	2
Dist. No. 6 Eugene,Ore.	2	27	81	7,045	45	42
Dist.No. 5 Sacramento	2	108	259	20,615	101	5
Dist. No. 5 Los Angeles	1	89	110	8,085	0	0
TOTAL	9	421	#909	75,615	217	61

#Note: Ferrying of planes from Rockwell Depot to patrol bases, and return thereto; ferrying of planes for installation of new engines, and inspection trip by the Air Service Liaison Officer not included in above flying time.

Following are quotations from reports of various Forest Officials:

'Replying to your favor of the 15th inst., regarding the use of airplanes, the writer made one flight only during the season. This was at a time when the

weather was such as to foster the start and spread of fires, and several were burning, but only one was of any size.

From my observation on this trip I believe the airplane, properly used, will render most valuable service to Forest Protective Agencies, and there is a place for it in our work."

-- Mr. Geo. C. Joy,
Washington State Forester.

'On July 26th it was known that two rather bad fires were burning on the Entiat District, and another fire, dimensions unknown, on the Lake Wenatchee District, but information as to their exact locations and sizes, and what should best be done about them, was not immediately obtainable.

I wanted to see for myself and thought of driving up to Entiat, but knew that would take considerable time, and immediate action, it was felt, was important. I remembered the airplane patrol and at 9:30 a.m. put in a call for the emergency operator at the Post Office. By 10:00 a.m. I was in touch with the airplane pilot (Vancouver Barracks) and at 12:30 he was in Wenatchee. By 3:00 p.m. I was back in Wenatchee with exact information as to the locations and sizes of these fires, and able to issue necessary instructions. One fire, hitherto not reported, was discovered, but while we were gone it had been discovered by a patrol man and men were already on it when I got back.

I was further sure that there were no other small "lightning" fires as a result of a small lightning storm that had occurred that morning.

It seems to me that this flight was well worth the expense involved, though I don't know what that was.

On September 4th, opportunity occurring, Mr. Conover, in my absence, made a flight, making the full round of the forest. He saw two fires, one outside of, but very close to, the forest boundary, which was being handled, and one far outside which, it developed, was not being taken care of. He was very enthusiastic about the possibilities of such a patrol.

It seems to me clear that air patrol can be a very valuable adjunct to our present detection system. It would take about ten additional lookouts fully to cover the Wenatchee Forest. This would mean at least one hundred miles of additional telephone line to put them into communication. The country they would cover is liable to fire almost only by lightning. Lightning storms do not always occur with the frequency of the past season, so that from three to five flights during the season could be counted upon to do what these additional lookouts would do, and which we have hitherto been trying to do by ground patrol.

On the whole it seems that air patrol after lightning storms, to detect fires in areas invisible from lookouts, and for sizing up going fires, such as those mentioned in my first paragraph, is cheaper than a complete extension of the lookout system; is worth while and should be continued.'

A.H. Sylvester,
Forest Supervisor.

The following article was published in the "Service Bulletin" (U.S. Forest Service), Washington, D.C., August 31, 1925:

'Santa Barbara Finds Air Patrol Effective:

Pilot James from the Griffith Park flying field came to Santa Barbara early in the morning of July 17 with a plane for use on reconnaissance of the Hopper Mt. Fire. Together we made a very thorough reconnaissance of the fire, which took us an hour and twenty minutes from the landing field at Santa Barbara.

Before leaving I had heard from Ranger Valentine, who was in charge of the fire, to the effect that the fire was making a run down the Little Sespe and it would be necessary to establish a camp on the mountain at the head of the Sespe Arrangements were made, before leaving on our flight, to have the pack stock come to Santa Barbara to be taken later to whatever place Valentine ordered the I found on looking over the fire from the air that it had changed its course since Valentine had seen it and was burning up Hopper Canyon very strongly toward the divide up Reasoner Canyon. Upon landing I found there were men ready to go to the fire from Piru, Filmore and Santa Paula, but they were awaiting orders from Valentine. After what I had seen from the air I knew that it would be necessary to change the plan of attack and therefore told the men to proceed to Reasoner Canyon so as not to lose any time. Later Valentine telephoned that it was necessary to change the plan of action and that he wanted the pack stock

sent to Reasoner and would try to get the men in there at once. I was able to tell him that the men had already gone and the pack would soon follow.

Gathering this information from the airplane enabled us to get the men on the line considerably sooner than it would have been otherwise possible. Having the men on the line when they were needed made it possible to control the fire before it backed around Reasoner Canyon and made a bad run into the Piru, which would have been an expensive fight. I feel that in this one case the Forest Service was probably saved an expense of at least $10,000."

C.E. Jordan,
Forest Supervisor.

It should be fully recognized that the work this year has been experimental and developmental in character. It marks the first attempt by the Forest Service to establish a patrol with Air Service Reserve Officer pilots and civilian mechanics.

The results were an absolute success from every standpoint in Districts 1 and 5 (Montana and Idaho - Dist. #1 - and California - Dist. #5). It is believed that the results of the patrol in District Six (including Oregon and Western Washington) were just as much of a success, considering the number of patrols for which requests were made. The District Forester of District No. 6, and some of his staff, believe it is doubtful whether the results obtained from the use of the airplane during the season just completed warrant the expenditures involved. Nevertheless, their own report shows that forty-four new fires in their district were reported by airplane before any other agency, as against seventeen new fires reported by plane before any other agency in Districts 1 and 5.

It is hoped that even more effective work will be done in the future. It will be if advantage is taken of the many uses to which the fire fighting airplane may be put."

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SERVICE TEST OF LOENING AMPHIBIAN

After completing one of the most important photographic missions as yet undertaken by the Army Air Service, Lieut. Eugene C. Batten returned on December 10th from Duluth, Minn. There was added interest in the work that he did, as all of the six weeks of flying was done with the Loening Amphibian, a new American type of airplane.

Lieut. Batten, with J.T. King, mechanic, and E.G. Plank, 1st Lieut. Corps of Engineers, the official photographer, made photographs of 2000 square miles around the United States-Canadian boundary in the Rainy Lake region near Duluth. In this region there are practically no landing fields at all, the country being largely thick forest, dotted with fresh water lakes. Although the Loening Amphibian was flown from McCook Field and landed at the Air Mail Field at Chicago as a land plane enroute, the operation at Duluth was almost entirely done using the machine as a seaplane. This demonstrated conclusively the necessity of the Army Air Service having an amphibious type of plane for work of this nature, as a land plane in this lake region would have been almost useless.

The flying that was done totalled almost 8000 miles, and during this time 720 photographs were taken with the new tri-lens mapping camera, and about 300 photographs weretaken with the oblique camera. The work was done under the direction of the Engineer Corps of the United States Army in connection with mapping the boundary and determining the extent and level of lakes, and much of the mapping disclosed some regions of the country that had hardly ever beem visited.

Special permission to do the work was granted by the Canadian Government, and a great deal of flying was done over Canadian territory. The greater portion of the flying was done in weather which was below freezing. Ice formed on the wings and the propeller, and the plane, which was left out in the open for the entire time of the survey was found one morning after a Northeast storm completely covered with ice, which had to be chopped off the surfaces with axes. Throughout the flying, however, it was found possible to overcome the ice difficulties and to operate the Loening Amphibian in very cold temperatures, with no facilities available at all other than hoisting the plane in and out of the water.

Lieut. Batten reported that the coldest flying was done at a temperature of ten degrees below zero on the ground, which became colder and colder until finally at 12,000 feet - at which altitude most of the photographs were taken - the

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temperature registered 27 degrees below zero.

The territory covered extended Northeast and Northwest from Duluth, taking in the westerly end of Lake Superior, and hundreds of lakes, including the famous Rainy Lake. An attempt was made to locate a land base somewhere near the scene of actual operations, but very few places were found suitable.

"Owing to the nature of the country over which it was necessary to fly", said Lieut. Batten, "the Amphibian was the only plane practical to use. In summer when the lakes are all open, the ability of this type to be used as a seaplane is ideal, and during the winter when the smaller lakes are frozen the Amphibian could land on them as a land plane with its wheels, and at the same time could be used on the larger lakes, which remain open much of the year, as a seaplane."

Lieut. Batten added that the Loening Amphibian stood up very well during the entire project, and no forced landings were made at any time during the flights.

Air Service experts at McCook Field have taken a particular interest in the results achieved on this trip because it constituted a very successful service test of the Loening Amphibian, since the entire operation of the plane throughout was handled by Lieut. Batten and his only mechanic - J.T. King of McCook Field. The plane returned to McCook Field and was immediately inspected and found to be in a remarkably good and serviceable condition.

Many records for cross-country flights in the Amphibian type of plane were broken by Lieut. Batten during his trip from McCook Field to Duluth, and also in his work at Duluth. An endurance flight at Duluth with full load was made for 6-1/2 hours continuous flying, partly at an altitude of 13,000 feet, which constituted a record in this country for the Amphibian type of airplane. The longest cross-country flight made by Lieut. Batten was from Duluth to Chicago, 420 miles, non-stop, in slightly over 3 hours.

The cruising speed of the plane throughout was about 105 miles per hour. This flying work, added to the previous flying done with the Amphibian, totals 200 hours of flying to date.

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A NEW TRANSPORT AIRPLANE

By A. M. Jacobs

The recent visit of the Fokker F-VII, three-engined commercial transport to the Engineering Division, McCook Field, for the purpose of undergoing government testing at what Mr. Fokker describes as the "only laboratory in the world where absolutely accurate airplane engineering performance test data ca be procured" absorbed its quota of engineering attention. The first few days the big monoplane was in the hands of the test pilots, from whom drifted universally favorable reports upon its performance. These were backed by commen of Engineers and flying officers who took a hand in trying it out. Finally, brought to the field by the enthusiasm of their men, the ladies appeared for rides, including three very small ones, all under two years of age, daughters of Major MacDill, Chief Engineer of the Division, Lieut. Macready, and Lieut. Aldrin. These latter took their flights much as a matter of course, not seem ing to appreciate just how much their presence was an expression of confidenc in modern aviation in general and in the Fokker plane in particular.

Safety, according to Mr. Fokker, has been the watchword in the designing of this plane and to see it suspended in the sky, seeming scarcely to move, a tually held to a speed as low as 42 miles per hour without stalling, is to be impressed with a conviction of its reliability. The big internally-braced cantilever wing, the same general type used on other Fokker designs, includin the historic T-2, has a span of 63½ feet, with a thick high-lift airfoil. In i are lodged the two gravity-feed gasoline tanks suspended between the fore and and aft wing beams. The steel tube fuselage is 48 feet long. It encloses a cabin with accommodations for ten passengers. Racks for wraps or light bag- gage extend along the upper walls above the sliding windows and there is an ample baggage compartment to the rear of the plane. Movable wicker lounge chairs insure ease of position for the long journey. A hot-air heater, whic may be regulated, provides a comfortable room temperature. A table at one e makes possible the writing of notes or a rubber of bridge. In fact, except f the lack of diner or pullman, all the facilities of the most modern methods c

ground travel are in evidence. An innovation in the pilots' cockpit up front lies in the careful windshielding which, with the tempering heat from the cabin, makes of the cockpit a cabin also and enables the pilots (there is space for two side by side with dual control) to fly without goggles or extra flying equipment. While this feature may be criticized because while flying through mist or snow the glass would become befogged, rendering visibility difficult, some form of automobile windshield wiper offers an easy correction.

To insure reliability of power plant, Mr. Fokker has chosen to man his plane with three Wright (Whirlwind) radial, air-cooled, 200 h.p. motors. One of these is situated in the nose of the fuselage, the other two in nacelles suspended from the wing. The plane climbs and flies with full load on any two of the three engines. In the event of two engines cutting out, it was calculated from test results that the plane would still fly 35 miles from 8000 feet and 25 miles from 5000 feet on one engine, making the possibility of locating and coming down upon a safe landing field an almost foregone conclusion. The failure of three separate engines in flight would, of course, be extremely remote, but should this highly improbable contingency arise, the inherent stability and non-stalling features would still afford every chance for a safe glide to earth.

The plane will not stall of its own accord, being so balanced that it will fly "hands off" with or without power. With engines shut off, the plane noses down, regains speed, and comes to the gliding angle necessary to develop flying speed without recourse to the elevator controls. In a glide it is possible to change direction by the use of the rudder only. If purposely stalled it will settle down without the tendency to go into a spin or nose dive. Even under the rough handling of testing, there was not the slightest inclination toward spinning. Shutting off any one of the engines effects only a slow change in direction, easily checked by a slight movement of the rudder. The plane carries a total useful load of 3500 pounds.

It was good to see the utter satisfaction of experienced Army airmen, ever working and hoping for the ideal in planes, accustomed to the handling of ships good, bad and indifferent, as one after another they landed this plane. It scarcely needed their enthusiastic praise to know they had found it good. In fact, the engineering cricitisms were of such minor nature that they were practically engulfed in admiration for the structural and aerodynamiccharacteristics which seem so well to fit this ship for the purpose for which it is planned- a practical commercial air transport.

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COMMERCIAL AVIATION - AT LAST?

By A.M. Jacobs.

The Fokker Transport recently left McCook Field for Detroit on a clear cold day, with low-flying clouds and heavy air bumps at the 1,000 ft. level. At about 3,000 feet a strong head wind was encountered, but because of the smoothness of this floor, it was the accepted altitude for the greater part of the flight, affording some beautiful cloud views to the travelers, several of whom, the writer included, were experiencing their first "cross-country". Detroit was reached in slightly less than two hours and landing made on the Ford Airdrome. Presto, as if a curtain had risen on a new set, army aviation was lost sight of and commercial aviation held the stage. "Bomber", "Pursuit", and "Observation" were forgotten words, lost in talk of the "Douglas", the "Ford", and the "Fokker" ships. Representatives of new and embryonic commercial air companies sprang to life, hailing from New England, California, Florida. Discussion of metal versus non-metal wing construction, of "dural" versus steel fittings edged its way into conversations. Comparative costs of operation and maintenance were as eagerly sought and figured upon as if automobiles and not airplanes had been in the balance. Pilots from competitive companies talked "shop", exchanging experiences, eagerly learning what they fairly could of each other. Now and then a wise little man who served his 500 hours piloting on the London-Paris route let fall sage observations upon the strict inspection, efficient weather service, radio communication systems and ground block-signal systems which contributed to the safety of air travel on European air lines. He claimed that this ground organization must be developed in America before it will be ready to efficiently handle in any large capacity the commercial air transportation question. The proportion of the traveling public in England and Holland which had taken to air journeying had been two percent. In this country he found some 6000 people now travel daily between New York and Chicago. Suppose two percent of these made the journey by air! Immediately an eager blaze of possibilities lighted many eyes, until the physical handicaps of mountains and distances were recalled, launching further discussion.

THE HAMILTON RICE EXPEDITION IN SOUTH AMERICA
By Albert W. Stevens.
(Continued)

The vertical camera could not be arranged inside the cockpit; there was no room without complete overhaul of the control system. Furthermore, the scheme of fitting a large circular aluminum casting into the hull did not seem good, as it would have weakened it greatly. A frame, therefore, was made up to fit on the starboard side of the hull forward of the wing. This frame held the standard Fairchild mount, which allows the camera to be turned or leveled during flight. Some trouble was expected from air currents disturbing the camera, but in this comparatively low speed plane, with heavy hull, the suspension proved rigid enough to hold the camera steady. Exposures were made at 1/100 and 1/50 second.

The hydroplane was found to be very good to make oblique exposures from. With the Fairchild 20-inch (Model K-6) camera, exposures could be made directly ahead, over the bow, or from either side, without the aid of a suspension. The plane was very steady and a comparatively low shutter speed could be used when desirable. One thing was poorly arranged in the cockpit; that was the magneto switch; located on the right hand side of the compartment, away from the pilot. The observer accidentally hit this with the oblique camera one day, and the engine ceased firing, but fortunately he realized what he had done and kicked the switch back again within a few seconds.

Traverses were carried out in practically the same manner as those made from the boats or canoes of the expedition. The hydroplane had the advantages of more nearly constant speed, of being able to cut corners, and of seeing both banks of the river and both sides of islands in the river. With boats, the river flow is measured at intervals, and the rate of progress is the boat rate less the current rate. Where the river narrows, the current rate rises, but there is no time to stop to measure it. Consequently, with boat traverses, the details are drawn out where the current is swift and compressed where the water is still. In sketching with the hydroplane, flights were made as soon after daybreak as possible, before a wind sprang up. The traverse was checked on the return flight always, and if wind existed, it could be calculated and the sketch corrected. The hydroplane had the further advantage that very long shots could be made. From 5,000 feet it was possible to see 10 to 20 miles ahead and behind, and to get the bearings of distant bends of the river, large islands in the river, or other features that could be positively identified when the plane finally got over them and notation of time was made. The pilot swung the plane until the parallel strips of the top of the hull pointed to the required bend or island. The observer read the compass, after allowing it time to settle, and laid off the bearing on his board with a protractor. Then the plane was swung until a bearing could be obtained over the tail. As the plane then swung on straight line course up river, the angles were laid off to correspond, and the time was noted as the lower and upper ends of islands were passed; these were located at once on the sketch, allowing a nautical mile per minute per division of scale selected. The width of river and islands, and the shape, were filled in on the sketch by the observer, but he was in a much better position to judge the relative proportions than the personnel in the boats or canoes. The canoe party measured the width of the river from time to time by theodolite, and such information was available the same day to the hydroplane crew. With wide stretches it was possible to get a measure by flying the plane from bank to bank and noting the number of minutes and seconds taken to cross. There are long stretches of the Rio Negro, filled with large islands, that are 15 to 25 miles across, and on the upper Rio Uraricoera, there is a stretch, island filled, that is 5 miles across. A canoe party can only guess the width and shape of the river as it passes up one of the many narrow channels, for there is no time to stop for an extended survey. The hydroplane gets a fairly correct idea in a few minutes of the same region.

The Aerial Camera records faithfully all details of the river and islands, but at 6,000 feet such a small area is covered that it takes a tremendous amount of film to cover a large territory thoroughly. For this reason film was saved for the more important spots, and sketching was relied on for the remainder.

At intervals of about 30 miles, the canoe party made night observations and calculated the latitude and longitude. The sketches were oriented and compressed or stretched as necessary to fit these calculated positions. The sketch from the hydroplane proved to fit the skeleton map of latitudes and longitudes remarkably well, and were especially close in direction, showing that the hydroplane compass was dependable. It was necessary to compress the sketches

usually, from 5 to 15%, in fitting them to the determined positions of latitude and longitude; it was necessary to change the direction but very little - less than 5 degrees. There is no question that sketching strange rivers from an airplane is much faster, is more accurate, and gives more detail than the same work done from boats, especially where there is considerable island formation. Aerial photographs give a still greater degree of accuracy, and it is desirable that a plane be capable of climbing to a high altitude, in order that as great an area as possible may be covered in each photograph of a series. This economizes both in film and in flying time. A plane should do this work at 15,000 feet at least. Next it is desirable that a short focus lens be used in the camera, that a large angle of view may be covered. On standard film, giving 115 negatives per roll, each 7 x 9 inches, a 12 inch lens is commonly used, but the Series IIb Tessar, F/6.3, of 10 inch focus, will cover the same size film perfectly. It is possible, at a small sacrifice in definition and covering power, to use lenses of 8 inch focal length, or even 7 inch. The illumination falls off appreciably at the edges of the negatives with lenses of less than 10 inch focus.

It is probable that a plane of the Douglas-Davis type, fitted with metal pontoons, will be as satisfactory as any. A plane for work in exploration should have a gasoline capacity of at least 7 hours, and perhaps 10 hours. It should be able to get off the water quickly with its load; a large wing area is desirable at a sacrifice of speed. There are few opportunities for landing except on the rivers, and pontoons only should be fitted. A Liberty motor, with Delco ignition, is desirable; with a 12 volt system, the same battery may be used for camera operation. The gasoline system should not be of the air pressure type; the gas supply should be pumped from the tanks by either sylphon or gear pump. There should be an auxiliary hand pump for the observer to operate in case of failure of the engine operated pump. It is desirable that a small emergency gasoline supply tank be located in the upper wing. The seats should be designed to allow the crew to wear parachutes. It is likely that a compass of the earth inductor type will permit greater accuracy in making sketch maps.

Provision should be made for mounting the camera inside the fuselage. A vertical view finder, calibrated, should be provided for.

The wings should be painted with aluminum dope to resist the sun's rays. Wood work should have best protective varnish; wires should be well greased.

Altimeter should be provided with a correction chart. A turn indicator should be part of the instrument equipment.

A metal propeller should be furnished on the plane, and the design of it should permit quick climbing rather than high speed.

The radiator should be extra large to insure cooling when take-offs are necessary in the middle of the day or afternoon. Shutters should be provided for use at high altitude.

Complete tool kit to be provided. Anchor and line part of equipment.

Light weight covers should be provided to completely cover the cockpits, while the plane is moored. Advisable to have 4 fittings for securing lines; one at bow, one at tail, and one at each end of lower wing, forward edge.

Funnel and chamois strainer necessary equipment. Oil tank cap should be of ample diameter; oil tank capacity sufficient for 10 hours flying.

Double stick control to be provided.

Some consideration has been given to making use of such a high-powered plane on a future expedition in this region, possibly two years from now. Tentative plans are to send a launch with aeroplane supplies up the Rio Negro, leaving gasoline and other materials at designated settlements, the latitude and longitude of which have been determined on previous Rice Expeditions. Another launch with supplies would be sent up the Rio Brance. Starting from a settlement on the Rio Negro, the plane would fly across to the Rio Brance, following and sketching in the courses of the nearest rivers that feed into these two larger streams; coming out on the Brance, the plane would be headed up or down river to the nearest settlement, where gas would be available. The plane would than move up river, fill tanks, and fly back to the Negro, again following the nearest water courses, and making for the nearest settlement on the Negro. In this way, in a few weeks, assuming no motor trouble, the system of waterways of the huge area between these two great rivers would be mapped with reasonable accuracy. At the present time almost nothing is known of this waterway system; no two maps show these two tributaries alike for direction or length, for the reason that geographers must guess, or work from meager information furnished by Indians or by parties gathering balata, rubber or nuts. With accurate information

available, it may be possible for parties to work from one waterway to another. In fact, some of these are likely to be joined together by canals, like the Rio Negro and the Oronoco, which are joined by a navigable waterway, the Casiquare Canal.

With a high altitude plane and a wide angle camera, the survey could be carried out photographically with greater accuracy than by sketching; with automatically driven camera, the sketching could be carried out at the same time by the observer, to insure results in case of possible loss of photographic record (as might happen should large masses of clouds form between the plane and the ground). In case of motor trouble, there is a fair chance of making a landing in some waterway, when the crew of the plane would have to work their way to civilization as best they could. A large plane could carry sufficient firearms, provisions, etc., to give the flyers a reasonable chance for escape from the forest.

With wireless equipment on both launches, departure of plane would be given, and failure of plane to arrive on time would be communicated back. Knowing the tributary followed from one river, and the probable stream followed to the other, relief parties could start out immediately from both ends, which would increase the chances of the aviators. A few rockets, to be used nights at a certain designated hour, by both aviators and relief parties, would perhaps be worth using.

While motors are now very reliable, there is always a chance of trouble, and every precaution should be taken to insure reliable operation, for a forced landing on any of the many flights that would have to be made, would be considered by those acquainted with the Amazonian forest a very serious situation for the flyers, even though the plane be landed on a waterway without damage. If not over a waterway, parachuting would be advisable before the plane crashed in the massive trees of the forest; the only hope of the flyers would then be to find the wreck of their craft, and secure food. With machete and compass, they could perhaps cut their way to the nearest river, build a raft and escape. A broken arm or leg would mean certain death, of course. These are chances that people who venture over this region must take, and no expense would be spared to give them as reliable an aircraft as may be had at the present day.

Work of this nature is fascinating, for there is a certain satisfaction in going where people have never been before, and in assisting in filling in accurately details of some of the big areas that are very doubtfully shown on even the most recently published maps.

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Following are some additional notes that may be of interest:

From the furthest point reached by the hydroplane, the Sierra Parima Range was underneath, stretching to the north and to the south as far as the eye could see; the elevation of this range is between 6000 and 7000 feet. To the southwest is a peak, located nearer the Rio Negro, that is perhaps in excess of 8000 feet. Brazil, as a matter of fact, has no very high mountains; according to French maps, Mount Roraima (almost directly north of Boa Vista on the Rio Brance, and at the border of British Guiana) is 3145 meters, or 10,315 feet, and the next highest is Itatiaya, 2,994 meters, or 9,818 feet.

The Sierra Parima Range is the location of the headwaters of the Parima, Uraricoera and Brance on the east, and the Orinoco on the west; it is the range through which, since the year 1763, explorers have failed to pass, because of the hostility of the Guaharibas', a particularly savage tribe which refuses to have communication even with adjacent tribes of Indians, killing all that venture into their territory. These Indians are said to be ignorant of the use of fire, eating their fish and game raw; they are also unacquainted with the use of canoes, apparently for the reason that they live so high in the mountains that canoes would be practically useless. Consequently, their expeditions are entirely on foot, through the forest. It was this tribe that nearly trapped Dr. Rice in his explorations from the Rio Negro, Casiquare Canal and Orinoco side of the Sierra Parima Range, in January, 1920; the savages, from the river bank, attacked Rice's small canoe party with arrows and were advancing over logs and through shallow water to the island on which the party's night camp had been made. It was necessary to use rifle fire, at first over their heads, and later into their ranks, to stop them long enough to enable the party to embark down stream. As there were over a hundred Indians against two white men and eight Rio Negro Indians, the exploration naturally came to an end right there; no question existed as to the outcome if it were continued into the home country of the tribe, on a steadily diminishing river lined with dense tropical forest.

To be continued in next issue.

A NEW ALTITUDE AIRPLANE

By A.M. Jacobs.

The P-53, Le Pere biplane, twice in tests of altitude equipment taken to heights which secured for the United States world altitude records, having well served its purpose, is about to be retired in favor of a more modern design. Its successor, the XCO-5, designed and built by the Engineering Division in 1923, is at present undergoing remodeling with the expectation of being ready for the testing of altitude equipment in the near future. In looking about for a plane which would most efficiently fulfill the conditions for altitude work, several features governed. It had been decided that the new choice must be designed for a supercharger, must be lighter per wing-span ratio than the old Le Pere and adapted to being fitted with high lift wings and a propeller of large diameter. The XCO-5 more than any other plane seemed to answer this description and to more generally lend itself to the modifications which would be necesaary.

Of first importance were the wings. The type selected to give the high lift desired was the Joukowsky StAe-27A. A set of wings to this design was built in the Engineering Division shops. Of wood and fabric construction, they are heavily cambered, being extremely thick at the leading edge and tapering sharply to the rear. Gap and stagger are pronounced. They present a total area of 600 square feet with an aspect ratio of 10. Mounted on the fuselage on the XCO-5 they reduce the weight-span ratio to a much lower value than the plane's original wings. With these wings it is planned to use a detachable-blade aluminum alloy propeller, 10 feet, 6 inches in length with pitch adjustable on the ground.

The inside of the fuselage of the plane has also undergone considerable remodeling in preparation for the frigid journeys. The liquid oxygen flasks, in former flights placed in the rear cockpit, have been moved to the rear of the rear cockpit with tubes and regulators carried through to the front cockpit. In the one-man altitude tests, the rear cockpit will carry the recording barographs. and thermographs and be sealed over. The pilot's cockpit has been completely lined, the floor and lower half of the walls with plywood, the upper half with quilted felt corduroy which, coming around the back of the pilot's seat, forms a taut cockpit covering which fastens about the pilot's neck and extends to the cowling. Even the opening about the socket of the control stick is closed over with corduroy, the whole interior being made snug against the entrance of outside winds or drafts. Through the cowling, which is of transparent celluloid, the pilot looks down upon the instruments and controls, with each of which, some time during the flight, his eyes or hands must be busy. There he sees the altimeter, the tachometer, the air speed indicator, the variable engine pressure gage which indicates the difference of air pressure in the carburetor as altitude is gained, the fuel level gage, the fuel pressure gage, the water thermometer for water leaving the engine, the water thermometer for water leaving the radiator, the oil pressure gage, the thermometer for oil entering the engine, the thermometer for oil leaving the engine, the clock, the oxygen flow regulator, the Liberty engine ignition switch, the battery control switch - the plane is equipped with a dual set of batteries so that if one runs down the pilot can switch to the second - the emergency gasoline hand pump, the radiator shutter control, the throttle control, the spark control, the carburetor mixture control, the supercharger blast gate control, the gasoline shut-off valve and last but not least, the airplane stick and rudder controls. In addition will be mounted a thermometer to give the air temperature inside the cockpit and a second altimeter registering the altitude according to the Federation Aeronautique Internationale reckoning.

In former flights, a temperature as low as 82½ degrees below zero Fahrenheit had been encountered. To further protect the pilot from the extreme cold an extra heating apparatus has been mounted on the exhaust manifold on the left side of the plane so that the cold air passing over the hot manifold and becoming heated is led through a tunnel and thence into a flexible conduit which extending into the interior of the cockpit, ends near the control stick. In this way, the warm air will be directed to the pilot's hands and the center part of his body, though because the conduit is flexible, he may change that direction as he chooses. Dampers in the tunnel make it possible to keep the temperature from becoming too warm at the lower altitudes, a danger which, of course, will not exist higher up.

The XCO-5 is powered with the 400 H.P. Liberty engine. A submerged fuel system has been adopted for altitude work; that is, the fuel pump has been placed at a level lower than the gasoline tank, thus accomplishing gravity feed

from tank to pump. At high altitudes, the boiling point of fuel is reduced close to its vaporization point, therefore any added negative pressure imposed on the fuel by its lifting to the pump is apt to cause vaporization, in which condition it is impossible to pump it to the engine. By submerging the pump beneath the level of the tanks, the duty of the pump is reduced to merely discharging the fuel, which, backed by an even gravity pressure, more easily retains its normal liquid condition. The regular Liberty starting system has been removed and an 8-volt ignition system installed to lighten the plane for these tests.

Since the Liberty engine, which delivers 400 horsepower at sea level, has an output of but 50 horsepower at 35,000 feet unsupercharged, a supercharger is a prime requisite of altitude work. The General Electric Form F, 20,000-foot side - type supercharger used in previous tests, with certain modifications, has been installed. The supercharger is an air compressor which keeps the air pressure in the carburetor at sea level pressure at heights where, owing to the natural decrease in the air pressure, the horsepower gradually falls away to but a fraction of its original output. In former supercharger installations, much difficulty was experienced with preignition of the engine. This often became so pronounced that the plane had to be brought to earth. It was suspected that a richer mixture with supercharger at altitude was necessary. This was found to be true but the principal difficulty was the overheating of the mixture due to the heat generated in the supercharger itself. Due to the increase of temperature created by the compression in the supercharger, it was necessary to interpose an intercooler between the supercharger outlet and the carburetor in order to obtain satisfactory engine performance. The intercooler, in the form of a honeycomb radiator, was placed on the side of the airplane. It was also found that, due to poor conductivity of the air at high altitudes, additional radiating surface for engine cooling was required. This, with the correction of mixture, put an end to preignition.

Lieutenant John A. Macready, who since 1920 has been the principal exponent of altitude test work in this country, will no doubt in the coming trials take the altitude airplane to its ceiling. What the height of that ceiling will be, whether it will exceed all previous ceilings ever made, carrying man farther into space than he has ever climbed before, remains to be seen. To gain a world's altitude record, a height of approximately 40,000 feet according to Federation Aeronautique Internationale computing must be achieved, the international ruling prescribing an increase of 100 meters (328.1 feet) over the previous record which would be that at present held by M. Callizo of France, who, on October 10, 1924, reached 39,586.47 feet.

An altitude record, however, is not the prime object of these tests. The development and testing of altitude equipment for military purposes is of the utmost importance. Experiment has brought to light that actual combat will scarcely be waged above 25,000 feet, the mental and physical faculties of man being too subnormal above this height for quick and efficient accomplishment. With the development of accurate bomb sights, bombing can be carried on as high as 30,000 feet, as less energy is demanded for bombing than for the more strenuous operations of pursuit combat. Photographic work may be accomplished, however, as high as 35,000 feet. Pictures of great areas, made at this height near McCook Field and enlarged, have proved to be remarkably clear in detail. Such views over enemy territory would be of untold value for war purposes. The plane would be out of sight and hearing of those on the ground and beyond the range of anti-aircraft gun fire. Hence, it is most important that altitude experimental work about 35,000-foot levels be most ably pursued.

Though much has been accomplished in the refinement of plane and engine for altitude purposes in the last several years aside from improvement of oxygen equipment, little has been done toward enabling man to increase his own ceiling or toward gaining normal efficiency for his body in the altitudes which he has already succeeded in reaching. A seemingly almost insurmountable difficulty lie in the task of making up to the human body for the decrease in air pressure and the limited amount of oxygen his lungs are capable of consuming at such heights. The cold, though a severe drain on the system with the best protection possible is more easily met. To prepare for it, Lieutenant Macready wears over his uniform, a heavy suit of woolen underwear and over that a thick heavily padded, leather-covered suit of down and feathers. Fur-lined gloves, fleece-lined mocassins over the boots and a leather head mask lined with fur, which with the oxygen mask completely covers the face completes the costume. The goggles are coated on the inside with anti-freezing gellatin supposed to function to 60 deg below zero Fahrenheit. The electrically-heated suits are not practical for suc

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flights, for they mean but another system of wires and switches for the aviator to add to his already complicated list of mechanisms and controls and should anything go wrong with the wiring, the suffering from the cold would be too intense to permit of continuation of the experiment; even if it did not in conjunction with the other adverse conditions cause unconsciousness.

The scientist, over eager for extending his knowlesge of these regions so near the rim of what we call "space", as well as the military expert, is looking forward with the greatest interest to the results of this series of contemplated tests.

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SERGEANT FARRAR'S THRILLING EXPERIENCE

Probably the first case on record of failure of an Air Service parachute occurred during a military circus at Dudley Field, El Paso, Texas, when Sgt. Farrar had to resort to the use of the auxiliary chute to reach terra firma safely, his training chute failing to open.

The military circus was held on November 21st and 22nd, and was participated in by all the components of the 1st Cavalry Division, Fort Bliss, Texas. Modern warfare, rough riding, polo games, stunt flying and parachute jumping held the crowd at a high pitch of excitement for two hours each afternoon. The "Rough Riders", a squad of 22 men from the 7th Cavalry, led by Sergeant James J. Porter, mentioned elsewhere in this issue of the NEWS LETTER, made an exceptionally fine performance in hazardous trick riding. Staff Sergeant Fred I. Pierce, 12th Obs. Sqdn., electrified the crowd by his smooth performance in a VE-9, and Lieuts. Clark, Hunting and Douglas, all in DeHavilands, engaged in a battle over the field.

Sergeant A.S. Farrar, 12th Obs. Sqdn., made a live parachute jump each day. The jump on the first day was made without mis-hap, but on the following day he "enjoyed" an experience which it is not believed he would care to renew. He used a training chute for these jumps and when leaving his ship on Sunday afternoon his trouser-leg got caught in the rocker arm and temporarily checked his descent. When this occurred he lost his hold of the parachute release ring and failed to find it for a few seconds. When he did find it and pulled the rip cord the chute failed to open, so he was compelled to use the auxiliary chute, which came to the rescue nobly. In the meantime, however, Farrar had dropped 1200 feet and was less than 500 feet from the ground when the small chute opened. He made a good landing - nothing hurt but his feelings. The crowd at the Circus got the thrill of a life time, however, doubtless believing that this stunt was premeditated, but --- Sergeant Farrar knows different.

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A THRILLING HUNTING EXPERIENCE IN TEXAS

The good luck had by personnel of Brooks Field in hunting early in November resulted in many hunting parties being planned over the Thanksgiving holidays. Lieut. Bivins wend down to Pearsall and brought back a seven point buck, while Lieut. Fuqua, who went to King's Ranch, succeeded in bagging a twelve point, 175 pound buck. Most exciting of all was the experience of Corporal Crawford, who shot a beautiful eight point buck and, thinking him dead, walked over to where the deer was lying only to have the animal get up and charge him. His gun refusing to function, Corporal Crawford hit the deer over the head with the butt of his gun so hard that he broke the stock, but failed to do any damage to the deer. Taking to his heels he ran away, pursued by the wounded deer until it caught up with him on the edge of a cliff. Being thus cornered, Crawford picked up a large rock and hurling it at the deer succeeded in knocking him down. Jumping on the buck while down he managed to kill it, but sustained several injuries in the tussle. His clothes were badly torn by the horns of the buck and he presented a bloody sight when he finally brought home the game.

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AFTERMATH OF THE SCHNEIDER RACE

Judging from what has lately appeared in British aeronautical publications regarding the recent Schneider Cup Race, it would seem that Lieut. Doolittle's victory over the fastest seaplane England could offer is felt rather keenly. THE AEROPLANE (London) states: "The waters of Chesapeake Bay will always be remembered by the British Aircraft Industry as the 'Waters of Babylon' besides which in spirit we have all sat down and wept because the Curtiss Company has prompted the building of racing aircraft to an exact science while we are still experimenting in the dark, and because the Americans have discovered that machine and personnel must be operated as a team instead of being separate entities."

Speaking at a recent banquet, the British Air Minister, Sir Samuel Hoare, said, in response to the toast of the Services, -

"* * * * * I am also giving renewed attention to the very important question of high speed British machines. I do not suggest that speed is everything. I do not suggest that taking into account our requirements as a whole the general standard of British squadrons in the matter of speed compares badly with that of other countries. During the last few years we have had to spend our money upon urgent necessities, we have had little left for record breaking. I can, however, say that we have learnt such valuable lessons from the high speed seaplanes that we have recently constructed and loaned to the makers for entry in the Schneider Cup Race, that I am now considering the placing of orders for one or more machines of still higher performance next year.

We were all sorry that we had such bad luck in the race, but we shall not on that account give up trying and I intend at once to take up the question of next year's entry with the British constructors. I hope that the British Industry will see its way to enter on its own resources. From all points of view it is better that private enterprise should take the field in these events. If, however, there is no other way of securing a British entry for next year's race, I shall be prepared to consider again the loan of Air Ministry machines under the same conditions as this year."

In an article on the Schneider Race, appearing in another issue of THE AEROPLANE, it is stated, among other things -

"Somehow or other, by hook or by crook, we have got to bring the Schneider Trophy back to Europe and keep it here again in 1927 to prevent its becoming permanently domiciled in the United States.

Since 1923 we have tried to win the Trophy by hook and in order to prevent its remaining in America next year it looks as though the only sure way will be to resort to crook, and hire the gentleman who 'won' the Ascot Gold Cup some years before the War, under the very eyes of the police and under his own top hat. * * * The Royal Aero Club should first and foremost now immediately enter three machines while their enthusiasm is still up, so as to avoid that error of judgment on someone's part which resulted in the Club being in the position only to enter two machines this year.

In the matter of engines we are probably in a better position than are the Americans. The Napier direct drive engine is well developed and next year it should have a power output of about 750 h.p. * * The figure is estimated by the difficult calculation of adding the nice round figure of 50 to the already admitted 700.

Next year the direct drive Rolls-Royce Condor should be available. The Condor normally develops 650 h.p., but with direct drive and a higher compression ratio the power output should be nearly 1,000 h.p. In fact, one hears already that in its first tests the direct drive Rolls-Royce Condor is proving a great success.

Then the Fairey Aviation Company Ltd. have the British rights for the Curtiss engine, so presumably that engine will also be available if required.

So far as the engine position is concerned we are right enough, but it must be admitted that so far as racing aeroplanes are concerned we are about where the Curtiss Company were in 1923. And somehow before next Summer we must catch up with them.

First and foremost let us hitch our wagon to a star and not one of the plural ones to which the Air Ministry goes through such hardships. We must be prepared to build a machine, or rather several machines which, as seaplanes, will go 270 m.p.h. next summer, and 300 m.p.h. by the summer of 1927. Otherwise we shall fail.

The Press this year have been taken to task by people in the Aircraft World for predicting speeds of four miles per minute for the Schneider Seaplanes. And yet Lt. Doolittle averaged 232 m.p.h. for the course and the following day put

up a straightaway record of 245 m.p.h. Therefore let us aim for 270 m.p.h. next year.

Ever since they built their first serious racer, the Texas Wildcat, in 1920, The Curtiss Company have produced generation after generation of racing machines. They have first of all carried out wind-tunnel tests at the Curtiss plant in Garden City, N.Y. With the aid of plasticene they have played about with models at racing speeds and on the results of these they have built full-sized machines. Data having been obtained from these they have returned to models and so on to full scale machines again. The result is that after five years' research they have reduced the design and construction of racing aeroplanes almost to an exact science.

If we are going to do any good we have got to produce two generations of machines by next year and five generations, if possible, before the summer of 1927. In order to be sure of no delays we must have several machines and not only one or two.

Let the Air Ministry at once place orders for a dozen direct-drive Napiers and a dozen direct-drive Rolls-Royces. Then let them place an order with every firm in the Aircraft Industry for two racing seaplanes. * * *

The next thing is the question of pilots. Twenty of the best R.A.F. and civil pilots should be selected. They should be possessed of the skill of a Farnborough or Martlesham test pilot coupled with the physical condition of an R.A.F. Rugger forward. They should start training at once on fast machines. * *

In July the Royal Aero Club should hold a seaplane meeting with a view to selecting machines to go to the States, but these tests must not take the form of eliminating trials as such trials usually result in eliminating the best machines.

Finally the machines should be shipped to the States so that three competing machines with at least three reserves and half a dozen pilots arrive at the venue of the event in time for machines and reserves to be fully erected a month before the contest. This will give time for practice on the course.

And it might not be a bad idea to despatch the complete team to the States in an aircraft carrier. Not only would it impress the multitude but also it would insure us against damage caused by the collapse of temporary hangars in American weather. ** "

Touching on the race itself, Mr. C. G. Grey, Editor of THE AEROPLANE, makes the following comments:

"One hates to be ungenerous to a victorious foe, but there is a little lesson to be learned from the American victory in the Schneider Trophy Contest which deserves to have particular attention drawn to it. So far as most people in this country are concerned the thing that sticks in their memory is that America won the contest for the Schneider Trophy. But the fact which many people neglect to notice is that if the seaplane business had been left to the U. S. Navy the Trophy would have been won by Great Britian.

This is an interesting little moral lesson which ought to be taken to heart by all those who put their trust in navies. The story is briefly thus: The U. S. Navy's Air Bureau, in which one hopes one still has many friends, had arranged to fly the two Curtiss Racers which were built specially for them. The U. S. Army, which really had no business at all to be playing with aeroplanes on floats, solemnly warned the Navy Bureau that the machines which the Navy had got would not finish the course because their tanks would not hold the gasoline and oil necessary for the distance. Therefore, to uphold the honour of the United States, the Army Bureau had floats fitted to the machine on which Bettis won the Pulitzer Trophy and entered it as the American third string.

In the contest itself Lieutenants Ofstie and Cuddihy, U.S.N., both failed to finish the course, one through shortage of petrol and one through shortage of oil, just as the Army had told them. And Lieut. Doolittle, U. S. Army Air Service, won the competition.

'Peace had its victories no less renowned than war,' and it would seem that just as no war has been decided by a fleet action except when the fleet has been commanded by a soldier, so even in peace time soldiers are the more dependable organizers of victory at sea."

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THE WORLD'S LONGEST FLIGHT

In the last issue of the NEWS LETTER an account was given of the landing of Commander di Pinedo in the Philippines while on his long flight from Rome,

via Melbourne, to Tokyo and return to Rome. THE AEROPLANE (London) in a recent issue gives a chronological account of this great flight, which the NEWS LETTER takes the liberty of quoting, as follows:

"On Nov. 7 Colonel the Marchese di Pinedo and his engineer, Sergeant Campanelli, alighted on the Tiber at Rome on the Savoia 16 ter flying boat (450 h.p. Lorraine-Dietrich engine) after having flown from Rome to Melbourne, thence to Tokyo and back to Rome, a total distance of approximately 35,000 miles.

Owing to the historical interest of his performance and in order to emphasize the greatness of his accomplishment it seems well to trace broadly his itinerary throughout the whole flight.

He left Sesto Calende, the birthplace of his Savoia flying boat, on April 21, and flying via Brindisi, Leros, Alexandretta and across the Taurus Mountains to Baghdad, Bushire, Bundar Abbas and Charbar, reached Karachi on May 4.

From Karachi he flew down the west coast of India to Bombay and thence across the Indian peninsula to Coconada and up the West Coast to Calcutta, arriving on May 12.

From Calcutta he proceeded via Akyab, Rangoon, Tavoy, Mergin, Puket, Penang, Singapore, Batavia, Sourabaya, Burra, and Kupang, to Broome in Western Australia, arriving at the latter place on May 31. Leaving Broome on June 1 he flew via Port Hedland, Carnarvon, Perth, Banbury, Port Albany, Israelite Bay, Port Eyre, and Adelaide, arriving at Melbourne on June 8.

The first stage of his flight, Sesto Calende-Melbourne, a distance of 14,900 miles, was covered in 145 flying hours. (This would make his average speed slightly more than 102 miles per hour). He remained in Melbourne sufficiently long to enable his mechanic to give the machine and engine a thorough overhaul.

On July 16th he flew from Melbourne to Sydney and was present there to assist in the aerial welcome to the American Pacific Fleet which visited Australian waters last Summer.

On August 6 he left Sydney and flew via Brisbane, Rockhampton, Townsville, Innisfail, and Cooktown, arriving at Thursday Island on Aug. 13.

On Aug. 14 he proceeded via Merauke, Dobo, Amboina, Merrado, Zamboanga, Cebu, and Tayabas, arriving at Manila on Aug. 17, where the machine was overhaul for the second time at the U. S. Naval Air Station.

On Sept. 16 he left Manila and flew via Aparri, Tamsui, Shanghai, Mokpo, Yamakawa, Kagoshima, arriving at Tokyo on Sept. 26.

He remained in Tokyo for three weeks, during which time a new engine was installed and the machine was given a third overhaul. The second stage, of approximately 8,023 miles, was covered under very unfavorable weather conditions, and was over a route that had never been covered by aircraft before.

On Oct. 17 he left Tokyo and proceeded via Kagoshima, Shanghai, Hong Kong, Haiphone, Saigon, Bangkok, Rangoon and Akyab, arriving at Calcutta on Oct. 28.

He left Calcutta next day and flying up the Ganges to Benares, and then do the Indus to Karachi, he succeeded in flying across India in two days.

Leaving Karachi on Nov. 1 he flew via Bundar Abbas, Bushire, Baghdad, Alexandria, Leros, Taranto, and Naples to Rome, arriving at the latter place on Nov. 7.

The first two stages are remarkable in themselves, but the third stage, from Tokio to Rome or at any rate to Taranto, the first point where he alighted on Italian territorial waters, is still more remarkable.

The total distance, of 10,400 miles, was covered in 19 days, and he flew from Bangkok to Taranto, 6,400 miles, in ten consecutive days.

The total distance of the round flight from Rome and back to Rome is about 35,000 miles, or some 7,500 miles further than the distance flown by the U. S. Army Round-the-World Expedition.

When one realizes that this was accomplished by one pilot and one mechanic on one flying boat and with but two engines (it is believed that the first engine was only replaced by a new engine at Tokyo as a precaution, and was not at all necessary) and that the complete circuit was flown over without anything more than the usual incidents that one might expect from a flight of this nature, the performance is undoubtedly the finest yet accomplished in the history of aviation.

The Savoia Co. have been faithful to the flying boat, and this flight, accomplished on one of their perfectly standard service types, has justified their faith. The engine, a standard "W" type 450 h.p. Lorraine-Dietrich, has added emphatically to its laurels.

The arrival of Colonel di Pinedo and Sergt. Campanelli in Rome was triumphal, and a number of ceremonies have been prepared in honour of the Marchese and his mechanic.

"For exceptional merit" the Marchese di Pinedo has been promoted to the substantive rank of Colonel, and a high military distinction has been bestowed upon him by H. M. the King of Italy.

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SUCCESSFUL NIGHT FLIGHT IN THE PHILIPPINES

The Army Air Service at Camp Nichols, Rizal, P.I., recently conducted a very successful cross-country night flight to Clark Field, Camp Stotsenburg, and return. The flight was made by Lieut. Earle Harper in a DH4B and Lieut. Delmar H. Dunton in an NBS-1. The planes were equipped with the latest apparatus available, such as radio, navigating lights, wing tip and parachute flares and landing lights and was in the nature of a test flight.

The take-off was made from Camp Nichols at 8:10 p.m., or a few minutes after the moon rose. Upon leaving Camp Nichols the weather conditions were very favorable, but some thirty miles north of Manila cloud banks were encountered and a very thick haze hung on the ground, thus forcing the pilots to fly by compass. Safe landings were made at Clark Field, and after a few minutes stop for the purpose of inspecting the planes the return trip was started at 9:15 p.m.

On the way back, however, a very severe electrical and rain storm was encountered just south of San Fernando. The moon was completely obliterated and the darkness was so intense that the pilots were not only forced down to an altitude of some 400 feet but had to fly at almost right angles to their compass course in order to get around the storm. After passing the storm the pilots found themselves out over Manila Bay, where the sky was fairly clear and the lights of Manila were seen in the distance. The remainder of the trip was without incident, the pilots landing at Camp Nichols at 10:30 P.M., total flying time for the round trip being about two hours.

This is the first cross-country night flight ever attempted in the Philippines, and the success of this flight only tends to prove the high state of efficiency of our Army Air Service in the Far East. It is quite probable that Manila will see quite a bit of night flying from now on.

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AERIAL MISSION TO INSPECT LANDING FIELDS IN PHILIPPINES

Three Douglas seaplanes left Camp Nichols, Rizal, P.I., on November 2nd for the Southern Islands on an extensive reconnaissance mission to inspect, photograph and report on landing field and harbor facilities for aircraft. This is in preparation for the establishment of regular airways from Manila to Jolo. It is estimated that three weeks will be required to complete the round trip. Pilots participating in the mission are Capt. Lynwood B. Jacobs, Asst. to the Air Officer, Philippine Dept.; Lieut. John W. Monahan, Camp Nichols; Lieut. Walter K. Burgess, Kindley Field; and Lieut. Guy Kirksey, Camp Nichols, photographic officer. The mechanics are Master Sgt. Reuben E. Wiseman and Staff Sgt. George A. Wiggs of Kindley Field. The itinerary calls for stops to be made at Ramblon, Ramblon; Capiz, Capiz; Iloilo, Iloilo, Dumaguete, Oriental Negros; Jolo, Sulu, Camp Keithley, Mindanao, Camp Overton, Mindanao; Cagayan, Misamis, Cebu, Cebu; Tacloban, Leyte, Surigao, Surigao; and Legaspi, Albay.

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APPOINTMENTS TO THE GRADE OF TECHNICAL OR MASTER SERGEANT

Army Regulations No. 615-5 provide that eligible candidates for appointment to the grades of Technical or Master Sergeant, Air Service, should submit their applications so as to reach the Office, Chief of Air Service between January 15 and February 15, 1926, with a view to taking the examinations which will begin on the first Tuesday in May, 1926. The scope of these examinations is covered in Circular No. 50-5, Air Service, 1924.

There are a number of men now on the eligible lists as a result of having previously qualified for promotion to these grades, but the names of successful candidates in the May 1926 examination will be added to the respective eligible lists.

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ANTI-AIRCRAFT PRACTICE ON PACIFIC COAST

Lieut. Jack Glascock, of Crissy Field, Presidio of San Francisco, Calif., was detailed at Fort McArthur, San Pedro, Calif., during the greater part of November for anti-aircraft practice.. He towed a sleeve target up and down a certain set course at a certain speed and at a certain altitude for the anti-aircraft to fire at. He actually towed the target for 21 hours and reports no direct hits and nine theoretical hits in 275 rounds fired.

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AIRPLANE A LITTLE TOO ROUGH FOR EXPERT "COW PUNCHER"

By the Biggs Field Correspondent.

Sergeant James J. Porter, Troop B, 7th Cavalry, stationed at Fort Bliss, Texas, is well known in Cavalry circles as the best horseman in the United States Cavalry. He has had a wide experience during fifteen years of Cavalry service; was born in Pendleton, Oregon, and prior to his entry in the service lived on his father's ranch there, eventually becoming an expert "cow hand" snd won many prizes at the "Pendleton Roundups" held there annually. The other day he "rolled" over to our airdrome and expressed his desire to mount one of "our broncs". The necessary formalities were gone through and he was given a hop in a DeHaviland by 1st Lieut. R. H. Clark, who took him over the city of El Paso, slid over Mount Franklin and gave him a birdseye view of Fort Bliss. The Sergeant seemed very happy when he crawled out of the rear cockpit. I don't know whether or not he was happy to back on terra firma or that he actually enjoyed the ride. Anyway he made the remark: "I have mounted on the hurricane deck of many a bronco, but this fellow "sunfishes" a little too rough for me."

Sergeant Porter is the leader of the "Rough Rider Squad" of the 7th Cavalry which performed in the Military Circus held at El Paso on November 21st and 22d.

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HOW THEY HUNT DUCKS IN THE PHILIPPINES

Dear Bill:

Do you remember the last time we went duck hunting and came home without the duck? I shall never forget how you knocked the feathers out of that old drake that was leading the formation, while I figured I had the third one from the end all cooked and ready for dinner. Your old drake did a lot of squaking, but he kept right on, leading his string out of gunshot; and we had to be satisfied with ham and eggs for dinner that night. Not that ham and eggs are bad eating when you are hungry, but we had our mouths all set for duck and dressing.

But all that is changed now, Bill; you don't even have to put a shot into them, or fill the air with feathers. Any shot is a hit that comes within fifty yards of your bird; and they must come down, undress themselves and make themselves fit to be eaten by these fine marksmen.

It's a cinch now Bill; of course you must consume a lot of ammunition, but your hits are as sure as shooting, for no holes or shot in your duck are required to get your hit. But you are anxious about it and I am going to tell you how it's done up in Pampanga -- anyone can hit them now, especially after they know how to go about it.

Bill, all you have to do is to figure how high your gun will shoot and its best spreading range -- perhaps you ought to have about six guns, preferably automatics, so you can keep up a pretty rapid fire when the right time comes along. Now get yourself a gander, one who has perfect control over the ducks, so that they be compelled to fly exactly as instructed, and no other way. This is awful important, Bill; you can't call your shots hits, if they are more than 1100 yards away from the ducks. Should it be a strange bunch of ducks, which ho come over to feed off of your ducks' rice paddies, they should be courteous enou to drop a note to let you know what their line of flight is to be and how high they intend to keep flying. This ought to be easy if you get the right kind of a gander -- I know a lot of ganders who say this is easy -- anyhow, they do it that way up in Pampanga.

Now you must pick out a good spot in some place where trees or mountain peaks may be lined on either side of you and plant your guns. Keeping two objec in line insures that the drake may lead his flight in exactly the same "over"

line your guns, both coming and going. Load your guns and start your drake and his formation to flying. Be sure to tell him to stick to your line and at the altitude best suited for your guns.

Bill, it's as easy as taking arrows away from dead Negritas. All you have to do is to start shooting when the drake gets close overhead, and keep shooting fast and furious. Maybe the old drake will tow some of his poor little ducks right into one of those shots. Remember, Bill, you only have to come within fifty yards of them to get a hit anyhow.

The way you find out if you come as close as fifty yards, is for two men to each take one side of a bird cage, with the bottom out; one man stands close to the guns, while the other climbs about a mile in the air and about a half mile away, along the line of flight, and when the shot goes off both men are looking through the wires of the cage. If they see the ducks and the explosion at the same time, both make a hit. This may seem funny to you, but they need a lot of hits right now.

Why, Bill, up in Pampanga, they were shooting for a week at a string of ducks, which kept flying in the manner I have told you about, and they got a lot of hits. But the only hole I saw in any one of those ducks, was the one I put in myself with the end of an iron rod that had been blackened with the smoke of a torch. I thought hits meant holes at that time, and those fellows that are doing the shooting seemed disappointed every time they looked the ducks over, after their return from being shot at, and I felt sorry for them after the fourth day of shooting. But they looked so pleased when that hole was discovered that I felt amply repaid for my trouble in heating up the torch.

Now Bill, I know you are quite a hunter yourself, but if you want to see hits, without making holes in the target, just come up to Pampanga while the ducks are flying next Spring.

Yours truly,

ED.

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WAR DEPARTMENT ORDERS AFFECTING AIR SERVICE OFFICERS

Changes in Station: Capt. George S. Warren (Scott Field), 1st Lt. Harrison G. Crocker (Kelly Field), 1st Lt. Chas. H. Howard (Chanute Field) and 2d Lt. Charles G. Pearcy (Post Field) assigned to duty in Panama Canal Department.

1st Lt. Joseph T. Morris (Langley Field), 1st Lt. R.L. Meredith (Selfridge Field) to Hawaiian Dept. Feb. 12; 2d Lt. David W. Goodrich (Fort Sam Houston) to Hawaiian Department, sailing March 6th.

1st Lts. Harvey W. Prosser and Roscoe C. Wriston, upon completion of duty in Hawaii, assigned to Kelly Field and Fort Sam Houston, respectively.

Capt. Charles E. Rust, 1st Lts. Edwin Sullivan and Robert T. Zane, upon completion of tour of duty in Panama, to be assigned - first named to Langley Field and last two named to Kelly Field.

1st Lt. Cortlandt S. Johnson assigned to duty in Office Chief of Air Service, Washington, upon relief from duty in Panama.

1st Lt. Leslie P. Arnold from Rockwell Air Intermediate Depot to Los Angeles, Calif., as instructor of Air Service, California National Guard.

1st Lt. James L. Grisham from Fairfield Air Intermediate Depot to Little Rock, Ark., as instructor of Air Service, Arkansas National Guard.

Changes in duties: 1st Lt. Edmund P. Gaines from 7th Photo Section, Wright Field, to duty with 88th Squadron. 1st Lt. Lionel H. Dunlap to command 7th Photo Section, Wright Field.

Relieved from Air Service: 2nd Lieuts. John O. Murtaugh and James M. Catlett (Advanced Flying School, Kelly Field), 2nd Lieuts. Walter W. Hodge, Judson M. Smith and Thos. E. Smith (Primary Flying School, Brooks Field) to duty with 2nd Division.

Capt. Edward F. French (Signal Corps) and 1st Lt. Clough F. Gee (Q.M.Corps) relieved from Air Service November 28th.

Leaves of absence: 2nd Lt. Robert W. Douglas, one month, 10 days, Dec. 8; 2nd Lt. Clyde K. Rich, 25 days, Dec. 10th; Capt. George S. Warren, 6 days, Dec.1.

Appointments: 1st Lt. Edwin E. Aldrin as Asst. Commandant, Air Service Engineering School, McCook Field, vice Capt. Oliver S. Ferson, relieved.

Transfers: 2nd Lt. Lewis A. Riggins to Infantry and for duty with 2nd Division; 2d Lts. Donald H. Bratton and A.W. Farwick to Cavalry, Dec. 3rd.

NOTES FROM AIR SERVICE FIELDS

Kelly Field, San Antonio, Texas, November 28.

The hunting season is on in full swing; doves, duck and deer are plentiful and the game within easy distance of the station has been sadly dimished as a result of efforts of the members of the command. There have been lots of disappointments but plenty of venison as well.

The usual holiday, accompanied by turkey dinner, was celebrated on Thanksgiving; the squadrons all put forth their best and the menus presented at dinner time were a source of pride to the various organizations. A Thanksgiving dance was held for the officers of the Post on Wednesday evening, November 25th. The 10th School Group received. The attendance was large and an unusual festive spirit pervaded the Club and the officers' quarters generally.

Lieuts. Levi Beery and C. E. Shankle, from the Panama Canal Zone, who made such a splendid record at the recent bombing contest at Langley Field, visited here for a few days while awaiting the arrival of the transport at Galveston to take them back to their home station. Lieut. Berry is under orders to report here at the expiration of his tour of foreign service. Six Marine Corps officers were ordered to the Advanced Flying School for special training - some in observation and some in attack. Lieut. John N. Smith has already reported and the following are expected daily:

Captains: Russell A. Pressley, James J. Davis, E. P. Mulcahy, Robert J. Archibald, and First Lieut. William L. McKettrick.

Three of the 10th School Group officers were called to Washington, D.C., as witnesses in the Mitchell court-martial,- Capt. Burdell S. Wright, 1st Lieuts. H. W. Sheridan and Orval A. Anderson. Orders were received transferring Lieut. Anderson to Scott Field in connection with the tests and operation of the new semi-rigid airship at that station.

The 10th School Group has been aided by the weather of late in facilitating the training of the present class in flying. Despite the fact that the Faculty Board continues to still function, fifty-three students still remain and have accumulated over 1300 hours in the air. About two-thirds of them are at present on the eight stage and one-third on the hurdles, 180 and 360 degree stages.

The 3rd Attack Group concentrated its activities during the last 15 days on motion picture work. Pictures were taken of the 90th Squadron hangar, stock room and operations office; the 8th Squadron Armament and the Group Operations Office, with all pilots assembled. Films were also made of airplanes on the line being taxied into position on the Air drome, taking off in flights and in group formations in the air. This is only a starter, and a more extensive outline of pictures to be taken will be completed in the near future.

All 3rd Attack Group pilots and mechanics, who took part in the New York and Langley Field flights last month, assembled for a series of photographs to be filed in the Photographic History maintained by the Group.

Rockwell Air Intermediate Depot, Coronado, Calif., Dec. 4.

Capt. Ira C. Eaker, with General John B. Bellinger, Assistant to the Quartermaster General, stopped for a few hours at this field recently, while enroute for the north. General Bellinger is making an inspection trip of the various Quartermaster activities throughout the country.

Colonel Harry Graham, with a flight of three DeHavilands, attended the opening and dedication of a new landing field at Phoenix, Ariz., recently; also a new field at Tucson, Ariz.

Lieut. A. B. Pitts, Finance and Employment Officer at this Depot, spent the past two weeks in Letterman General Hospital, San Francisco, where he underwent a minor operation. Lieut. Jack Greer took over Lieut. Pitts' duties during his absence.

Capt. Lowell H. Smith was absent from the Post for several weeks, having been called to Washington to appear before the General Court Martial of Colonel William Mitchell.

Colonel Graham, with a flight of four planes, flew to Santa Ana, Calif., the latter part of November, to attend the opening and dedication of a new landing field there.

Lieut. E. S. Hoag arrived here Nov. 23rd enroute to the Douglas Aircraft Corp. where he was to obtain a new Douglas plane to ferry to Washington, D.C.

Lieut. L. E. Sharon, Lieut. Carl A. Cover, Mr. Kennedy and Mr. Norvelle, arrived here last week in a Douglas Transport plane from Fairfield, O., for the purpose of making an inspection of the Depot storage and cost accounting departments. Lieut. Cover received orders which called him back to Washington, D.C., at once.

Lieut. Bernard T. Castor, with Sam Hudson, mechanician, left Dec. 4th for Denver, Colo., for the purpose of checking airways data enroute.

Brooks Field, San Antonio, Texas, November 24th.

Visitors at Brooks Field the past week were Lieuts. Cover and Sharon of Fairfield, who were here on a maintenance conference, and Lieut. E. S. Hoag, of the Office, Chief of Air Service, who visited Brooks and Kelly Fields on a school coordination mission.

Major Royce is again in Washington, testifying before the Court-Martial trying Colonel Mitchell.

The new PT Primary Training Ship is undergoing another change. Radiators are being placed so as to cover the whole front of the motors instead of underneath the propeller hub only.

One of our few DH's is wrecked. Lieut. Fey had the misfortune to nip a tree with his propeller when coming down to land and consequently we have one less DH for the present. Lieut. Brookley, Officer in Charge of Flying, cancelled Fey's cross-country for the week end to stay home to think over his crack-up.

Flying time for the week ending Nov. 23rd was: Daily aircraft hours, 733:50; daily man hours, 1,193:55; daily cross-country aircraft hours, 63:45; daily cross-country man hours, 115:45.

Brooks Field, San Antonio, Texas, December 1, 1925.

With the passing of the Thanksgiving holidays instruction is on in full force again. With most of the students soloing and stunting instruction being given to the more advanced, the air is full of ships, some of the higher ones in very strange positions.

Deer hunting occupied many of the men over the few days holiday we had, and several notches were added to the sporting rifles, one notch representing a ten point buck, the largest of the week, being shot by Lieut. Twining.

A public dance at the big hangar brought in the holidays, the dance being largely attended and netting a fair sum for the athletic fund.

Major Brailsford, permanently stationed at Kelly Field, is here on temporary duty as flight surgeon, replacing Capt. Thorne, recently ordered to Mitchel Field until another surgeon is ordered here.

Sergeant Newcomb, long a flying instructor at this field, was ordered to Selfridge Field, and Sgt. Angell from Langley Field was ordered here to take his place.

Lieut. Craigie is on a two months' leave. He is at present one of our bachelors but will return a married man. The bachelor ranks are becoming reduced, but as long as Capt. Oldfield, our Barney, stays a bachelor we won't feel lonesome.

Major Royce is again in Washington before the Mitchell Court Martial and will return as soon as he is through testifying.

General Fechet is to visit us in December on an inspection tour. During his stay he will be the guest of Col. Culver.

Brooks Field, San Antonio, Texas, Dec. 7.

Flying data for the past week was as follows: Daily aircraft hours, 502:20; daily man hours, 835:05; daily cross-country hours, 67:50; daily cross-country man hours, 131:25.

Capt. A. W. Stevens, widely known photographer of the Air Service, executed a few aerial photographic missions in this vicinity and, as usual, with very good results.

Word was received from Lieut. Schlatter, who is on his honeymoon, that he is having a wonderful time. To date nothing has been heard from Lieut. Craigie, who departed from here for the purpose of getting married. Whether he slipped the country is as yet unknown. Lieut. Myers, who returned a few days ago from detached duty at West Point, reported having seen Schlatter in New York, but Craigie, who was supposed to have headed for there, was not in evidence.

Lt. D. Clizio Bertucci, Argentine Naval Commission, reported Dec. 7th to take the primary flying course and will be here until about March 15th, when he will go to Kelly Field to take the advanced flying course. Lt. Bertucci has pilot wings, belonging to the Argentine Naval Aviation, but is taking our course for the experience and benefit his country may derive from a comparison of training methods.

Brooks Field is about to have an airways of its own. Heretofore all report pertaining to airways came from Kelly Field, Brooks Field merely furnishing a pilot every third week, but with the arrival of one of our allotted two airways DH's we are about to keep our own station. The old system of Brooks taking the trip every third week will still hold. We also received one of the new Douglas transports. There will probably be quite heavy competition for the next few days among our pilots, all of whom are anxious to fly it.

Major Royce, our C.O., was in Washington in connection with the trial of Col. Mitchell. Capt. Oldfield, Lts. Hine and Corkille awaited his return, being scheduled to fly to Selfridge in three A-1's to be ferried there.

Plans for a Christmas tree at the Officers' Club for all the children on the post being completed, the officers' wives have been quite busy lately buying the toys and decorations necessary to make it a success. The various squadrons are also preparing to decorate their messes and planning lavish feasts for Xmas Day.

Kindley Field, P.I., November 12th.

A formation, led by Capt. Berman, accompanied by Lts. Thomas, Williams, Redman and Burgess, made a 3-hour flight Oct. 20th over the Islands of Lubang, Fortuna and Ambil. These islands are out about 50 miles from Manila Bay and are of exceptional interest to the Coast Artillery officers at Fort Mills. A detailed report on the terrain of these islands was arranged for submission to the Coast Artillery.

Lieut. Burgess, Engineer Officer, was busy during the past ten days preparing three Douglas ships for a flight to the Southern Islands. Here's hoping they do not have any pontoon trouble.

Clark Field, Pampanga, P.I., November 12th.

Many officers stationed with the Field Artillery at Camp Stotsenburg were given an opportunity to observe an "Artillery Shoot" from the air this month when the mountain batteries held their regular target practice. For some of these officers it was their first hop and without exception they were enthusiastic over the possibilities of aerial artillery observation in mountain firing where howitzer fire is necessary and ground observation difficult.

The Pursuit Training consisted of high altitude patroling and bombing and while we do not wish to seem boastful, we have reached the point where the twelve foot circle gets more than its daily quota of hits and everything outside of the twenty-five foot circle draws a RAZBERRY for the pilot who failed to see the error of his ways (of bombing).

Lieut. "Buddy" Maxwell was a passenger on the last outward bound THOMAS and Lieut. H.H. Mills reported to this station to take his place.

Lieut. J.G. Taylor was assigned to duty here, relieving Lt. P.L.Williams, transferred to Corregidor.

Capt. Earl H. DeFord, our C.O., spent a delightful week cruising in the Southern Islands on the destroyer "Paul Jones" as a guest of the Navy on their annual "Navy Day" cruise in those waters.

The Stotsenburg Sports Carnival came off with a bang and the Air Service with their limited personnel did very well in their share of the athletic events, Corporal Paul taking first place in the high jump and pole vault, Private Zimmerman taking first place in the high hurdles and javelin throw, while Privates Bullison and Henneck took second place in the Shot Put and 220 yard dash, respectively.

Lieut. Camblin stepped to the front and annexed the open golf championship and a beautiful cup while Mrs. Camblin walked away with the third prize in the ladies open tournament. Lt. Bob Finley took second place, shooting a low medal score of 71. Lt. B.W. Chidlaw tied for third place with a 73. Not to be outdone, Lt. J.G. Taylor took second place in the handicap tournament. After the Air Service finished there were not very many prizes left to be awarded to the others.

A total of 162 aircraft hours (248 man hours) were flown at this station during the past month. Considering the limited number of officers available for duty here, this maintains a fairly good average for the tropics.

Staff Sgt. G.A. Wiggs was transferred to Kindley Field, Corregidor, on detached service in order to take a week's training in the Douglas Cruiser, after which he will take a three weeks' trip to the Southern Islands, touching at all the important cities and places of interest.

McCook Field, Dayton, Ohio, December 5th.

Lieut. Leonard S. Flo returned to Selfridge Field after ten days' temporary duty at the Engineering Division. During his stay Lieut. Flo was made a member in good standing of the Caterpillar Club, having saved his life by a parachute jump when his Thomas Morse training plane failed during flight. Sergeant McGinn, passenger, also made the leap alighting safely on the ground.

Lieut. Reuben C. Moffat is away on extended leave. He was married in Boston on November 24th.

Lieut. E.H. Barksdale was granted one month's leave, effective Dec. 20th.

Lieut. E.E. Aldrin was ordered to the Massachusetts Institute of Technology for conference upon courses to be followed in the A.S. Engineering School.

Lieut. Sam C. Carter and mechanic were ordered to report to the Engineering Division from Langley Field for temporary duty in connection with experimental work to be performed on the tow target reels.

Capt. Theos Tillinghast was transferred here from Selfridge. He was formerly located at this station.

Lieut. Robert E. Robillard is on temporary duty at Belleville, Ill. (Scott Field) in connection with the RS-1 airship and flight tests.

Lieut. E.C. Winnings, Reserve, was assigned here for 15 days training.

Capt. Vincent B. Dixon, transferred to Selfridge, reported there Dec. 1st.

Lieut. F.Q. Carrol reported here Nov. 30th, being transferred from Kelly Field. He will serve as Asst. to the Chief Engineer of the Engineering Division.

Brainard Field, Hartford, Conn., December 7th.

Major Talbot O. Freeman, C.O. of the 118th Obs. Sqdn., 43rd Div. Air Service Conn. National Guard, resigned and will become a member of the National Guard Reserve. Business pressure makes it impossible to continue his active connection with the squadron. His resignation took effect Dec. 1st. The Squadron feels its loss just as a child would feel the loss of its parents, for Major Freeman was exactly that to the organization. Through his spirit and untiring efforts it had its conception and birth, and under his tender care it grew to its present proportion.

But the passing from active duty of Major Freeman is not alone felt by the members of his organization, for he is well known throughout aviation circles and there will be many who will share the feelings of the members of the 118th Observation Squadron. He will be succeeded by Major Wm. F. Ladd, recently promoted from Captain, who has been a flight commander and has flown a great many hours. He graduated from a school of military aeronautics in 1918, and saw service at Camp Dick and Barron Field. He is well qualified for his new commission, and under his guidance the same progressive spirit that marked the past will surely crown the future.

San Antonio Air Intermediate Depot, San Antonio, Texas, Nov. 23rd.

First Lieuts. Carl A. Cover and Leon E. Sharon, of the Field Service Section at Fairfield, O., arrived here Nov. 13th on an extended tour of temporary duty, visiting various Air Service activities in this section of the country in connection with maintenance inspection and cost accounting work, to terminate at Crissy Field, Calif. They left this Depot Nov. 16th for Kelly Field, and from there will proceed to Brownsville, Texas.

First Lieut. Robert V. Ignico reported for duty Nov. 9th, having been transferred here from the Philippine Department.

On Nov. 13th Lieut. Chapman, Chief Inspector of the Depot, flew to Houston, returning the same day, to inspect the airplanes issued to the 36th Division, Air Service, Texas National Guard, at that place.

Capt. Edward Laughlin, Engineer Officer of the Fairfield Air Intermediate Depot, arrived here Nov. 16th for a hunting trip in this region, while on leave

of absence. He was warmly welcomed by his many friends at this station, where he was formerly the Engineer Officer.

First Lieut. Norman D. Brophy arrived Nov. 16th and was assigned to duty at this station. He returned from the Philippines via Suez and Europe and was on leave of absence until December 8th.

San Antonio Air Intermediate Depot, Texas, Nov. 12th.

"SLIM" INTRODUCES HIMSELF TO "ED".

Santone Air Intermedit Depot,
Duncan Field, Santone, Tex.

Deer frend:

Yors to hand and duly receved. You shore must be havin a helluva soree up to this enginer schule. I bets my angora chaps you gets throwed fer a row uv corrals fore the show is over. I noteces you remarks at some lenght about specks and golf pants. Frend you orter see some uv the locoed hombres aroun this outfit Lew Dayton and Lefty Vanaman breaks out all dressed up, like a fool puncher goin to a rodeo, in o.d. cullered golf pants and them funny little caps what just covers yore ball spot. I guess you recollect this Dayton hombre what absorbs tequilla down on the border same time as I and you chews sand aroun old El Paso. Down on the border this boy is so thin he has to wear his sombrero when drinkin out of a bottle to keep from fallin in. You jest orter see this mozo now. He aint saw his own feet in over a year and nobuddy else has saw his collar. He claims drinkin lots uv milk does the trick. Almost forgets to tell you about the dern good beer what they is making down here in old Santone. This Vanaman cabellerro is the livin example of what the golf wise boys says there aint. He plays this afore mentioned game from his near side and I aclaims to the whole gatherin as how he plays a right pert game, judgin from some of the alibys offered by some good off siders what has bet they is better than him in one of these long distant ball chasen contests. I claims he hunts a mean ball after his drive.

This Lewis feller what you speaks of at some length was a tellin me about his re serch work along uv a aral torpeder what he is a tryin to lay his ropes on Knowin this hombre as I done, I advises you to keep a eye on him as he is some absent minded and may try to ride this outlaw critter along about the time he thinks he has broke it to a hackamor and circingle.

I was in a muzeum onct and sees a statue of this Venus demeelo you speaks uv and I am announcin to the whole world that if you fellers is a studyin that kind of tecnecal matter, I aims to rope and hogtie some of these cowkalus and parabola critters and come a runnin to yore colledge. This Venus party has lost her grub hooks but she shore aint lost nothin else.

Maj Lackland and MacMullen just returns to the home ranch from a extended tower of the U.S. The feed and water on there northern and eastern ranges shore must be some nutrisus as they both falls away to a ton. They complains some of how they is held up by bad weather in such lonesome and god for saken bergs as Chicago, Buffalo, New York, Washington, Montgomery and several other little towns the names uv same I forgets. They claims to have made some right nice friends on this trip and aims to repeat first chance. Mac aint just clear on what happened at some of these places but is unanemus in declarin a good time was had by all, includin him.

I guess you remembers Jimmie Duke and Tommy Chapman. Well these boys breaks out uv the home range and comes back agin, each with a sparring pardner on a life contract. Havin signed up eleven years ago myself, I judges from the action of these two mavericks as how they has been branded and tamed. The sparrin pardners is ridin herd on the boys right smart. Tommy uster be last man to drag hisself away from the attractions uv the nineteenth hole out to the Country Club. You orter see that same boy now. He trots from the eighteenth green to his car and fans it fer home same as he has promised somebody he would be there at a certain time. Jimmy is plum meek and gentle and can be rid enywheres with a snaffle.

Our lady polo team gives a exhibishun tother day what is right pleasen to look at. What starts this fandango is a bunch of Kelly Field officers, as gets their exercise a playin 'highball' and 'low bunk', gets to kiddin these same ladies about how much polo they caint play, which kiddin gets these ladies some riled, and they offers to settle their side the argyment on the polo field with these scoffer boys a forkin broncs. Well we gets the 'scoffers', that bein the same they goes by, hoisted up onto some caballos (same bein hand picked special for the boys) and herded them out onto the field to their fate. I only sees

part uv the stampede as a hole lot uv the time I am all bent over tryin to keep from chokin. I think the caballos the boys is riding has wised up to the situashun and does their parts noble. They slows down when the boys crave speed and speeds up when the boys wants to stop. These same boys, when they sees the ball a laying out all innercent like, would raise their mallets and slip us same as they was tryin to kill a diamond back rattler. They would take a awful wallup and the ball would move all of four or five inches if eny. Imedetly after said wallup they throws both arms around the kiyuses neck same as they is a greetin a good lookin gal cusen. The boys would be a millin around in one place hitting each other with their mallets, jest like the movy picters shows some of the old timers that uster fight with spears, while the ladies would be a tappin the ball down the field for a goal. One high ridin mozo is a forkin a animul that only gets outer a walk when he is a headin for the picket line. The only time this hombre ketches up with the stampede is when he stops in the middle of the field and falls in as they comes past. We offers him a whip so as he could fan this cross atween a sloth and a snail he is ridin into the game. He turns down our genrus offer uv assistence and says it caint be did as he has only two hands and one being busy with the reins and tother with his mallet, he jest nacherly aint got nothin left to hold the whip with. I claims that the only times the scoffers sees the ball is when the referee is a holding it in his hand ready to throw it in for play. After the throw in these caballeros is right busy tryin to stop and start their kiyuses, and keepin from fallin off when same was acompleshed. Well when the dust of this battle of the Argon has cleared away the score board has settled the argyment. The scoffers has made none and the ladies has run out of figgers. The boys was a feelin some low judgin from genral aperences. The ladies was right nice to the boys bein as they dont rub it in none about who won the war. Well the scoffers limps spraddle leged over to their cars, helps each other aboard and trundles off to their quarters to hunt up the linament and somethin to cheer up their chastined spirrits.

Well frend Ed as nothin muchhas happened around this outfit lately I better unsaddle this here mashine im a punchin. Speakin of punchin, I aint noways as good at a punchin one uv these here typin mashins as I am at punchin critters. I caint jest seem to get my loop on the dern letters. I speaks above about nothin has been hapnin, well I calkalate I will be plum full uv news from this hence as the boss uv this outfit havin arrived back from his tower uv the U.S. he will nacherly try and work off some of the surplus averdupoise, I speaks of before, a roundin up some uv us mavericks what has been a runnin a little wild while he has gone.

Study hard on this Venus party, Ed, and rite soon to yore old bunky.

Slim.

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In the next issue of the NEWS LETTER, Friend Ed, now undergoing a year's hard grind at the McCook Field Engineering Colledge, will give his version of a mythical all-American football team, also his selection of eleven hand-picked men, tried and true, attending the Engineering Colledge, whom he is willing to back vs. any and all other American teams.

Langley Field, Hampton, Va., December 5th.

96th Squadron: Record firing by the squadron on the pistol range was completed with excellent scores, proving that the time allotted for practice was well spent. A percentage of qualifications was obtained topping those of previous years.

Lt. Multzer just returned from a week's trip spent in ferrying planes to and from the F.A.I.D. The cold weather experienced over the North made him glad to get back to this moderate climate.

The "Sgt. J.L. Johnson" was commissioned for use this week. The new squadron power launch is a hummer and can step out with anything in the vicinity. It is named in honor of the splendid flyer of our squadron who "went West" three years ago.

50th Squadron: Anticipating the approaching basketball season, the 50th's quintet of huskies began working under the direction of 1st Sgt. Napier, coach. The 50th relies upon the following to hold the Langley Field Championship: Right Guard, C.J. Brown; Ranger, Green, Woody, Huffman, Thornton and Johnson in reserve; Tuite, Center; Foster, Right Forward; DeFord, Left Forward; Carlton, Left

Guard. The business end of the team is being handled by Slygh Brown.

20th Squadron. This organization spent the past week on the target range, and therefore our activities have been limited. However, we are doing our utmost to make up for this by scoring a bull's eye every shot despite the fact that the weather has been such as to make good shooting impossible.

The squadron basketball team is developing into a very smooth operating machine under the management of Staff Sgt. Miller. The various teams of this station, as well as those of the surrounding country, had better look to their laurels.

THIRD CORPS AREA CHAMPIONSHIP FOOTBALL GAME

Urged on by over 2,000 wildly cheering spectators, pursued hotly by a huge, savagely determined, lumbering Tank, whose specific gravity belied his speed, Hoyt Carlton, Captain and Quarterback, with the pigskin tucked safely to his bosom - only two feet ahead of the pursuing Tank - made a run of 85 yards, the most sensational ever seen in this district, for the touchdown which won for Langley Field the championship of the Third Corps Area. The final score was 7 to 0.

The aviators had a line of which even Hindenburg would have been proud. Each man watched one Tank and trimmed him with the fatal accuracy of an oil stock salesman trimming a wealthy farmer. It was conceded by all who witnessed it as the hardest fought game in this section. Opinion was unanimous that the Langley Field team was no match for the imposingly huge and destructive looking Tanks whose cognomen fitted them to a "T". Opinion, however, as yet to change its way of thinking insofar as aviators are concerned.

We can feel for them and sympathize with them for being obliged to shatter their ideals as well as their enviable record of a five years' championship, but aviation must go on and it is up to the men who represent it to make it what it should be and to place it on the pinnacle of superiority in sports as well as in service.

Biggs Field, Fort Bliss, Texas, Nov. 23rd.

The supplementary pistol target season for members of the 12th Obs. Sqdn. and 1st Photo Section at this field, participated in by 19 enlisted men, was concluded Nov. 12th with the gratifying result of 100% qualifications, the result being: one Expert Pistol Shot, five Sharpshooters and thirteen Marksmen. Much credit for this exceptional result is due to the expert coaching and preliminary instruction given by 1st Lieuts. Guy H. Gale and Charles Douglas, Air Service, as fully fifty percent of the men participating had never before fired the Army pistol.

Lieut. Lloyd E. Hunting returned Nov. 17th from a cross-country trip to Los Angeles, Calif., visiting the Douglas Aircraft Corporation plant at Santa Monica during his stay on the Pacific Coast.

Lieuts. Carl A. Cover and L.E. Sharon, Messrs. Kennedy and Noville, all of the Fairfield Air Intermediate Depot, arrived in a Douglas Transport from Duncan Field, San Antonio, on the afternoon of Nov. 22nd, en route to the west coast on an inspection tour of all Air Service stations. The party continued on their journey the following day.

On Nov. 20th a number of visitors arrived at the field - Lieuts. Dichman and St. John from Kelly Field, each piloting a DH, Captain Wagner, M.C. and 1st Sgt. John T. Bills as passengers; Lieuts. McCormick and Thorpe of Brooks Field, with Lt. Barber and Pvt. McDonough as passengers; Lieut. Earl S. Hoag, from Bolling Field, piloting a DH, with a mechanic as passenger, en route to Santa Monica, Calif.

Staff Sgt. Fred O. Tyler, piloting a DH, with Staff Sgt. W.J. Riley, 12th Obs. Sqdn. as passenger, left Nov. 20th for Marfa, where this organization is maintaining a border station airdrome. Sgt. Riley is the Sergeant Major of the 2nd Division Air Service Headquarters at this field, and is now engaged in establishing effective filing systems at our outlying stations, Marfa and Dryden, Texas, and Douglas and Tucson, Ariz.

Major John N. Reynolds, Comdg. Officer, published a memorandum inviting all officers and married enlisted men and their families to be the guests of the 12th Observation Squadron for Thanksgiving Dinner on Nov. 26th.

Lieuts. Guy H. Gale and Lloyd E. Hunting departed Nov. 18th for Duncan Field in a DH and returned on the 20th in a new DH for photographic work.

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