

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE JULY 11, 1920.

LIEUT. JOHN H. WILSON OF KELLY FIELD, TEXAS SETS NEW
WORLD'S RECORD FOR PARACHUTE JUMP

Lieut. John H. Wilson of the 96th Aero Squadron, Kelly Field, Texas, leaped from a De Haviland B at an altitude of approximately 20,000 feet, and seventeen minutes thereafter landed in a diminutive turnip patch the holder of the world's record for parachute jumping. A nervy little Frenchman once took a 14000 foot trip through the ozone in a straight southerly direction, and an American floated 8000 feet with the aid of an enlarged umbrella. These two achievements were the high points in parachute jumping previous to 4 P.M. June 7th, 1920, at Kelly Field.

Lieut. Delmar Dunton, engineer officer of the First Day Bombardment Group, was assigned as pilot of the plane, and June 7th selected as the day. Lieut. Wilson spent most of June 7th folding his parachutes, and at four o'clock the party took off. It may be explained here that it is customary to wear two parachutes in case of accident. It was particularly necessary in Lieut. Wilson's case, because there was no guarantee that it would not take so long to come down that one would wear out.

At the end of an hour the altimeters showed a little over twenty thousand feet. Later the official recording barographs showed 19861 feet. A few feet, more or less, mean little in a jump from that height.

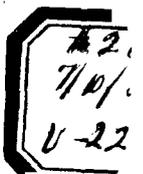
Lieut. Wilson says that the first few thousand feet it was difficult to discern any downward motion. He seemed to be hanging in the atmosphere motionless. A minute or so later, however, there was a lot of action. He dropped into a highly scrambled section of the earthly ether which was being disturbed by a northern gale. Wilson, who is not too big or heavy, was flopped around with entire disregard for his personal comfort. In fact, his stomach objected seriously. Due to his physical condition he is not prepared to say that he made a new loop record, but he thinks he did. The wind tossed him and his frail chute hither and yon, thither and thence, not to mention between and thereabouts. He was over, under and parallel with his canvas life saver at various periods.

As he dropped out of this stormy slice of air he observed that he was drifting farther and farther from the field, so he started to pick out a suitable spot whereon to light. He spied a small field and side slipped his chute toward it. Three hundred feet from the ground he pulled his second chute to break his fall and a few seconds later he lit gracefully in a turnip patch. Residents from miles away who had spied him in the air rushed to congratulate him.

Lieut. Wilson successfully accomplished a nervy experiment and conclusively established the fact that a chute will open in the rarefied atmosphere up above. It is given to few to be the holder of a world's record, and now Lt. Wilson can die happy.

A METEOROLOGICAL COMBAT

On Friday at 11:15 A.M. with Chauffeur Hoffman as passenger, Lieut. Plumb left Kelly Field in a DH-4 B on a Ferry Flight to El Paso, Texas. Flying a straight air line to Sanderson nothing eventful happened outside of dodging a



number of light rain storms in Real and Edwards Counties. At a point approximately thirty miles north of Del Rio in Valverde county a steady increase in the temperature of the motor with no evidence of loss of water was noticed. This was most alarming as the ground over which they were flying was hopeless for landing. For this reason the plane was headed south throttled so as just to retain flying speed and picked up Del Rio on the Rio Grande. Upon landing and investigating, it was found that the radiator was full of water but the wire controlling the shutters had broken and therefore the spring closed the shutters. With this repaired, and the plane serviced with gas and oil, they started again intending to land this time at Marfa. On the course half way between Del Rio and Sanderson, they encountered a severe storm, rain concentration at 3000 feet, falling in great quantity with quite a display of lightning. On observation it was noticed that the sky in all the north west was of a deep blue and very dark, denoting a great storm sweeping down from the north west. This first leg of the storm which was encountered, extended to the Rio Grande at this time and was moving south east at the rate of approximately 15 to 20 miles per hour. They swung below this leg getting on the course on the west side and soon found Sanderson basking in the sunlight. Sanderson had been hit by this storm as the water stood in large pools on the air-drome. As Marfa was the objective it was decided to push on and ahead about thirty miles, another leg of the great storm was seen across the course with a gap in it about wide enough to drive two planes through wing to wing. In this gap there was a light drizzle through which they passed into an arena and a scene which I dare venture the human eye has never witnessed before. This gap through which we had passed was at that time about fifteen miles south of the course. Inside we were truly in the cyclonic center of the storm, where the heavy black clouds hung restlessly at an altitude of about one thousand feet. We were driving among the mountains at the north end of the Santiago mountain range which are known as Elephant, Ceinaga, Goat, etc., all exceed 6000 feet in elevation there for they extended up through the boiling ceiling of black clouds. Ahead and in all directions about the rain was pouring down with a tremendous discharge of lightning above and about us. The air currents were circling, madly boiling so as to toss the big plane about like a chip on rough water. This made the situation very hazardous as at times there was little clearance above and between some of the rocks and crags. The summer air in Texas above mountains and cities is very rough and bumpy but this situation was far beyond comparison with that, for on one occasion the plane assumed a position laterally in a bank beyond the vertical, if this had happened a moment sooner we would have met our end, but as it was we had emerged over a deep valley where it was possible to correct the position of the plane with a fall of 500 feet, which brought us close to the rocks and brush below. As the rain was closing in on all sides and the cyclonic movement of the air becoming more fierce, it was decided to turn back and fight our way through the gap again. On passing between two mountains to reach the easternmost side of the circle, we were horror stricken to find that the storm had welded together at the gap and appeared as black as the rest. This hell hole was now closing up like some mad serpent around us, so everything was set for our final fight, opening the motor full and placing the machine near its maximum climb. The eastern wall was entered casting all odds to fate. Just before entering one glance was cast backward, I do not know why, but possibly for a last look at the passenger. Nothing could be seen but the tip of his helmet as he was in a crouching position, possibly realizing the great danger then faced. The rainfall was terrific, so dense in fact that I could not make out the outer struts of the wings. It seemed like an hour that we were in this, and we sat very uneasy in our seats not knowing when we might be dashed against the wall of a mountain. After five minutes, we emerged into a grey heavy mist which was recognized as light clouds hovering about the extremities of the storm. The fight was not over yet as it took a great deal of something to dive the plane out of these clouds and find out what was below. We came out over the unmistakable Rio Grande at a point judged to be at the southern end of the Santiago Range of Mountains. We pushed north eastward up the Rio Grande to a point where the river turned due east, where a glance to the north told us that Sanderson was now under a heavy storm which extended south eastward across the return course to Del Rio. We drove due north on the east side, hoping to reach the river again as it was our only salvation for landing and we were well over three hours on the gas tank. Reaching the Rio Grande with sunshine and white fluffy clouds, I turned and rocked the plane to attract the passenger's attention and smiled at him waving a hand at the storm behind. He apparently did not feel humorous but held up his wrist watch, pointing at it, meaning that we were short of gas. I pointed at the river which appears as a velvet cushion in comparison with the surrounding rocks

and mesquite, and he indicated that he could swim. Del Rio hove into sight and we landed, 10 minutes short of four hours and all this with nothing to eat at the noon hour. Some of the men from the Eagle Pass flight were there with two planes and three tents which they had erected. I warned them to fasten their tents especially strong and stake the planes well as an honest to goodness storm was coming on. All of this was accomplished with one exception which I will use as an illustration to show the treachery of these winds. My plane and one of the others were wrenched loose from their moorings and pitched up on wing end, causing slight damage while a third plane 50 yards over to the west sat calmly during the storm, not tied, and never budged an inch. The next day after replacing the right aileron, we flew on a clear sunshiny day to Marfa then on to El Paso at a conservative altitude where we could look down on the north edge of the battle grounds of the day before.

BOARD OF TRADE VISITS SUPPLY DEPOT AT MIDDLETOWN, PA.

During the week the Board of Trade of Middletown, Pennsylvania paid a visit to the Aviation General Supply Depot, and were conducted thru the various warehouses by Captain J. A. Mars, Commanding Officer. They were given an insight into the enormous amount of aviation material in storage at this depot. After their visit to the warehouses and headquarters, they were conducted to the flying field and shown the different types of airplanes in service at the present time and were also given a chance to see an airplane take off and land, which a number of them had never had the privilege of doing.

During the past week two German A. E. G. G. -4 airplanes were uncrated. This plane is of the heavy bomber type carrying over 1000 gallons of gas and is mounted with two 160 H.P. Mercedes motors.

STRAWBERRY FESTIVAL A LA MODE

A recruiting party from Chanute Field which has been working through the territory within one hundred miles west of Rantoul stopped over night at Taylorville, Illinois. Taylorville is the home of Private Gerald E. Spates, the airplane mechanic accompanying the recruiting party. Private Spates' parents Mr. and Mrs. George Spates entertained the men and officers of the party at their home, five miles from Taylorville. When the party left Taylorville for the field in the early morning, Mrs. Spates presented them with a case of cherries which were carried on the motor truck. She said she would like to send the men at the field a case of strawberries as well as the cherries, but she was sorry it had been impossible to pick them before the departure of the truck. The pilot and the mechanic with the plane, not desiring to miss such a prize as a case of strawberries, helped Mrs. Spates gather and prepare the strawberries for transportation in the plane. The strawberries were suspended in the fuselage and reached the field in perfect condition several hours ahead of the cherries, which had been jolted along over the rough roads. Since the return of the recruiting party there has been a general feasting in the detachment mess and the officers quarters on strawberry shortcake and cherry pie made from the cargo of the Aerial Fruit Express.

ELUCIDATION.

In the News Letter of June 18th, 1920, on page 11 under the heading "Quotations from Army Reorganization Act, approved June 5, 1920", the following changes should be noted.

In the above quoted title the date should read June 4, 1920. Under "Regular Army Reorganization" the date in the first sentence should read "National Defense Act, approved June 4, 1920" The first paragraph stating "There is hereby created an Air Service" is Sec. 13a of the Reorganization Act of June 4, 1920. The second paragraph stating "That the President"-- is from the appropriations Act of June 5, 1920. The third paragraph marked Sec. 127 a is from the Reorganization Act of June 4, 1920.

DO PILOTS BECOME STALE AWAY FROM THE GAME?

This is a question that has been argued pro and con ever since the Armistice was signed and there was apparently little on either side that could be pointed to with authenticity. Of late, however, with the opportunity for flying for reserve officers at some Air Service stations, points relative to this long standing argument are appearing and it will not be long ere there will be excellent statistics and data on the subject matter if a careful watch and record is kept of these men that avail themselves of the opportunity.

To start the ball rolling it has already been found that the returning pilot is extremely hazy on judging distance upon his first return to the stick after having been away from it for any considerable length of time. There is a fundamental point why reserve officers can not be called back into active duty at a moment's notice and be expected to give any sort of creditable showing, especially against a well trained or prepared enemy. Army aviation must be kept going it would seem or the trained men now available will be lost to the service in the event of sudden hostilities. A start should be made at once under the proper direction to check up all the discrepancies that crop up in reserve officers who return to fly so that remedial steps may be taken to arrange to constantly keep these men and their posterity in fit condition to fly at once in the interest of national defense.

THE FUTURE "LIFE BOAT"

While still in its infancy, the airplane parachute has been developed to such an extent that in case of accident to the plane, any pilot or mechanic, who has become familiar with its use would unhesitatingly dive over the side, trusting his life to his chute.

Students in the parachute school have so much faith in the efficiency of the chute that instructors are forced to lecture against over confidence. This confidence comes after they have been shown the strength of the materials used, witnessed the tests and finally the live jumps.

First the students make rip cords, then pack frames and the shroud lines to the testing harness. Then they do the thing their fingers have been itching for since they first saw it, - fold the chute.

Too much stress cannot be placed on the necessity for care and inspection in folding a parachute. Our motto reads, "Put your trust in God but be sure your parachute is folded RIGHT". If at any time a U.S. Army Type "A" chute fails to open properly, some one has missed a bet on the folding table.

Students now attach the chute to the plane for testing with the 300 pound weight. By an ingenious method developed at Dayton, Ohio this weight is suspended from the center of gravity by a strip, the release wire of which is led to one of the cockpits. The weight hangs in a guide just back of the faring on a DH 4 B axle. Cables lead from a ring in the weight to the test harness, which extends through one end of the pack. The chute is tied to the bottom of the fuselage with 50 pound twine and the ring of the rip cord secured also to the fuselage back of the chute. All is now in readiness for the test. After the ship has attained an altitude of 1200 to 1500 feet, the pilot dives toward the center of the field with motor wide open. Trip wire is pulled as the ship attains a speed of approximately 150 miles per hour. The released weight breaks the twine and the falling pack pulls the rip cord. Almost too fast for the eye to follow the parachute opens to receive a shock far greater than could possibly be given it in an ordinary live jump.

A 48 inch vent in the apex opens fully as the chute takes the shock. This vent is closed by shock absorber rubbers after the rush of air has passed through and the descent is from 14 to 18 feet per second, depending on all conditions.

The tested chute is now placed on the folding table and a rigid inspection follows. If defects or failure of parts show up, repairs are made and the chute again tested. In twenty-four tests at Kelly Field only one chute has split badly. This one, however, held its shape and the rate of descent was less than 15 feet

per second. Records show chutes have been tested at speeds up to 155 miles per hour with 400 pounds weight without starting a stitch. Certain weather conditions cause the rapidly unfolding chute to pick up static current and a shock is received by the person detailed to retrieve it. Brownish spots appear on the silk and weaken it. These are called static burns.

Passing inspection,- the chute is re-tied to the jumping harness which has been tested to 6000 pounds, and live jumps are in order. The jumper is buckled into his harness, his chute on his back, the rip cord led over his shoulder and fastened with the ring easily accessible to his reach. A reserve chute is placed on his chest. This is a precautionary measure ordered to be used in training and for exhibition work. Although in no instance has the original failed to function, the added confidence given, more than compensates for the inconvenience of wearing the second pack.

As he leaves the side of the plane, the jumper pulls his rip cord. The opening of the chute is so rapid that he is riding securely a fraction of a second later. With the use of pack frames, new packs made by students open the chute fully in $3/5$ ths of a second at speeds up to 100 miles per hour. These packs, smaller than the originals are 10 by 19 by 4 inches and carry a 23 foot chute.

Forty out of forty-two jumpers have told us they did not get any sensation, of falling but rather of continuing with the plane. Our jumper now begins experimenting. He finds he can stop oscillation by using the same tactics he would in a swing. He also finds that he can side slip the chute in any direction by pulling down on one set of cords, thus spilling the air out of the opposite side of the chute. It can be seen he would pull the lines facing the direction he wishes to go. This allows him to avoid unfavorable landing places. As he nears the ground his reserve chute is released solely for the purpose of relieving him of its weight in landing. This chute does not always open, due to insufficient speed. But in many instances it opens fully in time to make landing very easy. In fact many jumpers retain their feet.

With the development of the seat pack on which the flier sits instead of a cushion, and the consequent reducing of its inconvenience to his free action, the parachute will come into its own. It will be regarded as the life preserver is to the ocean going steamship.

BUSINESS AND MILITARY EFFICIENCY OF TOMORROW WILL DEPEND UPON
OUR AIR MERCHANT MARINE ✓

If Aviation in America is to have a future and is to grow as it undoubtedly will, then we must look to the civil rather than to the military for national expansion. Obviously, military aircraft and progress will continue to grow, and expand insofar as the present needs and the future needs of the military establishment are concerned, but fundamentally they will develop along lines which will be useful for training and tactical operations, and, therefore, the types will be divided between small fast pursuit types, day and night bombers, and training types.

The business world is fast coming to recognize the fact that aviation is but another means of increasing efficiency, cutting down time and costs, therefore, sooner or later commercial aerial transportation for express, mail, passengers, etc., must come into its own permanently, as did the railroad, automobile, the linotype, etc. This may appear to some as a more or less fanciful dream. But is it? Let us illustrate. The cities of Cleveland and Detroit are both manufacturing cities. Both cities have New York as a market to absorb a great part of their products. Prices for similar products were about the same, railroad facilities, etc., equalled things pretty fairly prior to the organization of the aerial mail to Cleveland. When this service was extended to Cleveland from New York, Detroit difficulties became acute in less than a month's time after the inauguration of the Air Mail. A cry came from the Detroit Chamber of Commerce to extend the air mail route to their city. Upon investigation by the authorities it was found that Cleveland was securing the cream of the business in New York and states south of it which were also on the mail route, because a package or letter from Cleveland would be delivered in New York city in eight hours whereas the best time Detroit could deliver a package or letter by train to New York was approximately 21 hours. Thus Cleveland business men had a jump of 13 hours upon their Detroit competitors, with the result that gradually they were eliminating competition.

Big business must ever move on with greater speed efficiency, and must also necessarily strive to cut down costs. Where this can be done the efficiency is raised. In the case of the Cleveland manufacturers it was raised seventy-five per cent. Naturally, therefore, the rate would be reduced in proportion. Therein lies the future of commercial aerial transportation. Dollars and cents on either the profit or loss side of the ledger, particularly on the latter, will do for aviation in a few years, that which would ordinarily have required 50-years to have accomplished.

Let us for example take Central American business concerns who find it necessary to make frequent trips to Chicago. In order to reach Chicago from Nicaragua, it would be necessary to travel by steamer to New York, thence by rail to Chicago, a distance of 3400 miles, requiring 9 days or 236½ hours. Now stretch your imagination slightly. We step aboard a great passenger airplane, entirely enclosed, driven by two American Liberty motors. The Aerial Transport holds 12 passengers and two pilots. Now everything is set to go. We ask the pilot how many miles it is to Chicago and learn that in an air line it is but 2900 miles, and his air speed indicator reveals the fact that you are now speeding thru space at 100 miles per hour. Looking below, you see the railroads winding around mountains, and the steamer apparently going miles off its course. The air transport has no such circuitous routes to follow. The business man keeps in touch with all the latest news and business at his office by wireless telephone and in 29 hours time arrives in Chicago.

It might be interesting to say something about the cost of operating the Aerial Transport on this trip. The two Liberty Motors are 400 h.p. each. Each motor will consume approximately 25 gallons per hour. Take gasoline at its present high water mark (30¢ per gallon) multiply by number of hours (29) the cost would be \$435. Now divide this between 12 passengers, the actual gas consumption would figure about \$36.25 per person. Then add for salary of pilot, lubricating oil, profit and depreciation, the cost to each passenger for the 2900 miles journey would be about \$522 as against \$150 on the ground but at a saving of over a week's time.

From these facts it must be apparent that the future of air travel is assured. The popular belief that when a motor on an airplane quits, the machine will fall like a plummet, is a mistaken one. All commercial airplane carriers are being built with two or more motors and are capable of staying in the air should one stop. Even if all the motors should stop, which is not likely to happen, this would not be the case because airplanes are built to glide, and for every 1,000 feet of altitude which the airplane has, it can glide a mile and, therefore, can always make a safe landing while on a cross country trip.

The important thing for business concerns in all cities to remember is that they must have a municipal landing field if they wish to have an air terminus in their city, otherwise, they will sooner or later find themselves in the same boat as the Detroit manufacturers. A municipal landing field should be, if possible, 1,000 yards square and situated away from areas thickly populated by buildings. The proportion of the field as given above may sound large but we are only a short distance away from the time when lighter-than-air airships, ranging in length from 500 to 1200 feet, will be flying regularly from San Francisco to London and from the Canadian border to South America. These machines will be built to carry several hundred passengers and a large space will be required to land them. It is more than likely that before the next two years go over our heads, Commercial airship lines will be in operation. If a beaten country like Germany can put across a project like this and operate a daily schedule over a distance of 395 miles with airships, with a passenger rate of 5¢ per mile profitably, then a great large and financially sound country like America should certainly be able to make the world sit up and take notice.

Analyzing the situation it simmers itself down to this. Business will be benefitted and speeded up at least 75% not to say the least about the benefit derived in health by the air traveling public from the breathing of pure air at high altitudes free from dust. However, that which is most important and paramount to all is that America must have a merchant air marine for her own protection. Everyone knows what an important part the sea merchant marine played

in the war just ended. The Air Merchant Marine will play even a more important part in the next war (if there be one) because the next will be fought in the air beyond doubt. Then it develops upon us to keep abreast at least with foreign countries, who are far ahead of America in civil commercial air transportation. It is of vital importance that a start be made soon, otherwise our few remaining aircraft industries, which are so vital, must naturally perish.

With airplane and airship lines plying regularly throughout the United States and to foreign countries, flying the Stars and Stripes, we can obviously have a feeling of national security, because in the event of war, we have trained air pilots, personnel and equipment. It will be but a small detail to turn over the merchant air marine to the military establishment. In such an event moving troops, freight, armament, etc., amid such conditions as faced us during the last war, will not have to be tolerated again.

WHAT A GOING AIR SERVICE ENTAILS EVEN ON A SMALL SCALE THE MIDDLETOWN DEPOT

The Aviation General Supply Depot covers 47 1/2 acres, the ground for which was broken May 15th, 1917. The warehouses and foundations cost \$748,010.92 and provide storage space totalling 563,431 square feet. The present contents approximating \$55,000,000.00 consist of foreign and domestic airplanes and engines, spare parts and necessary supplies of various kinds required by Air Service Flying Fields, Repair Depots and Stations, in fact this Depot is maintained as a Supply base for Air Service activities.

Twelve officers, four enlisted men and 450 civilians are employed 350 of whom reside in Middletown. The annual salary approximates \$500,000, 80% of which goes to residents of Middletown, a large percentage of which ^{being} is spent therein.

- Guard Personnel consisting of 1 Chief, 2 Assistants, 21 Guardsmen, 1 Fire Inspector (act as Guard and Fire fighters) at a monthly cost of \$2640.
- Garage Area of 16,800 square feet constructed at a cost of \$23,520, thirty-eight cars of various types in operation maintained by 1 Superintendent, 1 Truckmaster, 5 mechanics and 12 Chauffeurs at a monthly cost of \$3500.
- Warehouse "A" Area 67,200 square feet and 20,930 square feet of platform space constructed at a cost of \$72,764, housing approximately \$5,000,000 of airplane spare parts, mainly pertaining to De Haviland 4, supervised by 1 Storekeeper, 2 Assistants and 10 Laborers at a monthly cost of \$1200.
- Railroad Tracks Approximately four miles of railroad tracks thru Depot, constructed at a cost of \$60,875, maintained by 1 Labor Foreman and 10 Laborers at a monthly cost of \$1200. Cars received during past six months 300; which were loaded and unloaded with the help of two cranes.
- Warehouse "B" Area 128,080 square feet, and 24,250 square feet of platform space constructed at a cost of \$170,664 housing approximately \$7,800,000 of DH4, Spads and Curtiss Aeroplanes complete, with and without motors and their spare parts, supervised by 1 storekeeper, 2 Assistants, and 20 Laborers at a monthly cost of \$2150.
- Warehouse "C" Area 128,433 square feet, and 23,597 square feet of platform space, constructed at a cost of \$170,897, housing approximately \$30,000,000 of airplanes, engines and miscellaneous spare parts supervised by 1 Storekeeper, 3 Assistants and 40 Laborers at a monthly cost of \$4050.

Officers'
Quarters

- (a) Commanding Officer.
- (b) Residences of other married officers in frame bungalows.

Bachelors'
Quarters and
Officers' Club

Occupied by the four unmarried officers.

Test Block

For testing and adjusting engines repaired at this Depot, operated at a monthly cost of \$245.

Warehouse "D"
"The Granddad
of them all"

Area 194,300 square feet, and 13,000 square feet of platform space constructed at a cost of \$25,051, housing approximately \$6,200,000 of aviation clothing, spare parts; tools, office supplies and miscellaneous Air Service property.

(a) Shipping office: Supervises the shipping of approximately 800 carloads and 1500 less than carloads of outgoing Air Service material annually on which the approximate annual freight charges are \$183,000, maintained by 1 Shipping Clerk, 2 Checkers and 7 Laborers at a monthly cost of \$1100.

(b) Carpenter Shop: Crates outgoing shipments and construct and repair, using approximately 20,000 feet of old and new lumber and about 2000 pounds of nails monthly, maintained by 1 Carpenter Foreman, 1 Assistant and 17 Carpenters at a monthly cost of \$3000.

(c) Warehouse "D-6": Housing approximately \$758,920 of various kinds of machinery, supervised by 1 Storekeeper, 1 Checker and 2 Laborers at a monthly cost of \$500.

(d) Warehouse "D-10": Housing approximately \$2,600,000 of Aviators' clothing and miscellaneous supplies under supervision of 1 Storekeeper, 1 Assistant, 1 Checker and 3 Laborers at a monthly cost of \$700.

(e) Camp Supply Office: Furnishes office with stationery, clothing for enlisted personnel and sells certain food articles to married officers and enlisted men, monthly sales totalling approximately \$350. Estimated value of property stored \$500,000, supervised by 1 Officer, 2 Clerks and 1 Laborer at a monthly cost of \$600.

(f) Warehouse "D-2": Housing approximately \$627,000 of stationery, various tools and miscellaneous supplies, under supervision of 1 Storekeeper, 1 Assistant, 1 Checker and 3 Laborers at a monthly cost of \$700.

(g) First Air Station: Furnishes medical treatment to Army Personnel and emergency treatment to civilian personnel. Personnel: 1 Army Physician and 2 Enlisted Men.

(h) Receiving Dept: Supervises the receiving of approximately 1138 carloads and 1140 less than carloads of incoming Air Service material annually, on which the approximate annual freight charges are \$279,700 maintained by 1 Head Checker, and 16 Checkers at a monthly cost of \$1715.

(i) Electrical Dept: Approximately 15 miles of wire used on post with a monthly electrical bill of \$700. Machine shop equipped with complete storage battery charger, rotary converter, switch board and other up-to-date electrical appliances. Complete storeroom of electrical supplies valued at \$5000. Twelve electric trucks in operation. Department operated by 1 Chief Electrician, 1 Machinist, 6 electricians and 7 Laborers at a monthly cost of \$3000.

(j) Plumbing Dept: Approximately 14,220 feet of watermains are laid throughout Depot connected with Middletown and Ordnance Department Water Supply, with an average pressure of 50 lbs. There is a ground tank containing 200,000 gallons of reserve supply connected to a gasoline engine which will pump 1000 gallons per minute and will give 125 pounds of pressure per square inch. The elevated tank in front of Headquarters, 98 feet above the ground, holds 75,000 gallons and is used as a reserve when the other water facilities are exhausted. Plumbing under supervision of 1 Plumber Foreman and 4 Plumbers at a monthly cost of \$690.

(k) Warehouse "D-5": Housing approximately \$2,000,000 of Airplane and Engine material and spare parts, supervised by 1 Storekeeper, 1 Assistant and 8 Laborers at a monthly cost of \$1,000.

(l) Headquarters: The heart and pulse of the Depot maintained at a monthly cost of \$3000. The personnel consists of 50 Officers and civilians, 14 of whom are girls. Area 5120 square feet or an average of 100 square feet to each person. Office is cooled by 36 small and two large electric fan ventilators which, together with the open windows extending to the ceiling, make it a very comfortable working place.

Flying Field. Operations began in February, 1919. The ground is reasonably level, easy of approach and well drained, making it a very good landing field. Officers of this Depot have flown approximately 644 hours from this field in the past year, and there have been only two crashes, both of which have been minor, without causing any injury.

COL. W.K. WILSON, GENERAL STAFF, ON TWO CROSS COUNTRY FLIGHTS, IN
J.L.-6 ALL METAL MONOPLANE

At the invitation of Mr. J. M. Larsen a trip was made on June 11, 1920 in one of Mr. Larsen's J.L.-6 all metal monoplanes from Bolling Field, Washington, D.C. to Langley Field, near Hampton, Virginia, and returned on the same date. The distance covered in the round trip was approximately 270 miles. The plane was piloted by Mr. S.C. Eaton. Including the pilot, there were five passengers. The trip down was made in 95 minutes, and the return trip was made in 100 minutes, although there was a strong head wind to combat.

On the next day with the same plane with the same pilot, a flight was made from Washington, D.C., to Central Park, Long Island, a distance of approximately 250 miles in 145 minutes. Including the pilot, there were six passengers, some of whom had hand baggage on this latter trip.

The J.L.-6 represents a new era in aviation. It is designed to secure the maximum safety, service and efficiency. The metal wings carry the gasoline tanks which have a capacity sufficient to keep the plane in the air for over ten hours. Consumption of gasoline, however, for a plane of this size is very low. The cabin is designed for the comfort of the passengers. There are four upholstered seats arranged similarly to the seats in a limousine. There is a door on each side of the cabin and isinglass windows which can be raised or lowered by the passengers.

Behind the cabin there is a small compartment for baggage. During the flight the passengers changed seats at will, ate lunch, and wrote letters. As an inspection plane for Army officials, the J.L.-6 is ideal. The metal construction has a big advantage, in that it is both fire-proof and weather proof, and the possibility of developing this type into a very much larger plane with greater increased carrying capacity makes its introduction very important to both commercial and military aviation.

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CAPTAIN JOHN O. DONALDSON TO BE DISCHARGED

Captain John O. Donaldson, who has been in command of the 94th (hat-in-the-ring) Squadron at Kelly Field, Texas has finally received the discharge for which he has been waiting and has left the army for the more lucrative occupation of digging out the slippery black gold for which Texas is famous.

The early days of the war found Captain Donaldson on the waiting list for appointment to ground school which he finally reached in July of 1917. Upon his graduation he was sent to Canada to train with the Royal Flying Corps at Toronto. Here, after completing his preliminary training, he was commissioned a Second Lieutenant, A.S., S.R.C. Following the Canadian training he was sent to Fort Worth, Texas for advanced training and aerial gunnery on Curtiss planes. In April, 1918 he was transferred over seas to England and again attached to the R.A.F. with which he served throughout the war. During his advanced training in England he established the highest gunnery record for Americans training with the British up to that time. Following his graduation from the British Pursuit School he was assigned to the 32nd Aero Squadron R.A.F. (S.E. 5's); with which he went to the British front. Up to the time of his capture by the Germans, Lieut. Donaldson was awarded the Distinguished Flying Cross by the British upon crashing his seventh Hun. He was promoted to a First Lieutenant and Military Aviator, and three times was recommended for the Distinguished Service Cross, but was taken prisoner before these honors arrived. In addition to this he was cited in Army Orders four times. Twice before he was shot down, his plane was so damaged in action that it was a total wreck. This should have been a warning to him, but, heedless of past experience, on a bright day in September, 1918 he went into a fight against odds with the same reckless daring as before, and this time he was not quite so fortunate. In a hot "dog fight" in which he brought down another Boch in flames, his own plane was so damaged that he was forced to descend inside the German lines. As a prisoner he displayed the same daring and courage that had characterized his work in the air. After only forty eight hours had elapsed since his capture he escaped with another aviator and was at large for eight days during which time he made an attempt to steal a hun machine and was slightly wounded by a German bayonet for his pains. He was finally retaken in a starved and weakened condition while trying to cross No Man's Land to the allied lines. Following his recapture the Germans sentenced him to solitary confinement. After fourteen days, he again escaped and this time made for Holland. For twenty eight days he walked his way towards Holland; and after many hazardous adventures finally cut the wires at the Holland Border and escaped in safety from the Huns on October 23rd, 1918. After a brief internment in Holland, most of which was spent in a hospital, he returned to England on November 1st, 1918. He insisted on returning to the Front, and so rejoined his old outfit on November 9th, just two days before the Armistice was signed.

After his return to the United States as a 1st Lieutenant, M.A., he took part in most of the Flying Circuses that were sent out to perform for the Victory Loan Drive and in many subsequent propaganda flights. During this period he was promoted to Captain in recognition of his enviable flying and fighting record.

Captain Donaldson has eight victories officially to his credit and four unofficial victories; this record making him the leading American Ace still in active service at the time of his discharge. His remarkable flying record is exemplified by the excellent performance that made him the handicap winner of the recent Trans Continental race. He has a record of never having broken a ship excepting the three that were shot up by the enemy.

Captain Donaldson came to Kelly Field early in February, 1920 and was first assigned to the 95th (Kicking mule) Squadron, as Engineering Officer. Upon the lamentable death of Captain Kindley, Captain Donaldson took command of the 94th Squadron. The love of the Texas oil fields proved too strong for him, however, and he put in for his discharge while on leave.

As a friend and comrade we feel keenly the loss of this cheery young officer -- the youngest Captain in the Air Service-- and we join in wishing him every success in his new vocation.

ACCORDING TO HOYLE

Doubtless, there will, for years to come, be many interesting humorous stories told of early flying experiences occasioned by the extensive training necessitated by the "World War". Some may be real happenings and some may be exaggerated. Here is a real one that happened in the early spring of 1918 when Rich Field was just inaugurating there extensive training of cadets. One cadet, whose name is not now remembered, had received only a few hours instruction and had "soloed" only four or five times. A flying rule was in vogue at Rich Field at that time, which required all turns to be made away from the hangars. Now, the hangars are east of the flying field and the wind is nearly always from the south. Of course the cadet had had it instilled into him always to "take off" into the wind. This cadet, it seems, had never been taught how to make a left turn as what limited instruction he had received only necessitated right turns in order to "take off" into the wind and to turn away from the hangars. One morning, however, the wind had changed and was from due north. The ambitious cadet "taxied" out on the field for practice. He noticed the wind to be from the north. He "took off" according to orders. When the time came for turning, however, he suddenly realized that he could not make a right turn without turning over the hangars which was positively forbidden. Here is where his determination to obey orders resolved his effort into a bit of humorous exhibition. He could not trust himself to make a left turn. He must turn and he must not turn over the hangars; with a sharp snappy turn he linked the north east corner and just avoided going over the hangars coming out in a due westerly direction; at the north west corner of the field he made another right turn completing a link and coming out in a due southerly direction; at the south west corner he made another link coming out in a due easterly direction and continued on to the south east corner of the field where he again repeated the same performance, having made a circuit of the field in a path somewhat resembling a fleur-de-lis. It was an humorous happening but it indicated a spirit of obedience and originality. The cadet finally came down O.K., after having circled the fields several times in his original path. It is unnecessary to state that this determined cadet soon mastered left turns and became a good flier.

JUST A FEW THINGS THAT I ALWAYS TRY TO REMEMBER WHILE FLYING.

By Sgt. Wilburn C. Dodd, A.M.
Air Service Mechanics School,
Kelly Field, Texas.

FIRST-- I want to know what condition the ship is in. If all the control wires are O.K. I have found it good practice to turn the motor up at least long enough to empty the carburetor float chamber. This is to ascertain that the flow of gasoline is sufficient to at least go long enough to get back to the field.

The common practice of warming up motors-- is to warm it slowly, and when ready to be turned over to the pilot, the throttle is opened for a few seconds and then the blocks are removed from the wheels. The pilot taxis out and heads into the wind ready to leave the ground. If the gas line is partly closed, this trouble will not show up until the machine is 50 or 60 feet off of the ground, because the motor has not been opened up long enough to drain the carburetor before leaving the ground.

In a small field where the pilot has not taken precautions, and has not used all the field for take-off, owing to the low altitude he has gained, when his motor begins to slow down, his first thought is to get back into the field. (and this is the first time he has thought of any trouble) but he is not high enough to make the turn without his motor, which has failed him. Right here is where the pilot should keep cool. Since it is a sure shot that there is going to be a crash, for instance, if he tries to hold the plane up long enough to make the turn. Nine times out of ten the machine goes into a tail spin, which is nine times out of ten fatal to the man in the front cockpit.

If he does not try to turn, and lands straight ahead, the chances are he will hit something. He can still keep control of the machine, by not trying to turn and stall it just as it is going to strike the object-- yes, I will admit it will be a crash in either case, but it is better to have just the weight of the machine stalled, than weight plus speed.

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AERIAL PHOTOGRAPHIC MOSAIC AND DEMONSTRATION AT FORT LEAVENWORTH, KANSAS

Since the Fourth Aerial Photographic Section reported at Fort Leavenworth, Kansas, 40 square miles in the vicinity of Easton, Kansas have been photographed in one hour and fifteen minutes flying time, on 192 negatives at an altitude of 8000 feet on a scale of 1/8000, using a G.E.M. camera and a DH-4 plane. Prints from these negatives have been assembled into a mosaic to remain at the schools. This mosaic has been copied with a 20" by 20" copying camera to a scale of 3" to the mile and 15 of these prints have been delivered to the school of the Line and are being used in present instructional maneuvers.

The General Staff Class was instructed on the coordination of the Aerial Photography with other units of a command, being shown with explanation, the Easton mosaic and service types of cameras.

During the progress of the Class, a DH-4^B plane flew to Kansas City, Missouri where oblique photographs were made of the Union Station, Inter-City Viaduct and railroad yards. The seventy mile round trip was completed and dry prints in the hands of the class in two hours despite a delay due to inability to secure alcohol for quick drying.

1200 negatives have been made in eight hours flying time covering 250 square miles of a 300 square mile mosaic that will include the city of Leavenworth, Kansas, the Military Reservation and the ground usually included in the maneuver problems of these schools. It is being made with the same equipment and at the same altitude and scale as the small Easton mosaic, and it is to be regularly used by future classes at these schools.

A series of 18 x 24 Centimeter obliques, views of this post and vicinity have been made with the F-1 camera mounted on the machine gun tourelle of a D.H.-4 B and ten prints of each negative have been delivered to the Commanding General of the Post.

SHORT PARAGRAPHS OF NEWS INTEREST.

W.O. Butler, with pilot Lawrence Brown, covered the old military highway from The Dalles, Oregon, to Yakima, Washington, by airplane in one hour and 15 minutes. In old days, when all provisions were hauled into Yakima by that route the trip required three days. The flying time made by the two from Portland, where they flew to look after business matters, was two hours. During most of the trip they flew at 10,000 to 11,000 feet altitude.

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An excellent formation was flown Tuesday by the 8th Aero Squadron McAllen, Texas, for the purpose of bombing La Del Rey and the bombs were dropped from 10,000 feet and above a broken layer of clouds, many effective hits were made. The observers all released on the signal of the leader ship, who did the sighting, a total of 30 bombs being dropped at one release.

Three planes, carrying ten bombs each and twin Lewis guns, totally equipped for combat, left for Pt. Isabelle, where bombing and shooting will be practiced. 30 bombs are to be dropped and 2000 rounds of ammunition is to be fired at shadow targets on the Gulf.

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Pope Field, Camp Bragg, North Carolina was visited during the week by Lieut. Col. Henry B. Claggett, A.S.A. Department Air Service Officer, Southeastern Department. Col. Claggett made a flight in the afternoon to Wilmington, North Carolina, to examine the condition and the progress of the landing field at that place. The field is to be used as soon as completed by a flight from Langley Field under the command of Captain Frazier Hale, A.S.A. Commanding Officer, 50th Aero Squadron, A.S.A. for an artillery shoot in cooperation with the Coast Artillery command at Fort Caswell, North Carolina.

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The personnel of Selfridge Field, Mount Clemens, Michigan has been busily engaged during the past week in shipping surplus Air Service property to the General Supply Depot, Fairfield, Ohio.

The Gilbert Airline Company, a commercial aerial transportation organization, has been operating in the neighboring town of Mount Clemens, Michigan for the past few days.

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Elaborate plans are being made to have a Fourth of July celebration to take place at Souther Field, Americus, Georgia, in which the people of the neighboring towns are expected to take a big part. It is believed that a very large crowd will be present at the celebration.

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Lieut. Samuel P. Mills, A.S.(a), arrived at Ellington Field, Houston, Texas, during the week from Taylor Field, Montgomery, Alabama. He will assume the duties of Chief Engineer Officer, Vice Captain A.I. Eagle, who is transferred to Taylor Field.

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The Johnston Aviation Company is operating a landing field called the Pittsburg Air Port, located at Leetsdale, Pennsylvania. The field is 2000 feet x 1800 feet. It is reported that the company has several planes and is acting as an airplane agency.

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The shipping department of the Aviation General Supply Depot, Little Rock, Arkansas, is making up a shipment of forty-eight type "R" Hispano Suiza engines for shipment to Dayton, Ohio.

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FIRST DAY BOMBARDMENT GROUP, KELLY FIELD, TEXAS

Lieut. Spencer makes Record Flight

Lieut. Spencer, another shining light of the Bombardment Group, accomplished a good bit of work last week - one which will compare favorably with many world's records. He made a flight from Kelly Field, Texas to Ajo, Arizona, a distance of 1,100 miles, in eleven hours flying time and thirteen hours total time from take off to final landing. It was a corking good, workmanlike flight, and is an achievement to be proud of. It was done in a DHB.

AIR SERVICE MECHANICS SCHOOL, KELLY FIELD, TEXAS

The Air Service Mechanics School Post Exchange was a new venture since the school became a separate organization. This first month has been very successful, the net profits being \$952.76. Captain Charles R. Forrest is the officer to whom credit is due for the amount of business that has been done. His staff consists of Sergeant First-class George P. Klingler, Sergeant Horace Snider, Private First Class James A. Burgess and Private Manuel C. Churchill. The Post Exchange is thoroughly organized and it is expected that the business done this month will be half as much again as that of last month.

All the emergency officers of the field are going around with a worried look. This is due to the coming examination for the Regular Army. In the head of each shavetail, is seething a riot of an algebraic, logarithmic and geometrical equation intermixed with geography and history. On top of that each man is trying to add to his professional knowledge. The instructors in the various departments are kept busy explaining the "why" and "wherefore" of "this" and "that" to some interested Second Lieutenant, who is seeking to add to his professional knowledge. Classes in engineering, administration and mathematics are being held daily before working hours. From all present indications, all officers would make a very good showing on this examination.

Preparations for Officers' Meet

Preparations are being made for an Officers' Meet with the 1st Pursuit Group. These meets will be a monthly occurrence in which contests of all sorts will be featured. A silver cup will be awarded the winner of each meet and the group winning this cup the greatest number of times in a year will hold that cup permanently. This cup is an ornament to any officer's mess, and competition for it promises to be very keen.

Successful landing under difficulties

Major George E. Stratemeyer, had a very interesting experience a short time ago with a Model 7 Spad while flying at an altitude of some 2000 feet. The propeller developed bolshevistic tendencies and quit work which is characteristic of people of this class. The propeller flew apart, causing the motor to race before the switch could be cut tearing it loose from the engine bed. The Major did not procrastinate but "nosed her over" for the motor was making violent attempts to leave the fuselage. He came down in a hurry keeping the plane up with the motor and landing successfully at Kelly Field #2. A considerable amount of credit is due the pilot for setting a plane down safely in this condition.

NEWS FROM RICH FIELD, WACO, TEXAS

Rich Field's facilities and service for gassing and trouble shooting of the many planes, that land enroute to various points either north, south, east or west, seems to be appreciated by the pilots. Oil and gas are provided at a place easily accessible to the planes that land on the field and Lieutenant Edgar E. Glenn, under the direction of Major Muhlenberg, the Commanding Officer, has some one detailed to see that the visiting planes are given quick service when they land. If they are commercial planes, gas and oil are furnished at popular prices from a supply which is purchased for the purpose of supplying commercial aviators and a small charge is made for service which goes to the Supply Detachment fund. If the planes are army planes, they, of course, are gassed and oiled from the government tanks. With a system in which promptness and watchfulness are the main elements, pilots are seldom required to remain at Rich Field more than ten minutes unless they have motor trouble or especially desire to remain at the field for a visit.

ABERDEEN PROVING GROUND, ABERDEEN, MARYLAND

Three planes sent to Baltimore, Md.

During the week three airplanes were sent in formation to Druid Hill Park, Baltimore, Maryland, for the purpose of participating in a sham battle which was being conducted by the Maryland National Guard in the interest of recruiting. These airplanes performed acrobatically, then dropped a message and were shot up by sky rockets from the ground.

A De Haviland airplane equipped with a Michelin automatic trail bomb release has just been received from France. It will be tested in the near future.

18th Balloon Company on Recruiting Trip

The 18th Balloon Company didn't stay very long in Aberdeen Proving Ground, Maryland after its eventful stay in Bolling Field, Anacostia, D.C., before it was on the move again. This time, on a recruiting trip to various cities for the purpose of bringing the company up to full strength.

This system of recruiting, in sending out a whole command, is far different from the old system of recruiting, where a few men were detached and sent to different cities, and recruiting officials in Washington, D.C., are watching closely the results obtained from this recruiting trip, as such a trip is a new method of demonstrating the Air Service and its equipment and obtaining recruits for the Air Service.

The whole trip will be made by means of the company's own motor transportation, and the many new features connected with the trip to Bolling Field such as the mobile wireless apparatus, the display board, etc., will also be taken along as inducements to men considering enlistment. An additional feature will be the many recruiting signs and placards, which will be carried along on the sides of the trucks. They were printed especially by the men of the company, for the trip. One of the signs will be carried on a specially designed trailer twenty-six (26) feet long, with the printing on both sides showing the many advantages of enlisting in the Air Service.

According to plans laid out, the first stop will be Wilmington, Delaware, then Philadelphia, Pennsylvania, then to Harrisburg, Pennsylvania. Two hundred and fifty cylinders of hydrogen gas have been shipped to each of these cities for inflation purposes. They will be many parachute jumps made from the observation balloon during this trip, by both officers and enlisted men of the company.

There will be three (3) cross country free balloon flights made during the trip, one at each stopping place. Plans for the trip were made by the Commanding Officer, Lieutenant Harvey H. Holland, greatly assisted by Lieutenants Max F. Moyer and Emerson C. Cook.

NEWS FROM CARLSTROM FIELD, ARCADIA, FLORIDA

Parachute hopping has been making an appeal here of late to those more hardy souls, who, failing to imbibe any reactions from flying have become so blasé that they wish to experience the thrill that comes when the chutist, perched on the cockpit's edge with nothing but a prayer and a hope between him and terra firma. To tell the truth the thrill is due more to a psychological festering than to any actual grounds, since the parachute used has been proven by numberless experiments to be as positive in operation as the spring cover on the watch our fathers wore. The parachute is folded together with an umbrella like pilot chute inside a canvas pack the opening of which is actuated by strong rubber bands which yank apart the flaps when a cord over the operator's shoulder is pulled, withdrawing three pins securing the gear.

A new class of naval and marine officers is arriving at the field for advanced training on single seaters. With them have arrived Major Napier and Lieut. Milo, flight surgeons, who intend to take the entire course of flying training. There is every reason on earth and a few besides for a flight surgeon to be a flyer and it is an encouragement to the pilots whose welfare rests so much in their hands to see a practical interest taken in aeronautics.

NEWS FROM LUKE FIELD, PEARL HARBOR, HAWAII

The success of the artillery reglage with the Coast Artillery during the month of April has led to a new series of shoots to be conducted by one of the Fort Kamehameha Batteries, for which observation is made by the Second Observation Group. The first problem consisted of fire directed on a stationary object at a range of 10,000 yards. An HS2L flying boat was used as the observing plane. Radio equipment consisted of both a sending and receiving set. Twenty-four shots were fired at intervals of one minute.

Flight A of the Fourth Aero Squadron is rapidly getting settled at Schofield Barracks. A landing field has been cleared of obstacles and leveled off and markers established so that visiting planes will have no difficulties in landing. One of the Hangars is practically completed and the pilots of the Flight have begun ferrying their planes from Luke Field to Schofield. The Flight made its first appearance in the air at its new home recently when they flew acrobatically to entertain the large assembly expected at the Motor Transport Show.

NEWS FROM THE U.S. ARMY BALLOON SCHOOL, FT. OMAHA, NEBR.

The gas department at Fort Omaha has made some very valuable experiments with a field Generator Silicol Gas Plant. This is an experiment with an old type machine. The weight has been reduced from 20,000 pounds to 4,000 pounds since the experiment started about the first of January this year.

It is a portable Silicol Single Unit Gas Generator, and has a capacity of 15,000 cubic feet per hour; weight 4,000 pounds. The percent of efficiency over the old types is from 30 to 50 percent. It is constructed so as to be easily transported on a three-ton truck or aboard a flat car.

The features making for the light weight and high efficiency possible are:

- (a) New type of condenser and cooler.
- (b) New silicol feed mechanism
- (c) New type of agitator in generating tank.
- (d) Generating tank and mixing tank combined.
- (e) Improved methods of temperature regulation.

NEWS FROM BARRON FIELD, FORT WORTH, TEXAS

Two Spads Xlll were received at Barron Field from the Aviation Repair Depot, Dallas, Texas. These sturdy fighting scouts are quite a novelty in Fort Worth as they are the first ones ever seen there and a large audience is always assured when they are flown.

Lieutenants Wooldridge and Prentiss made a cross country trip to Waco and return, a distance of 180 miles in a DH Bluebird. The trip was made in the very good time of 78 minutes.

NEWS FROM THE U.S. ARMY BALLOON SCHOOL, LEE HALL, VIRGINIA

General Charles T. Menoher, Director of Air Service, inspected this post during the week. Colonel Gerald C. Brant, Eastern Department Air Service Officer, also made an inspection on the same day.

Operations this week have been confined to 25 ascensions totalling 18 hours and 25 minutes, and to preparation of the problems for the coming week Artillery firing.

The 43rd C.A.C., temporarily stationed at Camp Wallace, are scheduled to commence firing at 9:00 A.M. Monday, with a battery of 8 inch Howitzers. The firing will be over a 12000 yard range at both land and water targets. The results of the observations will be published later.

Last Monday, a parachute known as the Guardian Angel was tested by Captain Ross G. Hoyt and Lieut. James B. Wallace. The balloon ascended to 200 meters. Three sand bags weighing a total of 90 pounds were attached to the foot ropes of the parachute. The parachute was completely opened in three seconds from the time the sand bags were dropped and descended to earth in 57 seconds.

NEWS FROM MITCHEL FIELD, LONG ISLAND, N.Y.

On Friday Lieut. Kendall piloting a DH-4E with Sergeant Harding as passenger left Mitchel Field for Washington. On reaching Philadelphia a blinding rain storm was encountered and pilot was forced to descend to an altitude of 600 feet which was maintained from there on to Washington. Due to the rain obscuring vision the pilot got off of his course, flying considerably east to Havre de Gras and Baltimore. He finally sighted Annapolis several miles to the West of his course, and Washington was reached in 15 minutes, and the total time for the trip was one hour and 50 minutes which was remarkably good time considering that the trip was made through rain from Philadelphia to Washington and that the pilot went about 40 miles off his course.

A Parachute jump was made at this field during the week, by Corporal Floyd B. Haney, 1st Aero Squadron from a DH-4 B, Pilot 2nd Lieut. Walter E. Richards, 5th Aero Squadron. Altitude 3000 feet, descent 3 minutes, 15 seconds, average rate of descent about 15 feet per second.

Reserve pilots are very much in evidence at this field and there is not a fair day passes but there are not four or five applying for a ride. Up to the present time thirty-four have passed the Physical Examination at the Medical Research Laboratory. It is the prevailing opinion among the reserve flyers that they are capable of stepping into a plane and flying alone at once but this impression is found wanting after the first landing is attempted even with an Army Pilot guiding the controls. The Reserve Pilots get along fine with their air work but all are very hazy on judging distance and the closeness of the ground when landing.

A second parachute jump was made at this station during the week by Sergeant Gilbert A. Shoemaker, 5th Aero Squadron, at 3:15 P.M., from an altitude of 5800 feet. The wind at that altitude was about thirty (30) miles per hour. The time of descent 4 minutes and 30 seconds, rate of descent about 21 feet per second, due to the fact that the chute had to be side slipped by Sergeant Shoemaker for about 2000 feet, in order to avoid a forest. The rate of fall was otherwise normal. The second chute was opened about 200 feet from the ground, and the landing was made perfectly in a very small field. The jump was made from a DH-4E plane.

NEWS FROM SCOTT FIELD, BELLEVILLE, ILLINOIS

Mr. Randall Foster and four other Reserve Military Aviators, members of Missouri Aeronautical Society, visited Scott Field on Thursday. The Missouri Aeronautical Society has more than two hundred members. Major A. E. Lambert is a member of the Advisory Board. The members of the organization are very desirous of securing flying training at Scott Field.

NEWS FROM "B" FLIGHT, 8th AERO SQUADRON, LAREDO, TEXAS

During the week B Flight carried on reconnaissance and mapping expeditions to Pearsall and Cotulla, Texas. Problems issued by the Commanding Officer were to locate and sketch the enemy's roads, fords, the Nueces dam, all important warehouses and all traffic on roads.

Lieutenant Harrison G. Crocker, after a three month's stay at Kelly Field, has returned to the 8th Aero Squadron much to the pleasure of the members of the squadron. Knowledge of aeronautical engineering, parachute jumping, folding, care and remodeling was absorbed by the future Engineering Officer and many improvements are planned. Laredo can look forward to numerous parachute jumps in the near future as all pilots are anxious for the classes to begin.

Captain Luther H. Kice, M.C. the landscape gardener of Laredo, is to be congratulated upon the appearance of the Airdrome. Every morning after a session with sore fingers and thumbs he can be seen nursing the numerous plants and lawns with fatherly care. One visitor remarked that the castor bean plants would be palm trees ere long and no one wishes such to occur more than the inhabitants of the Airdrome, as it means coolness, shade and a touch of the home spirit where such conditions are unknown.

Fort McIntosh has kindly loaned the squadron a steam roller with which to grade the roads. Chauffeur Patchett has been appointed official charioteer and the work is progressing beautifully. They are striving to give the people of Laredo a worthy example of the proper manner of treating roads to make them passable.

NEWS FROM MARCH FIELD, RIVERSIDE, CALIFORNIA

A large number of people were expected to attend the big Flag Day Air Show at March Field Monday, June 14th. Both lighter-than-air and heavier-than-air craft from the Naval Air Station at San Diego and from the balloon School at Arcadia participated with March Field pilots in a program of ten events.

Commander Harvey B. Tomb of the Naval Air Base sent a "pony blimp"; Captain Mustin of the Pacific Fleet sent a flight of six Thomas Morse Scouts; Major Geiger of Ross Field sent a free balloon, an observation balloon, anti aircraft artillery, the post band and at least 50 men.

The entire exhibition was presented in the interests of the Air Service and was widely advertised through the newspapers in all parts of Southern California. Ground exhibits supplimented the aerial program.

The California Society of Engineers will convene in Los Angeles June 29th. A mechanical display will be sent to this convention in charge of an officer who will tell the convention "What the Army Air Service has to offer the Young Aspiring Mechanic".

"Top Paine", former flying instructor at this field is now "Chief" of the Air Service for Lower California. With two old "Jennies" quartered at Mexicali, just over the border, Paine has made a big hit with Governor Cantu. Likewise, big money.

HERE AND THERE WITH THE EDITORS

RADIO AIDS MAIL PLANE

The value of wireless equipment on mail planes was demonstrated recently on the Cleveland - Chicago route, reports the N.Y. Times 6/19/20. The large Martin twin motor machine, left Cleveland under favorable weather conditions at 3 o'clock for the flight to Chicago. While flying the operator kept in touch with various radio stations within a 100 mile radius. A wireless message from the Cleveland station warned the pilot of an approaching storm, so the pilot made a landing at the emergency air mail station at Bryan, Ohio, where he took on additional supply of gas and oil. The plane then proceeded to Chicago and within an hour ran into a severe thunderstorm.

"The radio operator reported that the lightning discharges were so near the plane that the amplifier of the radio set was paralyzed and that he was obliged to remove the radio helmet from his head. The antennae absorbed an electric charge while passing thru clouds, shocking the operator. He pulled in the antennae until the storm had passed.

"By this time, darkness had set in and the pilot and the plane had an S.O.S. call sent to the stations surrounding Chicago asking the field manager to set flares and turn on the flood lights to allow a landing in the dark. Seven amateur and regular radio stations responded with the result that with this assistance the field was lighted.

"It is the opinion of the Post Office authorities that this single instance in the use of the radio in the mail work saved costly damage to the \$40,000 plane and possibly injury to men which would have resulted from a crash in the dark."

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The Washington Star 6/17/20 makes the following announcement: "A department of aircraft was established by an ordinance passed by the Los Angeles county board of supervisors. It provides a commission of seven to examine air pilots and issue licenses, an aircraft inspector, punishment of violators and aerial 'rules of the road'."

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John M. Larsen left Central Park, L.I. yesterday in the J L 6 all metal airplane to attend a wedding in Omaha, Nebraska. The plane was piloted by Bert Acosta who had a mechanic with him,

(N.Y. World 6/19/20)

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Due to the great popularity of the Paris-London air routes, it has become necessary to start a regular afternoon trip in each direction, supplementing the former one-trip a day program. Because of the great saving of time a number of individuals, Government officials and business houses are taking advantage of the route.

(N.Y. Times 6/19/20)

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TO BENEFIT RESERVE OFFICERS

So that American airmen may be kept in trim for flying, the War Department has arranged that "qualified aviators now holding commissions in the Officers Reserve Corps may continue their flying training". Certain fields have been designated as active flying fields, where reserve officers may make flights by communicating with the commanding officer of the field and arranging for a time when planes will be available and military activities will permit their training.

To avail himself of this opportunity the reserve officer must apply to Major General Charles T. Menoher, Director of Army Air Service for an identification book. It is entirely voluntary whether or not the airmen will take advantage of this offer.

The fields designated as active flying fields are Carlstrom Field, Arcadia, Fla.; Kelly Field, San Antonio, Texas; Langley Field, Hampton, Va.; March Field, Sacramento, Calif.; Mitchel Field, Mineola, L.I.; Post Field, Fort Sill and Bolling Field, Washington, D.C.

(N.Y. Times 5/18/20)

LANDING PIER FOR SEAPLANES

Thru the efforts of Special Deputy Police Commissioner Rodman Wanamaker, the pier at the foot of West Eighty-second Street, New York, will be formally opened today as a landing place for seaplanes. Addresses will be delivered by Mayor Hylan and President La Guardia of the Board of Aldermen, the Police Band will play and there will be an aeronautical program.

Rear Admiral Glennon commandant of the Third Naval District expects to have one dirigible and five seaplanes and Col. Archie Miller of the Army Air Service will have fourteen airplanes to take part in the exercises.

(N.Y. Eve Post 6/17/20)

"SAFETY OF FLYING"

To prove the safety of flying, the London Times 5/30/20 quotes figures concerning two big English aerial routes. "In connection with the daily flights between London and Paris, which began on August 25, 1919 the total distance flown up to May 23d was 149,275 miles." During all this flying there was only one serious accident. In this case a pilot carrying mail, parcels and one passenger encountered a thick and unexpected mist and consequently came into collision with a tree. Both the pilot and the passenger lost their lives.

On the Handley Page Continental service, the total distance flown between Sept. 2, 1919 and May 22d was 107,417 miles without a single accident occurring. Considering these two services alone, England has on her record a total of 256,692 miles commercial flying with only 2 deaths.

MR. MARTIN'S VIEWS

Attempting to convince people that the airplane of today is safe, Glenn L. Martin again states and proves that, proportionally, there are fewer airplane accidents than automobile accidents. He believes the hardest task confronting aircraft manufacturers heretofore has been convincing the public of the safety of the airplane but he also believes the "airplane is coming to its own and much faster than the automobile did". He says "accidents to airplanes are serving not to dishearten the builders and pilots of aircraft but rather to instruct them in preventing repetition".

Mr. Martin urges more landing fields. He says "the greatest danger to aviators right now, and in fact the chief hindrance to commercial aviation is the lack of proper landing facilities. The cost of building landing fields is infinitesimal as compared with the vast financial outlay involved in promoting the development of the railroad and the automobile".

(N. Y. Times 6/19)

According to the Washington Post 6/18/20 seaplanes will be used this summer by business men at Alesund north of Bergen for the purpose of hunting seal and whale in Denmark Strait between Iceland and Greenland.

PENNSYLVANIA AERO UNIT

The Pennsylvania National Guard has been authorized to form an aero unit to cooperate with its infantry, artillery, cavalry, engineer and medical corps units. This aero unit will consist of an observation squadron of 103 officers and men. All planes and their parts will be furnished by the War Department. There will also be a balloon company of 109 officers and men and a photo section of twenty men as well as combat branch. (Philadelphia Ledger 6/20/20)

TO FLY TO NOME, ALASKA

On July 10th, five army aviators will leave Mitchel Field in four De Havilland No. 4-B planes for Nome, Alaska a distance of 4,871 miles. The purpose of the flight is to lay out an air route that can be used for commercial purposes when the rivers and bays about Alaska are ice locked. They will make twenty-two stops to examine and map sites suitable for landing places.

It is estimated that with all delays the round trip can be made in forty-five days. It is hoped that when the route is laid out only eight days will be required for the trip.

Capt. St. Clair Street who will pilot one of the planes will be commander of the flotilla. The officers accompanying him will be Lieuts. Eric H. Nelson, Clifford C. Nutt, A. C. Kirkpatrick and Clarence Krumerine.

(N. Y. Tribune 6/20/20)

NAVAL AIR STATIONS

The Washington Post 6/20/20 states that an aviation base will be established in Hawaii, and a hangar for rigid dirigibles is to be located on the Pacific Coast, probably near San Diego, Calif. Key West and Miami, Florida naval stations have been abandoned and the stations at Chatham, Mass. and Cape May, New Jersey are to be placed on an inoperative basis. The latter stations will be held available for use when the fleet may be in the vicinity.

AIMING AT SUPREMACY OF AIR

With a hope of controlling passenger and freight traffic via airplane M. Flandin, Under Secretary of State for Aviation is preparing an extensive scheme which he is confident will maintain French supremacy in the air against all comers.

The greatest efforts "will be devoted first to North Africa and then extended thru the French colonies with a total mileage of nearly 2,000 protected by modern signalling apparatus and numerous landing grounds".

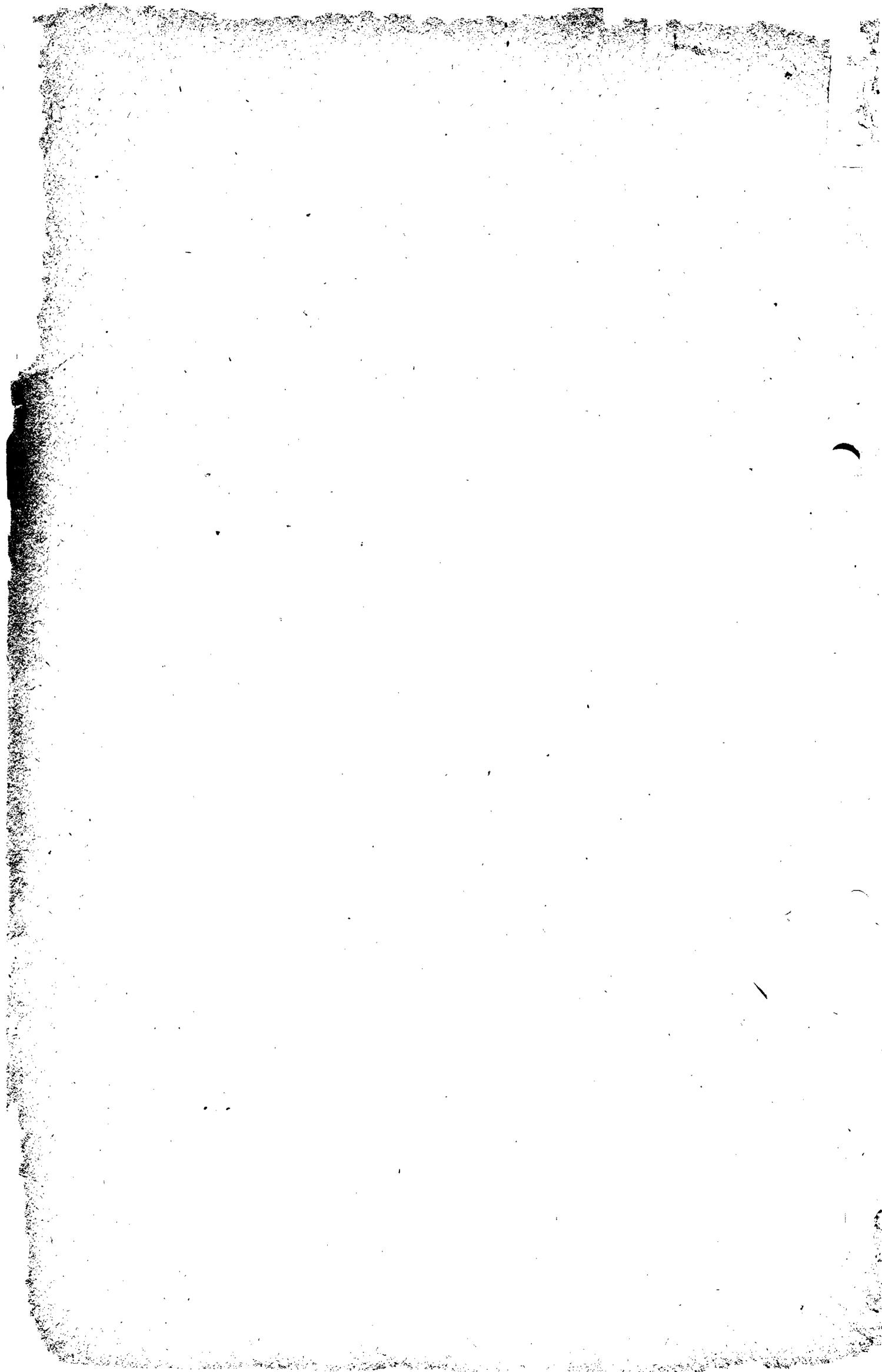
Mr. Flandin's one aim is to improve commercial flying. "For this purpose" he said, "I intend the subvention of manufacturers of approved types and will inaugurate bureaus of investigation whereby France will be able promptly to adopt all the latest inventions to her commercial advantage". He believes the greatest difficulty to be faced is the excessive cost of machines. The increasing cost of gasoline is another obstacle but it is hoped that by next year scientists will have made it possible to operate the machines with alcohol.

What financial aid the French budget will provide is uncertain but according to statement, it will not be less than 300,000,000 francs.

AERIAL MAIL REPORT

During the month of May, United States mail planes flew a total of 54,693 miles according to a report of Otto Praeger, Second Assistant Postmaster General. "The average efficiency on the New York-Washington route was 88 per cent; Cleveland-Chicago 76 per cent, and Chicago-Omaha 88 per cent". Two forced landings on account of mechanical trouble in either planes or motors were made, fifteen landings due to shortage of gas or oil, three due to combating head winds, four because of unfavorable weather conditions, and seven on account of new pilots.

(N. Y. World 6/20/20)



AIR SERVICE NEWS LETTER

Information Group

Building B

Air Service

July 12, 1920.

Washington, D.C.

ACTIVITIES OF OPERATIONS DIVISIONBORDER SITUATIONTroop Movement

The Detachment of the 464th Aero Construction Squadron, which was stationed at Ajo, Arizona, has been returned to Sanderson, Texas.

Flight "A" of the 90th Aero Squadron, has completed change of station from Eagle Pass to Del Rio, Texas.

ACTIVITIES IN HAWAII

The Department Air Service Officer delivered an address to the 2nd Observation Group at Luke Field, Ford Island, on Organization Day, May 19th, in which he eulogized the career of Frank E. Luke, 1st Lieutenant, Air Service, after whom the field was named. The date, May 19th, was selected by the 2nd Observation Group as Organization Day as being the most fitting, in view of its commemorating the birthday of Lieut. Luke.

Infantry contact missions are being scheduled weekly and constitute an excellent means of training pilots, observers, and the ground communication personnel. The practice followed thus far has been to establish a panel station representing battalion P.C., where messages are picked up and transmitted by radio or dropped message bags to a second station, approximately one-half mile away, which represents regimental P.C. Messages picked up by regimental P.C. are finally transmitted to the third panel station, representing divisional P.C. by pigeons, radio and dropped message bags. Two planes are assigned to each mission, one with radio and one without. Both planes transmit by pigeons and dropped messages, while only one plane uses the radio. The regular Very's light system of signalling is used by the observer during the mission.

Many photographic missions have been scheduled during the past two weeks, and in the majority of cases they have been attended with distinct success. All gun emplacements on the island of Oahu have been photographed pursuant to a request from the Chief of Staff; weekly progress photographs were made of trench construction at Schofield Barracks and of the camouflaging of Battery Selfridge at Kamehameha, and for the Department engineer an overlap map of the Waialae Road was completed.

PHOTOGRAPHIC ACTIVITIES

Commanding Officer, 2nd Photo Section, Kelly Field, Texas, reported that for the week ended June 5, 1920, four hours were flown for the purpose of making aerial photographs.

Commanding Officer, 14th Photo Section, Mitchel Field, L.I., N.Y., reported that for the week ended June 12, 1920, four hours were flown for the purpose of making aerial photographs.

Commanding Officer, 7th Photo Section, Langley Field, reported that for the week ended June 12, 1920, four hours were flown for the purpose of making aerial photographs.

The following is quoted from the regular monthly report, dated June 15, 1920, from the Commanding Officer, Langley Field, Hampton, Virginia, regarding the U.S. Army School of Aerial Photography:

"Aerial Photo Section No. 11, 2nd Lieut. Leonard D. Weddington in command, left this Post May 21, 1920, for Luke Field, Hawaiian Islands, the permanent station of this Section.

"Aerial Photo Section No. 15, 2nd Lieut. Winfield S. Hemlin in command, left this Post on June 4, 1920, for Crissy Field, San Francisco, Calif., for temporary station at that field in order to complete the mapping work at that place. The permanent station of this Section is Mather Field, Calif.

"An Aerial Photo Detachment consisting of eight (8) men, Captain John Howry in command, is being organized and will proceed to Post Field, Fort Sill, Okla., within a few days. This Detachment will do photographic work in connection with the School of Observers at Post Field.

"The aerial photographic mosaic of Camp Bragg, N.C., covering approximately 350 square miles of territory, has been delivered at the U.S.A. School of Aerial Photography and is now being copied. This mosaic was made while Captain John Howry was in command of the Air Service Troops at Camp Bragg, it was flown by 2nd Lieut. Charles M. Potter and the camera was manipulated by Sergeant Andrews E. Mates. This mosaic differs from other mosaics made in the past in that the coordinates and contour lines have been drawn on the original. This information was derived from a survey of that tract by the Engineers and is expected to be of considerable value to the Artillery in their firing practice.

INFORMATION OBTAINED FROM OPERATIONS REPORTS
OF TACTICAL UNITS FOR WEEK ENDING JUNE 12th, 1920.

STATIONS, FLYING TIME AND AVAILABILITY OF PLANES

<u>Name of Squadron</u>	<u>Location</u>	<u>Flying Time</u>
1st Aero - Obs.	Mitchel Field, Mineola, L.I., N.Y.	23:50
2nd " "	Fort Mills, Philippine Islands	22:05
3rd " "	Camp Stotsenburg, Pampanga, P.I.	13:48
5th " "	Mitchel Field, Mineola, L.I., N.Y.	32:55
2nd Obs. Group		
(4th & 6th Sqdrns)	Luke Field, Ford's Island, Hawaii	No report
7th Aero - Obs.	France Field, Panama, C.Z.	19:10
8th-A " Sur.	McAllen, Texas	42:25
8th-B " "	Laredo, Texas	29:20
9th-A " Obs.	Fresno, Calif.	41:15
9th-B " "	Mather Field, Sacramento, Calif.	169:17
10th & 99th	Bolling Field, Anacostia, D. C.	53:47
11th Aero - Bomb.	Kelly Field, San Antonio, Texas	13:45
12th-A " Sur.	Douglas, Arizona	11:40
12th-B " "	Nogales, Arizona	15:45
20th " Bomb.	Kelly Field, San Antonio, Texas	18:25
27th " Pursuit	" " " " "	12:10
50th " Obs.	Langley Field, Hampton, Va.	30:15
88th " "	" " " " "	17:30
90th-A " Sur.	Del Rio, Texas.	18:00
90th-B " "	Sanderson, Texas	32:55
91st " "	Rockwell Field, Coronado, Calif.	63:30
94th " Pursuit	Kelly Field, San Antonio, Texas	13:50
95th " "	" " " " "	10:35
96th " Bomb.	" " " " "	26:25
104th-A " Sur.	El Paso, Texas	39:20
104th-B " "	Marfa, Texas	14:15
135th-A " Obs.	Fort Leavenworth, Kansas	16:20
135th-B " "	Post Field, Fort Sill, Okla.	20:30
147th " Pursuit	Kelly Field, San Antonio, Texas	3:45
166th " Bomb.	" " " " "	27:30
258th " HTA	Aberdeen Proving Grds., Aberdeen, Md.	9:25
Air Service Troops	Camp Benning, Ga.	21:50
" " "	Pope Field, Camp Bragg, N. C.	:00
" " "	Godman Field, Camp Knox, Ky.	3:10
Hdqs. Det. 1st)		
Pursuit Group)	Kelly Field, San Antonio, Texas	12:45

TOTAL FLYING TIME 961:37

TACTICAL OPERATIONS, INSTRUCTION, AND MISCELLANEOUS
ACTIVITIES BY FIELDS AND UNITS

BORDER STATIONS

DOUGLAS, ARIZONA - 12th Aero Squadron, Flight A

With 100% of daylight suitable for flying, a total of twelve (12) flights was made including two (2) DR signal flights, three (3) smoke bomb reglage, two (2) flights for men on flying status, three (3) practice, two (2) cross country.

Tactical instruction was carried on as specified.

DEL RIO, TEXAS - 90th Aero Squadron, Flight A

With fair weather prevailing during the week, a total of fourteen (14) special missions was made.

No instructions were given due to flight changing stations from Eagle Pass, Texas, to Del Rio, Texas.

EL PASO, TEXAS - 104th Aero Squadron, Flight A

With 100% of daylight suitable for flying, a total of thirty-seven (37) flights was made including three (3) photographic missions, two (2) reconnaissance, two (2) miscellaneous and thirty (30) practice flights.

Tactical instruction was carried on as specified, but due to the lack of a sufficient number of planes the training schedule was cut down considerably.

FRESNO, CALIFORNIA - 9th Aero Squadron, Flight A

With 100% of daylight suitable for flying, a total of fourteen (14) flights was made - six (6) patrols covering Route #3; five (5) patrols covering Route #4; two (2) ferry flights and one (1) test flight.

LAREDO, TEXAS - 8th Aero Squadron, Flight B

With 100% of daylight suitable for flying, a total of thirty-four (34) flights was made including five (5) formation flights, eleven (11) command missions, fifteen (15) test flights, one (1) liaison flight and three (3) reconnaissance flights.

Liaison mission carried on with 37th Infantry while on march to Laredo.

Tactical instruction was carried on as specified.

MCALLEN, TEXAS - 8th Aero Squadron, Flight A

With 100% of daylight suitable for flying, a total of twenty-three (23) flights was made including thirteen (13) bombing and formation flights, seven (7) cross country flights, one (1) test, two (2) command missions and one (1) protection mission.

Seventy-two (72) dummy bombs were dropped at land targets, 2,250 rounds fired from Lewis gun at ground and shadow target during the week.

Tactical instruction was carried on as specified.

MARFA, TEXAS - 104th Aero Squadron, Headquarters Flight B

With 50% of daylight suitable for flying, a total of thirteen (13) flights was made including nine (9) practice flights and four (4) cross country flights.

Liaison was carried on with the 37th Infantry which marched to Laredo.

Tactical instruction was carried on as specified.

MATHER FIELD, SACRAMENTO, CALIFORNIA - Headquarters and 9th Aero Squadron, Flight

With 100% of daylight suitable for flying, a total of eighty-one (81) flights was made.

NOGALES, ARIZONA - Headquarters and 12th Aero Squadron, Flight B

With 100% of daylight suitable for flying, a total of fifteen (15) flights was made including six (6) practice flights; four (4) flights (one round trip) ferry passenger El Paso and return; two (2) instructional flights; one (1) flight practice visual reconnaissance; and two (2) ferry passenger flights to Tucson and return.

Instruction was carried on as specified.

ROCKWELL FIELD, CORONADO, CALIFORNIA - Headquarters and 91st Aero Squadron

With 100% of daylight suitable for flying, a total of forty-eight (48) flights was made including four (4) border patrol flights; one (1) test flight; one (1) photographic flight; thirty-two (32) instruction flights made by cadets assigned to the flight; three (3) flights to March Field and return by cadets, and several flights to Camp Kearney and return.

Advanced instruction in DH-4-B's was the only instruction given during the week.

A parachute jump was made by an enlisted man of this flight in which two (2) parachutes were used. The jump was very successful and a credit to the jumper.

SANDERSON, TEXAS - 90th Aero Squadron, Flight B

With 100% of daylight suitable for flying, a total of twenty (20) flights was made including nine (9) special missions, five (5) practice, three (3) tests, one (1) aerial gunnery, one (1) dual instruction and one (1) bombing flight.

Tactical instruction was carried on as specified.

OTHER STATIONS

ABERDEEN PROVING GRDS., ABERDEEN, MD. - 258th Heavier-than-air Bombardment Squadron

With 85% of daylight suitable for flying, a total of sixteen (16) flights was made including nine (9) bomb sights, two (2) meteorological, and five (5) miscellaneous.

Flight of three (3) airplanes was made to Baltimore, Md., in co-operation with National Guard of Maryland for the purpose of assisting in recruiting. Tested bomb sights over camera obscura for the Ordnance Department. Meteorological flights were made for the Signal Corps.

Instruction was carried on as specified.

BOLLING FIELD, ANACOSTIA, D.C. - 10th & 39th Aero Squadrons

With good weather during the week, a total of one hundred and twenty-two (122) flights was made.

Nine (9) flights were made to Langley Field, Va., one (1) to Mitchel Field, one (1) to Scranton, Pa., one (1) to Aberdeen, Md., one (1) to Martinsburg, W.Va., one (1) to Middletown, Pa., and one (1) to Denton, Md.

Twenty-three (23) officers from the Office of the Director of Air Service made flights during the week.

CAMP BENNING, GA. - Air Service Detachment

With 100% of daylight suitable for flying, a total of twenty-three (23) flights was made including country flights, liaison with Infantry battalion, ferry flights and test flights.

Two (2) Infantry liaison problems with battalion in attack with auxiliary arms and tanks were successfully carried out.

FORT LEAVENWORTH, KANSAS - 135th Aero Squadron, Flight A

With 100% of daylight suitable for flying, a total of fifteen (15) flights was made for the purpose of Infantry contact, radio, test and cross country flying.

Instruction was carried on as specified.

FRANCE FIELD, PANAMA, C.Z. - 3rd Obs. Group, 7th Aero Squadron (6/5)

With 70% of daylight suitable for flying, a total of twenty-nine (29) flights was made including six (6) demonstration, three (3) demonstration formation, seventeen (17) practice, one (1) reconnaissance and two (2) test flights.

Several demonstration flights were carried out with officers as passengers, who are returning from Siberia on the U.S.A. Transport "Mount Vernon". One (1) formation flight of three (3) planes, on Sunday, dropped flowers during Memorial Day services at Cristobal cemetery.

Instruction was carried on as specified.

GODMAN FIELD, STITHTON, KY. - Detachment Air Service Troops

With 100% of daylight suitable for flying, a total of eleven (11) flights was made.

KELLY FIELD

1ST BOMBARDMENT GROUP

100% of daylight was suitable for flying during the week.

11th Aero Squadron

A total of six (6) flights was made including cross country, test and practice.

20th Aero Squadron

A total of thirty-nine (39) flights was made for the purpose of ferrying ships to Dallas and practice flights.

96th Aero Squadron

A total of twenty-five (25) flights was made including cross country flights, test flights, instructional flights and solo flights.

166th Aero Squadron

A total of twenty-one (21) flights was made including cross country and practice flights.

1ST PURSUIT GROUP

100% of daylight was suitable for flying during the week.

Headquarters Detachment

A total of fourteen (14) flights was made during the week.

27th Aero Squadron

A total of eighteen (18) flights was made, all within the vicinity of the airdrome.

94th Aero Squadron

A total of twenty-seven (27) flights was made during the week.

95th Aero Squadron

A total of ten (10) flights was made during the week.

147th Aero Squadron

A total of eight (8) flights was made during the week.

LANGLEY FIELD, HAMPTON, VA.

About 92% of daylight was suitable for flying during the week.

50th Aero Squadron

A total of forty-nine (49) flights was made including twenty-five (25) practice, ten (10) formation practice, one (1) test, four (4) radio test, five (5) photo missions, and four (4) instructional flights.

Officers radio class is held one hour each day, except Saturday.

88th Aero Squadron

A total of twenty-seven (27) flights was made including two (2) motor test, one (1) radio, two (2) cross country, two (2) reconnaissance, nineteen (19) practice formation and one (1) parachute test.

Officers' radio class is held one hour each day, except Saturday.

On June 11th, a flight of nine (9) airplanes participated in Fleet attack maneuvers.

LUKE FIELD, FORD'S IS., PEARL HARBOR, HAWAII

No report since May 21st.

MITCHEL FIELD, MINEOLA, L. I., N. Y.

90% of daylight was suitable for flying during the week.

1st Aero Squadron

A total of thirty-three (33) flights was made including four (4) special missions, twenty-one (21) practice flight, four (4) tests, two (2) instructional and two (2) photographic.

Instructions are given to all recruits in school of the soldier and one hour close order drill for all officers and men each morning, except Saturday and Sunday.

One special mission was carried out to New Haven, Conn., on the 7th in interest of recruiting but did not land there due to the plowed up field, and on the 8th one (1) special mission was made over New York City for the purpose of doing photographic work.

On June 8th, an enlisted man of the 1st Aero Squadron made a parachute jump in a DH-4-B airplane - the altitude was 3,000 feet, descend 3 minutes, 15 seconds, average rate of descent about 15 ft., per second. The enlisted man is a graduate of the Parachute Dept., of the A. S. M. S., at Kelly Field, Texas. The airchute was of Irving U. S. Army type and was tested with new approved D rings.

5th Aero Squadron

A total of twenty-nine (29) flights was made including five (5) special missions, four (4) photographic missions, thirteen (13) practice flights, two (2) flights for parachute jumping and five (5) test flights.

Instructions to all recruits in school of the soldier and one hour close order drill for all officers and men each morning, except Saturday and Sunday. Regular squadron inspection of men, barracks and line on Saturday morning.

Mosaic of Lufbery Field has been taken and Artillery spotting practice will be held there.

Special missions were carried out to Providence, R. I., Washington, D. C., and over New York City.

POST FIELD, FORT SILL, OKLA. - Headquarters and 135th Aero Sqdrn., Flight B.

With 100% of daylight suitable for flying, a total of twenty-four (24) flights was made during the week.

POPE FIELD, CAMP BRAGG, N. C. - Air Service Detachment.

Altho 75% of daylight was suitable for flying, no flights were made due to the fact that Pope Field was used as a base for recruiting drives, by personnel from Langley Field.

PHILIPPINE ISLANDS

80% of daylight was suitable for flying during the week.

Fort Mills, P. I. - 2nd Aero Squadron (5/15)

A total of thirty-two (32) flights was made as follows:-

Thirteen (13) transportation flights between Fort Mills and Manila; four (4) transportation flights between Manila and Cavite; two (2) transportation flights between Fort Mills and Cavite; five (5) visual observation flights, five (5) instruction flights and three (3) test flights.

There was a class for one hour each day for all officers in visual signalling from the ground to airplanes; especially in the use of and identification of artillery and infantry panels.

Camp Stotsenburg, Pampanga, P. I. - Detachment 3rd Aero Squadron (5/15)

A total of eighteen (18) flights was made. These flights were made for the purpose of carrying out the schedule of training which calls for a total of 13 hrs. flying time to be spent in liaison, radio and bombing. This schedule was followed as closely as equipment would permit.

Time allotted to liaison was spent in carrying the mail, messages, etc., to the 1st squadron of the 9th Cavalry. This squadron is out on practice marches and maneuvers.

1. Post Field (Observation School).

Inspection of school and examination of officer graduates being held by Colonel C. C. Culver, June 26th and 27th, 1920.

Communications School - Distribution of graduates and order for new classes being held up on account of recent ruling that no officers will take station until after the Air Service examinations have been conducted.

2. Kelly Field (Mechanics School).

Students: 351

Instructors: Officer - 5, Enlisted - 22
Civilian - 52.

Courses: Engine Mechanics,
Airplane Mechanics,
Army Paperwork & Stenography,
Aircraft Armament.

3. Kelly Field (Radio School).

1st Wing Communications School discontinued.

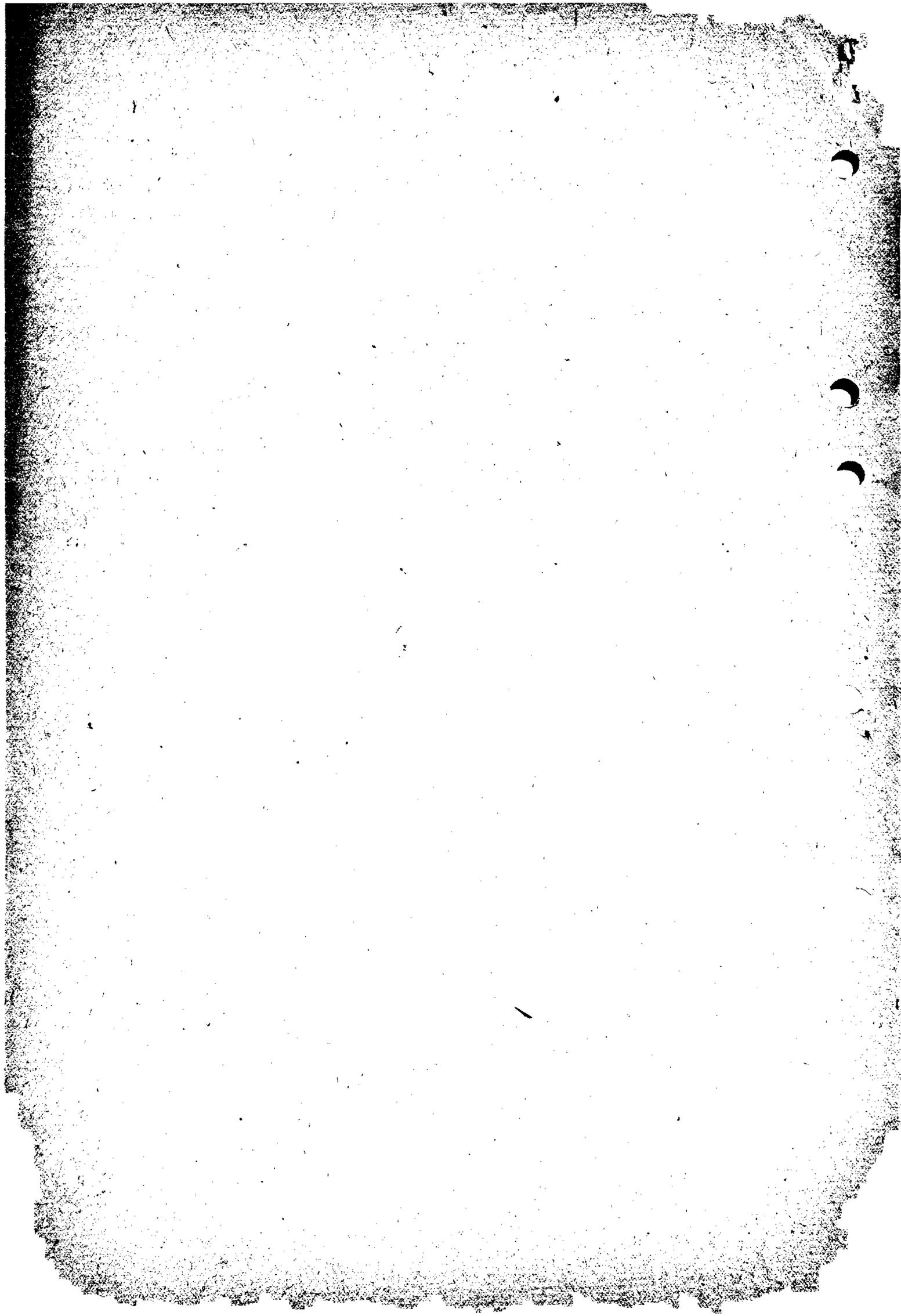
4. Langley Field (Photographic School).

Instructors: Commissioned 5, Enlisted 8

Students: Commissioned 2, Enlisted 3

(2nd Wing Communications School ordered closed by D.A.S.)

June 2nd flight was made in a DH-4B equipped with radio telephone and worked with ground stations within 7 miles of field. Encountered dirigible A-4, also equipped with radio telephone, and readily established communication while both were in full flight. This is perhaps first time that a dirigible and airplane have been in radio telephone communication while both were in full flight.



The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE JULY 17, 1920

ARMY AIR SERVICE

THE YEAR'S GREATEST AERIAL EVENT

ALASKA FLYING EXPEDITION

All along the trails that lead to the Klondike, the weary and unburied bones of these hardy pioneers who fell along the way from exhaustion and privation, as they ceaselessly followed the beckoning spectre of glistening gold, will turn over in awe at the onrush of the 20th Century pioneers who pass high over their resting places in the twinkling of an eye. The Age of the Air is upon us and it is beyond the power of mere man to stop or hamper its magnificent development.

At eight o'clock on the morning of July 15th what will be historically known as the greatest pioneer flying expedition of the year, will start from Mitchel Field, Long Island, New York. For months the details of this colossal undertaking have been under consideration, for months every inch of the route has been carefully combed and weather reports and landing fields have been carefully worked out until the chances of success are practically absolute.

The expedition will be composed of four airplanes of the D.H. 4 B type which have been specially selected and equipped for the expedition. They are equipped with the famous Liberty Motor, produced and perfected by the Army Air Service under the stress of war conditions.

With these powerful ships it is estimated that the trip from Mitchel Field to Nome, Alaska and return will not require much over 45 days.

The personnel of the expedition will be as follows:

Captain St. Clair Street, Commanding Officer of the Alaska Flying Expedition.

1st Lieut. Clifford C. Nutt,
2nd Lieut. Eric H. Nelson,
2nd Lieut. C. H. Crumrine,
2nd Lieut. Ross C. Kirkpatrick,
Sgt. Edmond Henriques,
Sgt. Albert T. Vierra,
M.E. Joseph E. English.

Captain St. Clair Street will pilot ship No. 1 and his passenger Sgt. Edmond Henriques will be his mechanic. Captain Street is eminently qualified to command a flight of this kind since he is a flyer of long experience. He was one of the first American flyers overseas and was stationed most of the time at the great American training center at Issoudun, France. His work overseas was of very high character and of such merit that he was given a citation for his good services by General Pershing. Captain Street has flown practically every type of modern flying machine and is thoroughly conversant with any emergency that would be apt to come up in a flight of this kind. Sgt. Henriques, mechanic for Captain Street, is one of the most experienced mechanics having had extensive experience on all types of motors, being a specialist on the Liberty 420 H.P.

Ship No. 2 will be piloted alternately by 1st Lieut. Clifford C. Nutt, A.S.A. who is second in command of the Expedition and 2nd Lieut. Eric H. Nelson, A.S.A., who will be Engineering Officer. These two pilots have perhaps had more experience on the D.H.-4 Liberty motored plane than any other pilots in the American Air Service. They have had approximately 600 hours flying in this type of machine and are thoroughly conversant with all details of this type of ship. During the summer of 1919 Lieut. Nutt was placed in charge of a recruiting expedition of four De Haviland-4 planes, being accompanied by Lieut. Nelson as Assistant. This expedition left Houston, Texas, flying to San Diego, California, thence to San Francisco, California, thence to Salt Lake City, Utah, thence to Denver, Colorado, thence to Omaha, Nebraska, and returning to Houston, Texas. During this trip, a distance of approximately 7,000 miles was covered. This expedition, in charge of Lieut. Nutt, left without any previous preparation as to landing fields, supplies, etc. and were obliged to pick their own landing fields and arrange for all supplies, gasoline, oil and any spare parts necessary. Entire trip was successfully completed without any accidents, all four ships returning intact to Houston, Texas, which was certainly a very excellent record. There is no doubt that a trip of this kind has eminently qualified Lieuts. Nutt and Nelson to take part in the Alaska Expedition.

Ship No. 3 will be piloted by 2nd Lieut. C. H. Crumrine, who will act as Photographic Officer on this trip. He will be accompanied by Sgt. Albert T. Vierra. Lieut. Crumrine is an old pilot of much experience. He has done a great deal of instructing and has had a vast amount of experience in cross-country work. Lieut. Crumrine, stationed at Carlstrom Field, Arcadia, Florida practically all of the time since he began his flying, has had experience over the wide and unchartered everglades of Southern Florida. He was one of the officers who was directly responsible for the finding of Lieut. Niergarth when he was lost in the everglades a short time ago. During this hunt Lieut. Crumrine flew a De Haviland-4 and in order to penetrate the dense growth of the everglades he was forced to fly at a very low altitude which made it doubly difficult to keep the course. Lieut. Nutt, piloting ship No. 2, was also in the Niergarth hunt. Mechanic Albert T. Vierra is, no doubt, one of the very best Liberty motor mechanics in the Air Service. Sgt. Vierra accompanied Lieut. Nutt and Lieut. Nelson on their 7,000 mile recruiting trip and much of the success of the expedition was due to his care of the motors.

Ship No. 4 will be piloted by 2nd Lieut. Ross C. Kirkpatrick, A.S.A. who will act as Information Officer of the Expedition. He will be accompanied by M.E. Joseph E. English who will act as mechanic. Lieut. Kirkpatrick is an old flyer with several hundred hours' flying time to his credit. He took part in the recent Transcontinental Reliability and Endurance Test in which he made a good showing. He flew a D.H.-4 in this test and was obliged to fly under adverse weather conditions throughout his entire flight notwithstanding which he made a most wonderful showing. He will be accompanied by M.E. English who will act as a mechanic. He is a specialist on the Liberty Motor, a fine mechanic and has devoted most of his time to work on the Liberty 420 H.P. Motor.

The feasibility of such an expedition as this by land airplanes to Nome, Alaska has been very carefully considered and even preliminary estimates of the route and landing facilities indicate the excellent possibilities of successfully carrying out the flight. With this definite information in hand permission was given some time ago by Newton D. Baker, Secretary of War to make the flight which was then approved by Major General Menoher, Director of the Army Air Service in all of its phases. The Canadian Dominion Government welcomed such a flying expedition and gladly gave its authority for this expedition to fly over such parts of Canada as were necessary. The route that will be flown is the most direct air route possible and has been selected for the adequate landing fields along its course and for the distribution of supplies at accessible points. These supplies will be placed by the Supply Group of the Army Air Service and will consist of gas, oil and spare parts. Prior to the actual inauguration of the flying expedition an officer will proceed from Washington, D.C. to Nome, Alaska by way of Ottawa, Ontario, Canada for the purpose of getting final information and forwarding instructions relative to landing fields particularly along that part of the route which lies across the Dominion of Canada. He will also in the course of his investigation act as advance supply officer and all supplies will be consigned to him whereupon he will authorize an agent at the various stops to handle the supplies during the course of the flight.

Landing fields have naturally not been developed along the lines of this route even to the extent which they have been through other parts of the United States where they are totally inadequate as to number even now. Where the necessity has arisen funds will be expended for the preparation of the necessary landing fields. This activity will be especially necessary at certain points in Alaska. Instructions for carrying out these preparations were made by telegraph through the cooperation of the United States Army Signal Corps. Data relative to certain of the landing fields has been obtained by the Canadian Air Board especially for the territory in Western Canada and Yukon.

The photographic section of the Army Air Service is to have cameras on the expedition for taking ground views at the stops and obliques and vertical views while enroute. In addition cameras and films are to be provided for the photographic mapping of the area north of the parallel 66° which includes the Yukon River where it crosses this parallel between Circle and Fort Hamlin. The photographic phase of this expedition will utilize Fairbanks, Alaska as a base of operation for its photographic work. Fairbanks will also be used as a base for a major repairs to airplanes for the Alaskan end of the flight. The United States Weather Bureau has arranged a very elaborate plan whereby weather reports may be obtained by members of the expedition along the entire route traversed and the Commanding Officer of the flight will in addition be supplied with local weather reports. The maps for the expedition have been very carefully arranged and prepared by the Information Group of the United States Army Air Service.

Arrangements have been made with the U.S. Weather Bureau and the Canadian Weather Bureau to send weather forecasts each day as the flight progresses, thus giving valuable data to the flyers which will aid them in avoiding unnecessary risks by running into severe storms. The longest single flight of the trip is 350 miles being the first leg from Mitchel Field, Mineola, Long Island, N.Y. to Eric, Pennsylvania. The shortest flight is 200 miles, from Edmonton, Alberta to Jasper, Alberta and the same distance from Jasper, Alberta to Prince George.

There are two very fundamental reasons for the making of this flight. The most important reason is to establish an aerial route to the north west corner of the American continent so that, should military considerations require, it would be possible to move Army Air Service units to the continent of Asia by direct flight. The route one way is approximately 4345 miles and a little over 9000 miles will be covered in journeying both ways. When the expedition gets to Nome, Alaska a 100 mile flight will be made to Cape Prince of Wales at which point the expedition will be approximately 50 miles from the continent of Asia. A long flight of this nature will also provide important and fundamental data for such further improvements as can be made upon the D.H.-4 B airplane. A second reason which indicates the utility of this expedition is the cooperation of the Army Air Service with the Engineering Corps and the Geological Survey for the purpose of photographing inaccessible areas in Alaska which have heretofore not been mapped. One area in particular which the Geological Survey especially desires to have photographed from the air comprises 3500 square miles, lying north of the 66th parallel between Fort Hamlin and Circle. This area includes the upper Yukon flats and is a district which can only be surveyed by ground methods with extreme difficulty. Representatives of the United States Geological Survey have estimated that it would cost as an absolute minimum of over \$10,000 and would take one surveying party at least three seasons which would mean three years to accomplish this work by the present ground methods and it would then only be partially accurate. Allowing for a 50% overlap of the photographs from the air this area can be photographed from one airplane in 10 hours of flying or approximately three days time at a cost of about \$1500 and the data assembled from such a photographic map would be more accurate than could be obtained from the ground in the short time available each year.

The route of the Alaskan Flying Expedition has been finally set as follows:

New York (Mitchel Field),	to Erie, Pa.	350 miles.
Erie,	" Grand Rapids, Mich.	300 "
Grand Rapids,	" Winona, Minn.	310 "
Winona,	" Fargo, N.D.	320 "
Fargo,	" Portal, N.D.	290 "
Portal-	" Saskatoon, Sask. Can.	280 "
Saskatoon,	" Edmonton, Alb.	300 "
Edmonton,	" Jasper, Alb.	200 "
Jasper,	" Prince George, B.C.	200 "
Prince George	" Hazelton, B.C.	220 "
Hazelton,	" Wrangell, Alaska	210 "
Wrangell	" White Horse, Yukon, C	300 "
White Horse	" Dawson, Yukon,	250 "
Dawson	" Fairbanks,	275 "
Fairbanks	" Ruby	240 "
Ruby	" NOME	300 "

Captain Howard T. Douglas left Washington, D.C. on June 5th enroute to Nome, Alaska thus going in advance of the Alaskan flying Expedition which starts from New York on July 15th, and will visit all landing stations making arrangements for supplies, reception of the flyers and will report back to the flyers and location and description of every field and all possible emergency fields between stops. Captain Douglas went first to Ottawa, Ontario, Canada to secure the necessary credentials and make final arrangements with the Canadian Government relative to that portion of the flight which goes over Canada. Assurance has been given by all cities where stops will be made to cooperate to the fullest extent possible in aiding this project. There has been extreme difficulty in finding suitable landing fields in the far north but from the reports of Captain Douglas it would seem that this difficulty is being rapidly overcome.

At Wrangell, Alaska there will be a boat provided to cooperate with the Alaskan Flying Expedition and in order to provide shelter on the landing field at Wrangell a tarpaulin about 40 feet square will be erected to serve as a shelter for supplies and for repair work on the airplanes of the expedition.

A preliminary test of ten hours flying will be given each ship consigned to the Alaskan Flying Expedition daily to insure that the ship is in good running order and the personnel have been given a thorough physical examination. The ships will carry 117 gallons of gasoline and 12 gallons of oil which gives them a cruising radius of 4 1/2 to 5 hours. Each plane will have an insignia of a polar bear, significant of the expedition, painted on the side of the fuselage. The landing field at Jasper, Alberta, Canada is about eight miles north of the town on a level strip of land along the Athabaska River and it is marked with a landing "T". At Hazelton, British Columbia, Canada the only available landing site is east of the town near the hospital grounds where there is a grassy slope on the east half of the field that will slow up the plane on landing and provide an accelerated take-off. At White Horse, Yukon Territory the landing field is on a bluff directly west of the town and is 500 yards by 125 yards. The slashing of the scrubby growth at either end of the field lowers the obstacles of approach. The ground is perfectly level and marked with a white cross in the center and with white strips on the corners. The prevailing winds at this point are north to south. The landing field at Dawson, Alaska has been selected on the west side of the river and is 360 yards by 185 yards. The prevailing winds are north to south. This field is sown with brown grass which will be about one foot high but quite thin. The brush on the north approach has been slashed for 100 yards and the south approach is in oats. The ground is dry but soft. The field is slightly up grade north to south and is marked in the center with a large white cross.

A record will be kept by all pilots of the landing fields, emergency landing fields, record of airplane and motor and other valuable data.

There are many advantages that will accrue from this expedition. One of which in particular will be the fact that following this effort both Commercial and mail aircraft may utilize this route so that the scenic wonders and natural resources and the many advantages of Alaska which have hitherto been forbidden to all but those courageous pioneers who were willing to cope with the hardships incident to such a trip, will in the future be obtained with a few days travel in luxury and comfort.

Where the mail at the present from the interior of Alaska is 30 days or more in reaching the United States and a mere matter of two or three days will bring this mail from the very heart of Alaska to the very heart of the United States. Ranchmen and others along the line of the route have cooperated magnificently with those in charge of the preparations for this expedition and are awake to the tremendous possibilities and advantages to be derived from contact between their small local communities and the great metropolitan centers of the United States. A successful culmination of this expedition will mean the closest sort of cooperation between the Air Board of Canada and the Army Air Service to the end that the North American continent may be served by commercial aircraft from one end to the other.

STEAM MOTORS FOR AIRCRAFT SHOULD PROVIDE FOOD FOR THOUGHT

In the first part we dealt with the general proposition of the engine and its attendant problems. The other fundamental feature of such motive power is the boiler. A boiler for a steam aircraft engine can be constructed, it is believed, so as to overcome all the difficulties that are faced in starting with its design for the reason that barring a few points, boilers have already been constructed that would do although not carried to as fine a point of perfection as is desirable.

The boiler should be essentially a water tube boiler of the circulating type, constructed entirely of steel tubing and devoid of drums or other large vessels. Such a boiler would be able with perfect safety to produce steam of very high pressure and it would be possible in this way to have water circulation the same as in large stationary or marine boilers and to operate it without using an automatic governing device as in the case of flash or semi-flash boilers. It would be desirable to have a boiler which would consist of a number of individual sections which would be identical in size and shape connected at the bottom to a common drum and at the top to a common steam drum. Then a common feed would allow a pipe lead to each section introducing water at a point where it would naturally enter into circulation. In this way horizontal tubes which would form the heating surfaces would connect with the front and rear header, and baffle plates could be in contact with those of the adjoining section so that they would form a continuous baffle wall extending across the nest of tubes.

Jointing in a boiler for this purpose must be very carefully watched but it will be found possible, unquestionably, to connect the horizontal tubes to the headers by means of acetylene welding for it has been found in some tests that when carefully made they are considerably stronger than the original non-welded tube. Some welds have shown that a tube wall would break under pressure of approximately 9000 pounds per square inch while the welding remained intact. In this way all joints exposed to the furnace consist of solid metal and all other types of joints should be located in the last pass of the gases which is always comparatively cool. The natural result of the intense heating at the base of the tubes is the circulation of the water forward in the horizontal tubes and backward in the front header; this rising water then returns to the rear header through the upper portion of the horizontal tubes while the steam which has been formed is separated and collected in the upper parts. It may be seen that such a method of circulation is essentially the same as in large water tube boilers. If the arrangement is such that a portion of the hot furnace gas is allowed to pass over the top part of the section without first passing through the heating surfaces it will dry and somewhat superheat the steam prior to entering the steam drum connection. Superheating can be carried to any degree desired all depending upon the necessity and its accommodation in design.

In a boiler of these characteristics nearly its whole space is filled with heating surfaces, and it is felt from some experiments that have already been tried that it can be placed in a cube of two feet. A boiler of this size would contain approximately 100 square feet of heating surface, providing approximately 5/8 inch diameter tubes were used. Perhaps heating surfaces could be even more concentrated if smaller tubes were used. Sectional construction is essential in that it will be found possible to remove any one section at any time quickly and easily. Then in case of accident a new section can be put in with very little loss of time, or in extreme emergency a boiler could be even repaired by removing the damaged section and closing its connection to the drum, steam drum and feed pipe. An aeronautically acquainted engineer should assist in designing for the reason that in proportioning the sections it will be possible to adapt the boiler with considerable freedom to the particular conditions and the installation under consideration.

When feed water is used which tends to scale, an opening should be provided in the rear headers, opposite each tube, closed by plugs, which would be accessible so that the tubes can be cleaned in position or after it has been removed from its casing. This particular feature would be desirable from an aeronautical point of view in that one section might be removed for the purpose of cleaning and a substitute section quickly put in which has been previously cleaned. Operating pressures have frequently been carried out on boiler experiments of this character already to the extent of 600 pounds per square inch and in special cases as high as 1500 pounds per square inch. Therefore, the gain in efficiency with high pressure and concentration of the heating surface, with light weight, enables a plant to be constructed of extremely small weight per unit of power and at the same time permitting all the advantages of size, control, flexibility, and reliability which steam has over other methods of power production.

THE WORLD'S FIRST COMPETITIVE AERIAL SHOOTING MATCH

The United States Army Air Service will participate in the National Rifle Meet at Camp Perry, Ohio in August of this year. This participation will provide the world's first competitive aerial shooting match and promises to be the most spectacular and unique event of its kind this year.

The entry of the Army Air Service into this national event is two fold. It will demonstrate the value of the Air Service in national defense and also will prove instructive to those who are privileged to view the ground and air exhibits.

The ground exhibit will be extensive and will comprise aerial photography, including a photographic map of the reservation, of which souvenir copies will be distributed; aircraft guns; aerial bombs; anti-aircraft guns; and all different types of airplanes "on the line". These airplanes will be fully equipped with regulation equipment and will be marked with placards indicating the type of plane, its mission, its armament, its speed performance and so forth. One plane will be equipped with eight machine guns, the only one of its kind so equipped in the world, and is a veritable flying arsenal. Future wars will be decided in the air or by the perfection and superiority of aerial equipment. Here one can see the synchronizing gears that allow a machine gun to be fired out through the revolving propeller of an airplane in flight and also the sights that are used in connection with these guns and those that are used in accurately dropping huge bombs from the air. Bombs weighing as much as 1100 pounds or over half a ton filled with T.N.T. can be dropped from great heights with deadly precision by the use of sights now being perfected. Again the wireless telephone and telegraph will be exhibited and demonstrated. This feature of the recent tremendously successful First Annual Army Air Tournament at Bolling Field was one of the largest attractions. An exhibit and demonstration of the rocking nacelle used in the ground schools during the training of pilots and observers for the Army Air Service will be given. It is rumored that possibly a Ruggles Orientator may be equipped with a machine gun and mounted on a derrick tower and entries made for live shooting from this for eligible observers. Among all of the ground exhibits will be the automatic cannon. This will be mounted on the nose of a well-known airplane where its range is very broad. This cannon is one of the most remarkable achievements of aircraft armament and is capable of firing 120 1 pound shells per minute.

The aerial exhibit will be the most thrilling to most of those in attendance at the National Rifle Match and it will include aerial acrobatics, competitive flights, closed course air races, wireless control of airplane formations and gunnery both from the ground and from the air. A specially equipped German Fokker D-7 airplane will be used in some of the wireless demonstrations. This plane was captured by the Army Air Service during the World War. Aerial maneuvers will be executed and there will be sham combat in the air during which all the tricks known to aviation will be demonstrated including how to escape when cornered and how to fake, and then secure the control of an adversary and shoot him to earth.

The aerial shooting contest is the biggest feature of course. In this event firing at targets from rocking nacelles on the ground will be of extreme interest for it permits close inspection by the spectators. Then the actual fire from planes in the air will be directed against ground objects, silhouette targets and moving objectives. A strict count and judging of these events will be arranged. Then there will be deflection practice against towed targets. As a final episode a grand attack will be staged in full tactical formation.

This event and the Army Air Service participation will be a history making period in the case of both organizations and the success that is assured points to the value of "stretching a point" to attend.

91% PERFORMANCE FOR THE AERIAL MAIL IN MAY

During the month of May the United States aerial mail accomplished 91% performance average for all divisions. It appears that even greater performance percentage would have been accomplished had the rule that a plane must leave the field within 15 minutes of schedule time been more strictly adhered to. There are now four divisions of the aerial mail in operation and on two divisions there was no damage whatsoever to the plane or its contents due to forced landings although respectively only 93 and 91 percent of the trips were completed without forced landings and on the other two divisions the damage percentage was 2% in one case and 10% in another. Considering the general lack of landing fields this is an excellent record which speaks well for the work of the pilots and particularly of the mechanics and motor reliability. During the month of May, 54,693 miles were flown with only two forced landings on account of mechanical trouble of any sort. Of the other forced landings 15 were due to running out of gasoline or oil in combating head winds; 4 of them to weather; and 7 of them to new pilots getting off their course and coming down to ascertain their location. With every month the aerial mail shows the rapid approach of the age of the air.

HISPANO SUIZA FACTORY MOVES

In the belief that aviation has passed the experimental stage and is developing rapidly into one of the foremost industries of the United States, builders of Wright-Hispano motors have just taken permanent quarters at Paterson, New Jersey, where they expect to manufacture aeronautical engines solely, the only plant devoted exclusively to this type of manufacture in the United States.

The Wright Company manufactured Hispano motors during the war at two plants, one located in New Brunswick, New Jersey, and the other at Long Island City. Following the armistice, wartime output of 1,000 motors per month at the New Brunswick plant was curtailed to approximately ten per cent of that number. The Long Island City plant had just been tuned up for a similar output when the war ended. That plant was abandoned. After completing, at New Brunswick, its post war orders for engines and spare parts, the company set about looking for a plant in which it could settle down to the peace time manufacture of aircraft engines. Such a plant, near New York and with the proper railroad facilities was not easy to locate. For approximately six months a site was sought upon which to erect a factory but of the score or more which were inspected they were all eliminated until the Paterson site, with a modern four story building upon it, was discovered. The new plant has a little more than 100,000 square feet of floor space and is situated on grounds covering seven acres which will permit of rapid expansion should there be in the future military or commercial need for an enormous number of motors.

In the opinion of the corporation the commercial demand will develop immediately upon enactment of proper federal legislation regulating aircraft and upon the completion of adequate landing fields throughout the country. It is contended that the automobile industry's development was coincident with good roads, and that as soon as similar, and the essential needs of airplanes are supplied the public will begin to purchase for commercial and sporting purposes.

ALL ABOARD ! ITHACA, NEW YORK, WASHINGTON, D.C. and DAYTON
OHIO AND RETURN

Although the airplane had been in constant use for a year and four months with practically no attention, the Washington-Dayton trip was started without preparation except for a general inspection. A speed range of from thirty-five to over a hundred miles per hour makes the little machine well adapted for cross country work.

The start was made at 10:10 A.M. on April 30th with the wind blowing from the NW by W which made it necessary to fly into the wind about twenty-five degrees in order to keep a straight course. The thriving village of Newfield was soon passed with the little "bus" still climbing and Elmira and the valley leading up to the foot of Seneca Lake showed up clearly on the right. Waverly and Sayre with the Susquehanna River winding to the south slid by and we soon picked up the valley to be followed nearly to Williamsport. The next ridge of hills to the east is conspicuous because of the large cemetery with winding roads leading up to a tall marble pillar on the highest pinnacle. Troy, Pennsylvania has a very wide brick street running east and west and a race track which shows up well a short distance north of the town. Canton, with a white Sheffield creamery and adjoining pond, came in sight surprisingly quick and the next fifty miles was ridge after ridge of mountains-- real barren rocky mountains where the streams had worn lines into the mountain sides like arteries in one's hands. We were glad that the Le Rhone was very dependable.

Before many minutes one was able to see the Susquehanna as it makes its big bend around the mountain east of Williamsport. The air was extremely bumpy over this rough section and every ridge could be felt as we passed over it. The country became much better as we neared the river and many of the fields looked like good landing places. Following the river made it easy to check our position by the bridges. At Sunbury the east branch of the Susquehanna flows into the main stream forming a large island at the junction. The scenery is beautiful-- long straight ranges coming out of the wild section to the north east and level country on the west side of the broad winding river.

The little LeRhone, was running very smooth and gave the machine eighty to eighty-five miles an hour speed with the motor throttled to eleven hundred. Below Selingsgrove the clouds forced me down a couple of thousand feet, and the visibility was poorer. Harrisburg's smoke and immense masonry bridge (the largest in America) made it easy to distinguish. From there it is a continuous line of factories until a short distance from the landing field at Middletown. After circling once we landed and taxied to the hangars. The time from ground to ground was two hours and ten minutes and the distance was one hundred and sixty miles. Fourteen gallons of gasoline and three gallons of oil were consumed.

The Middletown field is a part of the Army Air Service aviation supply depot and it is very well equipped. Every courtesy was extended by the officers in charge. After a short inspection the machine took off and after getting a little height crossed the river in the direction of York. After passing this town a rain storm was encountered for a few miles. The motor was throttled to about a thousand revolutions a minute, in order to save the propeller while passing through it. Baltimore soon appeared on my left and seems to be spread out over a large area. A thunder storm was gathering in the south and the wind preceding it was noticeable.

A vertical shaft of light loomed out of the haze and later proved to be the sun reflecting on the Washington Monument. Anacostia River was soon located and after following it a few minutes we were able to see the city with its perfect arrangement of streets. Cutting off the motor we glided toward the field. After

one circle we landed near the T and taxied to the hangar. The distance from Middletown is about one hundred and fifteen miles and the flight occupied one hour and thirty-five minutes.

The start for Dayton was made on Monday, May 10th with five gallons of castor oil as passenger in the front seat. The course was up the Potomac to Martinsburg, West Virginia. The river is small and filled with small islands. Several miles below Harpers Ferry the first mountain range meets the river and the country is not ideal for flying from hereon. The field at Martinsburg is covered with large rocks but it was possible to avoid them by turning sharply after entering the field and landing close to the fence. After filling up the machine with gas and oil, and the pilot with a sandwich, the plane took off and headed for the next mountain ridge. A strong west wind slowed us down considerably and it was impossible to get out of it by changing altitude. When it was seen that there was not going to be enough fuel to reach Moundsville, an eye was kept open for a field, and we finally came down between two high mountains into Keyser, West Virginia. During the fifty minutes while loading up about fifteen hundred people gathered on the field. Outside of a DH that crashed into the hillside few had ever seen a machine.

Back of the rear seat was carried a gallon funnel measure and a funnel with a chamois for gasoline. When possible the landings were made near towns, and the garages were very prompt in bringing out gasoline. With one exception it was not possible to get high test gas but the motor worked perfectly. As soon as one could fill up with oil the gasoline was usually ready. As the motor throttled well, all the cranking was done alone without blocks. In case of necessity one man can lift the tail and move the machine a considerable distance.

After spiraling up out of Keyser several forest fires could be seen and one of them seemed to cover a large area. The smoke from them cut down the visibility for the next fifty miles and was one reason why several towns were not picked up that were on the course. Washington, Pennsylvania soon appeared where it should and after a few minutes the Ohio River and the smoke from the valley below Wheeling came in sight. Several rivers south of Pittsburgh were crossed and many stern wheel steamers with cargoes of coal barges could be seen churning their way north.

The field at Moundsville is covered with alfalfa and it looked high enough to be dangerous. A farmer was plowing near the point where we touched but he only gave the machine one glance and kept on working. The supply of castor oil was nearly used up and Wheeling was the nearest place it could be found. It was nine thirty at night before the oil arrived and of course too late to start out again. The next morning at seven twenty-five we took off. An earlier start would have been desirable as there was a west wind blowing and better time could have been made before it came up. In about an hour it began to rain and it did not seem possible to go around these storm clouds. After two hours it was decided to land as the storm was increasing and one was unable to see where to go. When a suitable field was sighted we spiraled to look it over managing to land on it in good shape although very little could be seen. After getting some rubbers out of a bag a start was made for the nearest farm house, and it was then found that we were near Newark, Ohio. It was impossible to put in gasoline until one o'clock because of the rain. Two o'clock found us on our way after taking off going up hill. Columbus was soon passed and the country was covered with good landing fields. The wind was still strong and we stayed below twelve hundred feet altitude in order to make headway. Springfield and Wilbur Wright were soon sighted and after passing through a short rain storm we landed and rolled up to the hangars at McCook Field in Dayton.

On Saturday, May 19th, we left McCook Field and started for Ithaca. A north east wind made two more fuel stops necessary and forced one to fly under a thousand feet altitude. Following a railroad is the only way to avoid getting lost in Ohio as the country is level and there are no outstanding landmarks. New London was the first fuel stop. The garage man with the gasoline came promptly and in fifty minutes we started off again. The field was bounded by a row of sixty foot trees and the machine cleared them easily after taking off less than three hundred feet from them. It is certainly a great satisfaction to be able to get in the air without a long run and to be able to clear any obstacle in getting out of a small field. With one exception we were able to get out of every field by starting from the landing point.

Cleveland appears to be spread out for a great distance along the shore of Lake Erie. At one point ten ore steamers could be seen and some of them looked to be hanging in mid air. The Martin field is located about ten miles east of the center of the city and is not easy to find. In landing I zoomed the wires on the edge of the field and landed directly in front of the hangar almost at a stand still as the wind was fairly strong.

A few miles out of Cleveland a Curtiss Hispano was seen following our course and diving slightly. After a few miles he slowed up and soon landed in a field near a lake. About thirty miles farther on another Curtiss was noticed in a narrow field several miles from any town. Perhaps some farmer is awake to the advantages of aerial travel.

Erie was the next large town. Some four miles to east there is a race track that is reported as an emergency landing field. As long as the lake shore is followed the country is favorable although the hills often come within a few miles of the lake. For a long time we followed a road and kept the shadow exactly in the roadway. This made it easy to judge speed relative to many automobiles. Hundreds of new cars were noticed being driven away from the factories, and usually there were from four to ten in a group.

Ripley, New York was the next gasoline stop. A wheat field very close to the town looked good although the wheat was slightly higher than it appeared to be. A crowd gathered but the owner of the farm made them watch operations from the road side to avoid trampling down his crop. He was very agreeable and did not seem to object to airplanes even though they did frighten his horses. The machine was taken to a small spot where the wheat was not so tall and was soon on the way to Buffalo.

The country looked very low and wet as the corner of the lake is rounded but a detour slightly to the east avoided this. After passing over Buffalo the plane was dropped down to fifteen hundred feet in order to locate the Curtiss Field.

The motor was cranked at 8:30 P.M. and we soon left the group of spectators. The sun was just dropping out of sight and we picked up the tracks leading east from Buffalo. Following them was easy until it became quite dark and then we depended on the compass. The moon was out and a body of water was soon passed over which was probably Connequot Lake. The air was perfect and the machine practically flew itself for long periods. After a few minutes of uncertainty as to location Keuka Lake was found directly underneath. Its shape is much like a Y and the lights of Branchport and Penn Yan which are located in the northern extremities could be seen. It seemed only a few seconds before Seneca Lake appeared and the lights of Geneva and Watkins were plainly visible. Although fifteen miles away from Watkins one could actually locate the main street and could see the next village below. A large brush fire near Cayuga made an unusual sight in the darkness. The lights of the home city were quite welcome. Cayuga Lake looked very unusual in the shadow of the hillside and had it not been for the flashing light in the light house there would have been doubt as to position. A light could be seen at the hangar and I began circling with the motor lean to make it noisy in order to announce my presence. Coming in over the inlet with the motor throttled to sustain speed we slowly settled until my wheels touched. The bright light of the flares directly ahead were somewhat blinding but after finding the height it was very easy to land. We arrived over the field at about ten o'clock and landed at ten minutes past ten.

IN MEMORIAM
LIEUT. PATRICK HENRY LOGAN.

Lieutenant Patrick Logan was killed in an airplane accident at Baltimore, Maryland, July 5, 1920.

Lieutenant Logan was considered one of the best acrobatic fliers of the country. He enlisted at Chicago, Illinois where he was employed by the Michigan General Railroad Company, on June 21, 1917 and was sent to the aviation ground school at Chic State University where his course started on October 14, 1917. He commanded

pleted his course on December 8, 1917 and reported to Kelly Field, San Antonio, Texas on December 17, 1917. At Kelly Field he went through the R.M.A. training and graduated January 20, 1918. Lieut. Logan was stationed as follows:

Feb. 1	to	April 1, 1918,	Kelly Field,
Apr. 1	to	Aug. 25, 1918,	Taylor Field,
Sept. 25	to	Oct. 22, 1918,	Issoudon, France.
Nov. 10	to	Dec. 10, 1918,	13th Pursuit Squadron; zone of advance, Souilly, France,
Dec. 10	to	Jan. 10, 1919	Issoudon, France
Jan. 10	to	Feb. 28, 1919	Bordeaux, France
Mar. 26,	to	Apr. 1, 1919	Garden City, Long Island,
Apr. 2		-----	10th Aero Squadron, Bolling Field.

During the course of his career Lieut. Logan served as flying instructor, transport officer, assistant engineering officer, test pilot and performed other squadron duties.

Lieut. Logan resides at 142 Alger Avenue, Detroit, Michigan with his sister. He was born June 21, 1893, at Seney, Michigan and was educated at Assumption College, Sandwich, Ontario. His commission was dated February 1, 1918. The Air Service and those who know and witnessed his achievements feel that the "Red Devil" Nieuport on the recruiting expedition in cooperation with the American Flying Club of Baltimore took away more than can be replaced. The crash occurred at 5:45 P.M. and Lieut. Logan died at about 9 P.M. without regaining consciousness at the John Hopkins University Hospital.

SHORT PARAGRAPHS OF NEWS INTEREST

REMARKABLE EXPERIENCE OF PARACHUTE JUMPER

To fall like a plummet 1,000 feet from a damaged parachute and escape injury was the remarkable experience of Lieutenant E. E. Tattersfield at Parkwater aviation field in Spokane. Lieutenant Tattersfield had the presence of mind to disengage the emergency wings of the double parachute, to which he was attached, thereby checking his downward plunge less than 400 feet from the earth and saving himself from serious injury or death. The accident occurred while Lieut. Tattersfield and Lieutenant Mamer of the U. S. Aircraft Company were practicing the double parachute jump.

X X X X

SYMONS-RUSSELL AVIATION COMPANY DISSOLVED

The Symons-Russell Aviation Company of Spokane has been dissolved. Foster Russell will take the assets of the company and its field at Hardesty road and Sprague Avenue and will operate under his own name.

X X X X

AERIAL SERVICE BETWEEN SPOKANE AND LEWISTON

A twice-a-week aerial passenger service between Spokane, Washington and Lewiston, Idaho is being established.

X X X X

NEWS FROM BOLLING FIELD, ANACOSTIA, D.C.

During the past week Bolling Field and vicinity has been visited by daily showers which were a welcome relief to the torrid heat of the past few weeks. While interfering to some extent with flying a much desired opportunity was offered to use all enlisted personnel upon the general overhauling of a number of planes and as a consequence the aircraft at this station are in splendid mechanical condition.

Rainfall seemed to but little interfere with the number of visiting planes, fourteen planes having checked in from different flying fields during the week. Twelve cross country flights were started from this station and all returned in due course with no untoward incidents marring their trips.

Eleven former Air Service officers, now holding commissions in the Reserve Corps participated in practice flights during the week. One of this number, Mr. H. L. Miller, 1st Lieut. U.S.A., having journeyed from his home in Sterling, Illinois to Bolling Field, for the express purpose of participating in flights in order to 'keep in trim'.

On June 17th, Lieut. Col. Horace Hickam, Chief of the Information Group, O.D.A.S., left Bolling Field in an SE-5 enroute to Mitchel Field, Long Island, New York, on an inspection trip. He returned Sunday, June 20th. Col. Hickam is one of the most enthusiastic of the regular army pilots whose training antedates the recent conflict and is one of the few of that number whose interest is reflected in frequent flights. His ability to fly the most speedy types of planes is unquestioned, and was clearly demonstrated during the recent aerial carnival at Bolling Field when he led a field of five SE-5 type planes from the beginning to the ending of a thrilling race in which skillful piloting was the prime asset.

On June 18th, Captain Burdette S. Wright, aide to Brig. General William Mitchell, left Bolling Field in a DH-4 B with Lieut. Commander H. R. Fenn, U.S. Navy, as passenger enroute to Langley Field, Virginia, on official business, returning to this station the same day.

On June 18th, Major Martin F. Scanlon, Commanding Officer of Bolling Field and Lieut. Patrick Logan of Bolling Field flew to Mitchel Field, New York and returned the following day.

NEWS FROM SELFRIDGE FIELD, MT. CLEMENS, MICHIGAN

Harry E. Slater and Royal B. Woodleton, formerly pilots in the Air Service at Selfridge Field, were hauled into court at Ypsilanti, Michigan during the week by reason of a forced landing made in a grain field near that town. The owner claimed trespass, but as the court was without precedent in the matter the case was taken under advisement.

Colonel W. E. Gillmore, A.S.A., Chief of Supply Group made a trip to Selfridge Field during the week for the purpose of making an inspection.

Four enlisted men, Air Service, were transferred during the week to McCook Field, Dayton, Ohio, bringing the Air Service enlisted personnel of this field to its authorized quota of four.

NEWS FROM POST FIELD, FORT SILL, OKLAHOMA

Activities at Post Field are looking up. The past week quite a number of flights were made for the student officers at the Field Artillery School preparing them for artillery problems which they will conduct from the air in the near future.

The School is very much pleased to receive the orders directing Captain O. M. Baldinger to report to Post Field for duty. Captain Baldinger was formerly connected with the War Course for the Aerial Observers at this field and will be a valuable addition to the School Staff.

Another thing which boosts the morale of the Field is the announcement that Flight "A", 135th Observation Squadron for the last two months on detached service at Fort Leavenworth, Kansas, will return to the field about the end of the month.

ACTIVITIES OF THE U. S. ARMY BALLOON SCHOOL, LEE HALL, VIRGINIA

The 43rd Coast Artillery Corps, stationed at Camp Wallace temporarily, for practice firing, began their firing Monday with a battery of eight-inch Howitzers, over a 12,000 yard range at land targets.

A total of 47 ascensions were made during the week with a total flying time of 51 hours and 31 minutes, and a total of 82 shots were fired of which 66 were observed.

SCOTT FIELD, BELLEVILLE, ILLINOIS

Mr. Al. Redfield of St. Louis, Missouri, a former Air Service pilot, visited the field during the week.

Major Ira Longanecker, Commanding Officer Chanute Field, arrived at the field during the week. Major Longanecker is a member of Air Service Board No. 88-C to examine officers for commission in Regular Army, which convenes at Scott Field.

Former Sergeants Edward P. Doyle and John Murphy visited Scott Field during the week. Sergeant Doyle is now working at his trade of electrician in St. Louis. Sergeant Murphy, since his discharge last April has been piloting a Standard Airplane for a civilian company in Texas. The manager of this company "beat it" with the company funds and the sergeant had to sell spares to make up his salary.

Lieut. R. L. Starr, a former Scott Field officer, visited his old stamping ground Friday. Lieut. Starr is now in the automobile business in St. Louis. Like all old Air Service officers, he is making good with vim.

ENGINEERING DIVISION, MCCOOK FIELD, DAYTON, OHIO

The Equipment Section has been augmented by the establishment of a Navigation Branch. This branch is to deal with all aerial navigation problems.

This Section through the medium of:

The Radio Branch has conducted extensive comparative tests to determine the head resistance offered by the various types of wind driven generators with the many types of regulating and non-regulating airfans.

The Parachute Branch is conducting a series of tests of dropping parachutes in tandem arrangement, with large loadings.

The Leakproof Tank Branch has tested five (5) leakproof tanks manufactured and submitted by the Braender Rubber and Tire Company.

Has drawn up new tentative specifications for leakproof and crashproof tanks and coverings, incorporating the latest thought.

The Electrical Branch has tested the newest Bijur ignition and starting motors for Liberty "12's". It is interesting to note that the starters, in these tests were not injured by forced back firing of the engines.

Is conducting tests on combined starting and ignition systems for Liberty "12's", using a sectionally developed automatic cutout apparatus.

Has completed tests on two new types of magnetically operated starting switches.

The Instrument Branch has developed an accurate automatic constant pressure regulator for use in closed cockpits for altitude work.

Has developed a very sensitive automatic barograph of new type. The new departures consisting of -utilization of bellows as a means of measuring pressure; full travel of recording arm for each 300' change in altitude; continuous automatic inscription of record over continuous rolls.

Has developed instruments for tests to obtain pressure distribution curves on tail surfaces. These instruments consist of:

A highly sensitive pressure indicator gauge.
An angle of elevator indicator used in conjunction with the above, to indicate very small motion of the elevator surfaces.
Photographic record is to be made of the above indications at optional intervals.

Has developed an angle of incidence indicator, indicating on a remote strut-mounted dial, all changes of the angle of the air stream with the aerofoils, through minus 5 degrees to plus 15 degrees, this range giving a 320 degree indicating range on the dial.

Has conducted extensive comparative tests of two, presently accepted types of oxygen control apparatus. It was shown that one type conformed very closely to the theoretical flow desired, while the other gave an excess of oxygen at low altitudes and a retarded flow at high altitudes.

Has adapted a small type of pocket barograph for use in parachute jumping.

Has developed and placed orders for a quantity of Universal gasoline gauges, after the Maxinall type. These gauges are readily adapted to any tank.

The Camera Branch has conducted successful initial tests of an extremely light camera using cut films.

Has carried on aerial photographic mapping tests for corrections of constant error, etc, and developing efficient methods.

The Miscellaneous Development Branch has conducted preliminary tests on two types of flotation flying suits manufactured and submitted by the National Life Preserver Company, New York City, and various types of life preserver airplane cushions manufactured and submitted by the Robinson-Rodgers Company of Newark, New Jersey.

Has conducted tests on caisson chambers in the development of closed cockpits for altitude work.

ACTIVITIES AT MITCHEL FIELD, LONG ISLAND, NEW YORK

A very enjoyable dinner dance was held at the Officers' Club on Tuesday evening and a very nice party with many unique features were given and as the dining tables were set out on the porch this left the hall available for dancing during the time that dinner was being served. Dancing was enjoyed until a late hour and all expressed themselves as very much in favor of another dance in the near future.

A parachute jump was made at this station by Sergeant Frederick E. Jones of the Fifth Aero Squadron, on Tuesday afternoon at three o'clock from an altitude of three thousand feet, taking a total of two minutes and ten seconds for the descent. The rate of fall was about 20 feet per second. The jump was made from a DH-4 B plane piloted by Lieut. Walter E. Richards, 5th Aero Squadron, who showed great skill in flying and dropping the jumper off at the right time. Sergeant Jones is a graduate of the Parachute Department of the Air Service Mechanics School at Kelly Field, Texas and is in charge of the Parachute Department at Mitchel Field.

Saturday afternoons are far from being dull at Mitchel Field as everyone can say who happens to have a date for that particular time. At ten A.M. Saturday morning the Department Air Service Officer called for two formations of five planes each to fly over New York to participate in the celebration at the opening of the New York police Air Port at 82nd Street and Riverside Drive. Two five plane formations left the ground at three P.M. and flew for over an hour over the crowds at the celebration and played with the slow and clumsy hydroplanes of the Navy. Lieut. E. H. Barksdale led the First Squadron formation consisting of Lieut. C. E. Finter, Lieut. J. B. Wright, Lieut. H. D. Norris, and Lieut. W. R. Taylor. When over New York Lieut. Barksdale's motor started cutting out but he kept on and led the formation over the Air Port twice and then he started to limp for home field where he arrived safely. Lieut. C. L. Midcap led the Fifth Aero Squadron formation consisting of Lieut. J. P. Roullot, Lieut. P. Melville, Lieut. J. D. Kendall and Lieut. R. D. Kirkpatrick.

Hangars have been set aside for the use of the Navy Department planes which are expected to arrive at Mitchel Field next week.

NEWS FROM THE SUPPLY AND REPAIR DEPOTS

Americus, Georgia

The preparations for the Fourth of July celebration are progressing and it is believed that the show will be worth seeing. As an extra attraction, former Lieut. Roger Q. Williams, Air Service, has offered to put on his plane changing and wing walking stunts. As this act has been widely advertised throughout this part of the country, it is believed that it will draw a large crowd. Preparations are being made to handle a crowd of several thousand people.

Montgomery, Alabama

Personal Notes

The Depot was completely inspected by Captain Walter L. Reed, Inspector General Department, during the week.

Lieut. Colonel H. B. Clagett, A.S. (a), Department Air Service Officer, Southeastern Department arrived from Charleston by plane. He made the trip in a series of jumps; stopping at Pope Field and Americus before landing at the Repair Depot. He is here as President of the Examining Board for the examination of emergency officers for commission in the regular establishment.

Captain Charles T. C. Buckner, Flight Surgeon at Post Field, Fort Sill, Oklahoma, formerly Flight Surgeon at Montgomery, Alabama spent several days during the week at the Depot and was married on June 16th in the city of Montgomery.

Athletics.

It is hoped to be able to turn the conglomeration of shacks, known on the Post as the Wigwam, into a little club. The utilities section of the Depot has drawn up plans and as soon as the estimate is prepared the Commanding Officer will request authority of the Director of Air Service to make this into an officers' Club.

There has been quite a little talk of putting in a nine (9) hole golf course. If this is done the club house will undoubtedly be the center of attraction for the officers and their friends of Montgomery.

Recruiting.

Recruiting activities are progressing nicely. One point is brought out in the nearby towns and that is a great need in this section of the South for schools and a compulsory system that requires all boys up to a certain age to attend school. The number of illiterates and young men who can barely read or write is a reflection on the school system throughout this section and makes recruiting for the Air Service a very difficult problem. One thing that appears remarkable is the small number of rejections as a result of physical examination.

NEWS FROM THE 8th AERO SQUADRON, McALLEN, TEXAS

As usual the squadron has been actively engaged during the past week the main occupation being the moving of planes into the new steel hangars and the tearing down of canvas ones. It is rather disappointing that no concrete floors were laid, but anyway the hangars are a great improvement on canvas and will save the government a few dollars and will lighten the labor of the men.

Several officers of the Squadron were guests of Dr. and Mrs. Renfro last week end at Ft. Isabel, returning early Monday morning with reports of many pleasant surf baths and lots of boat rides.

Last Tuesday, Lieuts. Meley, Haizlip and Hickey and Major Barney made a flying trip to Pearsall, Texas for the combined purpose of selecting a landing field and playing baseball. Report a fair field, but the cowpunchers taught them a lesson in the general ethics of baseball.

Lieut. Peter Skanse, one of our most efficient officers has joined the 8th Aero Squadron and from the looks of Peter's graduation certificate from the Air Service Mechanics School he sure should know a motor.

One of the barracks has been completed and another almost finished which will make nine of all uniform buildings built from salvage lumber at McAllen. If this isn't efficiency we would like some of our critical friends to know that they have been constructed at, simply salvage cost of the lumber and no appropriation whatsoever.

ACTIVITIES AT MARCH FIELD, RIVERSIDE, CALIFORNIA

March Field's Flag Day Air Show was a big success. Over 300 private automobiles, passenger auto busses, and one single seated surrey carried nearly 6,000 people to the aviation school, the largest civilian gathering in the history of the field.

In addition to commemoration of Flag Day, Lieut. Col. B.K. Yount, Commanding Officer, sought to introduce the Air Service to Southern California by way of interesting exhibits and an entertaining aerial program. Assisting the heavier-than-air craft from March Field was a Navy blimp from the North Island naval base, and an observation balloon along with a free balloon from Ross Field, Arcadia, California.

Delegations were guided about the Post and through the educational and vocational training departments by commissioned officers. Those who desired were given a ride in the Ruggles Orientator. Wireless, machine gun and aerial camera and photographic displays were a part of the show. Ice cream and soda-pop were sold along "the line".

For the social set it was a "dress parade", for others an excellent opportunity to view Uncle Sam's Air Service. Men, women and children enjoyed the event. Two bands added to carnival effect of the show. Explanations in detail of the various events were provided for the assembled spectators.

An aerial collision at North Island, San Diego, last Saturday, which resulted in the death of naval Lieutenant Louis T. Barin prevented participation of naval scout planes in the March Field Flag Day Air Show. Cadet Joseph T. Walker, graduated from this school last month, who collided with the naval scout escaped uninjured.

Roy S. Cradle of Los Angeles, reserve pilot and ex-March Field flyer, will within the year attempt to lower the transcontinental airplane record established during the big aerial derby of last year. His plane will be of unique design and a complete departure from present day types of heavier-than-air craft. It will carry a new type motor and although no definite time has been set for the flight it is learned that no more than four stops will be made enroute with the possibility of but one or two.

Four officers of the command were given an opportunity last Monday to experience the thrill that may or may not come to one on his or her first free balloon flight. The balloon company from Ross Field which assisted in the Flag Day Air Show remained over night at March Field and transferred the gas from the big observation bag to two smaller free balloons. Cadets were placed in charge of the flights.

In the first basket to get away Major Ernest Clark and Major F. I. Eglin were carried as passengers. Everything went well until a landing was attempted. Major Clark returned to the field with a sprained ankle and loudly proclaimed that Major Eglin had fallen upon him when the balloon finally came to a halt after bouncing over the greater portion of a 50 acre tract. Neither of them seemingly could get a kick out of free ballooning.

Lieutenants Ned Schramm and Robert Worthington were carried as passengers in the second basket. They landed in the vicinity of Jack Rabbit Trail on the edge of the San Jacinto Mountain range. Worthington claims that on the way down they came so fast that the basket was beating the sand which they were heaving overboard to break the fall. There were no casualties.

However, in this connection, it might be added, that the free balloon released during the Flag Day Air Show came down in some high tension wires in the vicinity of Hemet and occasioned that village to be without electric lights that evening. Spectators say the balloonists are lucky to be alive as their descent upon the wires caused considerable of an electrical display.

NEWS FROM THE 12th AERO SQUADRON, DOUGLAS, ARIZONA

Captain Hallingsworth arrived in Douglas from Kelly Field as a passenger in a DH-4 B piloted by Lieut. Beaton to make arrangements with Lieut. Darr, camp utilities officer, concerning the construction of the new field for this flight. The field is being cleared and a foundation being laid for two hangars. The trucks are busy hauling steel for the hangars so that they will soon be under construction. Portable buildings are being shipped from camp Mabry to furnish quarters, barracks, Administration Buildings, etc. for the field. Plans have been formulated for a pumping plant and a lighting system so that the field will be a modern and up to date flying field when it is finished.

FIRST DAY BOMBARDMENT GROUP
KELLY FIELD, TEXAS

Training and Flying.

During the past week 80% of the daylight hours were suitable for flying. The Group made a total of 134 flights for 71 hours and 15 minutes. These flights were of the following types: Long Distance Reconnaissance, Dual Instruction, Test and Practice and Parachute.

1200 Miles in 10 hours and 10 minutes.

Mention was made last week of the remarkable flight of Lieut. Spencer in a DHB from Kelly Field to Ajo, Arizona. It was one of those bits of flying which show what the army Air Service can do when given the opportunity.

FIRST PURSUIT GROUP

PURSUIT PROTECTION OF DAY BOMBARDMENT MISSIONS

The lesson learned in the past war, both by the 1st Pursuit Group and the 1st Day Bombardment Group, shows that bombardment missions cannot be carried out without suffering great losses, unless sufficient pursuit protection is provided to insure immunity from enemy destroyer attack. The records of the 96th Day Bombardment Squadron prove the truth of this assertion. They were equipped with the strongest and best protected biplace planes that the French could produce, steel construction, protected gas tanks, armored pilot's seat, and small blind angle for observer's guns, - yet they suffered approximately 300% casualties because they generally had no pursuit protection and because such pursuit protection as they occasionally did have was entirely inadequate.

Two principal factors contributed to the almost total failure of such protection patrols as were provided. The first of these was imperfect liaison between Pursuit and Bombardment Groups. The second was the difference in the cruising radius of the two types of planes. These will now be explained in order.

There appeared to be two things the matter with the liaison. One of these was the lack of perfect timing. The time pieces of the respective flight commanders were not synchronized. Sometimes there was even some misunderstanding as to the exact rendezvous point. The second reason for failure was that the different climbing speeds of the planes was not taken into consideration. Supposing a bombing formation was scheduled to be over a certain point near the lines at a definite time. The scouts would take off for the rendezvous a half hour before the time scheduled for the meeting. The bombers would take off about the same time. Since the scouts could climb to the required altitude over the designated point in a half an hour, and it took the bombers more than twice this time to make it, the scouts' supply of gas would be so low by the time they started over the lines as protection, that they would have to return to the Airdrome instead of accompanying their charges past the danger zone. These faults could have been partially remedied by better liaison brought about by better cooperation between Operations Officers of the two different Groups. Thus perfect synchronization of time pieces is the first requisite. Then a proper allowance for the length of time it takes the two types of planes to reach the designated altitude over the point of rendezvous would enable the scouts to accompany the bombing mission, at least as far as to regain our own lines. Another factor is necessary to enable Pursuit to afford complete protection throughout the mission. This brings us to our second point of efficiency.

It is generally known that the pursuit plane used by the Americans in the great war could remain in the air only two hours on the main tank and fifteen minutes on the reserve, while the DH4's and Breguets used by the Bombardment Groups could remain aloft from three to four hours. The result of this is, that even if the Bombers meet their protection within half an hour after it leaves the ground, they can stay together for only one hour, after which the Pursuit must go home in order not to go down out of gas in enemy territory. While one hour's protection takes the bombing formation past the worst of it, going in, this does not help them

a bit coming out. The best solution of this difficulty is the development of a pursuit plane that can stay in the air for four hours, and still retain its fighting efficiency. One solution would be to have the return of the bombing formation timed so that they would arrive at a rendezvous point back of the enemy's lines where they would be met by a pursuit patrol sent out for that purpose. This solution was executed with both observers and bombers and proved to be expedient.

There is still another kind of protection to be considered besides that which accompanies a mission. It is the regular relayed patrols of the echelon flights of pursuit planes over the enemy lines, and as far in as the supply of gasoline will permit. The object of this patrol is to maintain complete superiority in the air, permitting no enemy planes aloft. This project, of course, requires the presence of our Pursuit in overwhelming numbers, and its success would insure the unhampered use of both of our bombing and observation planes and complete blinding of the enemy.

The successful protection of all our bombing missions during the next war will raise the efficiency of the Air Service more than 100% over that of any other Air Service during the past war. Naturally such superiority in the air will require a stupendously large pursuit organization. The 1st Pursuit Group, working in obscurity at Kelly Field, Texas, is keenly conscious that it is the nucleus of this Great Pursuit Service of the future and it guides itself accordingly. Now while we are at the same field as the bombers, we have a splendid opportunity to cooperate with them in working out the details of maintaining the necessary liaison to give them ample protection against hostile aircraft during the next war.

NEWS FROM "B" FLIGHT 8th AERO SQUADRON, LAREDO, TEXAS

The president of a college relies in large measure upon athletic events to work up his students to the proper "Esprit de Corps", and to encourage this feeling he encourages and arranges athletic events for his institution. For the same reason the Athletic Officer of "B" Flight arranges games for the team and results noticed among the men show that he has builded better than he knew. Last Thursday a formation of four planes ferried the baseball team to Pearsall, Texas, a short distance up the line. In a fast game they defeated the Pearsallites in the score of 17-12, thus scoring another mark for the reputation of the Squadron team and setting Pearsall afire with the romance of the Air Service. In another game played with the picked men of the 37th Infantry the team again showed up the 8th by giving them six and carrying away nineteen. It is believed that there is nothing that will help along the proper spirit in an organization so well as a series of victories in athletics and the Squadron team has gained the victories.

While appropriations for repairing and building camps are usually soon exhausted, the cause for making the appropriations still march merrily on, and often not checked by a smaller amount of money expended than necessary. It has been observed frequently in the past few days that storms have the habit of occurring more than once, and that a steel hangar is helpless as an infant to protect the air chariots unless it has something solid and water resisting to cuddle them up on. There are hangars, and they are good ones, but where are the cement floors for them?

The shipment of Lakeside lubricating oil arrived some time ago and has been duly tested in as grueling service as it could have in any organization. The Engineer Officer reports it very good and much better than the oil used before its advent.

A novel use of reconnaissance was employed by Lieut. John H. Glascock, Flight Transportation Officer, in bringing to light two mules of the flight which had strayed some distance from the Airdrome. When it was discovered that the mules had escaped, Lieut. Glascock took off in a plane and scoured the surrounding country in search for them. They were discovered in a short time and a truck was sent out to ferry the runaways in.

Despite the shortage of personnel the flight continues to be run with its old time efficiency. The discontinuance of border patrol has lessened the labors of the squadron not a little, and there is time to carry out to the smallest detail the schedule of training mapped out by the Operations Officer.

To bring about the necessary co-operation of the civilian population of the town with the Army, the Commanding Officer has extended to the American Legion and Laredo baseball teams an invitation to use the diamond to practice and matched games. Both teams heartily accepted the invitation, and a good many games have been played at the Airdrome, which serves to popularize the camp as a convenient Sunday visiting place.

NEWS FROM RICH FIELD, WACO TEXAS

During the last few days a special detail of men have been busy in going over the flying field and filling little ditches and smoothing off bumps. Major Muhlenberg believes in special attention being directed toward the elimination of every little deficiency that may result in any happening derogatory to proficiency. Some time ago an article appeared in Air Service News Letter from Kelly Field in which the writer waxed unusually prosaic and almost poetical in describing Rich Field as a field beautifully irrigated with ditches and ornamented with pretty flags; or words to that effect. The writer of this article does not profess to be authority on what constitutes color blindness nor does he feel disposed to criticise, unnecessarily any pilot's attempt to "taxi" in to hangars before he lands his plane; however, during the last two years, the Rich Field pilots and visiting pilots have had no trouble whatever in landing at Rich Field if they landed somewhat near the airdrome instead of on the outskirts of the field and in the outlying places which have been posted with red flags as a proper warning.

Much interest is being shown and much value is being attained in the evening class in overhauling of liberty motors which have been inaugurated by Major Muhlenberg. Experience in aviation reveals the fact that there are many first class theoretical motor mechanics but few practical ones. By taking tools in hand and actually taking off and putting on parts is the only real method of becoming practical mechanics.

NEWS FROM LUKE FIELD, FORD'S ISLAND, PEARL HARBOR, HAWAII.

Observation by the Second Observation Group of the weekly shoot of Battery Barri of the Coast Artillery was not as successful as the previous problems have been. Firing was directed at a moving target at a range of from 5000 to 8000 yards. De Havillands were used with radio equipment tuned in to communicate with the receiving station at the Battery. Customary ground panels were used as signals from the ground to the observer. Delays in firing were caused by heavy traffic of submarine and other naval vessels in the field of fire. These and other interruptions not only caused the pilots and observers a great deal of annoyance, but it affected the work of the battery, whose shooting was somewhat erratic, having none of its usual hits accredited on the day's score.

Owing to the scarcity of observers in the Group four of the pilots are taking special training to equip them to assist in the observing work which will fall to this organization when summer maneuvers take place. A weekly schedule of puff target practice, class room radio, and aerial photography has been arranged. In addition to this course for officers, a similar, though more intensive course is to be adopted for enlisted observers, on the question of which a board of officers is now engaged receiving applicants.

Another problem in Infantry Contact was flown recently. The work of the contact planes was observed by Major Curry, Department Air Service Officer. Three advances by an imaginary force were accompanied by three pairs of contact patrol planes. Ground panel messages were picked up in the zone of advance by the observers, who acknowledged the receipt of them by firing Very lights. These messages were transmitted by radio, carrier pigeons and message bags to Battalion and Division Headquarters.

RECREATION AT WILBUR WRIGHT DEPOT, FAIRFIELD, OHIO.

The untiring efforts of Lieutenant Samuel Johnston, formerly of the "Mysterious Disposal" at Dayton, the newly appointed Recreation Officer at the Field, do fair to crowd the calendar this summer with social and athletic events. A volleyball match marks the program for Saturday night of this week. The three tennis courts are crowded every evening and runners-up in the tournament have already started. Plans for the immediate future include a volley ball court, trap shooting range and 22 rifle practice gallery. The laying out of a golf course has begun. The Officers Club has recently been refitted and refurnished throughout and the interior with its subdued color tones, its easy chairs and lounges, and if one desires, billiards or cards, is indeed a distinct addition to the post. A dance marked the formal opening of the club and from the enthusiasm displayed there will be many more of its kind. Future plans include informal affairs on Wednesday evenings and a dance at least once a month.

ACTIVITIES OF THE REPAIR DEPOT AT INDIANAPOLIS, INDIANA

There has been considerable activity in and about this Depot during the past week. The Commanding Officer has been very busy having the ground plowed up and arranging to plant grass seed, flowers and shrubbery along the main roads of the Post. Heretofore, the grounds looked like small patches of a sand desert but it is expected with the amount of work being done that a great improvement in the appearance of the Post may be looked forward to.

The Engineering Department at the Repair Depot is surely doing some business. There are at present at the depot in the Engineering Department four officers, eighty-six enlisted men and two hundred twenty eight civilian employees. During the week there were completed and ready for shipment ten Hispano Suiza Model A, four Liberty 12 engines and one DH4 plane. There were shipped one Hispano Model A, two Hispano Model 1, one Mercedes 160 horsepower, one Curtiss OX5, three Liberty 12's school motor engines; one Fokker D-7, one Curtiss JN4B, two Curtiss JN6HGL and one Curtiss JN4D planes.

THE EDITOR'S ORIENTATOR

"Just Opinion for Opinion's Sake".

Recently reports have been noticed, occurring with increasing frequency, of various city, town, county and even state legislation regarding aircraft. This activity if applied with as much vim and ardor to the establishment of community landing fields would be decidedly welcome, but in its placing restrictions, limitations and regulations on aircraft it is decidedly unwelcome. Regulation of aircraft is national and international in its scope and is a problem to be solved by those with experience and mature judgment in aeronautics. To carry this present activity out to its logical conclusion, imagine the ludicrous situation of a few years hence when aircraft would have to display all manner and color of tin tags and markers, with one state desiring all green lights and another all blue lights, another with lights fore and aft, another wanting lights on the sides, while another would want lights or flares on all corners or on top and bottom. We hope that this activity calling for whistles, bells, gongs, lights, flags and so forth will stop and that the proper Federal legislation covering the subject matter will soon be forthcoming.

With the advent this year of aerial shooting matches the problem of making these events competitive and tutorial will arise and be solved. In connection with this problem it would seem that the Ruggles Orientator could possibly be equipped with a machine gun and mounted on a raised platform so as to better take the place of the old rocking nacelle of earlier training days. Then under the guidance of an operator who would simulate the pilot in the case of a two place fighter, the "shoot" could be carried on against animated targets on the ground at fixed ranges.

In this same connection the good old sport of trap shooting brings to mind another possible device and that is the use of a recently marketed aerial advertising floater which could be marked with black bands and be released from a plane flying above the selected combat area and after opening up and providing a target, could be shot at from airplanes just as the trap shooter collects his clay pigeons.

The following story of an associated press man's trip should bring many ideas to the mind of the business man and banker, who if they remain dependent on the old established customary ways of getting reports and "dope" will soon be left far behind.

"The contrast between the thorough cultivation of the Hungarian and Bulgarian fields and those of Thrace was strikingly visible to The Associated Press correspondent, who was the first passenger in the airplane postal and passenger service from Bucharest to Adrianople, instituted by the French because of the demoralization of land traffic. What was a week's journey by land was made in a few hours by air.

Claude Gonnin, a French army aviator, took the correspondent along the Danube country to the Black Sea, zig zagging across Bulgaria, where the fields were laid out like gardens, giving color to the assertions of the Bulgarians that 99 per cent of their people are working. Tilled ground was observed even on the tops of Balkan Mountains.

Once the frontier was crossed into Thrace, there came a change, the fields were ragged and only here and there were a few flocks of sheep and herds of cattle grazing. In Thrace the roads were in bad condition, compared with long, clean stretches in Bulgaria. Along the Thracian roads were groups of wagons, apparently bound for Bulgaria."

HERE AND THERE WITH THE EDITORS

"THE ITALIAN AIRSHIP ROMA"

"The new Italian airship Roma should elicit more than passing interest on several counts. The fact that the Roma is by far the largest semirigid ever constructed -- its size being about twice that of its largest forerunner -- would alone be worth mention. It was hitherto assumed that the largest 'sensible' semirigid was in the neighborhood of half a million cubic feet capacity which was due mainly to the belief that beyond that size the ratio of disposable lift to gross lift would become too unfavorable for practical purposes. The Roma upsets this assumption by having an efficiency ratio of over 51 per cent. This is a whole lot better than that of the British R 34 for which ship the efficiency ratio is only about 45 per cent, altho its size is some 40 per cent larger than that of the Italian semirigid. It may be argued that the R-34 is not by any means the last word in rigid construction for the German Bodensee, only one-third the size of the former, has none the less an efficiency ratio of 45 per cent.

This argument is however rather misleading for it should be noted that the Roma is by far the most heavily engined airship in existence, its horsepower aggregating 2,400 which was that of the Zeppelin L-70 a ship twice the size of the Italian vessel. That with such a powerful propelling apparatus the designed speed is to reach 80 m.p.h. is not to be wondered at, but the perfect streamline of the hull should be a great contributor to this performance. And here it may be remarked that the fineness ratio of the hull of the Roma is 5 to 1, that is, much smaller than that of the best airship streamlines in use.

Another interesting feature of the Roma is the use of the so-called Verduzio ridge, that is, a longitudinal lobe on top of the envelope formed by rigging guys in the manner of the Astra-Torres from which suspension cables run to the keel girded. As the latter is of the well known articulated type, the Roma may be regarded as a compromise between the prewar Military type of Italy and the experimental Verduzio, and probably embodying the best features of both.

In view of the many novel features above enumerated the trials of the Roma will be watched with keen interest by all concerned with the development of lighter than air craft." (Aviation, June 1, 1920)

GENERAL SEELY'S WARNING

At the inauguration of the Air League of the British Empire on June 8, General Seely, the president of the League outlined the purpose of the organization and warned his fellowmen not to permit any other Government to become supreme in the air. He reminded them that in 1918 they were "incomparably the best equipped", but stated that "today the position was indeed serious. If it were a little more serious", he said, "they could not talk about it. It could be retrieved but immediate action was necessary. The State had practically gone out of business. Its own directly controlled establishments were confined to the scientific side apart from any power to make adequate tests in the air. Without practical demonstration scientific research was of little value". He stated that of the ten great firms which had been manufacturing aircraft many had gone out of business altogether and he fears that in a year or two the remaining few will have taken up some other work or gone to some other country.

Gen. Seely believes the "wise action of the Government in forming a separate Air Ministry had to a great extent been neutralized by the extraordinary expedient of placing the new and most enterprising arm under the paralyzing influence of old fashioned militarism". It was urged that the League "dissever this arm from the paralyzing and strangling hold of old fashioned military minds". Gen. Seely challenged contradiction of the statement that the Navy was now getting the air equipment and assistance it needed to make it efficient. He acknowledged that they owed the "present Prime Minister a great debt for his services in the war" but he declared "the national defences were suffering from floppy control in co-ordination between Army, Navy and the Air Service". (London Times 6/9/20)

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"The first aerial craps game occurred recently on a flight from Indianapolis to Dayton. Six pilots and two mechanics to whom flying had become merely a matter of routine, participated in the game." (Ind. News 6/22/20)

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The first prosecution for low altitude flying in England was made on June 10 when Reginald Edmund Tollerfield, an air pilot, was fined 50 pounds for making two Immelman turns at less than 600 feet altitude. (London Times 6/11/20)

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Construction work on the King County's public aviation field, at Sand Point was begun last Saturday. (Seattle Times 6/17/20)

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THE AIR LEAGUE AND THE BRITISH EMPIRE

The inaugural meeting of an Air League of the British Empire was held on June 8th. "The first avowed object of the League" according to the London Times 6/8/20, "is separation of the Air Ministry from the War Office". The editor of the Times says "this is fundamental from the merely technical aspect of the case. The problems of the air require their own men and their own methods. Naturally, the Air Forces of the Crown must be co-ordinated with the Army and also with the Navy, and for this purpose the creation of an Advisory Body is to be urged". But it is believed that there is a stronger reason for separation. It is pointed out that the Army is a "fighting machine with comparatively little to do in peace except to get ready for war". The Navy is "none the less preponderatingly an armed force with a reserve external to itself in the mercantile marine". The Times says, "in our judgment, the development of the Aerial Service will be best secured if its centre of gravity be placed more on the side of activity in peace than of activity for war. It should consist of an organization attuned to civilian functions, with a nucleus of purely military intent. That is the way of economy and the way of progress. We cannot afford the vast extravagance of an air fleet that is merely a threat and a protective weapon. Improvements in aircraft and their engines and the training of a great body of pilots and mechanics will come more quickly under the rigorous test of commercial success".

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HERE AND THERE WITH THE EDITORS (Cont'd)

ANARCTIC EXPEDITION

The main purpose of the Antarctic expedition by airplane as planned by Dr. John L. Cope is "to ascertain whether the South Polar regions cannot be developed commercially, especially the chain of islands reaching toward the Pole". It is reported that manganese, coal, granite, gold and rubies have been found there.

But the Detroit Free Press believes it is probable that the "greatest actual service of the proposed expedition will be the charting of the polar cape -- if it can be done from an airplane! Whether or not it will yield the benefits which are dreamed of remains to be seen. "The editor of the Free Press says, however, "we have an idea that the cost of the Cope expedition, which is set at between half and three quarters of a million, will not be balanced by the financial returns".

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AVIATION IN CANADA

"Aviation in Canada is not dead", the Detroit Free Press 6/20/20 remarks. "The spectacular side of it may be, but it is being rebuilt on more solid foundation. The real commercial uses are being discovered". For example the Press gives the following: six of the largest Canadian pulp paper and timber concerns, realizing the practicability of aircraft in their business, have installed aerodromes and a staff of fliers and mechanics at their headquarters. The planes will be used for "survey of definite blocks of timber land, for exploration of new localities and for swift communication to camps and especially for quick and accurate location of forest fires."

Also Provincial governments with great crown land resources are adopting aeroplanes for fire ranging and survey purposes.

During the last year, it is stated, 30 private aviation companies with an average capitalization of \$100,000 each have been organized. One of these companies is investing in a number of seaplanes which are to be used in the lake regions; another is specializing on aerial photographs, particularly of industries.

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LARGE CIVILIAN FLYING BOAT

The largest civilian owned flying boat in the country will be dedicated today at Keyport, New Jersey. It is described as having "a wing span of 103 feet, two cabins and a baggage compartment. There are ten upholstered seats in the forward cabin and a settee in the rear cabin. The hull is 50 feet long and has electric lights. The machine has a flying speed of 105 nautical miles an hour with a cruising radius of five hours". It can carry ten passengers and is owned by the Aeromarine Plane and Motor Company. (N.Y. World 6/22/20)

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WOMAN'S ALTITUDE RECORD

The following announcement is made by the New York Times 6/24/20: "Paris June 23d -- Louise Favier a well known French woman aviator, today broke the world's altitude record for women by reaching a height of 6,500 meters, that is 21,325 feet. She was piloted by Lieut. Bossoutrot, who recently broke the world's record for continuous flight in the airplane Goliath. She attained that altitude in thirty-five minutes".

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U. S. Air Service magazine, the Official Publication of the Army and Navy Air Service Association, is to be congratulated upon its June issue, which is as usual up to the top in aeronautical magazine material. The editorials on "dumping" are particularly well couched.

"AVIATION IN SOUTH AMERICA"

"Reports from South America indicate that aviation is one of the greatest interests in those countries and commissions from England, France, Italy and America already are on the ground to help boom the projects. The announcement by the War Department says that "South America is keenly alive to the possibilities of aviation both from a military and commercial point of view". The statement continues that Great Britain's interests are by far the most active and most aggressive and credits England with having paved the way to the establishment of commercial air routes.

Americans, however, are not very far behind, and as a result of preliminary work costing thirty millions of dollars, Bolivia has decided to create and maintain two aero squadrons of 18 planes each as a starter.

The War Department adds that "splendid opportunities are available to all. The native South American likes our methods of getting results. It is to be hoped that the American interests will be represented in the South American field. The business is there. It is but a question of going after it."

(Dayton Herald 6/21/20)

SAFETY OF AIRSHIP

The New Orleans Times Picayune gives commercial aviation a substantial boost in its issue of June 20th. Since 1918, United States airships which have patrolled a distance of over a million miles and carried several thousand persons, have had only 11 accidents resulting in no injuries or deaths. A list of the accidents follows:

First - On April 16, 1918 a kite balloon was wrecked at Cape May, N.J. due to a high wind with no one injured or killed.

Second - On May 16, 1918 a dirigible was wrecked at Rockaway due to its being unfit for further use with no one injured or killed.

Third - On July 11, 1918 a kite balloon was struck by lightning while on board a United States battleship with no one injured or killed.

Fourth - On July 24, 1918 a dirigible was partly destroyed by fire at Miami, Fla. Part of the car was damaged. No one was injured or killed.

Fifth - On January 14, 1919 a dirigible drifted away due to the motor cutting out, at Miami with no one injured or killed.

Sixth - On January 20, 1919 a dirigible was disabled at Pensacola, Fla. due to the rudder getting out of order. A landing was accomplished successfully altho the fabric was ripped with no one injured or killed.

Seventh - On February 11, 1919 a dirigible was forced to land at Collett and the fabric was ripped, with no one killed or injured.

Eighth - On February 19, 1919 a dirigible sustained a stripped gear and made a free balloon landing with no resulting injuries or deaths.

Ninth - On July 1, 1919 a dirigible exploded and burned at Baltimore due to a static spark with no resulting injuries or deaths.

Tenth - On August 5, 1919 a kite balloon was destroyed by fire due to a static spark at Coco Solo with no resulting injuries or deaths.

Eleventh - On October 14, 1919 a free balloon had the fabric ripped due to roping at Cape May with no resulting injuries or deaths.

Such a record as this speaks well for the future of commercial aeronautics especially from the point of view of safety."

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HANDLEY PAGE REDUCES RATES

The passenger and freight rates on the Handley Page aerial routes between London, Paris and Brussels have been reduced. They are quoted as: single fare for passengers, 10 guineas, and the return fare at 18 guineas. Freight rates are as follows: - "up to 10 lb., 2 s. per lb.; over 10 lb. and up to 30 lb., 1 s.

HERE AND THERE WITH THE EDITORS (Cont'd)

9d. per lb; over 30 lbs. and up to 100 lbs, 1 s. 6 d. per lb.; over 100 lbs, 1s. 3d. per lb.; ad valorem, 1 per cent, including insurance, if not already covered by the consignee's or consignor's floating policies." (London Times 6/10/20).

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A United States army balloon started a flight yesterday from Philadelphia to Boston. The big bag is in the command of Lieut. H. H. Holland of the Eighteenth Balloon Company and is manned by four enlisted men of the squadron. (Philadelphia Ledger 6/25/20).

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The official United States entrant in the Gordon-Bennet International airplane race is Major R. W. Schroeder, reports the Dayton Herald 6/21/20. The race will take place near Paris next September but it is probable an elimination race will be staged with Dayton as a starting point.

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Jones

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE JULY 21, 1920

PURSUIT PROTECTION OF KITE BALLOONS

During the Great War, through no fault of its pilots, Pursuit lost the friendship and received the enmity of those much abused and little appreciated Aeronautical officers popularly known as "Chute Jumpers". The Hun had a playful habit of making daily visitations on our balloon line, where heedless of "Archies", and without interference by our own patrols, he would shoot down four or five balloons in flames, then turn around and have a pot shot at the luckless observers who were by that time gracefully floating earthwards in their parachutes.

Of course every spud that we could get into the air was up after the Hun's planes and also his balloons, but our own suffering Balloon Observers failed to appreciate this fact. They did not know that the most important duty of Pursuit is the offensive patrol, and, with hardly enough planes to perform that duty properly, we could not very well afford to remain hovering over our own balloon lines. We could not have shot down any Huns at all that way. We found not one single case on record of a Hun patrol picking the exact time when our patrols were crossing over, still in sight of our balloons, to make such an attack. The Huns never tampered with American Pursuit unless they had us outnumbered at least three to one. All of the victories we won we had to go after, and we had to leave our balloons far behind us to find any Huns to attack.

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Patrolling up and down the balloon lines is rather a monotonous task; but if the next great international struggle settles down to trench warfare, as did the last one, one of the chief duties of the Pursuit, will be to furnish relayed patrols for the work of protecting the balloon line throughout the length of the line and from dawn until dark each day. No one outfit will have to do this work day in and day out, for it would not be fair to keep any one group of Pilots on such monotonous work all the time. The work will be divided up between the various Groups so that all will have an equal amount of all kinds of Pursuit work to do.

The matter of maintaining liaison with the Balloon Companies is not so difficult as it is in the case of Bombardment and Observation Groups. The balloons, being stationary, are naturally more easy to find, so that we do not have to keep our watches synchronized with those of the balloon observers nor make allowances for climbing time and so forth.

A single flight of Scouts is not sufficient to protect any given section of the line. Several flights, echeloned at widely differing altitudes in sight of each other, must be employed so that the enemy cannot attack the protection with one formation while another one straffs the balloon. Also there are several important details that the Flight Commander must always look after. They must not allow themselves to be tempted by nice, easy looking hostile aircraft to leave their line of patrol under any circumstances. They must remember that they are over American territory and so must endeavor to so maneuver against an enemy that their spent bullets will fall in the enemy lines and possibly do some good there; although they must never allow this consideration to interfere with a possible victory. Furthermore, they must endeavor to remain in the air over their patrol lines until they are relieved by another patrol.

The First Pursuit Group has a splendid opportunity at this time to obtain what practice is necessary for the proper performance of this work, since it can work with the Balloon Companies at Brooks Field, only ten miles away. We are proudly conscious of the important work that we have to do as the nucleus of all future American Pursuit Aviation, in order to be prepared to carry out every one of the duties of Pursuit with perfect efficiency in the next war. As balloon protection is not the least of these duties, we are including it in our tactical training schedule.

NEWS FROM THE FIRST PURSUIT GROUP, KELLY FIELD, TEXAS

Training Value of Cross Country Flying

The policy now in effect in the Air Service, of authorizing as many cross country flights as possible is one of the best that could possibly be pursued to benefit the individual pilot's ability. In fact it would be an excellent idea to go even further and require that each pilot make at least one cross country of one hundred to three hundred miles per month.

There is no other kind of flying that so develops a pilot's confidence and flying judgment as long distance cross country flying. Furthermore it is a welcome break in the monotony of the daily routine and an excellent stimulant to the morale of the flying personnel.

The character of Pursuit aviation is such that ordinary tactical training schedules do not include a great deal of long distance flying, consequently it is the policy of the First Pursuit Group to encourage requests for week end trips involving cross-country flying on the part of its pilots. The pilots are showing an excellent spirit of cooperation and hardly a week passes when there are not at least two or three cross country trips made by pilots from the Group.

NEWS FROM LUKE FIELD, FORD'S ISLAND, PEARL HARBOR, HAWAII

The past seven days have brought to a close the Reserve Officers Training Camp at Schofield Barracks. To say that Flight "A" which has been on special duty in connection with the Camp has been kept busy would be putting it mildly. In addition to the daily plan of giving the officers instructional rides to various points on the Island of Oahu, there were several lectures given by the Air Service Officers every day and flying demonstrations of the subjects brought out in those lectures. On Monday the War Game maneuvers of the troops at Schofield were given a touch of realism by the addition of an Infantry Contact plane from Flight "A" which picked up messages from the ground, delivered them to Headquarters by radio and message bag, and dropped information to the troops simulating an advance upon an enemy objective.

On Wednesday an exhibition of combat flying was engaged in by Captain Oldys and Lieutenant Banfill. This was a type of flying which few of the student officers had ever witnessed, and brought forth words of admiration for the work of both pilots, neither of whom could gain a point of vantage over the other during the "dog fight". An exhibition of trench strafing was also given. A De Havilland-4 plane was used in this work. The two front stationary guns were synchronized and a pair of Lewis guns mounted on the turret of the observers cockpit. The attack was made on a large number of toy balloons strung along the edge of a trench. In spite of the fact that the front guns stopped functioning after the first burst of shots, the gunner in the rear cockpit left but few of the targets standing.

The second Observation Group suffered its first mishap in months, and incidentally lost its last Curtiss JN4D, which has been nursed along for instruction purposes, when Lieutenant Foster while flying it, lost control at about 100 feet altitude and crashed into the ground. By a stroke of good fortune the plane hit a fence before striking the ground, thus breaking the fall. The passenger, a Coast Artillery enlisted man, who was up for his first ride sustained a broken arm while Lieut. Foster crawled out of the front seat with only a few minor scratches and bruises.

Lieutenant L. D. Weddington and eleven enlisted men, comprising the Eleventh Photo Section came in on the Transport Logan on Saturday. They will be able to put to good advantage on these Islands the advanced photographic training they received at Langley Field from whence they came.

NEWS FROM FRANCE FIELD, CRISTOBAL, CANAL ZONE

During the present wet season there is no work with Infantry and Artillery but as most of the rain storms are in the afternoon, a few reconnaissance flights are made each week with a view to locating new landing fields. Two such flights were made on Wednesday and Thursday with good results. On Wednesday two planes flew to Chorrera, R.P. and located a field about a mile southwest of the town. This field is situated on high, hard and well drained ground. As Chorrera is connected to the Southern end of the Canal Zone by a good road, this field is well located for use as an advance base. First Lieuts. R.C.W. Blessley and Samuel N. Connell, A.S.A., were the pilots. Captain Harlan W. Holden, A.S.A., Observer flew with Lieut. Blessley and took photographs of the field.

The second reconnaissance flight, made on Thursday- was to locate a landing field somewhere between Chume and Anton, R.P. Two De Haviland 4 planes were also used for this flight and were piloted by Lieut. R.C.W. Blessley, A.S.A. and Lieut. Homer B. Chandler, A.S.A. with Captain Harlan W. Holden, A.S.A. and Lieut. J.W. Gastreich, A.S.A. as observers, respectively. While looking over a possible landing field, Lieut. Chandler's motor went dead and he made a forced landing in a field full of holes and covered with rocks. Lieut. Blessley in landing to learn the trouble, broke a shock absorber and one wheel. As it was impossible to get this plane off the ground, and as the generator in Lieut. Chandler's plane was not working- his battery having run out - an exchange of batteries was made, and Lieut. Blessley and Captain Holden succeeded in getting back to France Field. Two relief planes with spare parts were started out in the afternoon but were unable to cross the Isthmus because of heavy thunder storms.

The forced landing was made just west of the Rio Las Guilas and about three miles from the Pacific Coast, the few natives in the vicinity being Indians. Lieuts. Chandler and Gastreich spent the night on the ground beneath the wing of the plane, during which time a multitude of mosquitoes held a dinner at which the two officers appeared to be the main course.

An incident worthy of note occurred when, long before the relief planes were in sight the following morning, the Indians told the officers they could hear them and that there were two altho neither of the officers could see or hear the planes. About five minutes later both planes appeared in the distance and soon landed without mishap. The damaged plane was repaired and all three made the return trip to France Field.

While waiting for the relief planes, Lieuts. Chandler and Gastreich were informed by the natives that the small lake in the mountains, which had been located on a reconnaissance mission two weeks earlier, is fed by springs and that the water is very cold- so cold, in fact, that at some times there is ice present altho the lake is only about 3000 feet high. The bowl or basin (which was located on the same trip) was discovered to be an old volcano crater, and all of the stones on the field where the forced landing occurred are of upper lava, and rather soft, the softness being proven by the fact that the planes in landing on some of them broke the stones into small pieces.

The U.S.A.T. Mount Vernon recently passed thru the Canal enroute from Siberia to Germany, with Czecho-Slaviks and prisoners of war on board. During its ten-day stay at Cristobal, the U.S. Army Officers from the Mount Vernon were entertained by those from France Field, and the latter in turn were afforded an opportunity to hear two wonderful concerts rendered by about

thirty five German prisoners, on board the Mount Vernon. In spite of other organizations on the Zone being unsuccessful in securing this orchestra to play at their respective posts, France Field was more fortunate and we were royally entertained by these exceptionally talented musicians on Friday evening. The players were brought out in trucks, witnessed a basket ball game at our "Y" and after the concert were served a lunch- "and a most enjoyable time was had by all".

A flight of two De Haviland 4 planes was made to Nombre de Dios on Thursday, and twelve pigeons were released- ten of the birds reaching the field in good time, the two that failed to home being hit by wires on the tail of the plane upon being released. All of the young birds have flown to the loft from various points, twenty-five to thirty-five miles away. It is now planned to train the pigeons to home from greater distances along routes which airplanes from this field are likely to fly.

Two De Haviland 4 planes made altitude flights on Wednesday. Lieut. R.C.W. Blessley, A.S.A., pilot with Lieut. A.C. George, A.S.A. as observer, reached 19,000 feet in one hour and fifty five minutes. Lieut. H.B. Chandler, A.S.A., pilot, with Lieut. J.W. Gastreich, A.S.A., as observer, reached 18,000 feet in forty five minutes and then descended as neither pilot nor observer was clothed to stand the cold.

The first mentioned plane carried a barograph and thermometer, and readings were taken every five minutes. This plane was still climbing at about twenty feet per minute when 19,000 feet was reached. The thermometer read 88° on the ground and 35° at the highest altitude.

NEWS FROM THE AVIATION REPAIR DEPOT, INDIANAPOLIS, INDIANA

The high rate of speed which has prevailed in the Engineering department for the past month or two has been continued. Reports for the week show that six Hispano Suiza Model A motors and five Liberty 12 A motors were completed ready for shipment in the Engine Repair. The Aero Repair reported three De Haviland and one Avro 504 as completed, inspected and ready for shipment. During the week three Fokker DVII and three Mercedes 160 H.P. motors were shipped from this depot. A total of four Curtiss JN4G's and two De Haviland 4 airplanes were received, in addition to three Hispano Suiza Model A and two Liberty 12 motors. The shops are now working to their full capacity and a great deal of rivalry is being evidenced between the various mechanics as to the number of motors and planes each department is able to put through during the week.

The base ball team traveled to Fort Benjamin Harrison on Saturday and came back the holders of the big end of a 9 to 7 score. The game lasted ten innings. The game was hard fought throughout and for a soldier game was remarkably free from any squabbles; the only evidence being the temporary hot-headedness of one of the Fort Harrison players upon being accidentally struck by a thrown ball from the pitcher. On Sunday a Martin Bomber Army transport from McCook Field, Dayton, Ohio, flew over and landed in the Speedway with the entire McCook Field base ball team, who had come pursuant to an agreement between the two posts to participate in a game. Lieut. Harris of McCook Field piloted the Martin Bomber while Lieut. H. J. Forshay brought over two of his ball players in a De Haviland Honeymoon Express. The game was played before an enthusiastic crowd and was won by the McCook Field players by a score of six to three; the game going only seven innings, due to the fact that the Bomber needed plenty of light in its return trip. The game was exceptionally snappy and clean cut throughout; no evidence of unsportsmanship being displayed. Arrangements are being made whereby the Martin Bomber will be brought back to the Speedway and the team from Indianapolis transported to Dayton for a return game. The team is confidentially expecting to bring back the "bacon" on this trip and the boys on the team, many of whom are recruits, are wildly excited over the prospect of a ride cross country in the Martin Bomber. It is confidentially expected that the use of this plane will stimulate recruiting in the Air Service and will tend to keep up interest among the enlisted men of the Post.

NEWS FROM THE 8th AERO SQUADRON McALLEN TEXAS

On Saturday three planes from the 1st Pursuit Group came to McAllen for a week end visit. The planes were piloted by Majors Schaffler and Chambers and Lieut. Frierson. After supper the three S.E.'s accompanied three of the planes from McAllen to Pt. Isabel where all the A.P.'s spent many hours in the excellent surf off Pt. Isabel. One S.E. and one DH left Sunday and were overtaken by a cloud burst near Mercedes. The big plane pulled thru O.K. but the driving rain shattered the propeller on the little S.E. and forced the pilot Major Chambers, to land in an irrigation ditch close to town. The incident again conclusively proved that planes cannot be landed safely in canals, for only a few seconds after reaching terra firma, Major Chambers was on one side of the canal and his "bus", a total washout, on the other. Fortunately the hero of many air battles suffered nothing more than a severe shaking up.

Lots of work has been accomplished in the last week. The planes are now in the steel hangars and the old canvas ones have been taken down. Such a change necessitated a great deal of work and policing and now there is not the faintest semblance of the old dead line. Needless to say with the passing of the old hangars, the field presents a much neater and uniform appearance.

NEWS FROM BROOKS FIELD, SAN ANTONIO, TEXAS

During the week experiments were made with a French parachute at Brooks Field. The suspension foot rope was shortened and changed from a one point attachment to a two point attachment. A square pack was used in place of the conical pack. The parachute was dropped from a height of 1000 feet, and fully opened in three seconds from time of release. Time of descent: one minute, twenty five seconds. Drift about 200 yards.

A contract has been let for the erection of a large dirigible hangar on the field. Work on the construction of a road leading to the hangar will be started immediately, under the supervision of Captain Edward Dignowity, Constructing Quartermaster.

The bags and car of the dirigible S.S.T., are undergoing an overhauling under the Airship School recently established here. It is expected that the dirigible will be ready for erection within the next three weeks.

AERONAUTICAL NEWS FROM SOUTHERN CALIFORNIA

Assurance has been given (including official approval of the city of Los Angeles) that the request of the Aero Club of Southern California for including an air terminal in the projected union transportation terminal plans for Los Angeles will be acceded to, and that if a union terminal is ordered an adequate air terminal will be constructed. Inasmuch as this may be three to five years off the Club has under way a request for an aircraft landing field adjacent to the business center of Los Angeles and the acquisition of an emergency landing field at Exposition Park. This is a very important matter to Los Angeles.

The Club is helping San Diego, Ventura, Ontario, Bakersfield and other towns in establishing landing fields and taking an interest locally in flying. Special events have been carried out at Ontario and Ventura, and are being planned at other towns where landing fields are established. Venice is opening a very large municipal field and a branch of the Aero Club will be placed in a building set aside for that purpose by the Venice City Aeronautical Commission. San Diego has some large plans, and the Aero Club is co-operating with the Chamber of Commerce of that city in working them out. The campaign for a non-stop flight from England to San Diego of the Navy's rigid dirigible the R-38, has official approval, this means a great deal of airship progress on the Pacific coast and calls for a \$1,300,000 hangar among other improvements at San Diego.

Fifty-two permanent or emergency landing fields west from Texas and south from San Francisco and Stockton have been listed by the Club. The San Diego-Los Angeles- San Francisco flying route has been mapped, and a seasonal record of flying conditions is being kept. The approaches by air from the East are being charted by the Club. Considerable data on flying conditions in this territory has been collected, and as soon as funds will permit a flying guide book on California, Arizona and New Mexico will be published by the Club.

The Club has started a fog and wind service to flyers in this Territory and intends to develop it so that by winter it can offer information of value to any flyer, whether in Arizona or Northern California as well as at any point in Southern California, regarding conditions along his proposed route and at his destination. This will especially develop as to flying over the mountains and to or from points where low fogs prevail. A telephone call to the Club Office or a telegram will get this service so far as it has been developed. Already flyers going to Bakersfield, Santa Barbara, Ventura and San Diego, have been able to lay their plans by the information furnished by the Club. Col. H. B. Hersey, of the Weather Bureau is giving the Secretary invaluable assistance in this. Reports from Mt. Wilson and from Aerological Station of the Army Balloon School are also used. If a forest service telephone system can be installed a special lookout service from the Tehachapi Mountain crossing will be added. The Navy Hydrographic Office at San Francisco is furnishing data to the Club.

THE EDITOR'S ORIENTATOR

"OPINION FOR OPINION'S SAKE"

Lest we forget.

Airship: R-34 Mineola, N.Y. to Pulham, England; 3,300 miles,
75 hours, 6 minutes, 4000 gallons of gasoline.

Airplane: Vickers, St. John, N.B. to Clifden, Ireland; 1900 miles,
16 hours, 20 minutes.

Seaplane: N.C. -4; Rockaway, N.Y. to Plymouth, England; 3900 miles;
54 hours, 17 minutes.

First Steamship: "Savannah" from Savannah, Georgia to Liverpool, England;
27 days.

Fastest Steamship: "Mauretania"; Queenstown, Ireland to New York, N.Y.
3,000 miles, 106 hours, 41 minutes.

Sailing: Columbus 1492- Palos to Salvador 37 days.

The future holds in prospect then the aerial leviathan going from New York to London in two days. The handwriting is on the wall and to scoff or doubt marks a man as apart from his generation.

A NEW DISEASE -- AIRLEGISITIS

A club committee of the Aero Club of Southern California has co-operated with the Los Angeles Board of Supervisors and County Counsel Hill in preparing an ordinance regulating flying. It was a question of the kind of ordinance, not of any or no regulation-- accepting this, the Club believes the regulation adopted is the best possible. It provides for licensing flyers and machines, with nominal fees, and for the appointment of a County Aircraft Department and for inspection of aircraft. The ordinance will be in effect July 16th.

Along with Massachusetts here is another good state gone wrong. The air is national not local.

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ROARING MOTORS PUNCTUATE PREPAREDNESS FOR THE ARMY AIR
SERVICE ALASKAN FLYING EXPEDITION

When the four DH-4 B airplanes of the Army Air Service Alaskan Flying Expedition take off from Mitchel Field, Long Island, N.Y. on July 15th they will take a series of hops of approximately 600 miles per day. In order to make this distance it will require from 5 to 6 hours of flying each day but it will be over a country which is well mapped and which has quite a number of suitable landing fields. Grand Rapids, Michigan marks the turning point when the noses of the ships will be turned northward toward the final destination, Nome, Alaska, and all is well along the route until the flyers reach Jasper, Alberta, Canada. At this point the most difficult and dangerous part of the flight begins. The Canadian Rockies are encountered shortly after leaving Jasper and are known to be a part of the most rugged and inaccessible region in the northwest part of the North American Continent. The expedition will be slowed down from this point and they will probably make only one stop per day or 250 miles of flying. In flying over this country the pilots will have to rely entirely upon their compasses and their ability as aerial navigators will be given a very thorough test and at each stop the most of the time will be given to over hauling the ships and every precaution will be taken to guard against motor trouble. The success of this expedition is dependent to a large degree upon the unerring performance of the Liberty Motor with which each ship is equipped.

The dangers in the region after leaving Jasper are many in the case of forced landings in fact the aviators would require many days to find any human habitation if they made a forced landing safely. Rugged country of this character with its snow covered mountain peaks and deep valleys provide practically no opportunity to land. In spite of the fact that it has been estimated that the airplane could land on almost any level strip of ground 600 yards long if the approaches were good and the ground of a smoothness such that an ordinary automobile could travel over it at a speed of 30 miles per hour without danger of breaking the springs. Such places as this even are few and far between in this section of the country. The region is one of extremely high winds which blow with great frequency and violence especially during the winter months. Gales blow from north to the south and sometimes continue for weeks at a time. Temperatures however, are comparatively moderate, - seldom going below zero during the summer at which season of the year swarms of mosquitoes infest the region. Each ship in the expedition will carry mosquito helmets in case of forced landings, a concentrated supply of food as well as revolvers, shot guns, fishing tackle, etc., for this emergency. Every precaution has been taken to guard against any trouble whatsoever and it is the firm belief of all concerned that the planes will make the round trip only encountering minor troubles which will not necessitate forced landing of any sort.

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NEW DE HAVILAND-4 B PLANES TO BE USED ON THE ALASKAN
FLYING EXPEDITION

The planes which will be used on the Army Air Service Alaskan Flying Expedition are De Haviland-4 B's. These ships should not be confused under any circumstances with the ordinary DH-4's used overseas and in the recent Transcontinental Reliability Race. The DH-4 B is a remodeled type which has been strengthened throughout and it has many important changes. One of the most important changes is the arrangement of the gasoline tank with relation to the pilot's seat. The DH-4 B carries the gasoline tank immediately in the rear of the motor with the pilot next, but in the old DH-4 the pilot was placed between the motor and the gasoline tank and in a crash he was crushed between the motor and the gasoline tank. With this new seating arrangement of the DH-4 the danger to the pilot in the case of an ordinary crash is practically nothing. This remodeled type of DH-4 has been thoroughly tested and has given an extremely satisfactory performance.

AIR SERVICE MECHANICS SCHOOL, KELLY FIELD, TEXAS

CARBURETION.

By Sgt. C. W. Manning.

The subject of carburetion is one which very seldom receives the attention due it and, even men who fly know little about their carburetor beyond the fact that there is one on the engine by which means they cover their speed in flight.

There is no single part of an internal combustion engine which has undergone such radical changes and reached such a stage of perfection as the carburetor. The instruments in use today are so near to perfection that we can absolutely predict the performance of an engine upon which we place them, all other parts being correct.

The term carburetion means the mixing of gasoline and air in the proper proportions to burn under compression in the cylinder of an internal combustion engine. The carburetor is the instrument or device by means of which this mixture is effected. To be a success it must deliver the same evenly balanced mixture to the engine at all speeds regardless of operating conditions. The carburetors which do this are comparatively few in number, so these have been perfected and adapted for use on Aviation Motors. There is no service which demands more from a carburetor than an aviation engine. The average automobile carburetor, once adjusted to suit atmospheric conditions found in the locality in which it is being operated, very seldom needs any attention and will continue to deliver service day in and day out for months or even years. This is due to the fact that conditions do not change as regards altitude and consequently atmospheric pressure.

On the other hand, the adjustment on an aeronautical carburetor is good for a comparatively small range in altitude only. As an airplane leaves the ground and begins to climb it encounters a reduction in atmospheric pressure which requires a new adjustment due to the decreasing proportions of air fed to the engine. Then again, an automobile engine seldom, if ever, is called upon to run at maximum speed while all aeronautical engines run at either near their maximum or their minimum at all times and the changes from maximum to minimum or vice versa are so sudden as to be almost instantaneous. At no point must the mixture vary from the same even proportions of gasoline and air, for if they do then the engine fails and the pilot either loses his life or is forced to a landing which is more often than not, very unsuitable landing ground which will at least crash his ship if nothing worse.

No set proportions of gasoline and air can be given, due to the fact that the mixture varies with the compression of the engine. A high compression engine requires more air in proportion to the amount of gasoline supplied than does a low compression engine but the approximate proportions are from fifteen to eighteen parts of air to one part of gasoline. Carburetors in most general use in aviation today are the Zenith and Stromberg, the first a mechanically compensated instrument and the latter a physically compensated type. Both of the instruments are used in the Motor School of the Air Service Mechanics School and a most thorough instruction is given in the carburetor laboratory which covers the subject of carburetion from the very beginning to the present day in both theory and practice.

"SITE LOCATED FOR AVIATORS' COUNTY FIELD"

Establishment of a county aviation field at Sand Point, on Lake Washington, north of the University, was formally agreed upon by the county commissioners Monday morning on terms which protect the county from the payment of any money except \$6,000 for interest at the end of the year.

Owners of the site will exchange 219 acres at \$869 an acre for 55 acres of county owned land lying between the point and the sound at \$1,250 per acre, the balance to be paid in county bonds bearing 5 per cent interest. The property is expected to pay an increase which may take care of the interest and possibly the bonds.

SHORT PARAGRAPHS OF NEWS INTEREST

Private Smith of the 8th Aero Squadron, Laredo, Texas, the official Charioteer of the water-wagon is still nursing the roads in and about Laredo. The people of Laredo have remarked that aviators can build roads as well as fly but it is more of a reality as the charioteer was given a flying trip when the mules balked and dragged him from his perch a distance of one hundred yards.

A three plane bombing formation left Laredo on Saturday for the purpose of bombing strategical points on the river between Laredo and Roma. After satisfactory hits were recorded the formation proceeded to McAllen, Texas to pay an official call on the squadron brethren and enjoy the last dance of the 8th Squadron at McColls ranch.

Captain John Howry, with ten photographic men reported this past week for duty with the Air Service Observation School at Post Field, Fort Sill, Oklahoma. Captain Howry is a valuable addition to the staff on account of his wide experience in matters photographic.

Oklahoma City has secured a good landing field. Captain Bradley inspected this field last Wednesday, and with the exception of a few minor defects found it to be a suitable municipal landing field. Notification has been received from the Secretary of the Oklahoma City Chamber of Commerce that Captain Bradley's suggestions for improvement have been acted upon and he expects to make a final inspection today.

The appearance of two cases of the Bubonic Plague at Galveston has put a damper on the social activities of Ellington Field, Houston, Texas, most of which consist of trips to the famous beach. Orders have been issued prohibiting visits to Galveston, and a vigorous campaign has been started to exterminate the rats and other rodents which are on the Ellington Post.

There has been a noticeable falling off in the number of applications received from reserve flying officers for practice flights at Selfridge Field, Mt. Clemens, Michigan. This is due in part to the closing of the universities and colleges in this vicinity, especially the University of Michigan. Many of the students were ex-service men and availed themselves of the opportunity afforded by Selfridge Field in keeping up their practice this spring and early summer.

The 300 square mile mosaic, mentioned in the News Letter for the foregoing week, comprising the Fort Leavenworth reservation, the city of Leavenworth, Kansas and ground usually included in the maneuver problems of the aerial photographic school, has all been photographed and temporarily assembled and no gaps found. This mosaic will be permanently assembled and mounted.

Pope Field, Camp Bragg, N.C. was visited during the past week by Captain Reynolds, 1st Lieut. Raymond E. Davis, and Major Davenport Johnson of Langley Field, Hampton, Virginia. Major Johnson and Lieut. Davis were proceeding to Savannah, Georgia, to confer with the Coast Artillery authorities at Fort Moultrie relative to the artillery shoot that is to take place at that coast defense during the coming week.

NEWS FROM MATHER FIELD, SACRAMENTO, CALIFORNIA

During the past month the 9th Aero Squadron has become thoroughly broken in to its new work of Forest Patrol and is showing greater efficiency daily. Patrol bases are established at Red Bluff, Mather Field, and Fresno, landing fields with gas, oil, spares and one enlisted man each at Covelo, Alturas, Cooperstown and Bakersfield, ground radio stations operated by Signal Corps personnel at Alturas, Red Bluff, Mather Field, Sonora, Fresno and Hot Springs.

Seven daily patrols are made by the Squadron- three from Red Bluff and two each from Mather Field and Fresno. Each patrol comprises from three to four hours flying and leads over some of the most beautiful as well as most dangerous terrain in the country. A few of the well known points covered by patrol are Mount Shasta, Lassen Peak (an active volcano), Lake Tahoe, Yosemite National Park, Mount Whitney (highest mountain in U.S.), and Sequoia National Park.

During the past month (May 26 to June 25) it has been necessary to abandon a number of patrols due to the extreme shortage of gasoline in California. High test gas has at times been impossible to obtain and the commercial gas now on sale is of such poor quality that it is unsafe to use in the air. In spite of this difficulty, the Squadron made a total of 153 patrol flights, covered 1,551,400 square miles and reported 93 forest fires. Total patrol flying time was 441 hours and 13 minutes. Total flying time, all kinds, 527 hours and 29 minutes. The latter total includes instruction to cadets, test flights and ferry flights. A total of 11 planes has been wrecked without serious injury to personnel. Most of the wrecks were caused by forced landings with the consequent familiar "nosing over" of our old friend DH4B.

The experiment has been tried of using forestry officials as observers and has proved highly satisfactory. When a smoke is discovered by a commissioned or enlisted observer it is necessary for the plane to diverge from its normal course and fly close enough to the source of smoke to discover whether it is caused by a real fire, a sawmill or by Bill Jones burning the brush off his farm. A forester, however, knowing as he does every foot of the mountains, can tell at once the cause of any smoke and can thus avoid any unnecessary flying.

The flying cadets recently assigned to the squadron have turned out remarkably well. All succeeded in learning to fly DH's in a very short time and are now taking their regular turn at patrol. They are doing excellent work. One of them, Cadet Henry M. Labataille, had a narrow escape the other evening when fire broke out near the Hispano Suiza motor while he was at an altitude of about 1500 feet. He used his head to good advantage, however and slipped down nearly to the ground, made a good landing and turned the tail of the plane to the wind thus involving a minimum of damage to the plane and none to himself or his passenger, who as it happened was a recruit taking his first flight.

During the past two weeks a detachment of the 91st Aero Squadron now stationed at Rockwell, has been at Mather Field under command of Captain Lowell H. Smith setting up new DH4B's for use on the Oregon Aerial Forest Patrol. Most of them left yesterday for Oregon where they will take station at Eugene and Medford. Oregon patrol will start about July 1st.

ACTIVITIES OF MARCH FIELD, RIVERSIDE, CALIFORNIA

Major Thomas G. Lanphier, formerly adjutant and most recently officer in charge of vocational and educational instruction, departed Wednesday for Mitchel Field, Long Island. During the summer encampment of West Point cadets at Camp Dix, Major Lanphier will have charge of the Air Service co-operation work with the Infantry and Artillery units quartered at that post.

The Goodyear Tire and Rubber Company of Akron, Ohio has advised Lieut. Col. B.K. Yount, commanding officer of March Field that they will send their "Pony Blimp" to March Field from their new factory at Los Angeles some day next week-

possibly Wednesday or Thursday. The arrival of this blimp over Riverside and at March Field will mark the second invasion of the dirigible type aircraft into this community. The naval blimp which docked here on June 14th in connection with the Flag Day Show attracted considerable attention. The Goodyear blimp it is understood is much smaller, but has made several inland and coast trips since its arrival in Southern California.

Actual flying instruction of the new cadet class was started this week under the direction of Captain Ernest Clark, officer in charge of flying. The 100 or more candidates for pilots commission are getting time in the air every-other day, the program of instruction calling for ground work along with the aerial training. From three to six hours, every-other day is spent in the hangars, on the line and in the machine and motor shops thus giving the cadets a practical insight into every phase of the aerial game.

Riverside as a municipality will celebrate the Fourth of July on Monday July 5th. The entire community has been invited to Fairmount Park there to participate in various athletic events and to consume a big picnic dinner. March Field has been invited by Mayor Porter to join in with the civilian community and enjoy the occasion.

Captain Frederick Eglin has been appointed Commandant of the Pilots School Detachment, vice Major Lanphier, transferred to Mitchel Field, Long Island, N.Y.

Fred Hoyt, ex-flying instructor at this field, is now enroute via Texas to Chicago in a JND-4. Pilot E. L. Remelin is accompanying Hoyt and is flying a "Curtiss Canuck". The planes will be used by Al Wilson in filling state and county fair engagements throughout the middle west. Wilson will replace Omar Locklear in the "change-of-planes-in-mid-air" stunt.

NEWS FROM U.S. ARMY BALLOON SCHOOL.

FORT OMAHA, NEBRASKA

A free balloon flight was made during the past week with Lieut. R. E. Thompson as pilot and Major H. C. White, Captain C. F. Adams, Master Electrician C. M. Maricle and Sergeants first class W. J. Mansfield and C. S. Ruff as passengers. The balloon left Fort Omaha at 12:25 P. M. on Monday going in a northwesterly direction. There being only a 10 mile wind the balloon landed at 5:10 P. M., a duration of 4 hours and 10 minutes, 5 miles northeast of Herman, Nebraska, a distance of 40 miles from Fort Omaha, and reaching a maximum altitude of 2,200 feet. Major White left the balloon at this point and after taking on more ballast the balloon continued for one hour and thirty minutes, reaching a maximum altitude of 5,400 feet and landed 4 1/2 miles northwest of Craig, Nebraska, a distance of 2 miles from the first landing.

The flying time for observation balloons was 445 minutes and 8 flights.

An 80,000 cubic foot free balloon is being constructed and it is anticipated that this balloon will be used in the International balloon race to be held next October.

The gas department is experimenting with a machine to thoroughly clean gas cylinders, by means of a sand blast, preparatory to their being painted by a dipping process, and are receiving satisfactory results, three men working eight hours, clean and paint 40 cylinders.

The machine consists of a rolling device in which the cylinders are placed and given a revolving motion while a sand blast, operated by one man is sprayed on the cylinder. The cylinders are dipped in a solution of caustic soda to kill the old paint, put through the sand blast machine and then dipped into a tank containing paint. By this process cylinders in need of painting are quickly and thoroughly cleaned and painted.

U. S. ARMY BALLOON SCHOOL, LEE HALL, VIRGINIA

The 43rd Coast Artillery Corps continued the practice firing from last week by firing 8 inch rifles over a 12,000 yard range at both land and water targets, from Camp Wallace. A total of 84 shots were fired, of which 69 were observed. A total of 10 ascensions were made for week ending June 26th, with a total of 17 hours and one minute of flying time by the three active balloon companies of this post. The 53rd C.A.C. are making preparations to begin their practice firing on Monday, using 12 inch mortars, and firing from Mulberry Island at moving water targets as well as at land targets.

NEWS FROM THE 8th AERO SQUADRON, McALLEN, TEXAS

It is with regret that we report Lieut. Ames' landing in Northern Mexico and it is believed by the officers of the Squadron that the incident was unavoidable as Lieut. Ames was known to be an efficient, prudent officer. Lieut. Ames' own statement to the effect that he encountered heavy clouds on an eastern patrol from the Airdrome at McAllen and on emerging from them followed what he thought to be the Gulf Coast but turned out to be one of the many lagoons so common in this sector of Northern Mexico, and due to shortage of gas was forced to land, being about 30 miles in the interior of Mexico. A good landing was made with no damage to the little SE-5 which we hope to see sailing into the Airdrome at McAllen in the near future.

Captain Kenney and Lieut. Beam had a narrow escape last Wednesday afternoon when the motor of the plane they were flying developed either a broken crankshaft or connecting rod causing them to try landing in the nearest field which turned out to be filled with the usual irrigation ditches, crashing the plane. Captain Kenney and Lieut. Beam though badly shaken up are thankful for their safety as the plane was a total wreck.

A three point formation flew Friday afternoon to Donna, Texas for the purpose of testing a new landing field, constructed by the civilian population of that town as well as to show our appreciation, as few good fields are available in this district.

NEWS FROM SELFRIDGE FIELD, MT. CLEMENS, MICHIGAN

During the past week six reserve flying officers made practice flights at Selfridge Field and stated their desire to continue this training during the summer months. Every effort is made to accommodate reserve flying officers in the matter of practice flights.

Selfridge Field was visited twice during the past week by the new Packard biplane. Flights were made from the Packard test field situated ten miles south of Selfridge Field. Lieut. Colonel Vincent, formerly of the Air Service was a passenger on each of these trips.

MANEUVERS AT LANGLEY FIELD, HAMPTON, VIRGINIA

During the week some very interesting maneuvers were held at Langley Field, Hampton, Virginia by the 1st Army Observation Group and the Balloon and Airship troops. Condition of a hostile fleet attacking the Atlantic Coast was assumed. Battle orders were issued by Wing Headquarters, Group Operations orders were issued, Balloon and Airship issued Operations Orders. The Zodiac-1, patrolled the entrance of the Chesapeake Bay from Cape Charles to Cape Henry, from 2:00 o'clock until daylight. They reported the enemy fleet approaching at about 4:00 A.M., the enemy was represented by two or three ships in a group. All pilots and observers had reported on the field at 3:00 A.M., awaiting information of the enemy. The heavier-than-air craft was divided into flights,

representing attack, bombardment and pursuit squadrons. On receiving notice of the approach of the enemy about 4:00 A.M., all squadrons took off, and the attack was conducted in good order and successfully. Reports of the tactics employed by each squadron were rendered and an operations report of the whole maneuver compiled, accompanied by photographs. Aside from the training and education involved this maneuver was extremely interesting to all of the participants. General Mitchell was present and all orders and reports were rendered to him for criticism. He expressed himself as being very well pleased with the operation as a whole and that from a standpoint of efficiency and morale the maneuver was highly successful.

FLIGHT "B" 50th SQUADRON

The enlisted personnel of Flight "B" 50th Squadron left Saturday on a special train for Savannah, Georgia. The commissioned personnel following on Sunday by airplane, stopping at Pope and Emerson fields for supplies enroute, and arriving without mishap Monday at Savannah. This flight is to work with the Southern Atlantic Coast Defenses, and will probably be out about two months, going from Savannah to Wilmington. They are undergoing actual field conditions, and aside from the liaison with the Coast Artillery they should benefit from the standpoint of field training.

NEWS FROM THE U.S. ARMY BALLOON SCHOOL FORT OMAHA, NEBRASKA

There were eight observation balloon flights with a total of 466 minutes of flying time during the week.

An interesting experiment was conducted at Fort Omaha in the designing of a suitable life preserver or belt for the baskets of free and captive balloons. The ultimate aim of this experiment is to produce a basket that will not sink in water.

Mr. A. Leo Stevens has been conducting this experiment in a near-by lake. With a belt of Kapok around the basket and a load of approximately 750 pounds the basket was launched. Mr. Stevens tried in every way possible, to capsize the basket but was unsuccessful in doing so. It remained in the water for 36 hours and remained afloat during the entire time.

It is anticipated that this type of basket will be used in the international Balloon Races to be held this fall.

HERE AND THERE WITH THE EDITORS

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Editorial Comment on Aeronautics from the Leading American Dailies,
In Condensed Form

"HENRY FORD AND THE NAVY"

The U.S. Air Service Magazine for June in speaking of the Henry Ford -- Navy airship deal says:

"It is not because Ford is not ready to begin as soon as a proper contract has been worked out with the Navy, nor is it because the Navy will have nothing to do with Ford, that inaction continues; it is because Congress has not given and apparently will not give, the Navy sufficient funds to enable it to contract with Ford, or any other person or concern, for such production of dirigibles. Ford gets ready for airship manufacturing by arranging the financial means and the legal authority. Under the laws of the State of Delaware he has had the Ford Motor Company and the Henry Ford and Son Corporation consolidated into one concern with a capitalization of \$100,000,000 for the purpose of manufacturing automobiles, trucks, ~~actors~~ and aircraft."

While Congress is thus unconcerned about aeronautics, the United States under the Trading with the Enemy Act can not even consider buying German airships to relieve the situation. "But Germany has been manufacturing aircraft, contrary to Article 201 of the Peace Treaty; she has 7,000 miles of effective air routes in daily use; she carries 20,000 passengers a month. We permit Germany to break the Treaty, we permit the building of aircraft in defiance of the Treaty terms and we are as a matter of fact, trading with Germany every day." Then since Congress refuses to aid our own manufacturers "why not buy what we need in the aerial line?"

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WASHINGTON AS AIRCRAFT CENTER

The Merchants and Manufacturers Association has decided to make Washington a large aircraft center. Among the reasons given why Washington should be such a center are: "located here is the bureau of standards with its wind tunnel, engineering testing equipment, including the only altitude chamber in the country, textile mill and testing apparatus, metals research and testing laboratories; and the navy yard wind tunnel and basin for testing flying boat hulls and pontoon

"The National Capital already boasts three flying fields, the Navy fields at Anacostia, the Army post at Bolling field and the Postoffice field at College Park. The Anacostia field is provided with facilities for landing on either land or water.

"Then too, the National Capital affords unexampled sources of information for aircraft producers. There are aircraft bureaus in the bureau of construction and repair of the navy, in the bureau of steam engineerings, the bureau of operations and the United States air mail service."

It is planned to present the above arguments to manufacturers and in this way induce them to come to Washington.

(Wash. Post 6/27/20)

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NON STOP FLIGHT OF 1,200 MILES

The all metal "J-L" plane yesterday made a record non stop flight of 1,200 miles, leaving Omaha, Nebraska at 5.12 A.M. and arriving at Pine Valley, N.J. at 6 P.M. The plane was piloted by Bert Acosta, one of the cleverest American pilots, and carried John M. Larsen passenger and W. Bugh, mechanician.

They were attempting a flight from Omaha to New York but on account of dense fog were forced to land at Pine Valley. The flight is the same distance as that of Commander A.C. Read in the NC-4 from Trepassey, N.F. to Horta in the Azores which was made last year. The plane leaves Pine Valley for New York today.

(Philadelphia Ledger 6/28/20)

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The Goodyear Tire and Rubber Co. expects to launch its dirigible D-1 within a few days.

(Cleveland Plain Dealer 6/28/20)

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The Aeromarine flying which had the honor yesterday of carrying 10 millionaires to their homes, is the first commuters' aerial express to fly from New York to Southampton, L.I. The flight was made in 79 minutes, while train time on the fastest express is 2 hours and 43 minutes.

(Sun and N.Y. Herald 7/2/20)

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HERE AND THERE WITH THE EDITORS (Cont'd)

Frederick R. Coudert, international lawyer has just returned from abroad where he made airplane tours over sections of France and Germany.

(N. Y. Times 6/30/20)

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"In compliance with her request written and sealed fourteen years ago, the ashes of Mrs. Sarah D. Brown who died last week were scattered today over the Statue of Liberty from a seaplane soaring above it."

(W. Post 6/30/20)

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AERONAUTICAL CUSTOM HOUSE

"The French government has established the world's first aeronautical custom house at St. Inglevert, six miles from Calais. A permanent staff of officials who are familiar with aeroplane construction has been installed there. Aviators entering France must land at St. Inglevert and pass custom inspection,

In case of difficulty in landing at St. Inglevert, aviators may "report their dereliction to the custom authorities at Dunkirk, Calais, Boulogne, Lezre-port, Drepple, Havre, Caen, Cherbourg, or St. Milo."

(Aerial Age 6/28/20)

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ENGLAND GETS L-71

The L-71 which was built for the purpose of bombarding New York City and is considered the most wonderful airship in the world is "about to arrive at Fulham, the British air station". The ship is to be piloted by a German and British crew.

This prize ship has a flying radius of 12,000 miles or more than three times the distance between London and N.Y. and is as large again as the British R-34.

The United States under the terms of the peace treaty will receive an airship smaller than the L-71. Captain Maxfield is now training a picked crew of American airmen in Yorkshire and it is probable he will go to Germany to take charge of the ship.

(Cleveland Plain Dealer 6/26/20)

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CLEVELAND'S AERONAUTICAL SHOW

Between 30 and 50 planes were exhibited at the Cleveland Aeronautical Show from July 2 - 7. A recruiting drive will be one of the features of the show. All those enlisting in the Air Service will be given an airplane ride in a Martin bomber from Cleveland to Dayton. Several hydro airplanes will be exhibited by the naval reserve during the same week in the interest of recruiting.

(Cleveland Plain Dealer 6/27/20).

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NEW AIR LINE

An air line will soon be opened connecting the Great Lakes and the Mississippi River, starting from Chicago and passing thru Illinois cities down to St. Louis. The Inter-American Aircraft Co. has purchased one of the newest model Aeromarine three place flying boats for this service.

The exact route begins at Chicago and passes thru Joliet, Ottawa, La Salle, Peru, Spring Valley, Peoria, Pekin, Havana, Beardstown and Alton, then to St. Louis.

HERE AND THERE WITH THE EDITORS (Cont'd)

The Aeromarine boat which will be used on the route is the "Clove Leaf" type. Fully loaded it weighs 2,452 lbs of which 791 lbs. are available for pilot and passengers, fuel and baggage. The plane carries gas for four hours in the air, can climb 1,800 feet in 10 minutes and has a landing speed of 48 miles an hour,"

(Detroit Free Press 6/27/20)

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AERIAL MAIL SUCCESS

Air mail service in and out of Cleveland is being operated at capacity, according to C.A. Parkers superintendent of the central district of the United States air mail service. He also said it is the policy of the aerial mail service to add to lines of mail transportation rather than to greatly increase service on existing lines.

"Ever since we have used the Martin bombers we have been bringing approximately 1,000 pounds of mail daily from the east and another 1,000 pounds from the west. A like amount leaves Cleveland daily in each direction."

(Cleveland Plain Dealer 6/30/20)

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AERO COUNTRY CLUB

The Aviation Country Club of Detroit which is backed by men interested in aeronautics has purchased 823 acres of land and two lakes for \$750,000 and intends to build a \$2,000,000 plant.

At present the construction of hangars for 20 planes is underway and landing fields are being laid out. Membership in the club, which is by invitation, is at present limited chiefly to the men financing the construction plant. "The Advisory Board and Board of Directors include Capt. Eddie Rickenbacker, H.N. Leland, Col. Sidney Waldron, Col. J.G. Vincent, E. Leroy Pelletier, John E. King, J.B. Duffield and E.J. Woodeson."

(N.Y. World 7/2/20)

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COMMUTING BY AIRPLANE

The New York Times of July 3rd in speaking of the bankers who flew from the North River to their homes in Southampton, L.I. says "the novice is always grateful to the pilot when making his first landing in an airplane safely. He knows that there have been tragedies in aviation. He had been one of the lucky ones. As he gets his land legs he wonders whether he will go up again, but is inclined to think that in future he will prefer to look up at flying machines. But the habit once acquired, a man thinks less and less of the danger and more and more of enjoying the rapture and looking downward with a serene soul.

"The day is no doubt coming when air flights to Southampton in busses de luxe will be commonplace, and one who talks about them with self-consciousness will be voted a bore. Everybody except the most timid reactionaries will be doing it. Insurance companies may raise the rates a little. Wives will not be nervous. In fact, they will go along and take the children. This may seem to the conservative a fanciful prediction, but they may be asked if any of these personally conducted parties on a big plane have ever come to grief."

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EUROPEAN AIR SERVICE

It is reported that both British and French aeronautical firms encouraged by their governments, are attempting to make Bucharest the center of a complete airplane service. The French are especially interested to connect Paris, Vienna, Budapest, Bucharest and Constantinople in a general way with branch services including Serbia, Bulgaria and Greece.

Last summer the French established the Constantinople--Bucharest service which connects with the express train to Paris. The cost of this service aver-

ages \$100 for every hour the machine is in the air and "it is felt necessary to have each government over whose territory the airplane service will be conducted to contribute a pro-rata share to maintain the service."

It is further stated that there are aeronautical routes over the mountains of Central and Southern Europe and waters of the Black Sea, the Adriatic and the Mediterranean. Flying between Moscow and Berlin is a common practice. With air routes open in all sections of Europe, it is now the policy of France to keep Eastern and Western Europe connected by airplane communication.

(N.Y. World 7/5/20).

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JAPAN

Japan is busy planning commercial air routes. The Handley-Page hydroplane and the French Breguet hydroplane agencies have been secured by a Japanese firm which proposes to open a school to train pilots for concerns purchasing machines. A former member of the American air forces in France will have charge of this school. Air routes to China, Corea and Siberia are being considered as well as trade routes in Japan because all other means of communication there is badly congested.

(N.Y. World 7/6/20).

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AMSTERDAM -- LONDON

The airplane service between London and Amsterdam uses the English "Airco" machines. The planes leave Amsterdam Tuesday, Thursday and Saturday at 11 a.m. and arrive in London about 2 p.m. They leave London Monday, Wednesday and Friday at 10 a.m. and arrive at Amsterdam about 1.30 p.m.

This time is one sixth of the railroad and steamship route between the two cities. The passenger fare for the aerial service is \$60.30 -- twice as much as the first class fare on the usual route.

(Philadelphia Ledger 7/6/20)

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FIREPROOF "GAS" TANK

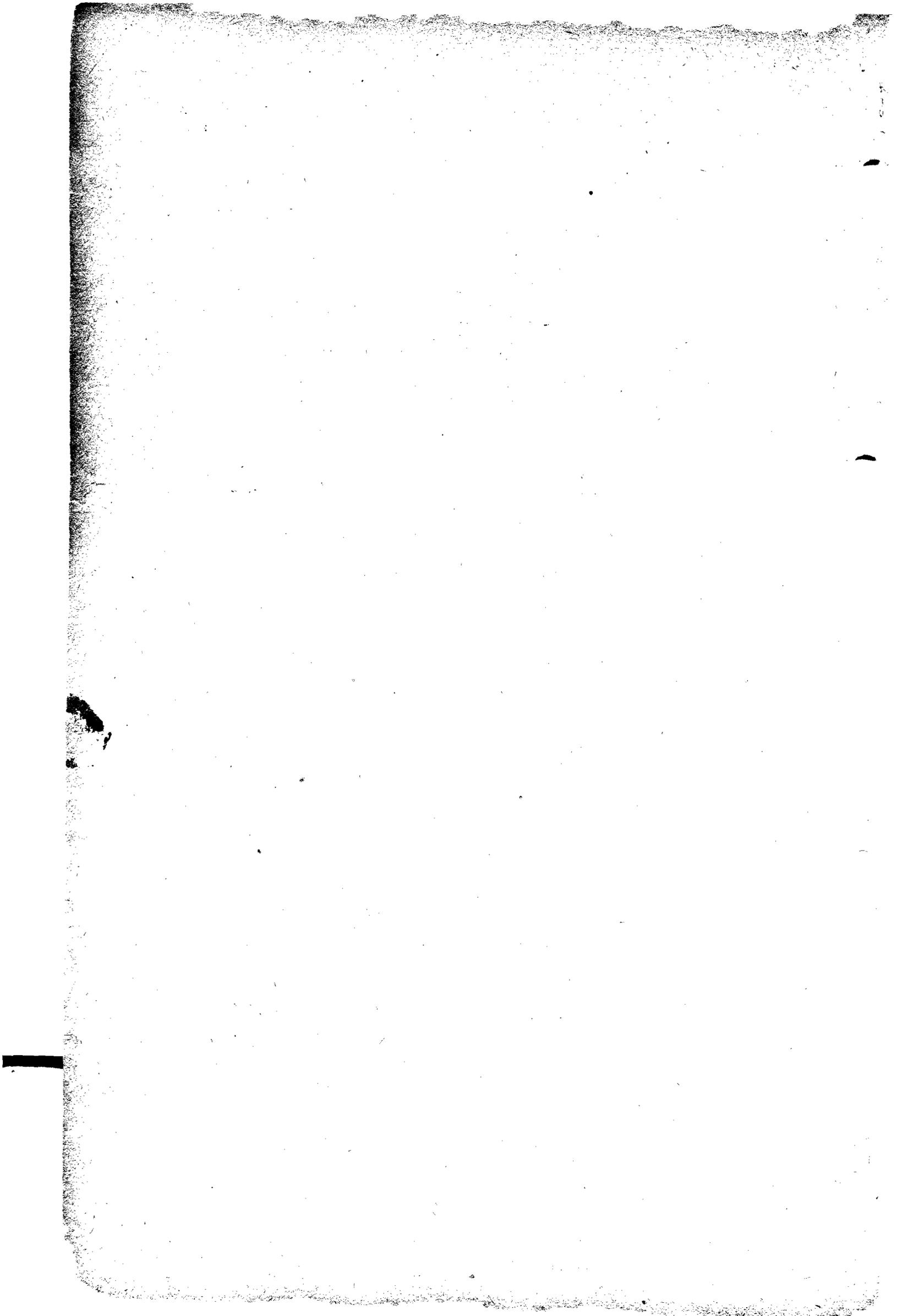
A fireproof gasoline tank for airplanes, one that will eliminate the danger of fire in the air was demonstrated last week at the American Flying Club by John H. Gose, one of the inventors.

"The invention is remarkable for its simplicity. It consists of a tank with double walls, built much in the same manner that a thermos flask is constructed. The feed pipes leading from the tank to the engine also have double walls. In the space between the walls a fire resisting chemical is inserted.

"At any time the main tank or feed pipes leak the acid immediately mixes with the gasoline and robs it of its inflammable nature. The acid also extinguishes any fire that may start as a result of the leak. The system is completed by another flask containing acid which is installed over the engine of the airplane. This flask releases its acid immediately after a certain temperature has been reached."

Lieut. Gose lost his right leg during the war when the plane in which he was flying caught fire and crashed to the ground. (N.Y. Tribune 7/4/20).

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ACTIVITIES OF OPERATIONS DIVISIONJUNE 30, 1920.1. Post Field (Observation School).

The week ending June 26th will be the final week for both officers and men at the Communications School.

2. March Field (Pilots School)

Class of 102 Cadets to begin taking instruction in Radio, June 21st, 1920. Model instruction sets were exhibited to the public on Flag Day. SCR-67 used for transmitting and receiving, also amplifier and loud speaker. Music transmitted by means of phonograph and SCR-67 and also large horn, such as used by buglers, supported in front of the regular loud speaker horn, resulting in a greater volume of sound.

3. Kelly Field (Mechanics School).

Students: 361

Instructors: Officer - 5, Enlisted 21, Civilian 51,

Courses: Engine Mechanics; Airplane Mechanics;
Army Paperwork and Stenography;
Aircraft Armament.

Aircraft Armament course started with a student personnel of thirty-three. They have been divided up into three separate divisions, the Marlin gun, the Lewis gun and the Browning gun. The students are taking a very keen interest in the maintenance and operations of the guns and although it is early to make a prediction there is no doubt but that they will all graduate with excellent records.

4. Langley Field (Photographic School).

Students: Commissioned 2; Enlisted 3.

Instr.: Commissioned 5; Enlisted 8.

Radio ships from the 50th Aero Squadron have been observing and spotting the fire of the Coast Artillery at Camp Eustis during each shot made and telegraphing that station the results of the fire. Powerful stations to be established at Langley Field in connection with Radio and Aerial Coast Defense. Contemplate the erection of two 90 foot steel towers.

JULY 16th, 19201. Kelly Field (Mechanics School)

At the Air Service Mechanics School there are at the present time 371 students in the following courses: Engine Mechanics, Airplane Mechanics, Auto Repairmen, Army Paperwork and Stenography, Aircraft Armament.

During the fiscal year ending June 30th, 1920, 440 students were graduated.

2. Carlstrom Field (Pilot School).

The second class, consisting of 89 cadets, 40 of whom enlisted from civil life as cadets, is well started and making good progress. 202 hours were flown last week by cadets under training.

3. March Field (Pilot School).

All of the second class, consisting of 114 cadets, are under training, either dual or solo. 177 hours were flown last week by these cadets.

CASUALTY

The following telegram, dated July 6th, 7:30 P.M., from France Field, Panama, C.Z., was received:

"2ND LIEUTENANT ELMER F. DEGON, 3rd OBSERVATION GROUP, FRANCE FIELD, KILLED 9:30 A.M., JULY 5th, 1920, AS RESULT OF AIRPLANE CRASH. DEATH IN LINE OF DUTY.
Signed Kennedy".

INFORMATION OBTAINED FROM OPERATIONS REPORTS
OF TACTICAL UNITS FOR WEEK ENDING JULY 3rd, 1920.

STATIONS, FLYING TIME AND AVAILABILITY OF PLANES

<u>Name of Squadron</u>	<u>Location</u>	<u>Flying Time</u>
1st Aero - Obs.	Mitchel Field, Mineola, L.I., N.Y.	22:20
2nd " "	Fort Mills, Philippine Islands	No report
3rd " "	Camp Stotsenburg, Pampanga, P.I.	" "
5th " "	Mitchel Field, Mineola, L.I., N.Y.	14:00
2nd Obs. Group (4th & 6th Sqdrn.)	Luke Field, Ford's Island, Hawaii	No report
7th Aero - Obs.	France Field, Panama, C.Z.	4:35
8th-A " Sur.	McAllen, Texas	21:25
8th-B " "	Laredo, Texas	68:30
9th-A " Obs.	Fresno, Calif.	No report
9th-B " "	Mather Field, Sacramento, Calif.	" "
10th & 99th "	Bolling Field, Anacostia, D.C.	68:19
11th Aero - Bomb.	Kelly Field, San Antonio, Texas	18:40
12th-A " Sur.	Douglas, Arizona	6:00
12th-B " "	Nogales, Arizona	4:15
20th " Bomb.	Kelly Field, San Antonio, Texas	18:30
27th " Pur.	" " " " "	16:25
50th-A " Obs.	Langley Field, Hampton, Va.	No report
50th-B " "	Savannah, Ga.	52:20
88th-A " "	Langley Field, Hampton, Va.	No report
90th-A " Sur.	Del Rio, Texas	18:45
90th-B " "	Sanderson, Texas	19:25
91st " "	Rockwell Field, Coronado, Calif.	20:35
94th " Pur.	Kelly Field, San Antonio, Texas	12:10
95th " "	" " " " "	48:25
96th " Bomb.	" " " " "	22:50
104th-A " Sur.	El Paso, Texas	10:25
104th-B " "	Marfa, Texas	13:30
135th " Obs.	Post Field, Fort Sill, Okla.	49:00
147th " Pur.	Kelly Field, San Antonio, Texas	19:15
166th " Bomb.	" " " " "	7:05
258th " HTA	Aberdeen Proving Grds., Aberdeen, Md.	15:34
Air Service Troops	Camp Benning, Ga.	6:50
" " "	Pope Field, Camp Bragg, N.C.	:00
" " "	Godman Field, Camp Knox, Ky.	No report
Hdqrs. Det, 1st) Pursuit Group)	Kelly Field, San Antonio, Texas	8:40

TOTAL..... 587:48

TACTICAL OPERATIONS, INSTRUCTION AND MISCELLANEOUS
ACTIVITIES BY FIELDS AND UNITS

BORDER STATIONS

DEL RIO, TEXAS - 90th Aero Squadron, Flight A

With 100% of daylight suitable for flying, a total of thirteen (13) flights was made including six (6) practice and seven (7) special missions. Tactical instructions were carried out as specified.

DOUGLAS, ARIZONA - 12th Aero Squadron, Flight A

With 78% of daylight suitable for flying, a total of five (5) flights was made including three (3) test flights and two (2) cross country flights. Tactical instruction was carried out as specified.

EL PASO, TEXAS - 104th Aero Squadron, Flight B

With 100% of daylight suitable for flying, a total of eight (8) flights was made including two (2) photographic missions, one (1) photographic test flight, four (4) practice flights and one (1) test flight. Tactical instruction was carried out as specified.

FRESNO, CALIF. - 9th Aero Squadron, Flight A

No report

LAREDO, TEXAS - 8th Aero Squadron, Flight B

With 100% of daylight suitable for flying, a total of forty (40) flights was made including twelve (12) formation flights, thirteen (13) command missions, five (5) tests and eighteen (18) liaison missions. Instructions were carried out according to schedule of training with necessary changes to suit local conditions. Liaison missions with the 37th Infantry, Ft. McIntosh, were carried on during the week.

McALLEN, TEXAS - Headquarters and 8th Aero Squadron, Flight A

With 100% of daylight suitable for flying, a total of sixteen (16) flights was made including three (3) practice formation flights, five (5) test flights, one (1) carrier mission, one (1) cross country flight, three (3) special missions and three (3) reconnaissance missions. Tactical instruction was carried out as specified.

MARFA, TEXAS - 104th Aero Squadron, Headquarters, Flight B

With 75% of daylight suitable for flying, a total of nineteen flights was made for the purpose of practice. Tactical instruction was carried out as specified. A system of panel reading has been worked out, and panels are being made for work with the 5th Cavalry.

MATHER FIELD, SACRAMENTO, CALIFORNIA - 9th Aero Squadron, Flight B

No report.

NOGALES, ARIZONA - Headquarters and 12th Aero Squadron, Flight B

With 100% of daylight suitable for flying, a total of five (5) flights was made including one (1) Douglas patrol, 2 flights and three (3) practice flights.

ROCKWELL FIELD, CORONADO, CALIF. - Headquarters and 91st Aero Squadron

With 100% of daylight suitable for flying, a total of ten (10) flights was made including three (3) Border Patrol flights to Monument #189 and return; seven (7) miscellaneous flights, including field flying and a flight to Camp Kearney and return.

SANDERSON, TEXAS - 90th Aero Squadron, Flight B

With 100% of daylight suitable for flying, a total of thirteen (13) flights was made including ten (10) special missions and three (3) test flights.

Tactical instruction was carried out as specified.

OTHER STATIONS

ABERDEEN PROVING GROUND, ABERDEEN, MD. - 258th Heavier-than-Air Bombardment Sqdrn.

With 75% of daylight suitable for flying, a total of forty-five (45) flights was made including sixteen (16) bomb tests, six (6) bomb sight tests, one (1) photographic flight, twelve (12) miscellaneous flights.

Training was carried out as specified.

Dropped 98 Mk. III bombs thereby completing the present bombing program for the Ordnance Dept. Furnished airplane as target for anti-aircraft shells.

BOLLING FIELD, ANACOSTIA, D.C. - 10th & 99th Aero Squadrons.

With 85% of daylight suitable for flying, a total of ninety-three (93) flights was made including four (4) flights to Aberdeen, three (3) flights to Mitchel Field, two (2) flights to Scranton, Pa., one (1) flight to Middletown, Pa., one (1) flight to Langley Field, Va., and one (1) flight to Bustleton, Pa.

Fourteen (14) officers from the Office of the Director of Air Service made flights during the week.

CAMP BENNING, GA. - Air Service Detachment

With 100% of daylight suitable for flying, a total of sixteen (16) flights was made for the purpose of cross country flying, practice, test and for the carrying of student officers.

FORT LEAVENWORTH, KANSAS - 135th Aero Squadron, Flight A Flight A, 135th Aero Squadron returned to Post Field.

FRANCE FIELD, PANAMA, C.Z. - 3rd Obs. Group, 7th Aero Squadron (6/26)

With 80% of daylight suitable for flying, a total of twelve (12) flights was made including two (2) photographic, eight (8) practice, one (1) reconnaissance and one (1) test.

Two (2) attempts were made to get aerial photographs of Fort San Lorenzo, at the mouth of the Chagres River, but because of the cloudy weather and poor light, practically no good photographs were secured. Another attempt will be made when the visibility and light are better. This is the old Spanish fort which was built in the 17th Century and later captured by Morgan, the pirate, when he invaded Panama and sacked Panama City. For over a hundred years these ruins have been overgrown by jungle and were so completely camouflaged that the fort was unnoticeable from a distance of about 100 yards. The entire fortifications, which cover about eight or ten acres, are being entirely cleared of brush and this gives the first opportunity to photograph this remarkable and historic old fort.

Instructions were carried out as specified.

GODMAN FIELD, STITHTON, KY. - Detachment Air Service Troops No report

KELLY FIELD, SAN ANTONIO, TEXAS

1ST BOMBARDMENT GROUP

86% of daylight was suitable for flying during the week.

11th Aero Squadron

A total of seven (7) flights was made, as follows:

June 27th - cross country from Kelly Field to McAllen to Pt. Isabel, to Corpus Christi to Kelly Field.

June 28th - 1 cross country flight.

June 29th - 1 test flight.

June 30th - cross country flight to and from Dallas, Texas, completed, and one (1) practice flight.

20th Aero Squadron

A total of forty-six (46) flights was made for the purpose of practice and dual instruction.

96th Aero Squadron

A total of thirteen (13) flights was made including four (4) test flights, four (4) time stage flights, two (2) solo flights, one (1) practice flight and two (2) reconnaissance flights.

166th Aero Squadron

A total of thirty-four (34) flights was made for the purpose of practice and cross country flying.

1ST PURSUIT GROUP

86% of daylight was suitable for flying during the week.

Headquarters Detachment

A total of twelve (12) flights was made.

27th Aero Squadron

A total of twenty-eight (28) flights was made.

94th Aero Squadron

A total of twenty-one (21) flights was made including cross country flights, practice flights and acrobatics.

95th Aero Squadron

A total of thirty-one (31) flights was made during the week.

147th Aero Squadron

A total of forty-three (43) flights was made including a cross country flight to Corpus Christi and flights within the vicinity of the airdrome.

LANGLEY FIELD, HAMPTON, VA.

No report.

LUKE FIELD, FORD'S IS., PEARL HARBOR, HAWAII

No report since June 18th.

MITCHEL FIELD, MINEOLA, L. I., N. Y.

75% of daylight was suitable for flying during the week.

1st Aero Squadron

A total of twenty-six (26) flights was made including nine (9) practice flights, four (4) special missions, eleven (11) test flights, one (1) photographic flight and one (1) gunnery flight.

Instructions were carried out as specified to all recruits in the school of the soldier.

5th Aero Squadron

A total of eighteen (18) flights was made including two (2) practice flights, one (1) special missions to Middletown, N.Y., for the purpose of locating a suitable Municipal landing field, nine (9) test flights, four (4) Artillery Spotting Practice flights, one (1) aerial gunnery flight and one (1) photographic flight.

Instructions to all recruits in the school of soldier and one hour close order drill and calisthenics for enlisted men each morning, except Saturday and Sunday. A one hour class in radio for all officers of the squadron is being held each morning in conjunction with artillery spotting and radio practice in the air.

POST FIELD, FORT SILL, OKLA. - Hdqrs. and 135th Aero Squadron

With 100% of daylight suitable for flying, a total of two hundred and forty-one (241) flights was made including cross country, practice, observation and dual instruction flights.

Flight "A", 135th Aero Squadron, arrived at Post Field on July 1st, 1920.

POPE FIELD, CAMP BRAGG, N. C. - Air Service Detachment

Altho 88% of daylight was suitable for flying during the week, no flights were made.

Field was visited by flight of five ships from Langley Field, Va., enroute to Savannah, Ga., to co-operate with Coast Defense command in Artillery reglage.

SAVANNAH, GA. - 50th Aero Squadron, Flight B

With 95% of daylight suitable for flying, a total of forty-nine (49) flights was made including two (2) practice, five (5) radio test, three (3) radio and nineteen (19) cross country flights.

Conducted twenty (20) shoots with Fort Screven, Savannah, Ga.

PHILIPPINE ISLANDS

2nd Aero Squadron - Fort Mills, P.I.

No report

3rd Aero Squadron - Camp Stotsenburg, Pampanga, P.I.

No report

PHOTOGRAPHIC ACTIVITIES

PHOTOGRAPHS: In 4th Ind., dated July 7, 1920, on basic communication of April 14, 1920, from the Director of Air Service to the Commanding Officer, Langley Field, Hampton, Va., subject- "Directions for using Richard Stereoscope and Printing Desk", acknowledgment was made of receipt of photographs, or illustrated instructions for the use of this desk.

On July 9, 1920, the Commanding Officer, Langley Field was directed that in the near future, on cross-country flight from Langley Field to Washington, a photographic officer be assigned as observer and that he come prepared to take not more than 24 aerial photographs of points in Washington, these points to be indicated by the Chief of Photographic Section. This project is in accordance with verbal request of Col. Ridley, Supt., Buildings and Grounds, Washington, D.C., (thru representative from his office, July 1, 1920) that an oblique view be made over the river between Giesboro Point and Potomac Park. Col. Ridley desires particularly views of the picnic grounds and the golf course in Potomac Park.

WORK AT FIELDS: In 2nd Ind., dated July 10, 1920, to basic communication from this office March 19, 1920, to Commanding Officer, Langley Field, subject - "Development of Motion Picture Film", (Film made by the 12th Aerial Photo Section, France Field, showing battle ships of the Atlantic Fleet and a submarine, Harbor of Colon) it was directed that the film be sent to this office, unless the motion picture printing machine ordered for the photographic school had arrived and was in operation and it would be possible to make positives, in which event the negative film should be accompanied with a positive film.

In 3rd Ind. of July 9, 1920, to D.A.S.O., Eastern, Dept., (basic communication from this office June 21, 1920, subject - "Photographic work", attention was called to the fact that it appeared from the second and from the wrapper indorsement that the Commanding General of the Middle Atlantic Coast Defense Station desired to enlarge the scope of the approved harbor defense projects in and around New York. It was suggested that the photographic work of harbor defenses be made the matter of a conference with the Commanding General of the Middle Atlantic Coast Defense Station explaining to him fully the details of the work, and as this work had originated with the Chief of Engineers and the Chief of Coast Artillery any proposal for changing the approved plans should be handled as indicated in the 2nd paragraph of this indorsement. Meanwhile, the D.A.S.O., Eastern Dept., was instructed to direct the Commanding Officer, Mitchel Field, to follow strictly the instructions already issued regarding the scope of the photographic projects, informing him at the same time that he would be notified if the scope of the project was enlarged as desired by the Commanding General of the Middle Atlantic Coast Defense Station.

1st Lieut. Chas. B. Austin, A. S. A., Commanding the 12th Photo Section, France Field, C. Z., reported that for the week ended June 26, 1920, 30 minutes were flown for the purpose of making aerial photographs.

1st Lieut. U. L. Bouquet, A. S. A., (For and in the absence of 2nd Lieut. Evers Abbey, A. S. A.,) Commanding the 1st Photo Section, Airdrome, Camp at Fort Bliss, Texas, reported that for the week ended June 26, 1920, 14 hours and 40 minutes were flown for the purpose of making aerial photographs.

EQUIPMENT: Requisition was made on July 3, 1920, for photographic material to be shipped to Supply Officer, Mitchel Field, Long Island, N. Y., marked "For Alaskan Expedition", via "Quickest means of transportation possible".

MISCELLANEOUS: Request was made in Memo., of July 10th, 1920, to the Information Group, Reproduction Division, that the Chief of the Photographic Section be supplied for official use with 12 prints from Air Service negative No. 850-A. S. - which is the insignia for the photographic service.

Communication dated July 3, 1920, from the Eastman Kodak Company contained request that the Air Service cooperate with them, by furnishing plane, expert pilot and camera operator for a few flights for the purpose of testing an aerial camera constructed by them, and known as the Robertson camera.

In memorandum of July 10th to the Executive regarding the above, it was recommended that favorable action be taken on the request of the Eastman Kodak Company. As orders will be requested at an early date for Capt. Albert W. Stevens and 2nd Lieut. Lewis McSpaden to proceed by airplane from Langley Field to Mitchel Field, in order to engage upon the project of making a photographic mosaic of New York City, including views of the waterfront, the Executive was advised that it would be convenient, upon completion of their work in and about New York City to proceed to Rochester by airplane before returning to their proper station at Langley Field. It is believed that in thus cooperating with the Eastman Kodak Company much good will result to the Air Service.

COMMUNICATION ACTIVITIES

Langley Field:

Nothing since date of last report.

Mitchel Field

Practice flights in Artillery Reglage conducted with smoke bombs. This practice brings out the fact that observers should constantly practice "buzzer", adjust sets in the air and become familiar with the operation. An officers' school has been organized.

Consultation held with Director of Naval Communications with regard to establishing radio communication between Naval Stations and Mitchel Field. It is hoped soon to be in communication with the Coast Artillery at Sandy Hook.

Southern Department

Considerable radio work on hand at Kelly Field in connection with reglage with the Artillery at Camp Travis.

Western Department

102 Cadets are taking instruction at March Field.

March Field received a high rating as a result of an inspection trip of the Assistant District Forester.

Development

Remodeled SCR-68 Airplane Radio Transmitter and Receiver.

Six flights made with set installed in a JN4H airplane. In all tests, transmitter is very noisy. Ground tests conducted to determine source of noise. Noise eliminated. Distance flight made with good results. Additional changes being made in the set to eliminate more noise in the transmitter. Laboratory tests being conducted with changes in transmitting circuit.

School

Nothing since date of last report.

ARMAMENT ACTIVITIES

1. A definite decision has not as yet been made as to whether or not the Ordnance Department will develop and manufacture aerial targets or whether this work will be done by the Air Service.
2. Special Regulations No. 31, revised 1920, have just been issued and cover Ammunition allowances of the Air Service.
3. Hawaiian Department made a request for information as to the installation of Mark V Bombs. Due to the fact that on the DeHaviland airplanes it is not possible to install a release under the fuselage it is necessary to use smaller weight bombs under each wing in order not to disturb the balance of the plane. The policy of the Air Service is that nothing heavier than the one hundred (100) pound bomb should be used on DeHaviland airplanes.

CIVIL OPERATIONS ACTIVITIES

1. Charlotte, N. C. has made a request that their landing field be given official inspection. The Department Air Service Officer, Southeastern Department has been instructed to have this inspection made whenever practicable.
2. Department Air Service Officer, Panama Canal Department has been instructed to forward to this office such information as may be on hand concerning landing fields in Panama and Central American Countries. This Section is engaged in formulating plans for a flight from the United States to Panama.
3. A brief report was made, in form of a memorandum, on the activities of this Division during the past year.
4. Curtiss-Indiana Company of Kokomo, Indiana have offered the use of their field at that city for the establishment of an Air Service station. They were informed that it is not contemplated to establish any additional stations at the present time but that the Air Service would be glad to use their field whenever the occasion should arise.
5. A list of Air Service Posts, at which is desired to have established Meteorological Stations, was furnished the Signal Corps.

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE JULY 29, 1920

WHY NAVIGATING PERSONNEL SHOULD BE OFFICERS

Navigation personnel is the term applied to those of the Air Service who actually pilot the airplanes and airships through the air on the different missions. It is not generally appreciated by outsiders that this personnel consists almost entirely of officers and that of all the Air Service, including civilian, enlisted and officer personnel, only the navigators, commissioned officers, engage the enemy in battle. The remainder with but few exceptions, as in the case of liaison personnel, remains well behind the line, penetrating the zones of the armies no further than the advanced airdromes. True the mechanics on the airdromes, the workers at the base depots and the munition workers of the factories are all part of the great effort of the Air Service, but go to make up the shaft or body of the lance rather than the head. The officer personnel must be the spearhead, capable of penetrating, with the impetus of the whole mass behind him, the enemy forces and dominating his strength. If one finds five hundred airplanes in the air over the enemy lines, he may assume that there are five hundred officers guiding them. At first sight this may appear to be a large number of officers and the question 'why not use enlisted men' could easily arise; but it is the purpose of this article to show why they must be commissioned officers and why it would be impossible to have it otherwise.

There are three main differences between an officer and an enlisted man. First, there is that of permanency, second, degree of professional capacity, and thirdly, authorized responsibility. A commissioned officer is supposed to be one who is making it his life work or who, in the event of an emergency, is drawn from those people of the nation whose reputation through long service is well established.

Then there is the degree of professional capacity. All members of the army from the last recruit to the commander-in-chief are professional soldiers for the time being. Theoretically and indeed practically the rawest recruit can with study and application some day become the commander-in-chief as he masters the military science and rises on the ladder of promotion. Each increase in grade is a certificate from the state that he is capable of performing the duties consistent with that grade. By the time he becomes a suitable candidate for commission he must have a general education about equal to that of a university graduate, and a technical education in administration and organization, military history, strategy and tactics, military topography, engineering and law before he is considered capable of understanding the special training commensurate with the rank of second lieutenant given him by the state.

If one can show, therefore, that the navigating personnel of airplanes must possess both this general and technical education and must then specialize on Air Service work, it will be logical to grant from the standpoint of educational requirement alone that all Air Service navigating personnel should be commissioned.

When a pilot takes the air he is virtually his own commanding officer and carries in his hands and subject to his will an airplane made possible by the exclusive efforts of at least forty persons laboring for one hundred hours. The life of a military airplane is not more than one hundred hours and therefore he becomes leader of forty persons in their war effort against the common enemy. In addition to his material responsibility he carries an abstract trust that he will carry on his work in conformity with the general scheme of things. Orders,

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it is true, are issued for him, but at best they are extremely indefinite. Even the definite instruction to bomb a given town at a given moment implies two hours initiative on the part of the pilot going and coming, darting here and there over battalion after battalion of infantry, depot after depot of supplies at that altitude most propitious.

This unlimited scope for initiative calls for education of a general nature equal to that of the second lieutenant above mentioned and for an education on the technical lines combined, making a backing for the pilot in any mission he may be called upon, carrying him deep into the enemy's territory or up and down the battle front as the case may be.

Up in his plane, as leader of all the government has placed behind him, from the factory workers to his own crew on the airdrome, he must push on against all the counter forces of nature, gravity and the enemy which are ever pulling in an attempt to bring him to earth and destruction. Without defense or flank guards, deprived of all cover or shelter and in full view of everyone, he moves at the rate of two miles a minute, perhaps into the very jaws of an enemy formation maneuvering to shoot him down. Unless he has been educated to that point where he appreciates his responsibility and takes pride in the sense of trust manifested in his commission, he will turn back at the least provocation for he has not the shoulder to shoulder comradeship and esprit to bear him up in his mission. Commissioned, and so a representative of the state, he has at heart only the cause and makes subservient his own personal inclinations and, as a professional officer, forges ahead despite the tempting cough of a cranky motor or a threatening streak of clouds impeding him daily on every sortie over the lines. It is impossible to drive a pilot over the lines; he must be led. The discipline involved is one of mutual confidence. He trusts his superior officers, appreciates their honest endeavors and loyally supports them and the responsibilities of his commission. The sting of a guilty conscience is all that can be meted out to him for cowardice. No court-martial could ever prove him guilty. Moral suasion, not material compunction will make him a brilliant airman and it takes an educated man to possess these qualities and fully understand them.

But it is not alone from a standpoint of education that the Air Service should insist upon all its navigating personnel being officers, from a point of economy it would seem wise for the government to pay the emoluments of an officer's rank, insist upon officer material and give the rank even though there may be no active command. Ever since the middle of the eighteenth century rank has not necessarily meant command, so there should be no objections to having any number of lieutenants, for example, even though there be no apparent command other than a single airplane. The Germans had to pay their privates 1000% additional so that from a money saving standpoint there was little gained by using enlisted men. If no flying pay is given, no one will continue flying in war for more than one or two sorties over the line. Each sortie corresponds to going over the top in the infantry. Proximity to the line, even, means a barrage of enemy antiaircraft fire while penetration brings the added menace of attack in number from the enemy, at a place where a stalled motor spells at least captivity for the remainder of the war. But from the standpoint of economy there is another feature that must be considered and that is the training.

It costs the government, someone has estimated, \$50,000 to train each pilot. To spend this much money on transitory or irresponsible material would be, to use a colloquial expression "bad business". Not meaning to insinuate that an enlisted man is irresponsible and transitory, but pointing out that the investing of \$50,000 in officer material is far more apt to produce a successful active service airman than in enlisted personnel.

But were there no arguments from the standpoint of education or economy, an argument on the basis of morale seems sufficient of itself to warrant a decision in favor of making all navigating personnel officers. On the ground, the doughboy marches forth to a front line trench singing, cheering, and braced up by the presence of his pals. Something psychologically akin to that human element engendered in crowds and known as the mob spirit carries him on to do things wholly

impossible single handed. Some say this spirit is engendered by a sense of security which the individual gains in a drove and state that it is a primitive instinct of self preservation as seen in the droves of animals that roam the jungles. But be that as it may, it is a form of esprit de corps, and is the very life spark of a successful military organization on the ground. Break it and your ground military machine is doomed. Strengthen it and it can move mountains.

But in the Air Service the actual fighting man is deprived of all this support of his comrades save in the few exceptions where he gains a little support from the presence in the plane of his gunner or observer. As commander of his plane, a complicated piece of complex machinery that may cross over the 6th rather than the 7th Division simply by an extra strong puff of wind or an unintentional push of the right rudder; a machine flimsy, and liable to catch fire, intent of purpose rather than esprit must carry the pilot across. Back home on the airdrome another kind of esprit, it is true is necessary, one built upon pride, but up in the air the navigator's initiative, keen judgment, skill and ability even in the face of countless odds must be recognized for every flight and the best way of doing it is to rank him with the commissioned personnel. To make some of the navigation personnel officers and others enlisted men would be wholly impossible. Enlisted men would lose an incentive were they told that a commission would not be forthcoming until a certificate for educational attainments had been received, because their morale would be forever low and little could be expected of them against the great odds of aerial navigation in war.

From the standpoint of organization too, the navigating personnel of the Air Service must be officers in the chain of responsibility of the great war machine called the army. The airplane is a link occupying such a position in this chain of responsibility that it demands that its commanding officer be a commissioned man. Developments take place constantly as the machine is used on the front. These are complex and include changes in tactics, variations in rate of speed and climb, differences in altitude and all other points that go to make up an efficient flying combination for war purposes. These developments must be linked up closely with the superior officers in the command and wrapped up closely in the daily orders of the commander-in-chief himself. There is no doubt that as time goes on the commander-in-chief of every army will rely more and more on his airmen. From them he will be able to get in the shortest time the bird's eye view and wide outlook so necessary to successful operations. Every pilot, even those who handle the fighting machines, will be required to understand the whole scheme of things and will have to be given that place in the chain of responsibility consistent with his trust. For in him will the superior officers place so much confidence and demand so much loyalty and support that nothing but a commission can be the pledge.

Despite these arguments in favor of the general proposition, some will point to the success of the German and French air forces where non-commissioned officers were used. Perhaps, however, investigation will show that the successful navigating personnel of these two services was indeed officer material. If such is the case then these countries were to blame in not rewarding loyal enlisted men of the proper mental caliber with commissions. On the other hand, the unqualified successes of the U.S. Air Service on the front and of the Royal Air Force where none but officers, save with few exceptions, engaged the enemy in combat or in military missions, is concrete evidence of the advisability of using commissioned personnel. At best nothing but a few dollars and cents could be saved by making a change. Why lower the status if their work is commensurate with the rank of an officer?

COMMEMORATION OF JULY 14th, BASTILE DAY AND ALSO THE SECOND
ANNIVERSARY OF THE BEGINNING OF THE GERMAN OFFENSIVE AT
CHATEAU THIERRY.

In a talk to the officers of the Chief of Air Service on Bastille Day, attended by some of those who were with him in the First American air operations in France, General William Mitchell, Chief of Training and Operations recited the experiences

of officers who were in France on the date of America's declaration of war. He told of the difficulties encountered, of the first plans for our cooperation worked out under many handicaps and reminded the Air Service that today was the anniversary also of the first great participation of the American Air Service, the First Pursuit Group and 1st Observation Group on the Marne on the Chateau Thierry operation. He related the occurrences in the St. Mihiel and Argonne offensives which demonstrated the accuracy of the American Air Service plans. He paid high tribute to the French Air Service, its accomplishments and its aid to America. His concluding remarks gave renewed energy to his hearers when he told of the prospective National Air policy and its realization in an air force capable beyond the thoughts of all except those who are so closely connected with Army aeronautics.

AERIAL OBSERVERS (PROVISIONS OF CIRCULAR 143)

The following instructions relating to the training of aerial observers are published for the information and guidance of all concerned:

The Air Service is responsible for the provision of aerial observation for the Army, and is charged with the training of all aerial observers, both air-plane and balloon. Officers designated for this duty will be commissioned in or detailed for duty with the Air Service. They will be trained in Air Service schools and in the schools of such other arms as may be necessary.

Training of airplane Observers. As a preliminary to becoming a flying officer all Air Service Officers will attend a pilot school where the course will include the instruction formerly given at ground schools and instruction in aerial gunnery, theory of flying and flying training in so far as is necessary to develop flying officers so that they can be classified and sent to one of the specialist schools (observation, pursuit and bombardment), for training in one of these specialties.

Having learned the fundamentals of flying, graduates of a pilot school selected for further training as observers will be sent to the Air Service observation school. The course at this school will include flying training for the purpose of developing observation pilots and observers of all types. Instruction will be given in map reading, visual reconnaissance, photographic reconnaissance, liaison with ground troops, surveillance, observation of and adjustment of artillery fire, maintenance and operation of the radio telephone and telegraph, intelligence, aerial gunnery and meteorology.

The staff of the observation school will include one or more officers of Infantry, Cavalry, Field Artillery and Coast Artillery selected by the War Department, and these officers will be employed to supervise the instructions in all matters requiring a knowledge of the tactics or technique of their respective arms.

Before any student shall be qualified for rating as an Aerial Observer he will be required to pursue a course at an Artillery School. The scope of this course will be determined by the Chief of Air Service in consultation with the Chief of Field Artillery and the Chief of Coast Artillery. Should any irreconcilable difference of opinion exist as to the proper scope the matter will be forwarded to the Adjutant General of the Army. The scope having been determined, the details of the course, including the time necessary to carry out the instruction, will be determined by the Chief of Field Artillery and the Chief of Coast Artillery. Proficiency in this course will be determined by the proper authorities of the Artillery School. The staff of the Artillery school will include an Air Service Officer.

Observers who have successfully completed the courses above outlined, will continue their training with observation squadrons of the Air Service. During target practice of the Field and Coast Artillery, observation squadrons will train with the Artillery. During the period of field training, and especially during the period of maneuvers, observation squadrons will train with the Infantry, Cavalry and Artillery.

Training of Balloon Observers. The same general policy as that outlined above will be followed in the case of balloon observers. Their training will be conducted at a balloon school. The course at such a school will include training in balloon maneuvering and balloon observation. There will be one or more officers of Infantry and Cavalry, Coast Artillery and Field Artillery detailed by the War Department as members of the school board at the balloon school. These officers will be employed to supervise the instruction in all matters requiring a knowledge of the tactics and technique of their respective arms. Balloon observers will be required to take a course at an Artillery School, as outlined in paragraph 5. The training of balloon observers who complete the school course will be continued with service balloon companies as has been already outlined for the heavier-than-air branch of the Air Service.

Officers of other Arms. It is the policy of the War Department to provide for the attendance of officers of all other arms at the Air Service schools, this attendance being followed by a short detail in an Air Service observation unit. These officers, already trained in the tactics and technique of their own arms, by securing Air Service training, will be better qualified to act as instructors at Air Service schools. They will be available for such special aerial observation as the conditions of service may render necessary. By thus coming in direct contact with the Air Service and acquiring a knowledge of the limitations and possibilities of the Air Service, and by disseminating this information in their own arms, cooperation and mutual understanding between ground troops and the air forces will be fostered.

The Air Service must furnish from its own personnel complete elements including observers for all the larger combat units, such as divisions and higher units, for which tables of organization prescribe air service elements. The Air Service shall be responsible for the efficiency of these elements until they are assigned to the larger combat units and become integral parts thereof and thereafter shall furnish all necessary replacements. After such assignment the commander of the combat unit must assume all responsibility for their efficiency and it further becomes his duty to select from other elements of his command and have trained by his air service such special observers as may be needed in connection with active operations in the field to make his whole combat unit operate most efficiently as a fighting force.

The above circular places the responsibility for the training of airplane observers directly on the Air Service. All officers or cadets who are to become Airplane Observers must complete the following schedule of training:-

Pilot training with the Air Service, 4 months; 3 months special Artillery Course at Field Artillery School; 3 months at the Air Service School of Aerial Observation, Post Field, Fort Sill, Oklahoma; 2 to 3 months with an Air Service Squadron.

Each year a limited number of graduates of this course will receive additional training with the Coast Artillery as Coast Artillery Observers. In special cases details for short periods from other arms of the service to the Air Service may be made but as a general policy all Airplane Observers must first receive pilot training and training in a Battery Commander's work in addition to work at the School of Aerial Observation, Post Field, Fort Sill, Oklahoma, before they can be rated as Airplane Observers. It is expected that the first class of pilots to take training under this system will enter at the Field Artillery School some time during the fall of 1920.

ONE OF MEXICO INTO THE AIR SERVICE

Just out of the interior of Mexico after five months spent in the vicinity of Villa's strong hold in the state of Sonora, William A. Gardenhire, veteran of the World War, prospector and soldier of fortune, is today, "back in God's country", as he puts it, and glad of it. He has enlisted in the Air Service at March Field, California to gain some knowledge of aeronautics, which he claims is going to play a big part in the opening up of the mineral districts of the southern Republic.

Concerning Francisco Villa, Gardenhire asserts that this notorious person is rapidly failing in health. "When I last visited his camp", says this soldier, "Villa weighed scarcely 135 pounds. Apparently his lone ambition was to be left in his mountain retreat. He declared he had no desire to rule affairs in either Sonora or Chihuahua".

Gardenhire left Mexico about the time President Carranza was assassinated.

CADET FLYERS GIVEN FOREST PATROL WORK AT MARCH FIELD

Aerial forest patrol from March Field, California is now almost entirely in the hands of cadets graduated from the cadet school at this field in May. Lieutenants Herold and Ott are the only two remaining commissioned pilots detailed to this work. Cadets Rouse, Eckerson, James, London, Calkins, and Dolph comprise the remaining pilots in the flight. Sergeant 1st Class, Clyde Taylor is in charge of the hangar and DH-4 B used exclusively in this work.

Two patrols are maintained daily. One to the south over the Cleveland National Reserve as far south as San Diego and the other to the north and west over the Los Angeles Reserve as far as Santa Barbara. Wireless communication between planes in flight and this station is maintained at all times. Lieut. Joseph Morris is in charge of the radio equipment. Forester C. R. Benton is detailed to this post by the Forestry Department in connection with the work.

It is significant that on one flight last week over the Cleveland Reserve five different fires were reported within 30 minutes time. Flying at about 12,000 feet altitude the range of vision is very great and the different fires covered a vast area. These were spotted by radio on the maps in the field office, however, and telephonic communication established immediately with the various rangers in the mountains. Needless to say the fires were all extinguished before a great amount of damage had been done.

"Thousands of dollars worth of valuable timber was saved on this one flight", states Forester Benton. In all nine fires have been reported during the past ten days and in each instance we have been able to reach them in time to prevent their spreading into the more heavily timbered sections of the mountains. It is difficult to state in dollars and cents what a saving will be effected this summer because of this aerial patrol".

278 HOURS FLOWN AT MARCH FIELD, CALIFORNIA

Despite heavy fog rolling in from off the Pacific 278 hours and 55 minutes flying time was recorded at March Field during the past week. One hundred and eleven cadets in preliminary training consumed 165 hours of this total. Three officers and six cadets in advance instruction consumed 44 hours and 20 minutes. Forest fire patrol required 34 hours and 30 minutes, while the remaining time was consumed in test and miscellaneous flights.

AERIAL MAIL TO UTILIZE CHANUTE FIELD

The Chief of Air Service has authorized the postoffice department to utilize Chanute Field, Rantoul, Illinois for a landing field for the mail plane on the Chicago, St. Louis aerial mail route. Mechanics have been on the field for the past two weeks over hauling and repairing planes. The planes to be used on the new aerial mail route are the JN type. Later on it is the intention of the division superintendent to replace the JN with DH-4's. The Air Service officers and enlisted men at Chanute Field are rendering all assistance possible. It is believed that the machines will be in good shape and ready to start over the route within the next few days.

BASE BALL TEAM TRAVELS BY AIR

To the Air Service belongs the honor of being the first in the aeronautical world to transport an entire base ball team of 15 men by air in one airplane. On Thursday the baseball team at McCook Field, Dayton, Ohio, in all 12 enlisted men a pilot and mechanic, climbed into a modern commercial Martin air transport with their equipment including the "ump". After the personnel were comfortably seated in their places the big plane which was piloted by Lieut. Harris took off and flew to Indianapolis where a game was scheduled to be played with the team at the Air Service Repair Depot. The distance from Dayton to Indianapolis is 105 miles and was flown in 70 minutes. After the game the team returned in the same manner to Dayton arriving in time for supper.

This is the first time that an entire baseball team has travelled in one airplane for the purpose of playing a game and illustrates a commercial use for airplanes of the transport type.

NEW LANDING FIELD OFFERED AIR SERVICE

With a great deal of pleasure we make the announcement that Mr. W. R. Ward of Lyells, Virginia has offered his farm as a landing field to the United States army aviators and that the Chief has accepted on the part of the Air Service. Lyells, Virginia is over the Washington- Langley Field route and is a particularly good place to land in.

The splendid patriotic spirit which prompted Mr. Ward to offer his farm for landing purposes is indeed noteworthy and no doubt will be appreciated to its full extent by all pilots. Mr. Ward's field will be noted on our Bolling-Langley maps and also on the maps of the United States as an emergency landing field. However, this is not all he offers, read his letter which is as follows:

"Lyells, Va.,
June 28, 1920.

"Commandant, Bolling Field,
Washington, D. C.

Dear Sir:-

I enclose a map of the country your aeroplanes fly over enroute to Langley Field, Va.

Our farm, Bladensfield, is a mile and a quarter south east of Lyells, Virginia, and, as indicated, is directly in the above mentioned route. I have counted four or five planes flying over in a day, and I judge they use the gray slate colored roof of this house, which is 35 x 70 feet, as a land mark. The hundred acre field that is near the house, half of which is in grass and is quite level, I assume has not gone unnoticed by pilots who may have to make a forced landing some time.

I enclose a picture of this field, and extend your aviator's an invitation to land in this field located about 300 yards north of the house. We use the field as a pasture, and there are some sheep and cattle grazing in it. However, if an aviator flew over the field low to pick out the place to land, he could scare the animals to one side, and I am sure he would have plenty of room. There is a post and wire fence between the pasture and a wheat field but the change of color between these fields would indicate this fence.

It might be noted that Bladensfield is half way between the two flying fields. This invitation is extended by one who has been intensely interested in aviation from the time of the Wright Brothers' and Curtiss early flights, and re-

cognizing the position and natural advantages of the field for aeroplanes, he would like to have some of the many aviators use it,

Very truly yours,

W. R. Ward.

P.S. We could give our air guest a country dinner from our garden and a hearty welcome."

A little effort in the form of personal calls, literature mixed with a little diplomacy on the part of our pilots in the vicinity of their posts will do a great deal toward helping to clear up the difficult situation of establishing landing fields the lack of which has done more to retard the progress of commercial aeronautics than any thing else.

THRILLING EXPERIENCE WITH PARACHUTE

Without telling their plans beforehand, Sergeant Strong B. Madan took Sergeant Ralph Bottrell up in a Le Pere two-seater for the purpose of attempting to break the world's altitude record for parachute jumps. Sergeant Bottrell was equipped with the standard U.S. Air Service parachute of the double-pack type. After climbing more than an hour, when the airplane had reached 20,600 feet, Sergeant Bottrell started to climb out of the cockpit when the release ring of his parachute accidentally caught in some manner in the fuselage and the parachute opened, dragging him out of the fuselage thru the tail assembly of the Le Pere. Sergeant Bottrell's left arm struck the rudder as he went by tearing some ligaments and ripping off the sleeve of his fur lined flying suit. One of the webbing straps of his harness caught over the point of the balance portion of the rudder and tore the rudder entirely off the airplane. The parachute, in blowing thru the tail, ripped from skirt to vent and broke three shroud lines. This did not, however, seem to increase the velocity of the fall, as the parachute opened and functioned very satisfactorily.

Sergeant Bottrell lost considerable blood from his injured arm during the descent, but did not lose consciousness, and at an altitude of about 1,000 feet released the second parachute, which did not open as the fall was so slow, owing to the successful functioning of the first parachute. He made a safe landing in a plowed field, and received medical attention in time to prevent any serious results from his thrilling experience.

In the meantime, Sergeant Madan was having an interesting time on his own account in controlling his airplane with the rudder entirely gone. He found a position of the throttle at which he was able to maintain a straight flight by tipping the airplane slightly to one side with the ailerons. He glided in this condition to about 8,000 feet where he managed to make a wide turn by juggling the throttle and aileron controls, then straightened out and headed for Wilbur Wright Field where he accomplished a perfect landing. He chose Wilbur Wright Field for his landing place on account of its being much larger than McCook Field.

The altitude at which the jump was made was measured by the same barographs used by Major Schroeder on his altitude flights, and the necessary corrections were applied both for instrumental temperatures and the temperature of the air, giving him a true altitude of 20,600' above sea level for the height at which the jump was made. The indicated altitude was only a few feet higher than this true altitude, on account of the very warm temperature conditions existing near the ground.

BRITISH CONTEMPLATE FINANCING AIR TRANSPORT COMPANIES

According to despatches received, British aviation is fast forging to the front. It has been learned that a plan has been devised by the British Advisory Committee on Civil Aviation in which limited direct state assistance is recommended for the development of English air transport companies operating upon approved routes. The recommendations are as follows:

(1) That direct assistance should be given, limited to a maximum sum of 250,000 pounds, within the two financial years 1920-21 and 1921-22, and that payments to companies operating on approved routes should be calculated on the basis of 25 per cent of the total certified gross revenue of each company (exclusive of the Government grant) earned by the carriage of passengers, mails or goods.

No differentiation should be made with regard to the class of load carried, and the payments should be allotted on the return for each period of three months treated separately, provided that the company can show that, on a minimum of 45 days in each period of three months (or such other factor of regularity as may be determined later by the Air Ministry) flights have been completed in both directions by aircraft of British manufacture and with British engines within an agreed maximum number of hours.

For the purpose of checking the revenue earned it will be necessary for the company to submit to departmental inspection, when required, all the company's books, receipts, and other documents in support of their claim.

A further condition of the grant should be that the details of the cost of maintaining and operating the service should be produced annually for inspection of the Government.

(2) That the "approved" routes should be:-

- (a) London to Paris and approved extensions therefrom.
- (b) London to Brussels and approved extensions therefrom.
- (c) An approved route, as, for instance, England, Scandinavia, on which the possibilities of a service employing flying boats or "amphibian" machines, or a mixed service, of sea and land aircraft, can be demonstrated.

The maximum time allowed for journeys between London and Paris, and London and Brussels, should be four hours from aerodrome to aerodrome (or such other time limit as may be determined later by the Air Ministry); and the maximum time allowed for journeys on the extended routes should be proportionate.

(3) That any company intending to run on the routes and notifying the Air Ministry of this intention would become an "approved" organization, by fulfilling the conditions laid down as to regularity and speed of service.

(4) That a grant for an air service in this country should not at present be made. However, if satisfactory proposals are put forward for internal service, or for a service between Great Britain and Ireland, the extension of the principle of State assistance for this purpose may require further consideration at a later date.

Aviation interests in Great Britain are to be congratulated for their progressiveness and foresight in the partial financing of commercial transport companies. They are bound to keep their pilots and ships in the air and maintain their planes on the aerial map of the world. Their thoroughness and efficiency have been evident from the very beginning. One need only to look back as far as a few months after the armistice to be convinced. After the armistice those who had British aviation interest at heart took hold of things when it looked to all as though aviation was destined direct toward the junk heap.

It is one thing to organize a commercial aerial transport company upon paper and another to start actual operations with real planes, equipment, personnel and money. It is also another thing to face the fact that little money is to be made while much is to be lost if not properly managed and especially is this true if the cooperation of state governments is lacking. Particularly is this so in so far as landing fields are concerned. British methods pertaining to civil aviation have from the beginning been directly under the department of Civil Aviation, Air Ministry. In other words, Federal control. The Department has seen to it that landing fields and other needs vital to the life of aviation have been placed into being. Their spirit of "You help me roll my log and I will help you roll yours", has gone a long way toward cementing together the good will and cooperation of all identified with aviation in Great Britain.

It is to be hoped that their plans for helping finance civil aerial transport companies will be a success.

It is also to be hoped and fervently too, that America will see that it is about time we quit allowing others to teach and show us how to utilize the very thing which we ourselves have created. Yesterday will never come again, but tomorrow is our most glorious opportunity.

DURING THE WEEK THE MOTION PICTURE PLAYS AN IMPORTANT PART IN AMERICA'S HISTORY

The motion picture industry has come to recognize the American Air Service as indispensable in presenting to the public the best in news pictures.

A few years ago one scarcely ever saw a motion picture made from aircraft. However, today few news weeklies are complete without at least one recorded. Those who have had the opportunity to see such pictures as the trip over Mount Lassen and the Yosemite Valley, Niagara Falls which were taken from Air Service planes can fully appreciate how faithfully the camera man recorded every detail of Dame Nature in her most glorious moments.

This week the Chief of Air Service made it possible for three great American motion picture companies, namely the Pathe, International and Fox to secure the scoops of their lives by authorizing the Commanding Officer at Mitchel Field, Long Island, New York, to provide them with planes and pilots to record the start of the New York to Nome, Alaska flight which left Mitchel Field on Thursday last. This event will go down in history as one of the greatest air events ever attempted and those intrepid flyers commanded by Captain St. Clair Street will be likened to those men in the pioneering days of early America. After the camera men had completed making a record of the start of this flight they were flown to Sandy Hook and arrived there in time to photograph the Great International Yacht classic from the air. For many months these companies have been planning every detail in connection with the above events and so carefully were their plans made that not the slightest detail was over looked. The camera men on the ground were stationed at the most advantageous point and also on water craft while the airplane photographer flew over head. This is probably the first time in history that a yacht race has ever been photographed from aircraft. Thousands of feet of film were taken of these events but only that which is of the very best will be used. After editing, cutting, assembling and projecting probably not more than 1000 feet in all can be used. The systematic way with which these companies operated is little short of marvelous. As soon as the camera man photographs his last foot of film a messenger is dispatched to the laboratory and the film is immediately developed and printed. In the space of seven hours the films are leaving the laboratory for every city in the United States and the public sees these events in less than twenty four hours after they have taken place.

The New York- Alaska flight and the International Yacht Race are of great importance and interest to the American public and through the faithful eye of the camera it will also be possible for future generations to view the progressiveness of enthusiastic America in the year A. D. 1920.

MUD DAUBER BUILDS NEST IN EXHAUST PIPE

A busy mud dauber selected the crest of an exhaust pipe to build its nest. The exhaust pipe was attached to a DH-4 in which Lieut. William Maynard and Lieut. Myron Wood, of Kelly Field, Texas set out for San Marcos.

The ship began throwing oil. The mud daubers nest got afire. Whether the dauber was at home or out rollicking around has not been determined. As was natural, the fliers opined that they were afire. They were about two thousand feet high at the time, and side slipped within three inches of Hangar 18. They straightened at that moment, caught their tail skid on the hat of the hangar thereby hitting the ground in a side ways position ripping off their under-carriage and several other things. Both were uninjured. As a matter of fact Lieuts. Maynard and Woods had a nerve wrecking experience and it was only by a combination of skill and luck that they came thru without injury. They are to be congratulated.

BOMB DROPPING RECORD MADE AT ABERDEEN, MARYLAND

In compiling the history of the Aviation Field at Aberdeen, Maryland recently, the interesting fact was disclosed that more bombs have been dropped at this field than by the entire American Expeditionary Forces overseas. To date approximately 350,000 pounds of bombs have been dropped here as compared with 275,000 pounds dropped in France.

Bombs of every description have been dropped at this field ranging from 20 pounds to 1800 pounds each and of American, British, French and German design. This record bomb dropping has been accomplished in spite of the fact that it is only a small portion of the activities of this field.

THE AIR SERVICE MECHANICS' SCHOOL, KELLY FIELD, TEXAS

When it comes to training men in mechanics few civil institutions can boast of a record for turning out efficient men equal to that of the Air Service Mechanics' School at Kelly Field, Texas.

The fiscal year of 1921 finds the Air Service Mechanics School, Training Department with four hundred and ten students enrolled. These students have been drawn from all parts of the Air Service. Some are recruits while others are members of different tactical organizations. The number of students enrolled in each course are as follows:

Course for airplane mechanics	154
Course for engine mechanics.....	167
Course for auto repairmen	20
Army paperwork and stenography	16
Aircraft armament	31
Awaiting instruction or in hospital, etc.	22
Total	410

In addition to the above there is organized a course for Electricians, one for Instrument Repairmen; Blacksmiths and Machinists. Plans of instruction are completely drawn up, hangar space ready but the complete list of equipment has not yet been delivered. The course for parachute repairmen has graduated a number of students but at present no classes are receiving instruction in this work. However, the instructors in this course are preparing material for the next class, testing parachutes and repairing chutes for pilots. They are also constructing a double harness which was recently presented at McCook Field, Dayton, Ohio. This harness does not hamper the jumper in his movements as the two harness' do. It was impossible for him to get out of this harness unassisted. With this new jumping harness a jumper can release himself at any time in case of landing on a building in the water or other inconvenient places.

The standard length of the courses in this school, with few exceptions, is four and one half months. No students will be accepted for instruction who do not have at least one year yet to serve after the date of graduation.

Advanced Training Division, Air Service Mechanics School, Kelly Field, No. 1, Texas.

Much has been said about restricting the training of enlisted men to practical work. The fact, gained through experience during the War and up to the present time, is that a certain amount of theoretical knowledge is essential in order to apply practical knowledge. By this it is not meant that a student has to undergo a course of instruction in theory and formulae but means that he must understand the elementary principles of the theory of carburetion before he can properly diagnose carburetion troubles. He must also understand the elementary principles of electricity to properly keep up the ignition system. In this school, the practical and theoretical work go hand in hand but the right hand is always the practical.

The Advanced Training Division consists of two weeks of supervised practical work on actual flying planes. This work is under the direction of a very competent officer. The instructors are carefully chosen men and the finished grade of the student is determined largely by the work accomplished by this course. The work on all Service planes such as De Havillands, S.E. 5's, Fokkers, Spads, Curtiss', Le Peres and Sopwith Camels is given. Directions on the proper method of warming up the motor or to properly prepare the plane for long cross country flights are learned. The men are given problems in rigging to work out and these problems are not completed until planes which are used fly properly. In addition to this each man is given one or more flights and while in the air their attention is called to the reading of the various aeronautical instruments and the behavior under various conditions. There are many wrinkles in the upkeep and maintenance of the plane which the student picks up during the period of his work in this Department. The average pilot can tell you how to service a plane but to do this correctly and accurately takes practice. At present there are eighty-eight students in this Division, thirty-eight of which graduate this date, fourteen of these men have completed the course as airplane mechanics, twenty-four have completed the course for Engine Mechanics. Every week classes of both airplane mechanics and engine mechanics are entered by the progressive system. The importance of training can not be over estimated for here the practical worth of a man is determined.

The weather conditions have been unusually good during the week and a number of cross country flights have been made.

FIRST PURSUIT GROUP, KELLY FIELD, TEXAS

A few Definitions.

Chasse:- The French term for Pursuit, in common use in the A.E.F. by American Pilots and frequently used by Army Pilots today who served overseas. Pronounce it, "Shass".

Avion de chasse:- Pursuit Plane.

Plane:- Airplane.

Ship:- Likewise airplane. Other terms applied to airplanes by pilots are: bus, hack, boat, crate.

Vrille (pronounced vree):- French name for tail spin or spinning nose dive.

Cheval (shevahl):- Contracted by American pilots from the French expression, "cheval de bois", literally, "horse of wood", the French for a merry-go-round applied to a ground spin, the uncontrolled turning of a plane on the ground during which the landing gear is often damaged and the ship sometimes turns over.

Chassis (Shassee):- Landing gear.

Pilot de chasse (Peelo duh shass):- Pursuit pilot.

Straff (originally straf): From the German word meaning to punish. First applied by the British R.F.C. to ground harassment in the form, "Ground straffing". Also applied to shooting balloons and enemy aircraft as, "straffing a hun balloon", "straffing a Hun" (machine).

Major Reed Chambers receives Discharge

Major Reed M. Chambers has at last received his discharge and embarked upon a civilian career; and Captain Arthur R. Brooks has resumed command of the Pursuit Group. The members of the First Pursuit Group were all extremely sorry to lose the able leadership and comradeship of Major Chambers; and all join in wishing him every success in civilian life. The only source of consolation for this great loss lies in the fact that he leaves such an able and likeable Commander as Captain Brooks to whom the men may look for guidance and encouragement at this time of transition.

Enlistments.

Enlistments seem to be nil and the number of men who do not reenlist is nearly 100% of those whose terms of enlistment are expiring from day to day. Unless things take a turn for the better, there will soon be just enough men left to do the K.P. duty.

NEWS FROM THE FIRST DAY BOMBARDMENT GROUP

During the past week 65% of the daylight hours were suitable for flying. The group made a total of 177 flights for 135 hours and 10 minutes. The flights were of the following types: 111 practice and test, 26 long distance reconnaissance, 35 dual instruction and 5 photographic.

The second Caproni was ferried from Ellington this past week and piloted by Lieut. Jack Palmer with Lieut. D. Dunton, as Engineering Officer. Arrived at Kelly Field in O.K. condition.

Lieut. Carlson marries.

One of the officers from the 11th Squadron did not like the idea of relinquishing married quarters for bachelor quarters so on June 27th he took advantage of a leave of absence to take unto himself a wife. He will therefore retain his present quarters. 2nd Lieut. H. Carlson is the guilty party.

Studious Officers

It is quite surprising to say the least that the Bombardment Group has so many officers of a studious nature. At 8:30 in the morning and 1 o'clock in the afternoon you may see them wending their way to Building #48, with books under arm to hear Lieut. Lingle propound the "Hot stuff". Or again if you should happen to drop in on them in the evenings, books and papers are scattered about and a harassed expression is noted.

NEWS FROM ELLINGTON FIELD, HOUSTON, TEXAS

Caproni ferried to the Border.

Lieutenants J.H. Palmer and D.H. Dunton of Kelly Field were detailed by their Commanding Officer to fly the remaining Caproni at this field back to Kelly Field. The evening of their arrival a test flight was made and the next morning Lieutenants Palmer and Dunton carrying as passenger Lieutenants Aven and Mills from Ellington Field who had to travel to Kelly Field in order to take their 609 tests, Sergeant Kelsey and Mr. Cramer, inspector of airplanes and engines from Kelly Field, set out to take the big plane back, where it is understood it will be used along the border. However, soon after it had taken off the roar of its three big Liberties was heard again, and in a short time Lieutenant Palmer returned making a perfect landing. It seems that when about thirty

miles from the field, it was noticed that the generator on the port motor was not generating any current; upon investigation it was found that the connection on top of the generator had come loose. It was at first decided to go out on the wing and make the necessary repairs, but while preparations were under way to do so a hose connection on the pusher motor burst and the water began to leak out very rapidly. About the same time the tachometer shaft on the port motor broke also. Then it was decided to return to Ellington. Emergency repairs were made to the hose enroute back and the plane landed with about two gallons of water left in the pusher system. A new generator, tachometer shaft and hose connection were installed, two hundred pounds of sand was placed in the nose as it had been found to be tail heavy and the plane took off again at 5:20 P.M. Outside of dodging a few rain storms, nothing of any consequence happened and a landing was made at Kelly Field.

Lieutenants W. R. Aven and S. P. Mills flew to Galveston Beach to advise the Aeronautical Committee of the beach Association relative to the big airplane race the committee is to put on in Galveston. On account of the strong cross wind and narrow beach, both tires were rolled off in landing, one hundred feet of small rope was secured and the flat tires were wrapped tightly with this rope and tied to the rim of the wheel. A take-off was made in good fashion.

Shortly after getting in the air, the throttle became disconnected and Lieutenant Mills, after talking it over with Lieutenant Aven, got out and handled the motor while Lieutenant Aven flew the plane, arriving and effecting a good landing at the field.

AIR PIONEERS OFF TO ALASKA

On Thursday morning, July 15th the Alaskan flying Expedition left Mitchel Field, Long Island, New York. The personnel of the flight is as follows:

Captain St. Clair Street, Commanding Officer of the Alaskan Flying Expedition.

1st Lieut. Clifford C. Nutt,
2nd Lieut. Eric H. Nelson,
2nd Lieut. C. H. Crumrine,
2nd Lieut. Ross C. Kirkpatrick,
Sgt. Edmond Henriques,
Sgt. Albert T. Vierra,
M.E., Joseph E. English.

The Expedition is composed of four airplanes of the DH-4 B type which have been especially selected, having been extensively tested and they are especially equipped for this expedition. With these powerful airplanes it is estimated that the trip from Mitchel Field to Nome, Alaska and return will not require much over 45 days.

The route of the flight is as follows:-

New York (Mitchel Field)	to Erie, Pa.	350 Miles
Erie,	to Grand Rapids, Mich.	300 "
Grand Rapids,	to Winona, Minn.	310 "
Winona,	to Fargo, N.D.	320 "
Fargo,	to Portal, N.D.	290 "
Portal,	to Saskatoon, Sask. C.	280 ""
Saskatoon,	to Edmonton, Alb.	300 "
Edmonton,	to Jasper, Alb.	200 "
Jasper,	to Prince George, B.C.	200 "
Prince George,	to Hazelton, B.C.	220 "
Hazelton,	to Wrangell, Alaska,	210 "
Wrangell,	to White Horse, Yukon	300 "
White Horse,	to Dawson, Yukon,	250 "
Dawson,	to Fairbanks,	275 "
Fairbanks,	to Ruby,	240 "
Ruby,	to NOME, Alaska	300 "
	TOTAL	4345 "

The feasibility of such an expedition as this covered by land airplanes to Nome, Alaska has been carefully considered. The route which these officers are flying over has been carefully gone over and the landing facilities indicate excellent possibilities of successfully carrying out the flight.

It was only through the cooperation of the Canadian Air Board that all arrangements to start the Alaskan flying Expedition on July 15th were completed.

The Canadian Air Board is a department of state of Canada, corresponding with the Secretary of Interior, Secretary of Agriculture, etc., and is delegated to care for aviation projects in the Dominion of Canada. By the keen interest and wholehearted assistance of the Canadian Air Board practically all of the details and difficulties incurred throughout Canada have been cared for by them.

Captain Howard T. Douglas, Air Service, U.S.A., who went on ahead over the proposed route of the flight and made preparations for landing fields, supplies of gasoline, oil, etc., was accompanied all thru Canada by a representative of the Canadian Air Board, who rendered every assistance possible in completing arrangements for the trip. It was thru the efforts of the Canadian Air Board that the gasoline, oil and supplies were permitted to enter Canada free of duty. The Canadian Air Board took up the question of duty on supplies for the Alaskan Expedition with the Canadian State Department and obtained permission for the free entry of all these goods. They arranged with the Canadian Weather Bureau to furnish weather reports to all the different stops throughout the flight and in

addition co-operated with all of the cities throughout the Canadian part of the route in obtaining their interest and cooperation in conjunction with the flight. The Canadian Air Board has at all times since plans were first begun for the Alaskan Flying Expedition, displayed the greatest courtesy and has rendered all possible assistance to the United States Air Service in this Alaskan project.

In addition to establishing an aerial route to the north western part of the American continent, one of the principal purposes of the flight which is being made by Army Air Service flyers to Alaska is to photograph an important area in that territory which is comparatively inaccessible and has never been surveyed. The tract lies to the south of the Tanana River and is approximately 170 miles long and 65 miles wide.

Lieutenants Eric Nelson and Clifford C. Nutt, of the Air Service, two of the flying officers who were selected for the Alaskan Expedition, completed a special course of training at the Air Service School of Aerial Photography at Langley Field, near Hampton, Virginia, consisting of practical instruction in the latest types of Air Service photographic equipment, in order that the best photographic results may be obtained in Alaska and turned over to the United States Geological Survey for their use in making maps. The making of photographs for the Air Service for the use of the various making agencies of the government is rapidly becoming an important function, and the present indications are that aerial photography will be extensively used in connection with surveying and map making and that there will be appreciable saving in the cost of doing this work. It may be interesting to explain how photographs used for mapping work are made. The aerial camera is quite different from the ordinary type. It is large, of very substantial construction and is fitted in the bottom of the airplane and the photographs are made with the camera in as vertical a position as possible, and with the lens pointing through a small window in the bottom of the plane. Success in this work calls for the closest cooperation between pilot and the photographer. The one should know exactly how to handle the airplane for this work, and the other should know when to take the photographs. When photographs are made for subsequent use in connection with the preparation of maps, the first consideration is to make enough so that when they are laid down the entire area will be completely covered. To insure that there will be no gaps between the photographs the pictures are made so that one view will overlap the other, this overlap usually being to the extent of about 30 to 40% of the area of the photograph. In a practical way photographic work is approached as follows:

The tract is flown over to obtain a comprehensive idea of it, and a strip of overlapping photographs is then made of the southern boundary, and this strip is used as the base from which other strips are made in flying from south to north. The return trip to the southern boundary in each case being utilized to observe topographical features of the country, which are used as sighting points for keeping the plane in a straight course when flying the next strip of photographs.

As the size of the lens and the dimensions of the photographic negative on the one hand bear a definite proportion to the altitude and the dimensions of the ground area covered in the photograph, it is a matter of simple computation to determine the size of the ground area covered in a photograph when a plane is flying at a certain altitude, and, conversely, to determine at what altitude the plane should fly when it is desired to have the photographs on a certain map scale. Of course in making the photographs it is necessary to take into consideration the speed of the plane, in order to determine how often pictures may be taken so that there will be the requisite amount of overlap.

As the atmospheric conditions in Alaska are unusually good for photographic work at this time of the year, it is believed that excellent photographs will be obtained. It is planned to use Fairbanks, Alaska as the base for photographic work.

SQUADRON NEWS

NEWS FROM THE PILOTS' SCHOOL MARCH FIELD

Captain George H. Peabody, commandant of the cadet detachment has been granted 30 days leave of absence. The greater part of it he will spend at his home in Cheyenne, Wyoming. Captain Ernest Clark, Officer in charge of flying, will assume command of the detachment and all training activities during this period.

Among visitors at March Field during the past week were: Captain Harvey Tomb, commanding officer of the Naval Air Station at San Diego. He was ferried to March Field and returned to North Island in a De Haviland plane. Lieut. Harry A. Halverson, adjutant to Colonel N. H. Arnold Department Air Service officer, paid an aerial visit enroute from San Francisco to San Diego.

Eighteen enlisted men were honorably discharged from the service at March Field during the past week. Seven of them re-enlisted and secured the \$90 bonus. Three recruits were enlisted during the week and assigned to the Pilots School Detachment.

NEWS FROM THE AVIATION GENERAL SUPPLY DEPOT, AMERICUS, GEORGIA

Examinations have been held during the week for emergency officers who have applied for examination for commission in the Regular Army, Air Service. During the week 32 applicants were examined. These applicants came from Carlstrom Field, Souther Field, Camp Benning and former officers from the states of Georgia, North and South Carolina and Florida. The officers of the examining board are Lieut. Colonel Thomas Duncan, Major Arnold M. Krogstad, Captain Ross, Lieut. Milleau, M.C., and Lieut. Long, M.C. A large number of applicants are expected this week.

ACTIVITIES OF THE ARMY BALLOON SCHOOL, FT. OMAHA, NEBRASKA

During the week two free balloon flights with a total of 4 hours and 40 minutes of flying time.

One balloon piloted by Lieutenant Colonel J.W.S. Wuest and carrying as passengers Major Henry C. White and Lieutenant James McAllister left Fort Omaha at 11:40 A.M., going in a northeasterly direction, reaching a maximum altitude of 2,600 feet and landing 2 miles north of Dunlap, Iowa, a distance of 60 miles from Fort Omaha.

Another balloon, piloted by Lieutenant Wm. E. Connolly and carrying as passengers, Captain Clarence F. Adams and Mr. Harry P. Lister left Fort Omaha at 11:39 A.M., going in a northeasterly direction, reaching a maximum altitude of 3,000 feet and landing 2 miles northeast of Dunlap, Iowa a distance of 60 miles from Fort Omaha.

The first balloon landed at 1:45 P.M. and the second at 1:50 P.M.

These balloons were of the 19,000 cubic foot capacity type.

The flying time for observation balloons was 176 minutes and three flights.

HERE AND THERE WITH THE EDITORS

Editorial Comment on Aeronautics from the Leading American Dailies,
In Condensed Form

NAVY AIRCRAFT SALE

Further details of the \$20,000,000 Naval Aircraft sale have been announced by Roy U. Conger, vice president and treasurer of the United Aircraft Engineering Corporation.

The transaction involves all the surplus war material of the navy, comprising more than 400 flying boats and seaplanes that have never been flown, 250 new Liberty motors, and a large supply of spare parts and instruments.

The entire equipment will be placed on sale immediately and the country has been divided into four divisions each with local agencies to accomplish the sale. The districts are the Pacific Coast, Great Lakes, Gulf Coast and the Atlantic seaboard.

Two large flying boats have already been sold to a Canadian concern.

Among the ships that are still to be sold are 12 giant F-5L flying boats, 29 of the H-16 type and 144 of the HS-2L types, all of which can be used for passenger service. (New York Tribune 7/11/20)

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INTERNATIONAL AVIATION SHOW

The first post war aviation exhibition has opened in Olympia, under the auspices of the British Aircraft Constructors and the Society of Motor Manufacturers and Traders.

The United States is not represented at the exhibition tho the list of other nations include Japan, Poland, Sweden, Holland, Belgium, Canada, Brazil, Australia, Argentina, Roumania, France, Tasmania, Peru and Greece.

The exhibition is divided into classes which include "a historic group of British war planes, the commercial planes, the amphibious airplanes, flying limousines, planes for the Far East, fireproof planes and machines that control themselves".

Rolls Royce has an especially interesting exhibit of its four types of motors, the 100 h.p. six cylinder "Hawk", to the latest 600 h.p. 12 cylinder "V" motor, the "Condor" and also the "Eagle".

The whole exhibition clearly shows that Europe has made strides far beyond the United States in the actual peace time utilization of the air. (Sun & N.Y. Herald 7/11/20).

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LIEUT. FERRARIN'S EXPERIENCE

Lieut. Ferrarin the famous Italian aviator who flew from Rome to Tokio tells of his flight over Korea, "In my entire flying experience I had never before met with such conditions. The air was so disturbed over Korea that the machine pitched like a small boat in a heavy swell, and for the first time in my life I knew what it was to be seasick. As soon as I reached the straits, where an escort of Japanese destroyers was waiting for me, the air conditions improved and the rest of my flight to Tokio, except for the storm in the Hakone was made in ideal weather".

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"The most exciting part of my trip occurred in Asia Minor. About 100 miles from Aleppo I was subject to heavy machine gunfire by the Arab rebels. Again in Baluchistan when I was forced to land on account of minor engine troubles, I was captured by the natives imprisoned and not allowed to leave until I succeeded in establishing my identity. They thought I was a British aviator but when they learned I was an Italian I was liberated."

(N.Y. Tribune 7/16/20)

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TO FLY 7 1/5 MILES HIGH

Jean Casale, who made an altitude record of 9,520 metres on June 14, 1919 claims he will soon climb to 12,000 metres or seven and one fifth miles. Casale recently spent more than an hour in a hermetically sealed cabinet equipped with air-density and other scientific instruments. He controlled the exhausting of the air and the admission of compressed oxygen thru a form of gas mask.

"The atmosphere was reduced to the equivalent of the pressure at the 12,000 metre height in 47 minutes 30 seconds and normal atmospheric pressure was restored in 20 minutes.

"The aviator said he experienced cold and a sense of uneasiness. At one time he closed his eyes but found it accentuated his dizziness. During most of the experiment he kept his ears stopped." (N.Y. Tribune 7/14/20).

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INTERESTING INSURANCE CASE

The term "participating in aeronautics" was debated before Judge Ralph Donges of the Atlantic Circuit Court yesterday. Mrs. Marie J. Bew claimed that the Traveller's Insurance Co. owed her \$3,000 on an accident policy which was taken out by her husband James W. Bew. The latter was killed with an aviator named Beryl Kendrick when their seaplane fell on May 24, 1919.

The policy definitely stated that "in the event the insured 'participated' in aeronautics the policy became void if the insured died as a result of injuries sustained in an airplane accident".

The judge ruled that Mrs. Bew was not entitled to the \$3,000 accident insurance on the grounds that "one who is a passenger in an airplane partakes of the pleasure and benefits of the art or practice of sailing or floating in the air and thereby participates in aeronautics, my conclusion being that the insured met his fatal injuries whilst participating in aeronautics. The exception in the policy bars recovery in this case and the motion to non-suit is granted".

(N.Y. World 7/17/20)

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AVIATION COURSE

A thorough course in aviation is being offered at Culver Military Academy, Culver, Ind. Two expert aviators, one a naval flier and the other an army flier are in charge of the instruction work and a number of skilled mechanics attend to the upkeep of the planes.

The course is divided into two parts, ground school course and the flying course. "The ground school includes instruction in gas engines, rigging, doping, theory of flight, aerial navigation and bombing. In the flying course thorough instruction is given in conservative flying. The student is instructed to take off, fly a straight course, turn, glide, spiral and land".

Students who take the course at the Summer School devote 20 hours a week to it.

(Phila. Ledger 7/11/20)

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HERE AND THERE WITH THE EDITORS (Cont'd)

ALL METAL PLANES FOR NAVY DEPT.

The Navy Department has awarded a contract for six all metal aeroplanes to William B. Stout of Detroit, technical advisor during the war to the aircraft board at Washington and former chief engineer of the aircraft division of the Packard Motor Co.

It is stated that the new Stout ship can surpass the German ones of the internally trussed wing type which are carrying 20 passengers at 130 miles an hour.

The type of ship ordered by the Navy Department will have a "spread of 100 feet, a wing depth of seven feet at the center and has within it a compartment for mails, bombs, or passengers as the case may be, this cabin being 30 feet long and six feet high and eight feet wide. In military use it can carry a ton and one half of bombs, do 10 hours at a speed of 100 miles an hour, drop its load and come skipping home at 153 miles an hour". (Detroit Free Press 7/2/20).

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JEWELRY AERIAL ROUTE

Watches and expensive jewelry will soon be carried by airplanes from Chaux de Fond, the seat of this industry, in Switzerland to Paris. The editor of the Sun and N.Y. Herald 7/19/20 says that such a system of exporting jewelry would prevent "troublesome delays of the present rail service and American buyers would have more prompt deliveries". He also points out the absolute safety from robbery when planes are used for at present there are no "flying Jesse James gangs".

"But this new aerial undertaking would seem only a natural addition to the recent uses of the aircraft, which already have come to include the carrying of passengers and mail, protecting forest lands, seeking out planters of cotton in prohibited areas, spotting whales and schools of fish and patrolling international borders."

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RADIO SIGNALS GUIDE PLANE

The Philadelphia Public Ledger of July 8th reports that the F-5-L seaplane, guided entirely by radio compass signals left Norfolk yesterday and flew ninety five miles on a "bee line" to pick up the battleship Ohio at sea, with no knowledge at the time of taking the air of the vessel's location. "The seaplane then navigated its return to Norfolk entirely by radio compass.

"Navy Department officials to whom the flight was reported said it was the first time radio compass apparatus had been used to direct aircraft to a ship."

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BARS FOREIGN PLANES

American manufacturers are to be protected from the invasion of foreign aircraft. Judge Thomas I. Chatfield of the United States District Court, sitting in Brooklyn granted a decree restraining the Interallied Aircraft Corp. of New York "from using or selling in this country machines built abroad which are liable to the charge of patent infringement".

The suit was brought by the Wright Aeronautical Corp. of Paterson, New Jersey. A similar suit is pending against the Aerial Transport Corp. incorporated in Delaware by the Wright Aeronautical Corp. and the Curtiss Aeroplane and Motor Corp. The Curtiss Corp. charges violation of fundamental Curtiss patents in British planes brought to this country.

"Judge Chatfield's decree upholds the original Wright patent as a means for maintaining and restoring lateral equilibrium, whether by warping the wings

or by ailerons or otherwise. Rights were sold in some countries abroad including Great Britain. The Chatfield decision is interpreted as meaning that planes adopting these rights cannot be imported into the United States for sale."

(N.Y. World 7/10/20)

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BALLOON RACE

The Aero Club announced yesterday that it had received altogether fourteen entries from the United States Air Service and the United States Navy for the national balloon race at Indianapolis on September 11th. This race will be an elimination contest for the international balloon race at Indianapolis on Oct. 23rd. Eight foreign entries have already been made for this contest. The three balloons making the best record in the elimination contest will represent the United States in the international one.

(N.Y. Eve Post 7/6/20)

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PRESIDENT DESCHANEL'S PLANE

Paris reports that President Deschanel has a de luxe Farman airplane in which he can travel over France. "There are places for six in the enclosed cabin beautifully furnished, with electric lights, silk shades, a thick woolen carpet, bouquet holders, a mirror and with six windows around the cabin. There are tables for card games, a dinner service and a tiny dressing room and wardrobe.

(Philadelphia Public Ledger 7/7/20)

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WARNED AGAINST GERMAN AIRCRAFT

Swiss firms were warned yesterday not to buy German airplanes or airships at low prices owing to the present exchange rates.

All newspapers said that these planes and ships belong to the Allies, according to the treaty of Versailles. Buyers and sellers are liable to a fine of 100,000 marks and all machines are apt to be confiscated.

(N.Y. Times 7/20/20)

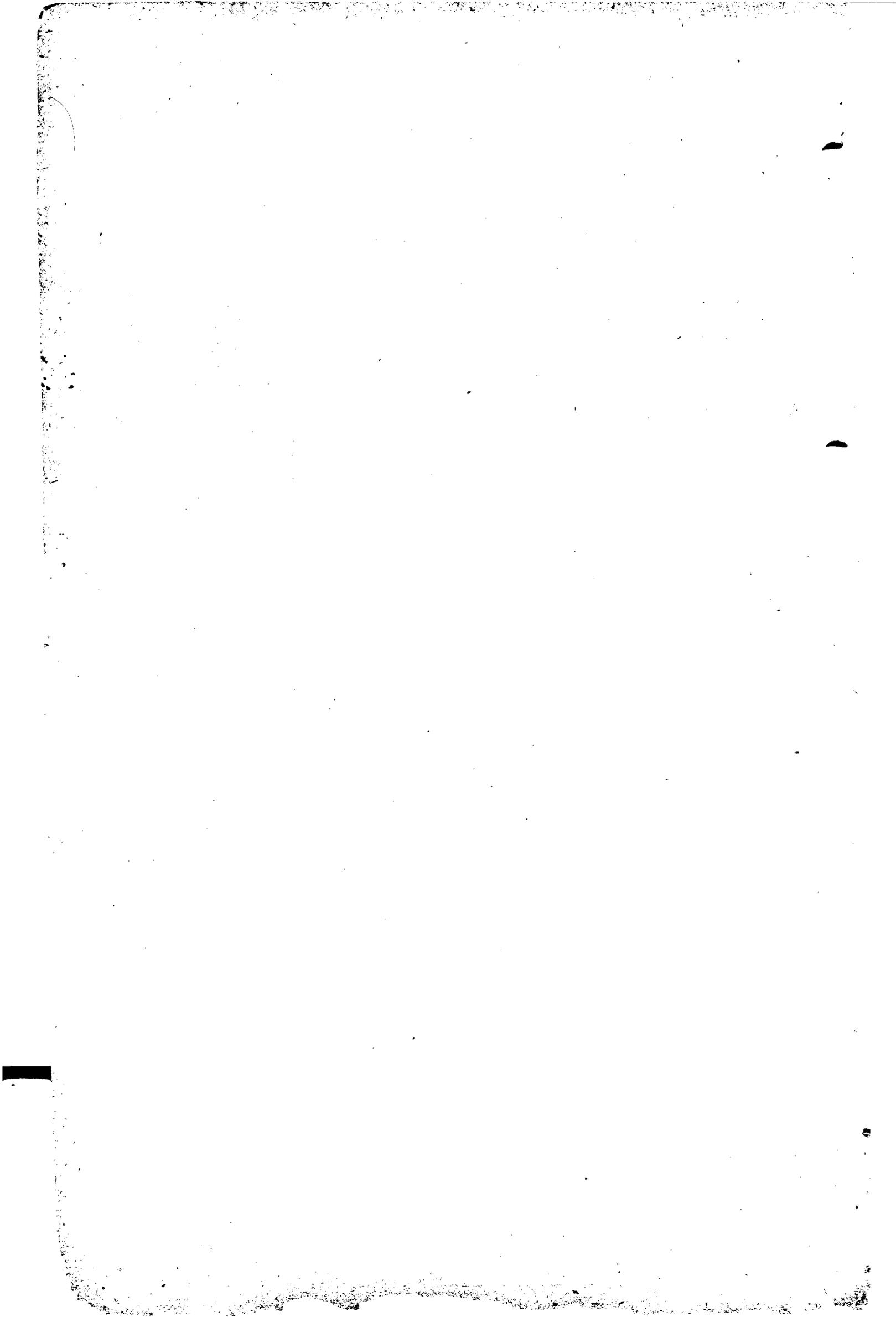
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NEW AIR LINE

A new aerial passenger service was opened yesterday between Salt Lake, New Jersey and New York. Eleven passengers were carried and the trip was made in 25 minutes. The aerial route is only 50 miles while by rail the distance is 70 miles. It is expected that within a few days, planes will be operated on a regular schedule.

(N.Y. Times 7/20/20)

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ACTIVITIES OF OPERATIONS DIVISIONProgress and Activity Report for Week ending July 17th, 1920.464th Construction Squadron

The 464th Construction Squadron has been ordered to Camp Stanley, Leon Springs, Texas, for the purpose of clearing a landing field, to be used in connection with bombing practice flights.

OBSERVATION OF FIELD ARTILLERY FIRE

Preparation under way for the assignment of Air Service units to cooperate with Field Artillery firing at Camp Knox, Stithton, Ky., and Camp Bragg, Fayetteville, N.C. A Photo Section is being included in the detachment for Camp Knox. This section will render assistance in aerial observation of fire by taking photographs of targets and the dispersion of shots. In addition, it will make a mosaic of the camp.

NATIONAL RIFLE MATCHES

The Air Service is to make its bow at the National Rifle matches at Camp Perry, Ohio. For this purpose three (3) airplanes have been ordered from Langley Field and two (2) from Mitchel Field together with pilots and observers or mechanics as observers. These are the only airplanes being ordered from Operations activities tho there are some being procured from other activities. All of these airplanes are being completely equipped.

AIR SERVICE DETACHMENT FOR FORT LEAVENWORTH

In a communication from the Commanding Officer, School of the Line, Fort Leavenworth, a request was made for another Air Service detachment and a Photo Section between the dates of September 6th and November 1st for the purpose of co-operation with the School of the Line. The Commanding Officer of the School of the Line expressed satisfaction with the results of the previous temporary duty of the Air Service at that station, which duty expired June 26th.

CAMP DIX

An Air Service Detachment is on temporary duty at Camp Dix for the purpose of bringing the cadets of the yearling class of West Point in contact with the Air Service.

OBSERVATION OF COAST ARTILLERY FIRE

"B" Flight of the 50th Aero Squadron is on temporary duty in the Southeastern Department for the purpose of observing Coast Artillery fire. This flight has co-operated with several Coast Defense commands in this Department and has a few more Coast Defense co-operations before completing its temporary duty in the Southeastern Department.

INFORMATION OBTAINED FROM OPERATIONS REPORTS
OF TACTICAL UNITS FOR WEEK ENDING JULY 10th, 1920.

STATIONS, FLYING TIME AND AVAILABILITY OF PLANES

<u>Name of Squadron</u>	<u>Location</u>	<u>Flying Time</u>
1st Aero - Obs.	Mitchel Field, Mineola, L.I., N.Y.	22:15
2nd " "	Fort Mills, Philippine Islands	20:30
3rd " "	Camp Stotsenburg, Pampanga, P.I.	7:54
5th " "	Mitchel Field, Mineola, L.I., N.Y.	23:50
2nd Obs. Group (4th & 6th Sqdn.)	Luke Field, Ford's Is., Hawaii	25:55
7th Aero - Obs.	France Field, Panama, C.Z.	12:20
8th-A " Sur.	McAllen, Texas	42:30
8th-B " "	Laredo, Texas	15:50
9th-A " Obs.	Fresno, Calif.	No report
9th-B " "	Mather Field, Sacramento, Calif.	185:10
10th & 99th " "	Bolling Field, Anacostia, D.C.	47:15
11th Aero - Bomb.	Kelly Field, San Antonio, Texas	14:55
12th-A " Sur.	Douglas, Arizona	13:55
12th-B " "	Nogales, Arizona	12:35
20th " Bomb.	Kelly Field, San Antonio, Texas	15:45
27th " Pur.	" " " " "	15:00
50th-A " Obs.	Langley Field, Hampton, Va.	No report
50th-B " "	Sarasota, Florida	33:15
88th " "	Langley Field, Hampton, Va.	16:01
90th-A " Sur.	Del Rio, Texas	20:05
90th-B " "	Sanderson, Texas	22:35
91st " "	Rockwell Field, Coronado, Calif.	25:00
94th " Pur.	Kelly Field, San Antonio, Texas	21:00
95th " " "	" " " " "	14:55
96th " Bomb.	" " " " "	33:05
104th-A " Sur.	El Paso, Texas	11:45
104th-B " "	Marfa, Texas	10:10
135th " Obs.	Post Field, Fort Sill, Okla.	No report
147th " Pur.	Kelly Field, San Antonio, Texas	9:00
166th " Bomb.	" " " " "	18:25
258th " HTA	Aberdeen Proving Grds., Aberdeen, Md.	18:13
Air Service Troops	Camp Benning, Ga.	5:20
" " "	Pope Field, Camp Bragg, N.C.	:00
" " "	Godman Field, Camp Knox, Ky.	2:25
HdQRS. Det. 1st) Pursuit Group)	Kelly Field, San Antonio, Texas	3:55
GRAND GRAND TOTAL		<u>740:48</u>

TACTICAL OPERATIONS, INSTRUCTION AND MISCELLANEOUS
ACTIVITIES BY FIELDS AND UNITS

BORDER STATIONS

DEL RIO, TEXAS - 90th Aero Squadron, Flight "A"

With 100% of daylight suitable for flying, a total of six (6) special missions was made.

Tactical instructions were carried out as specified.

DOUGLAS, ARIZONA - 12th Aero Squadron, Flight A

With 100% of daylight suitable for flying, a total of seventeen (17) flights was made including seven (7) practice flights, six (6) test flights, and four (4) cross country flights.

EL PASO, TEXAS - 104th Aero Squadron, Flight A

With 100% of daylight suitable for flying, a total of two (2) flights was made including a flight to Kelly Field and return and one (1) practice flight.

LAREDO, TEXAS - 8th Aero Squadron, Flight B

With 100% of daylight suitable for flying, a total of twenty-four (24) flights was made including fifteen (15) formation flights, eight (8) command missions and one (1) reconnaissance mission.

Instructions carried out according to schedule of training with necessary changes to suit local conditions.

MCALLEN, TEXAS - Headquarters and 8th Aero Squadron, Flight A

With 100% of daylight suitable for flying, a total of fifteen (15) flights was made including one (1) 5-plane formation, five (5) special missions, three (3) ferry missions and six (6) cross country missions.

MARFA, TEXAS - 104th Aero Squadron, Headquarters Flight B

With 75% of daylight suitable for flying, a total of ten (10) flights was made including eight (8) practice flights and two (2) cross country flights.

MATHER FIELD, SACRAMENTO, CALIFORNIA - 9th Aero Squadron, Flight B

With 100% of daylight suitable for flying, a total of ninety (90) flights was made.

NOGALES, ARIZONA - Headquarters and 12th Aero Squadron, Flight B

With 100% of daylight suitable for flying, a total of eleven (11) flights was made including one (1) patrol to El Paso and return, three (3) flights; six (6) practice flights and two (2) ferry flights.

ROCKWELL FIELD, CORONADO, CALIFORNIA - Headquarters and 91st Aero Squadron

With 95% of daylight suitable for flying, a total of eleven (11) flights was made including four (4) Border patrol flights, three (3) test flights, one (1) flight to March Field and return, one (1) flight to Camp Kearny and return and one (1) flight to Los Angeles in which the plane was wrecked in taking off Field owned by Goodyear Tire Company.

SANDERSON, TEXAS - 90th Aero Squadron, Flight B

With 100% of daylight suitable for flying, a total of fifteen (15) flights was made including fourteen (14) special missions and one (1) test flight

Tactical instructions were carried out as specified.

OTHER STATIONS

ABERDEEN PROVING GROUNDS, ABERDEEN, MD. - 258th Heavier-than-air Bombardment Sqdrn.

With 80% of daylight suitable for flying, a total of twenty-five (25) flights was made including flights of a miscellaneous nature.

Instructions were carried out as specified.

BOLLING FIELD, ANACOSTIA, D.C. - 10th & 99th Aero Squadrons

With approximately eight hours of daylight, per day, suitable for flying during the week, a total of sixty-nine (69) flights was made. Six (6) flights were made to Baltimore, Md., two (2) to Mitchel Field, L.I., N.Y., one (1) to Bustleton, Pa., one (1) to Langley Field, Va., and one (1) to Culpepper, Va. Flights were also made for radio experimental work for the Bureau of Standards.

Six (6) officers from the Office of the Chief of Air Service made flights during the week.

CAMP BENNING, GA. - Air Service Detachment

With 90% of daylight suitable for flying, a total of seven (7) flights was made including two (2) cross country flights from Warm Springs, Ga., to Camp Benning; two (2) cross country flights to Souther Field, Ga., two (2) cross country flights from Souther Field to Camp Benning and one (1) Infantry liaison with Battalion 29th Infantry.

FRANCE FIELD, PANAMA, C.Z. - 3rd Obs. Group, 7th Aero Squadron

With 80% of daylight suitable for flying, a total of nineteen (19) flights was made including two (2) cross country flights, seven (7) demonstration formation flights, two (2) photographic and reconnaissance flights, six (6) practice flights and two (2) reconnaissance flights.

One fatal crash occurred at this field on Monday, July 5th, which resulted in the instantaneous death of 2nd Lieut. Elmer F. Degon, A.S., A., and the subsequent death of Sergt. Theophile Doucett, 7th Aero Squadron.

Four (4) planes left the field for a formation flight over Cristobal and Colon in connection with the Fourth of July celebration. Lieut. Degon had made one turn after leaving the field and was almost over the hangars when he evidently made a stall-turn and his plane fell off into a tailspin. He was at about 700 feet altitude but for some unknown reason failed to pull the plane out of the spin and it crashed nose first on the concrete in front of the hangars. The plane was completely demolished, Lieut. Degon being badly crushed between the engine and the gas tank. Sergt. Doucett was very badly injured about the head and died about five hours later. This accident put an end to all flying for the day.

On Thursday, July 8th, two planes made a cross country reconnaissance flight to the Pacific end of the Canal and then East along the coast to the Chepo River. The purpose of the flight was to make a reconnaissance of the country during the wet season and to locate landing fields near the Chepo River and the town of Pacora.

The country exhibited a great contrast to its appearance in the dry season, as many places which are entirely dry and suitable for landing during the dry season are now entirely submerged by water. One landing field, suitable for use in the dry season, was located close to the Chepo River and about five miles from the coast but at present the field is partly covered by water. An excellent landing field was located about three miles West of Pacora, and both planes landed there. This field is at least 2,000 feet long and over 200 feet wide at its narrowest point. It is covered by heavy grass and probably cannot be used a little later as the grass will be too high.

Several other landing fields were located which showed too much water at present but which will be tried out in the next dry season. Photographs of the submerged territory and the field where the planes landed were taken.

Instructions were carried out as specified.

GODMAN FIELD, STITHTON, KY. - Detachment Air Service Troops

With 86% of daylight suitable for flying, a total of eight (8) flights was made including one (1) test and one (1) with the Commanding Officer, Godman Field, for purpose of examining targets of Artillery.

KELLY FIELD, SAN ANTONIO, TEXAS

1ST BOMBARDMENT GROUP

100% of daylight was suitable for flying during the week.

11th Aero Squadron

A total of sixteen (16) flights was made including five (5) test flights, one (1) practice flight and five (5) flights to Schulenburg, Texas and return.

20th Aero Squadron

A total of forty-seven (47) flights was made including practice flights, cross country flights to Corpus Christi and return and practice flights and dual instruction.

96th Aero Squadron

A total of thirty-four (34) flights was made including reconnaissance flights to Laredo, Texas, Sanderson, Texas, Schulenburg and Brook Field; time stage flights, practice flights, solo flights and test flights.

166th Aero Squadron

A total of forty-three (43) flights was made for the purpose of practice, exhibition and cross country flying.

1ST PURSUIT GROUP

100% of daylight was suitable for flying during the week,

Headquarters Detachment

A total of twelve (12) flights was made, all within the vicinity of the airdrome.

27th Aero Squadron

A total of thirty-two (32) flights was made including one (1) flight to Dallas, Texas, and return and flights around the airdrome.

94th Aero Squadron

A total of forty-seven (47) flights was made including practice flights.

95th Aero Squadron

A total of thirteen (13) flights was made, all within the vicinity of the airdrome.

147th Aero Squadron

A total of twenty-two (22) flights was made, all within the vicinity of the airdrome.

LANGLEY FIELD, HAMPTON, VA.

95% of daylight was suitable for flying during the week.

88th Aero Squadron

A total of eighteen (18) flights was made including nine (9) cross country flights, one (1) reconnaissance flight, four (4) motor tests, one (1) radio test and three (3) practice flights. Officers' radio class held one hour each day, except Saturday.

LUKE FIELD, FORD'S IS., PEARL HARBOR, HAWAII (7/2)

2nd Obs. Group - 4th & 6th Observation Squadrons

With 95% of daylight suitable for flying, a total of one hundred nine (109) flights was made including sixty-four (64) patrols, three (3) photographic flights, two (2) Artillery adjustments and nineteen (19) test flights.

Patrol flights during the week covered the following territory: fifteen (15) from Barbers point to Diamond Head, six (6) Luke Field to Waianae, nine (9) Luke Field to Kahuhu Point and Waimea, thirty-four (34) Luke Field to Schofield Barracks.

MITCHEL FIELD, MINEOLA, L.I., N.Y.

98% of daylight was suitable for flying during the week.

1st Aero Squadron

A total of sixteen (16) flights was made including six (6) special missions, seven (7) practice flights, two (2) test flights and one (1) photographic flight.

5th Aero Squadron

A total of eighteen (18) flights was made including one (1) practice flight, ten (10) special missions, one (1) Artillery Adjustment (practice), one (1) Aerial gunnery and five (5) ferry flights.

POPE FIELD, CAMP BRAGG, N. C. - Air Service Detachment

Altho 67% of daylight was suitable for flying during the week, no flights were made.

SARASOTA, FLORIDA - 50th Aero Squadron, Flight B

With 80% of daylight suitable for flying, a total of thirty (30) flights was made including four (4) practice flights and twenty-six (26) cross country flights.

PHILIPPINE ISLANDS

2nd Aero Squadron - Fort Mills, P. I.

With 30% of daylight suitable for flying, a total of thirty-two (32) flights was made including four (4) photographic flights, two (2) test flights, seven (7) local visual observation flights, six (6) transportation flights between Fort Mills and Manila and thirteen (13) instructional flights.

3rd Aero Squadron - Camp Stotsenburg, Pampanga, P. I.

With 30% of daylight suitable for flying, a total of seventeen (17) flights was made including three (3) flights to Manila and return for the purpose of carrying passengers to Department Headquarters on official business; two (2) observation flights and one (1) radio test flight.

COMMUNICATIONS ACTIVITIES

Langley Field

The 50th Aero Squadron completed their work at Fort Screvens and the results of the radio work with the Coast Artillery were highly satisfactory. The problem was to control the fire of the Artillery guns by observation from an airplane, communication to and from the airplane being maintained by radio. The airplane was never out of communication and very excellent fire was maintained by the Fort over a range up to 14000 yards. The SCR-73 was used in the plane together with an SCR-59 and a 1/4 K.W. table set was used at the Fort.

Mitchel Field

One DH4B plane, equipped with SCR-73 and SCR-59 sets, made flight and conducted a smoke bomb artillery reglage. Another DH4B plane made flight to Camp Dix, N. J. and established communication. Radio functioned perfectly.

Station worked with navy plane for distance of 25 miles.

Development

Direction Finder for Multi-Engined Planes. The development of the navigating set for the Martin Bomber is progressing very satisfactorily. From data obtained from experiments, it has been found that the fixed coils in the wings and the resultant tuner in the fuselage is far superior to the small movable coil mounted in the fuselage.

Remodeling SCR-57 Interphone. Two flights made comparing the new throat transmitter with the standard transmitter on the remodeled interphone. The results of the tests were satisfactory. The speech from the throat transmitter was very clear on the remodeled interphones.

ARMAMENT ACTIVITIES

This Section has been working up designs for panels to be used by ground troops. Considerable coordination work has been done with various offices in order that the designs will meet the requirements of all organizations working with panel signals.

Due to the shortage of 25 M/M signal ammunition it has been necessary to substitute, for the present time, 10 gauge pistols in order that 10 gauge ammunition may be used.

PHOTOGRAPHIC ACTIVITIES

MAPS AND MOSAICS: Relative to request of the Municipal Air Service Commission, Kansas City, Mo., dated July 9, 1920, that a photographic mosaic be made of Kansas City, recommendation was made to the Executive in memorandum dated July 16, 1920, to the effect that it is not believed that the Air Service can or should undertake the making of the mosaic, certainly not at this time.

Mr. Arthur A. Stiles, State Reclamation Engineer, State of Texas, Reclamation Department, called at this office July 17, 1920 and requested on behalf of his state that overlapping aerial photographs be made of the Oklahoma and Texas overflowed valley of the Red River on both sides, about 2 miles in each state. At the direction of the Executive the cost of doing this work was computed and Mr. Stiles stated that he would take the matter up further with his state.

PHOTOGRAPHS: On July 12, 1920, communication was sent to the Department Air Service Officer, Western Department, subject, "Aerial photographs of Los Angeles County, Calif.," enclosing a U.S. Geological Survey topographical map of that county, and stating that it was desired to ascertain to what extent this county had been covered by aerial photographs, and directing that one print from the best negative made of each part of the county be obtained and that the ground area covered in each photograph indicated to scale in red ink on the map and prints identified with the plottings by serial numbers, and that the map and prints be forwarded to the Chief of Air Service.

The above is being done at the request of Lt. Col. Glenn E. Smith, of the U.S. Geological Survey.



The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE AUGUST 6, 1920.

THE GORDON BENNETT INTERNATIONAL CUP RACE

On August 20, 1920 the United States Army Air Service representatives for the Gordon Bennett International Cup Race will sail for Paris, France in command of Captain Walter G. Kilner, A.S.A. The personnel of the expedition is as follows:

Captain Rudolph W. Schroeder, Captain Corliss C. Moseley, Lieut. Alfred I. Puryear, Master Sergeants Warren C. Bailey, John Dolan, Homer Gorby, Oscar Pach, Staff Sergeant John Ross, Aviation Engine Mechanic J. D. Smith, Aviation Mechanic Joseph M. Pallisard, Aviation Mechanic George Tribbett, Aviation Mechanic S. A. Christiansen and Foreman Assistant Charles W. Dworack.

Captain Kilner is one of the oldest aeronautical officers in the United States Army and has had extensive experience both in America and in France where during the war he commanded the 3rd Aviation Instruction Center at Issoudon and later all Air Service training in the A.E.F. He holds the Distinguished Service medal, the French Legion of Honor and the English Order of St. Michael and St. George.

Captain Rudolph W. Schroeder is Chief pilot of this expedition and Captain Corliss C. Moseley is going as his alternate. Capt. Schroeder is well known throughout the United States as the holder of the world's altitude record and is Chief Test pilot for the Engineering Division of the Army Air Service at McCook Field, Dayton, Ohio.

Captain Moseley served at the front during the World War with the 27 Aero Squadron of the 1st Pursuit Group. After the armistice Captain Moseley acted as Chief Test pilot at the First Air Depot at Colombey les Belles, France and has flown practically all types of French, English, German and American planes and represented the United States Army Air Service in flying at the inter-allied games held in the Pershing Stadium, Paris, France at the close of the war.

Lieut. Alfred I. Puryear is now stationed in the office of the Chief of Air Service and will act as Supply Officer for the Expedition.

The Gordon Bennett Aviation trophy was first offered for international competition under the rules and regulations of the Federation Aeronautique Internationale which changes the rules each year increasing them in severity as the science of aviation advances. The first contest held for the trophy was on August 28, 1909 at Rheims, France. The distance was 20 kilometers (12.42 miles). The Aero Club of America with its single entry, Glenn H. Curtiss who was little known at this time won the contest in 15 minutes and 50 $\frac{3}{5}$ seconds. The next race was held in 1910 at Belmont Park near New York over a distance of 100 kilometers (62.14 miles) and was won by Grahame White, in 1 hour, 1 minute and 4 seconds. Grahame White represented Great Britain and John R. Moisant representing the United States was second in this event. In 1911 the race took place at East Church Isle, Sheppey, England. This contest was won by C.T. Weyman of the United States over a course of 150 kilometers in 1 hour, 11 minutes and 36 seconds at an average speed of 78 miles per hour. In 1912 the race was held in Chicago and was won by Jules Vedrines, representing France over a course of 200 kilometers in 1 hour, 10 minutes and 56 seconds at an average speed of 85 miles per hour. At Rheims in 1913, Maurice Prevost of France won the event over a course of 200 kilometers in 50 minutes and 45 seconds. This year all contestants averaged over 100 miles per hour. Thus in five years the speed of airplanes increased from 46

miles per hour to approximately 120 miles per hour, due principally to the encouragement created by the Gordon Bennett International Aviation trophy. The race which is supposed to be an annual event was cancelled during the years of the war and this year will be the first contest since 1913.

The airplane entered by the United States Army Air Service is known as the Verville-Packard and is of all American design and manufacture throughout. The motor is 500-600 H.P. engine, the most powerful ever built in this country and was recently designed and built by the Packard Motor Car Company plant in Detroit, Michigan. This engine was designed under the guidance of Mr. J.G. Vincent who was one of the co-creators of the famous Liberty engine. This new engine has a total piston displacement of over 2000 cubic inches and weighs approximately 1.94 pounds per H.P. The Verville Plane was designed and constructed especially for this engine but it is, however, in no way a freak racing plane but is built for both service and production. The plane itself has been developed by the engineers of the Office of the Chief of Air Service at the Engineering Division at McCook Field, Dayton, Ohio. It is felt that in the face of the terrific speeds which will undoubtedly be shown by all planes entered in this year's event that the Army Air Service entry has an excellent chance to win.

As the winners of the Gordon Bennett Contests now stand the United States has won two, France two, and England one. The country that wins three times wins the trophy permanently. The trophy consists of a cup valued at \$2500 so it is seen that this year's event beyond all doubt will be the greatest universal aviation contest ever held for it may decide the permanent winner of the trophy and it will bring out the peak of the great advances made in aviation during the past six years due to the stimulus of the war. This year's race will be held in France over a cross country course of 300 kilometers (186.3 miles) over a closed circuit of 100 kilometers (62 miles), starting and arriving on the air-drome. The winner will receive a prize of 10,000 francs from the Aero Club of France and in addition there are other prizes donated by private interest in France. In addition to the Army Air Service entry the following are other entries from the United States for this year's Gordon Bennett race; The Aero Club of Texas, Glenn H. Curtiss, and the Dayton Wright Airplane Company. Practically all of the European countries with the exception of Germany have entered this contest and the finest examples of present day aeronautics are to be competitors in this event. Sweden has entered the contest and her entry is creating considerable interest as it is believed that Germany, although disqualified for the contest, has entered her latest in aeronautical development through Sweden.

THE FUTURE OF TRANSPORTATION AS EXISTING FACTORS
INDICATE IT MUST BE

During the last decade there have been many men in the United States who foresaw the impending future and its transportation problems, but who did not say that these problems would be solved by air travel, and they merely kept faith, and watched and waited. Incredulity has now been assuaged to such an extent that its inefficient and hampering ways are gradually being broken down, with the result that the present day developments alone bring to the open those thinkers who but a few years ago would have been considered rank heretics had they voiced their thoughts, even in the light of the responsible and impressive positions from which they would have spoken.

Unfortunately this is the usual channel through which all great benefits reach us even to the sciences and teachings upon which our lives, and health depend, and although belated, are welcome in their mark of slow but sure progress. Just as surely as Jules Verne's story was depicted and photographed by moving pictures under the ocean in the West Indies and just as surely as the first idea of the "horseless carriage" was later turned into a reality, just so surely will you travel by air and the time is now here both from the point of view of the perfection of the vehicle as well as the existence of actual operations which will within the next few years spread into a continental and inter-continental network.

Airship and airplane transportation will become the controlling factors in the nation's commerce. To ship by air will be a common slogan of being up to the minute and today the basic data upon which that slogan can be founded is in existence proven by over a year of successful and profitable operation. The world's airways go on forever, there is no seaboard, there are no rails, the right of way is universal and free. Air mail routes have already been in operation in the United States for two years with records of high performance and also of great saving and economy to the Government. Department stores, express companies and others have followed closely in this wake so that while the United States is at present far behind the European countries in commercial aviation, the time is here when we will not only equal but rapidly outstrip them and take our place at the head as all leaders do.

In France, England and Germany there is already daily commercial aeronautic activity on a considerable scale. In France lines radiate from Paris to Lille, Brussels, London, Deauville, and Cherbourg. In England government airdromes provide "garage" service for the nominal fee of a dollar and that includes overnight storage and assistance in starting and alighting. In fact so popular has flying become that beacons are being considered for installation to encourage night flying. Regular daily schedules are maintained on three lines for passengers and express from London to Paris and now even Holland is connected by air with London. Cape Town, Australia and Constantinople have been reached by air from England and have blazed the trail for the many followers of the future. Italy has been also among the ranks of the commercial aeronautical field and has proposed an extensive service some of which is now being tried out.

Predictions are hazardous but in the light of what has been done no one can but see that with landing fields and large hangars and mooring towers for airships the world will find a latent power that will spring up to carry the nation to its utmost both in peace and war.

CIVILIAN PHOTOGRAPHIC PLANE EQUIPPED WITH A LIBERTY SIX

During the week a "Standard" appeared over the airdrome at Douglas, Arizona with a very familiar sounding motor but it was not until a landing was made that the local pilots had their curiosity satisfied. It proved to be a "Standard" equipped with a Liberty Six owned and piloted by Billy Rahn and Charlie Baker, civilians, making a cross country flight to New Mexico from Los Angeles, California.

Rahn and Baker are to do some commercial photography for the state of New Mexico. Full photographic equipment will be furnished the team upon arrival at their destination. Both Rahn and Baker are ex-service men and "Billy" has a large number of hours to his credit.

It is expected they will remain at the Douglas Airdrome for a number of days then hop from there to El Paso stopping only for gas, then moving northerly to New Mexico.

AUTOMOBILE AXLE FORWARDED BY AIRPLANE

In order that it might continue to run, one perfectly good Army Ford truck at Rockwell Field needed a new rear axle. San Diego could not supply it, so Lieut. MacDonald of the 91st Aero Squadron was "sent a shopping in a DH". He landed at March Field about noon. By one o'clock he obtained the object of his search from an agent in Riverside, had it stowed away safely in the rear cock pit and in 55 minutes more was again at Rockwell Field. Thirty minutes later Henry's product was carting barrels of iced tea over to Coronado Beach for the consumption of Air Service officers and a few of Max Sennets' bathing beauties.

AIRSHIP ARRIVES AT MARCH FIELD, CALIFORNIA

Carrying a pilot and two passengers the Goodyear Pony Blimp landed at March Field about noon Tuesday. It required nearly four hours flying time for the dirigible to make the 70 mile trip from Los Angeles.

The blimp is propelled by a three cylinder Lawrence radial type motor but 50 horse power. It remained at low altitudes enroute, barely passing over the orange groves, in order to conserve gas. Even so, because of the increased altitude (1,500 feet above sea level at March Field, 68 feet at Los Angeles) there was not sufficient lift for the big gas bag to "weigh off" with three men on the return flight. Philip K. Coe, aeronautical sales manager for the Goodyear Company was returned via airplane.

C.K. Wallon was pilot of the blimp with B.F. Campbell as assistant pilot and engineering officer. A favorite pastime of these men when enflight near their base is to descend out over the Pacific and fish for "big game". It's much more pleasant than in a boat as the bag above provides plenty of shade in the fuselage. They seldom return without the limited number of fish.

METEOROLOGICAL DATA FURNISHED BY LOS ANGELES CHAMBER OF COMMERCE

No longer is it necessary for air pilots to start on a journey through the upper strata over Southern California in a hit or miss fashion. Flyers from March Field and other patrol bases are able to ascertain before taking off, the condition of the atmosphere on the routes which they propose to take, and make their preparations and select their altitude accordingly.

Aviators wishing to fly over Southern California may obtain information regarding air currents at least six hours in advance to guide them in determining at what altitude they should fly, according to Mr. Ford A. Carpenter, formerly of the U.S. Weather Bureau, now manager of the meteorology department of the aeronautical bureau of the Los Angeles Chamber of Commerce.

The department of which Dr. Carpenter is the head furnishes information daily to aviators with regard to general flying conditions. The data thus supplied is based on Dr. Carpenter's personal observations in this section covering a period of more than 20 years; United States weather bureau reports and telephonic communications from various California points.

"Should an aviator ask which route to take in flying north", Dr. Carpenter said, when explaining his system, "We would telephone to certain points in the mountain passes of the Tehachapi Range. The wind might be sweeping north through one pass and south through another. Of course we would advise him to follow the path where the wind was to the north.

Air conditions come so near being without deviation in Southern California that we can make a statement regarding conditions likely to prevail at any time of the year at any point. This was demonstrated recently when a trip was made in a free balloon from the campus of the University of California, southern branch, to Highland Park, in the northern section of Los Angeles. Every detail of the flight was planned six months in advance, even to the time and place of starting and landing."

This service concerning Southern California weather conditions is said to be proving invaluable to commercial flyers.

ARRIVAL OF STAFF CLASS OFFICERS FROM FORT LEAVENWORTH, KANSAS, AT POST FIELD, FORT SILL, OKLAHOMA

During the week twenty-nine officers from the Staff Class of Fort Leavenworth, Kansas arrived at Fort Sill, for the purpose of observing the work conducted at Fort Sill and Post Field.

An artillery shoot was given Friday, fire control being conducted by airplane and with the use of the Radio Telephone. Captain Follett Bradley, Assistant Commandant of Post Field acted as observer, being piloted by Lieut. Arthur Liggett. The shoot was very successful, necessary corrections being made in remarkably short time. Fire for effect was conducted after the necessary corrections were given, and out of eight shots fired, seven hit directly upon the target.

Bombing Exhibition by 1st Lieut. S.M. Lunt

The Staff Class Officers were given an exceptionally successful exhibition of bomb dropping by Lieut. S.M. Lunt, Bombing Observer, piloted by Lieut. Johnson. The target consisted of two shell holes, and all bombs dropped, fell within thirty feet of the target.

Saturday further demonstrations of Air Service activities were made at Post Field. A parachute jump from 5000 feet was made by Sergeant Encil Chambers, and notwithstanding that the second chute failed to open, a very easy landing was made. The Staff Class Officers were able to observe "close-up" the line of flight described by a bomb, when ten smoke bombs were dropped on the airdrome from an altitude of approximately one thousand feet.

THE 1920 INTERNATIONAL RACES

The United States Army Air Service has made extensive plans for entry in the famous international balloon races which will be held at Indianapolis, Indiana. The first race which will be an elimination contest, takes place on September 11, 1920 and the final race takes place at Indianapolis on October 23, 1920. In this connection it is interesting to note that the Army Air Service is also entered in the International airplane race which will be held in France, September 27, 1920. The participation of the Army Air Service in these two great international events indicates one of the many ways in which the Army Air Service is furthering aeronautics throughout the world by its hearty cooperation and support of established aeronautical contests. The Army Air Service looks to the picked crews of these events to come out The winner in both.

SHORT PARAGRAPHS OF NEWS INTEREST

A solo free balloon flight was made by Major Henry C. White A.S.A. at Fort Crook, Nebraska, a nearby Post, during the week, the flying time being one hour and twenty minutes and reaching a maximum altitude of 1,600 feet.

This was an exhibition flight and also qualifies Major White as a spherical balloon pilot.

FRANCE ERECTS WRIGHT MONUMENT

A colossal stone column surmounted by the undraped figure of a man climbing with arms out stretched towards heaven, France's tribute to the genius of Wilbur Wright, was unveiled at Le Mans in the presence of Ambassador Wallace and members of Aero Clubs representing America, England, France and Italy.

The statue is located in Place Jacobins and is by Landowski one of the most famous sculptors of Europe.

Commander Beaumont should be given due credit.

According to an announcement made by the Curtiss Aeroplane Company, Mr. John Willys, President of that corporation has purchased Hazelhurst Field at Mineola, Long Island from the Hemstead Plains Company. The buildings and hangars are included in the sale. The field consists of 135 acres and was used by the Army Air

Service as a training field during the world war. The Curtiss Corporation, it is understood, will use the field for experimental and manufacturing purposes and will probably be renamed and called the Curtiss Field.

During the week Lieut. Stanley M. Ames of the First Pursuit Group who was compelled to make a forced landing in Mexico two weeks ago has been released and landed at the headquarters of the 8th Aero Squadron, McAllen, Texas. Lieut. Ames was enroute to Kelly Field via Laredo and is flying the same S.E.-5 which is none the worse for its stay in Mexico. Lieut. Ames reports that he received courteous treatment from the Mexican authorities and that his movements were practically unrestricted while in Matamoros.

Captain Willard J. White, M. C. arrived at Ellington Field, Houston, Texas during the week and assumed the duties of Post Surgeon, vice Major A. M. Brailsford, M.C. transferred to The Engineering Division, McCook Field, Dayton, Ohio.

VALUE OF PURSUIT

By means of establishing liaison between the Air Service and the other line branches of the Army, the Infantry and the Artillery have come to realize the value of observation planes to ground troops, but they do not seem to have learned what use Pursuit can be to them.

During the war, the Infantry, the Engineers, the Supply Train troops, and all other ground troops doing front line service were harassed from time to time by German scout planes and armored harassment planes. No American Pursuit came to the rescue-- because it was necessary to put what little Pursuit we had over territory on destroyer patrols. Consequently the "Doughboy" became completely disgusted with the Air Service. He did not understand the situation, liaison between the Infantry and the Air Service was so poor that he did not even know that we had changed our insignia from a star to a cocarde and he even fired upon our own low patrols as they crossed over the lines on many occasions. Feeling, as he did, that he was not being protected against German aircraft attack, he was naturally somewhat apprehensive, for there is no sensation more depressing to the morale of troops than to feel that they are in constant danger of attack by a force against which they cannot fight back. Of course, no real "Doughboy" will admit being afraid of anything, and his spirit is such that he will "Carry on" in spite of any and all obstacles; nevertheless, he would feel much more contented with his lot did he know the combat trains which bring supplies up to the front line along the roads, and also the Engineers who build our field works; in fact, all of the ground troops who operated in or near the trenches regarded the Air Service in the same way.

Now the only way to prevent the enemy from straffing out trenches and lines of communications is to have an adequate number of defensive Pursuit patrols constantly on the alert, and also to have a sufficient understanding of the appearance of our ships and insignia to prevent our troops from firing on our own ships.

In addition to defending ground troops against harassment, Pursuit planes may be of invaluable service to them both directly and indirectly in six more ways. Let us now devote a paragraph to each one.

Artillerymen believe, apparently, that the only planes of service to them are the Observation planes that adjust their fire from over the target by wireless. Now, it will be readily conceded that in order to most efficiently spot the fire of the artillery and report the necessary adjustments, the observation planes must be able to work uninterrupted by attacking enemy aircraft. What, then, is to prevent such an interruption unless it is a Pursuit patrol? Thus, the Pursuit planes that protect the Artillery Reglage planes are, in effect, working for the Artillery.

The same argument applies to those low patrols which prevent enemy attack upon our Infantry Liaison planes, -- that drop orders to the advancing infantry in message bags or cans, watch the panel signals, and wireless back calls for reinforcements, supplies and ammunition, and changes in artillery fire. The scout planes that enable these liaison patrols to work unmolested are also working for the troops who are fighting on the ground.

Sometimes conditions are such that observation planes cannot be used for this liaison work, while the smaller, faster Pursuit planes can be employed to advantage for the rapid liaison patrols. Then it is that the Pursuit planes perform a direct service to the Infantry below by reading their panel messages and quickly flying back to headquarters with the information which is dropped in message bags. This kind of mission is called in Pursuit parlance a contact patrol.

Another way in which Pursuit may be direct service to the Infantry is to perform what is known as a "straffing mission". These missions are of two kinds; trench straffing and road straffing. Trench straffing is of the greatest benefit to our Infantry just after a barrage has lifted and just before and during the attack following. If our own troops are attacking, there is no more effective way to make the enemy keep his head down than that of dropping light fragmentation bombs on him and firing tracer bullets at him from the air; and if the enemy is coming over, there is no better or more efficient method of breaking up his waves and demoralizing him completely than that of resorting to the very same tactics. The value of such assistance to our troops would be very apparent to them upon seeing it in operation. The usefulness of road straffing missions is not so obvious to the "doughboy" because he does not see them going on; however, a little explanation will make it clear how such aerial offensive action against the enemy ground troops can be of great benefit to him. The method employed is exactly the same as that of trench straffing, and it has the same demoralizing effect upon the enemy's advancing columns and combat trains that it has upon his forces in the trenches. It breaks up columns of advancing reinforcements, interferes with concentrations, and interrupts-- often stops completely-- combat trains carrying supplies without which the enemy cannot operate. By these means Pursuit straffing missions give invaluable assistance to the men in the trenches.

In open warfare, with the enemy in full retreat, the same type of Pursuit work described above really performs the office of a super-cavalry and armored machine gun trucks, though it does not replace these important arms. Pursuit harassment patrols harass the enemy's rear, prevent the placing of ambushes, and, by means of dropped messages, warn the advancing Cavalry and Infantry of the location of strong points left by him for the purpose of hindering our advance.

In the unusual and most deplorable case that our own troops should be in retreat, these harassment patrols, if in sufficient numbers, could so interfere with the enemy as to check his advance for a sufficient length of time for our forces to construct adequate defensive works and turn defeat into victory.

While following this description of the value of Pursuit to ground troops, it must be borne in mind that the enemy can use his own scout planes against us in the same ways, and that we must, therefore, have a sufficiently large Pursuit Service in the next war not only to carry out the work outlined in this and other expositions, but also to prevent the enemy from doing the same things to us and to prevent him from interfering with our work in the air. Consequently, our pursuit must either out number the enemy's three to one or else it must be three times as efficient.

The first Pursuit Group aims at such a high point of efficiency. However, we cannot know just how efficient our next enemy may be for we do not know at this time who he is. Therefore, we must be prepared to furnish the tactical knowledge which we learn and develop, to an enormous flying personnel which we hope will flock to the colors for the next war. To this end Pursuit must be carefully fostered throughout the years of peace. The favorable sentiment and good will of all of our Brothers in Service throughout the entire Army can do a great

deal of good in this direction now, if it will assist in producing that friendly public sentiment for us without which no organization can progress very far, and which we need if we are to be strong in the air as we must be to assure victory.

AIRCRAFT INSURANCE- A PROBLEM BUT CAPABLE OF SOLUTION

Aircraft insurance in the field of commercial aeronautics is a fundamental without which civil aviation cannot go far, but on the other hand is a subject approached with considerable hesitancy by insurance companies.

Primarily the greatest difficulty in the United States is the lack of adequate reinsurance facilities commensurate with the capital it is necessary to involve in order to approach the scale upon which commercial aeronautics can be made successful. This fact alone makes it hard for the insurance companies to go at the problem with a free hand and more especially is it a problem when an attempt to enlarge reinsurance facilities is rebuffed on the ground that the funds are sought to cover a new and untried field of endeavor characterized by the uninitiated as extremely hazardous. This practically announces to aviation that it can stumble ahead unaided and suffer under the cross of tradition and incredulity although the blunders of such a process of bringing out cross have been colossal.

Possibly however, popular demand for commercial aeronautics in those communities acquainted with its possibilities and present achievements will assist in breaking down such a barrier should it be raised, detrimentally or prohibitively. One function created already by this demand is an organization known as the Aircraft Coverage Syndicate which is composed of representatives of all the larger insurance companies, amalgamated to unify coverage and secure its proper and reasonable administration and rating.

This organization is composed primarily of insurance experts with a few scattered in its numbers who have had some experience and knowledge of matters aeronautic although perhaps not to a very detailed technical point. Their purpose is excellent and it is felt their willingness and zeal to accomplish this purpose will in all probability permit the insurance field to clasp hands with commercial aviation and strengthen it in its infancy. Naturally this body of men seek assistance and guidance from those whose efforts have led them into daily contact with aeronautics and who have come to be looked upon as conservative and well balanced judges in their field. Most of the physical data and statistics however are not of particular weighty importance for the reason that they are based on the period of mushroom growth of aeronautics, of war developments, of war activities, and under the stress of such conditions and facts. Surely no one would apply these figures as fundamental. In fact about all they do show is that considering the conditions, aviation as a science is comparatively safe, yet there is one point shown which is an old one. The necessary evil of the human element, namely the pilot. The human element in anything is a large percent of the risk incident to its execution. In commercial aviation the pilot of the airplane or airship is the responsible pivot around which the general or specific condition and safe operation of the aircraft itself centers. Therefore the pilot or pilots of a company so long as approved and tested aircraft are used are at least for the time being the crucial test in determining aircraft insurance rates. Most of the insurance companies considering aircraft coverage have through a process of elimination come to this point and have issued pilots' grading cards. It is felt that this step is one in the right direction providing it is properly administered. Colonel H. E. Hartney of the Army Air Service has considered in this connection three factors which he believes affects the risk.

First there are the conditions of the employment of the pilot which can be roughly divided into three divisions as follows (1) Where the pilot himself owns the aircraft, (2) Where the pilot is employed by a company in which he has an interest, and (3) Where the pilot is employed by a company in which he has no interest. Naturally the case of the pilot owner is the ideal one from the insurance point of view for the old laws of a man and his own property precludes

other than the highest order of caution, attention, and care possible under the individual circumstances, it is however only probable that such a status will exist in other than sporting, commuting or private use of aircraft. Stepping then to the case of the pilot with-an-interest we come upon what will be found to be almost the universal case in commercial aeronautics for this status for employees today in any endeavor has been found to be most mutually satisfactory. From the insurance point of view this is the most favorable commercial situation and should be duly considered in rate quotations. The last case of the mere pilot employee is one that will undoubtedly pertain to a considerable extent but it is by far the least desirable from the insurance point of view. Example of the working of this psychological rule is cited in the instance of cases where pilots who handled and crashed government airplanes later undertook civil operations of their own and developed a decided change toward added carefulness which was openly apparent.

A second factor that bears almost an equal weight with the human equation is that of the nature of the duties and the nature of the risk. This is a broad field capable of many limitations and qualifications but should be delved into rather completely in a questionnaire for pilots included with the request data for aircraft insurance. Some of the points to be ascertained under this heading are the nature of flight duties, whether or not the piloting is for cross country work and if so whether the route is an established one or not. Also whether the flights are to be made over army itinerary that may be laid down, and whether the pilot knows the country over which he will fly very thoroughly. The status and existence of emergency landing fields in the territory or along the route to be traversed, and whether the pilot has landed at each and every one of these is pertinent data. A further interesting point is to inquire, hypothetically of course, at first, whether the aptitude of the pilot is sufficient to warrant his being able, should there be a call for it such as poor or extremely low visibility, to fly from his home airport to any of the destinations mentioned in the terms of his contract at an elevation of fifty feet above the general elevation of the country traversed on the routes. If this ability obtains the pilot will be found to have an extremely good sense of location at any time under any circumstances. Finally then inquiring as to the character of the country around the home airport and the extent to which it could be utilized in successful forced landings when taking-off would round out a good general examination on salient points in this phase of the aircraft insurance problem.

A third factor would be length of service. Here is where a reduction in rate should be accomplished yearly when the same pilot has successfully accomplished the same route for that length of time. However from the point of view of temperamental and psychological factors it is believed that it will be wise to shift pilots around on various routes somewhat so as to relieve the monotony. This factor is one to which deep consideration should be given for it provides a basis for reaching the point where aviation insurance can be provided as among the regular order of events and yet its breadth of interpretation alone can permit of the problem of personnel morale.

It is conservatively estimated upon authority that within twenty-five years there will be aerial routes all over the United States and abroad which will be operated entirely free from accident and the majority of the people will travel by air due to economic pressure and to obtain the more pleasant surroundings and ease of travel as well as to avoid the greater risk which prevails on railroads, automobiles, or other modes of conveyance. At present the greater part of the insurance problem is inappropriately based on and deductions are being made from misleading and irrelevant statistics, comprised of war time activities and heterogeneous commercial activity. The real lead for the insurance companies is to accept the fundamentals and extend a helping hand so that aircraft insurance and commercial aeronautics may progress to each others mutual benefit and success until such time as by this cooperative nursing, each may assume its proper position in the normal order of events.

SQUADRON NEWS

CHANUTE FIELD, ILLINOIS

Chanute Field has been designated as an emergency station for the Chicago-St. Louis Aerial Mail. The aerial mail service has not commenced as yet, but work has been going on for about ten days, over hauling planes, preparatory to starting this service in the near future. The Commanding Officer has furnished a large number of spare parts to the aerial mail, in accordance with the plan for cooperation with the mail service, prepared by the War Department.

Captain Charles W. Stolze, Zone Supply Officer and Lieutenant Mann, pilot, landed at Chanute Field in a DH-4 Friday enroute from Chicago, Illinois to Wilbur Wright Field near Dayton, Ohio. As soon as the plane was gassed and oiled, they continued their flight. The wind was on the tail of the plane, after leaving Chanute Field, and it was estimated by observers on the ground that the ground speed of the plane in the direction of Indianapolis was about two miles per minute.

All of the emergency officers at Chanute Field have returned from Scott Field after completing their examinations for commissions in the Regular Army. Lieutenant Jack Greer, who returned the last of the week was the last to return. The officers met a number of old acquaintances who are now in civil life and who desire to return to the army, as well as officer friends from other fields in this vicinity. After spending the day doing tail spins in the medic's chair, and writing long essays on aeronautical subjects in general, the pilots assembled in the barracks each evening, brought out the ships of fancy and indulged in a great deal of spectacular indoor flying. It is safe to say that everyone enjoyed the visit at Scott Field in spite of a number of anxious moments spent before the Board. Lieutenant Kennedy, Aeronautical Supply Officer at Scott Field, maintained an excellent mess for the benefit of the officers, and the swimming pool and moving picture show were greatly appreciated, as well as many other courtesies shown the visitors by Captain Houghton and his staff.

Major John N. Reynolds reported here last Friday and assumed command, in compliance with orders from the A.G.O. Major Reynolds comes here from Langley Field, where he has been stationed for some time and relieves Major Ira Longanecker, who has been in command at this station since January 1919. Major Longanecker goes from Chanute Field to assume command of the Aviation General Supply Depot at Little Rock Arkansas.

The activities of an inactive station are much greater than many people suppose and usually tax the energies of the limited personnel to the fullest capacity. A great deal of surplus material is being packed and shipped to other stations and a considerable quantity of material is being received for the maintenance of the buildings and grounds. The Maintenance Officer has started repainting some of the buildings, which are in bad shape from the action of the weather. It is expected that this work will keep the post painter and assistant busy continuously until cold weather.

FRANCE FIELD, PANAMA

Two attempts were made this week to get aerial photographs of Fort San Lorenzo at the mouth of the Chagres River, but due to poor light and clouds practically no good photographs were secured. This is the Old Spanish fort which was built in the 17th Century and later captured by Morgan, the pirate, when he invaded Panama.

For over a hundred years these ruins have been overgrown by jungle and were so completely camouflaged that one could stand within 100 yards of the fort and not see it. The entire fortification- which covers about eight acres, is being cleared of brush, thus presenting the first opportunity to photograph this remarkable and historical old fort.

SELFRIDGE FIELD

During the last week between fifteen and twenty farmers have been harvesting hay on the field and according to a rough estimate of the crop it is thought that the Government's share of the hay will be between ninety and one hundred tons. This, according to the present price, \$36.00 per ton, will net the Government approximately \$3600.

Selfridge Field is visited almost daily by some reserve flying officer for practice flight and examination in compliance with instructions from the Chief of Air Service.

There has been a noticeable falling off in the number of applicants for enlistment. This is due in part to the high wages paid for mechanics in this vicinity.

PHILIPPINE ISLANDS

The Third Aero Squadron which arrived in the Philippine Islands nearly a year ago, now has a roof to shelter its personnel and the fact was celebrated by a House Warming which warmed up the whole air service section of Camp Stotsenburg.

The opening of the barracks for the enlisted men was an occasion worthy of the celebration for since the arrival of the squadron at Manila in August of last year the men literally have not had a place to hang their hats. Of course they could hang them on a tent pole but if they were left there, the owners had little assurance that either hat or tent would be in the same place after the next typhoon. From the tent the men have watched the barracks buildings slowly take shape, and last week the welcome order to move in came, so the celebration was decided upon and preparations begun.

The two biggest pigs in the islands were purchased for the barbecue and all sorts of edibles, drinks and smokes were ordered from Manila.

A combination stage and boxing ring was built in the open air near the 'cue pit'. Electric lights were strung around the whole arena to the intense interest of the entire post, which had never before had an electric light plant in operation.

The House Warming began promptly at seven in the evening when the men and their guests, including Colonel J.W. Heard, the Post Commander, officers of the Ninth Cavalry and the First Philippine Artillery sat down to "chow". The band of the Philippine Artillery regiment played during the meal, and everybody put away large quantities of barbecue pig, real spaghetti cooked by Major Roy S. Brown, Commander of the Air Service Station, and chef of renown.

Then the show began. The Knights of Columbus had come from Manila bringing six live vaudeville acts, Monologists, black face comedians, dancers and singers. They kept the crowd roaring for more than an hour and then the five fast boxing bouts were staged. Battling Antullo of the Mp. took on Ingraham of the blacksmith shop for four lively rounds. This was followed by a bout between the Supply Officer, 2nd Lieut. Harry P. Disher and the Radio Officer, 2nd Lieut. William P. Sweeley of the Air Service Station.

Probably the fastest fight of the evening was between Private Tailor of the 27th Infantry, recently out of Siberia and Private Borometa of the Philippine scouts. The bout was called a draw.

The completion of the barracks marks the fact that the Air Service Station is nearing completion. Three hangars have been completed in the past two months and there is little work left to do on several of the others, while the building of the officers' quarters is now well underway and some of them will be ready for occupancy before another month has passed.

While it has been without quarters since its arrival in the islands in August of 1919 the Squadron has been flying since September of that year. The first plane was set up in the court yard of the Cuartel de Espana in Manila soon after the arrival of the outfit, the wings were then taken off and the plane trucked out to the beach at Pasay, which at low tide affords a fairly safe landing place. When the Liberty roared and the DH-4 took the air the inhabitants of the islands saw their first land plane in flight.

After the organization went under canvas at this post in December, 10 DH-4's were assembled and the natives are becoming quite blasé about the flying game. Instead of running to the churches to offer a prayer every time a strange bird comes by, they scarcely stop their work to look at a passing plane and they now never let one disturb a siesta.

The planes of the squadron make almost daily trips to Manila and are landing there at Paranaque on the field of the Curtiss Corporation. A number of trips to Baguio the mountain capitol, whose elevation is 5,030 feet, have been made.

Colonel John W. Heard veteran cavalryman in command of the post is enthusiastic about flying and now he seldom leaves the post except in an airplane.

Both the Philippine Artillery and the Ninth Cavalry have been on practice marches over Luzon during the past three months and when ever a squadron goes on the march the Air Service establishes a mail route to the halting places. The heaviest mail was dropped a couple of days ago. It included two complete sets of harness. It seems that two mules, pulling an escort wagon fell off of a high bridge into a swift river. The mules were cut loose from the wagon but they were drowned and drifted rapidly down stream taking the harness with them. A hurry-up call was sent in and the Air Service went to the rescue with two sets of harness complete.

All work of the squadron is being pushed now in order that a school for observers can be begun on the fifteenth of June. The Commanding General of the Department is detailing a number of Line Officers to the station for four months for instruction. At present there are no observers with the squadron. The Air Service Officers now in the Philippine Islands are: Major Roy S. Brown, Captain Charles T. Phillips, Lieutenants Ira C. Baker, LeRoy E. Hessel, Harry P. Disher, William C. Maxwell, William R. Sweeley and Newton Longfellow.

POST FIELD, FORT SILL, OKLAHOMA

Flight "A" of the 135th Observation Squadron, has just returned from Fort Leavenworth, Kansas, where the Flight has been stationed for the past two months on duty with the Staff School at that station.

The work at Fort Leavenworth consisted in instructing and demonstrating to the officers undergoing the Staff Course, the value of planes in connection with the regulation of artillery fire, infantry liaison and contact patrol. An excellent record was made by the flight as evidenced by a number of letters from Instructors in the School, congratulating the Flight on its success.

The majority of the student officers of the school were taken on flights, most of whom had never been in the air before, and all were impressed with the efficiency, accuracy and speed with which an Aerial Observer can report on things of military importance which can be so rapidly seen from the air.

One day was allotted to the explanation of the technical side of airplanes and their equipment. The Staff Officers were all very interested in DH-4B's with their equipment of machine guns, bomb racks, radio telephone and type "L" aerial photographic camera. To demonstrate the speed with which a photograph could be made of a strategic point in time of warfare, a DH-4B was flown to Kansas City, Missouri a distance of twenty-five miles by air and twelve photographs were made of the various strategic points in and around the city, such as bridges, and railroad yards. The trip was flown in thirty six minutes, and prints were completed fourteen minutes after the plane had landed.

Classes in the Air Service Communication and Air Service Observation Schools began this week, with seven student officers in the former and twelve student officers in the latter. Actual work was retarded to some extent, due to the examinations now being held for candidates for commission in the regular establishment.

France Field, Canal Zone.

A little stranger- Miss Helen Clark Harmon- arrived at the quarters of Lieut. Colonel and Mrs. Harmon, and everyone on the Canal Zone is extending hearty congratulations and best wishes. There is a rumor afloat that the young lady in question has taken complete command of Col. Harmon's domain, and will soon do likewise with the entire field. If the little miss were aware of the many people who are eagerly waiting to serve her it is certain that she would rush her debut.

NEWS FROM THE AVIATION REPAIR DEPOT, INDIANAPOLIS, INDIANA

Activities in the Engineering Department are keeping up the high standard of the past few months. Seven Hispano Suiza 150 horse power motors and six Liberty 12's were completed by the Engine Repair Division. One De Haviland 4 and one Curtiss JN6HO airplanes were completed by the Aero Repair shop and are awaiting shipping instructions. Forty-three Hispano Suiza motors, two Liberty 12's and eight Curtiss OX5 motors were received for repair, while three De Haviland 4's, one Curtiss JN4 G and one Curtiss JN4HO have been received for repair during the past week.

Recruiting has gradually increased at this Post until now an average of about two recruits a day are received. The Aviation Repair Depot is co-operating with the local recruiting office in Indianapolis to the extent of setting up an airplane and placing upon exhibit one Liberty 12 and one Hispano Suiza motor on the State House grounds. A detail of eight men chosen from among the enlisted men at the Post was also sent to cooperate with the recruiting officer in Indianapolis for the purpose of securing recruits for the Air Service. It is confidently predicted that their success will be remarkable.

Experiments have been conducted along the lines of communicating from the ground to an airplane by means of the wireless telephone, which experiments have been highly successful. It is hoped that in the near future an exhibition flight may be given over the city of Indianapolis whereby anyone on the ground may direct the airplane to perform maneuvers while the pilot in the airplane may communicate with the ground by means of the wireless telephone, reproduced by a magnavox. Aerial concerts are also being planned and if successful will be described at a later date.

LUKE FIELD, HAWAII

Major John B. Brooks, of the Department Air Service Office established several records for the Islands by piloting an HS2L boat to Hilo on the Island of Hawaii, a distance of over two hundred miles, and returning to Luke Field the same day. Those accompanying him were Captain F.W. Wright as safety pilot and Lieut. A. W. Marriner as Radio Officer. The flying time of the complete trip was a little over seven hours. No difficulties of any nature were encountered during the flight, the day being perfect from a flying standpoint.

Lieutenant Gale, Group Athletic Officer, allows no grass to grow under his feet in the pursuit of his duties. While returning from a flying mission several days ago he took advantage of his opportunity to fly down over a ball game the Luke Field team was engaged in. His interest got the better of him, he spotted the game for several innings, spiraling and doing eights so that no plays would miss his observation.

THIRD AERO SQUADRON, PHILIPPINE ISLANDS

The following officers have recently been transferred from the 2nd Aero Squadron at Fort Mills, Corregidor, to the Third Aero Squadron at Camp Stotsenburg. 2nd Lieutenants Charles L. Webber, John Blaney and Ralph A. Floyd.

The new officers are badly needed by the Third Aero Squadron as a school for the training of line officers in the work of observers is to begin in the near future. Six line officers will be sent to this station and attached to the Air Service for four months. While at Camp Stotsenburg they will be given instruction in radio, gunnery, photography, artillery spotting etc. The six line officers to take the training will be selected from over fifty applicants by a board of officers consisting of Major Roy S. Brown, Air Service, A. S. A., Major Francis H. Poole, Medical Corps, Flight Surgeon, and First Lieutenant Ira C. Eaker, Infantry.

With the three officers recently transferred from the 2nd Aero Squadron the 3rd Aero Squadron has only nine pilots on duty. Since its arrival in the islands, the Squadron has lost two officers by resignation- Lieutenant David E. Doty resigned to accept a position with a Manila firm- Lieutenant Earl F. Evans left Uncle Sam's tame Air Service and sailed away as cook on a steamship. He is only cooking however until he can get to Poland where he expects to find active service in the Kosciusko Squadron which is composed entirely of American pilots.

NEWS FROM THE PILOTS' SCHOOL, MARCH FIELD, CALIFORNIA

Colonel C. C. Culver, radio expert arrived at March Field last Monday and will remain here on temporary duty for a week or ten days. The purpose of his trip to California is to assist the Air Service in organizing its own line of communications and replacing the Signal Corps personnel so assigned.

Colonel Culver has been much interested in the forest fire patrol operating from this base. Additional wireless equipment is now enroute which will be utilized for the establishment of sub-stations in the Los Angeles and Cleveland forest reserves. Increased and more efficient means of communications are to be established between rangers in the reserves, the pilots and observers en-flight and the local radio station at March Field.

It is probable that some few men from March Field now assigned to the radio department will be sent to the Air Service communications school at Fort Sill, Oklahoma.

Lieutenant R. B. Holmes of March Field looks like a sure winner for the Olympic meet. In the inter departmental meet at Jefferson Barracks last week he won the 3,000 meter walking event with ease, having finished 400 yards ahead of all competitors. His time was 14 minutes and 40 seconds, slightly under the world's record.

Thomas Brinker, another pilot from March Field showed up well in the swimming events. Brinker was first in the 400 yard breast stroke and first again in the 100 yard back stroke. He was third in fancy diving and one of four members of the Western Department swimming team which won the departmental cup.

The average temperature during the past week has been well above the 100 mark. Numerous small fires have broken out in both mountains and valleys recently. A valley fire near Hemet late Friday threatened to damage considerable property and several grain fields. More than a 100 men from March Field were dispatched to the scene to fight the blaze.

Total number of flying hours at March Field for the week ending July 10-291 hours and 10 minutes.

Preliminary training activities consumed 121 hours and 5 minutes; advance training 62 hours and 35 minutes; forest patrol, 51 hours and 10 minutes and the remainder by test flights and miscellaneous cross country trips.

A total of 325 flights were recorded at March Field during the week ending July 17th. Total flying time 344 hours and 10 minutes. Preliminary instruction flights consumed 168 hours and 25 minutes; advance instruction 40 hours and 5 minutes; forest patrol 70 hours and 45 minutes and the balance in test miscellaneous flights.

Weather conditions have been ideal although the temperature has averaged above 90 from 10 A.M. to 3 P.M. practically every day of the week. Cadet instruction is carried out during the early morning hours to escape the heat of the day. Class room and vocational instruction periods are held during the afternoons.

Nurses stationed at the government convalescent hospital at Arrowhead, in the foothills of the San Bernardino Mountains, entertained about 30 men from March Field Friday evening. A dance was held in the parlors of the recently converted hospital and was one of the most interesting affairs of the week. About 100 disabled soldiers are being cared for at the hospital resort at the present time. Accommodations will soon be available for 300 or more.

About \$500 is being expended from the Officers' Club fund in refurbishing and decorating their club house at March Field. Officers' wives are taking an interest and assisting in the work.

Colonel C. C. Culver, radio expert, who was on temporary duty at March Field for about a week, departed via air Tuesday for Washington. Accompanied by Lieut. R. S. Worthington the flight was made to Mather Field, Sacramento, California from which point he boarded an overland limited for Chicago.

Among visitors at March Field during the past week was Miss Alice Brewer, supervisor of hostesses for Service Men's Clubs of the Western Department. She declared that the March Field club is one of the most complete recreational centers for soldiers on the Pacific Coast.

AIR SERVICE MECHANICS' SCHOOL, KELLY FIELD, TEXAS

The Officers' Monthly Field Meet was held during the week. There were three teams participating; the East Team consisting of the Air Service Mechanics School Officers, the North Team of the Pursuit Group Officers and the West Team of the First Bombardment Group Officers. Due to the fact that the A. S. M. S. Officers did not have on their overalls they did not show with their usual brilliancy. They starred, however, in the wheelbarrow race. Lieutenants Stromme and Fox coming in first, Lieutenants Minter and Shovlin second and Lieutenants Carter and Spruance third. The last mentioned team experienced some difficulty at the half way mark or the race would have been completed in a shorter time. Great hopes were held for the A. S. M. S. in the sack race but due to the A. S. M. S. representative having to loop twice in succession to avoid a pugnacious and interfering bull dog the race went to the Bombardment Group. The acrobatics given by Lieutenant Spruance brought forth round after round of applause. The potato race, shoe race and obstacle race were run in quick succession. First one team and then the other were in the lead. When the big event came off, a two mile hike in which the teams were represented by squads who marched in close formation, the hike rapidly developed into a two mile run. At the start the A. S. M. S. led but lost ten points when Major Longacre dropped out near the finish. The final score were: 18 points for the West team, 18 points for the North team and minus 2 points for the East Team.

The Air Service Mechanics School gave their second dance at the Aviation Club, Kelly Field, No. 2 on Friday evening. This dance, like the one previously given was a great success, being given on the open air pavilion. Sport clothes of white were ordered for the evening which tended to make the evening more enjoyable and the guests far more cool and comfortable.

The course for Aircraft Armament is now in its fourth week with a class of thirty-one students, M.E. Hoitzman, Chief Instructor. The work of this course covers gunnery, care and maintenance of synchronizing apparatus and bomb sights. Instruction is given in complete form on the Browning, Lewis and Marlin machine guns and the student is given a working knowledge of the various other types. The student is given instruction on the installation, synchronizing and testing of the gun in the plane. Upon graduation from this course the student is ready for assignment to the squadron and is entirely competent to cope with any trouble which may arise. The weekly inspection of the armament used for instructional purposes in this course showed results of careful and efficient instruction.

The class in Army Paper Work and Stenography consisting of sixteen students has completed the prescribed twenty weeks of instruction according to the schedule and is being graduated this date. The men have all done commendable work and their training should make them of great value to their respective organizations. A new class of specially selected students will enter this course July 12th.

HERE AND THERE WITH THE EDITORS

Editorial Comment on Aeronautics from the Leading American Dailies,
In Condensed Form

AERONAUTICAL POSSIBILITIES

"Commercial Aviation Forges Ahead in America" is the title of an exceptionally interesting and instructive full page story featured in the Sun and N.Y. Herald for July 25th. Views of three commercial planes, an aerial view of Seattle and a map of the United States which shows all the air routes now in actual operation, give the story an attractive setting.

The writer outlines our aeronautical progress, emphasizing the efficiency and future possibilities of the aerial mail service.

Considerable space is devoted to the Manufacturers Aircraft Association, its membership and functions. Its work is outlined in four classes; 1st: "Educating the public in values of aircraft. 2nd: Working in connection with the Department of the Interior, Army, Navy and Post Office, State Governments, municipalities, chambers of commerce, boards of trade, flying clubs for the passage of laws for air travel. 3rd: Landing places and 4th: Experimenting with strictly commercial planes".

In referring to the present cost of planes the writer argues "but is the price of aircraft, ranging anywhere from \$7,000 to \$12,000 for the smaller machines to \$25,000 to \$30,000 for the larger planes more exorbitant than cost of railroad cars? Locomotives now cost about \$77,000, freight cars \$3,000 and Pullmans \$15,000."

The writer recommends for the immediate future of commercial flying "improved and more economical aircraft; a better organization for bad weather flying and an organization for night flying".

HUGE AIR LINER

The Lawson Company expects to launch a new air liner in Milwaukee next month which is designed to surpass anything constructed either in America or Europe for passenger and freight carrying capacity.

The giant aircraft is designed to sail noiselessly. For the purpose of night flying the liner is equipped with mufflers on the engine exhaust, sleeping berths and other conveniences. Its lifting capacity is 5,000 lbs. ~~dead-~~weight.

Alfred W. Lawson the designer has bid for a mail route between Chicago and New York. With this plane he claims he can leave Chicago at 10 p.m. with 1500 lbs. of mail and 3,500 lbs. of express freight and passengers and arrive in New York at 8 a.m. the next morning. (Philadelphia Ledger 7/27/20)

* * * *

DIRIGIBLE FALLS 3,000 FEET

The C-10 fell 3,000 feet without injuring any of her eight passengers while she was cruising over the yacht race yesterday. When at an altitude of 1,000 feet, Lieut. A.W. Evans commander of the ship noticed a leak in the bag, so he immediately sent the ship up to 3,000 feet in order to command a safer landing radius. An S.O.S. was phoned to the Rockaway station. Until it was necessary to throw the batteries overboard, to lighten the load, the reporter for the N.Y. Eve. Post, who was one of the passengers, was busy sending wireless accounts of the wrecked ship to his paper. After careful maneuvering, Lieut. Evans landed the ship lightly on the water. The ship floated until within a few hundred yards of the shore when it caught on some rocks, then everyone crawled from the ship and waited on the rocks for naval boats to bring them in. (N.Y. Tribune 7/22/20).

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WESTERN AIR LINE SYNDICATE

The Western Air Line Syndicate has just been formed in Cleveland for the purpose of operating air lines between Cincinnati, Cleveland, Pittsburgh, St. Louis, Indianapolis, Louisville, Chicago and Columbus. Ships of 3,500 lbs. capacity will be used on these lines which will be opened by November 1st. C. E. Lay, president of the Cincinnati Aircraft Co. is one of the promoters in the syndicate.

Bids will also be made for the new aerial mail routes.

(Cleveland Plain Dealer 7/17/20)

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"FRENCH AIR PLANS"

Plans for the future of French aviation were discussed yesterday by Under Secretary of State for Aviation, M. Flandarin.

"The program has two distinct parts, military and civil. Our military air fleet is not yet reorganized. It awaits the report the minister of war will make to Parliament but while waiting for this we are transporting all our old machines making the fleet as up to date as possible without building new avions.

The civil part is proceeding faster. All our factories are turning out machines so fast that there is a great demand for pilots in addition to many passenger lines. We now have the Paris-Brussels, Paris-Geneva, Paris-London routes and are about to organize the Paris-Deanville air post of the summer. When our military program is submitted to Parliament our ambitions will be realized." (Philadelphia Ledger 7/21/20)

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"FLYING CRACKSMEN"

Scotland Yard has been outwitted by a criminal who cleverly made his escape in an airplane. It was simple enough. Detectives were watching every means of land and water transportation. The criminal, knowing this telephoned to the London airport at Croydon and asked for a reservation on the plane leaving for Paris. The plane had left so he went immediately to the aviation ground and secured a special one.

The official report says the aerial escape of a criminal "is the first in the annals of British crime".

However, the Sun and Herald 7/21/20 claims "this exploit should prove not alone to Scotland Yard but to the police departments elsewhere the necessity of precautions that will make its recurrence impossible".

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A I R S E R V I C E N E W S L E T T E R

Information Group
Air Service

August 7, 1920

Building B
Washington, D.C.ACTIVITIES OF OPERATIONS DIVISIONProgress and Activity Report for Week ending July 24th, 1920.CO-OPERATION OF COAST ARTILLERY

Letter written C.O., Flight "B", 50th Aero Squadron, at present on temporary duty in the South Atlantic District observing Coast Artillery fire, instructing him to submit to this office upon completion of his temporary duty a complete report on the observation of Coast Artillery fire in the South Atlantic District. It is considered that considerable aid can be gleaned from this report when the time arrives for the setting of basic rules and regulations for observation of Coast Artillery fire by airplanes.

Flight "B" of the 50th Aero Squadron has made observation of fire at the following Coast Defense forts:

Fort Screven
Coast Defenses of Savannah
Fort Dade
Coast Defenses of Tampa
Fort Caswell
Coast Defenses of Cape Fear (was due to arrive at this station, July 27th)

At Fort Screven, one (1) sub-calibre and three (3) 12" adjustments were accomplished and excellent results were obtained. The Battery Commander used the sensings of the airplane observer exclusively, employing the observation of the base end stations only for checking purposes. In the first problem a target shot was obtained on the third round; the second problem required six (6) shots and the third required ten (10) shots.

At Fort Dade, eight (8) adjustments were made. The adjustments accomplished in the morning were very successful, while those in the afternoon were not so successful on account of unfavorable weather conditions.

CAMP BRAGG

Letter written C.O., Air Service troops, Camp Bragg, required that a complete report be submitted upon completion of the co-operation between the Air Service and the Field Artillery at that station.

Letter written Commanding General, Camp Bragg, informing him that the delay in the arrival of Air Service troops was due to examinations of applicants for Regular Army commissions and it was requested that he take cognizance of this delay in his schedule.

POWERS ARTILLERY SPOTTER

According to report from Langley Field, the Powers Artillery spotter might be improved by making a few simple alterations. Authority was granted upon the request to make certain alterations on one of these spotters, and it was requested that a complete report including recommendations be submitted upon consummation of these tests.

MOTION PICTURE OF AERIAL OBSERVATION OF FIELD ARTILLERY FIRING

Letter was written to the Chief of Field Artillery inviting him to make known his wishes on taking motion pictures portraying the methods of aerial observation of Artillery firing so that the picture may be complete both from Air Service and Artillery standpoints. It is contemplated that such a picture would be of great benefit in the early training of future observers and observation pilots. These pictures would be an advantage apparently in the training of Artillery officers also, therefore, the Air Service has offered to submit the completed film to the Chief of Field Artillery for his inspection and to furnish him with a complete positive film for his own use if upon inspection he desire one.

HAWAIIAN DEPARTMENT

In Activity Report of July 1st from Department of Hawaii, it was stated that the regular weekly practice shoot with Battery Barri at Fort Kamehameha was staged, and attention was invited to the fact that these weekly Artillery reglage missions have progressed beyond the experimental period.

The Air Service participated in the First Reserve Corps camp to be conducted by the U.S. Army. The Air Service's participation was apparently quite a success. Its program included lectures on Air Service subjects, flying demonstrations of various types of missions and the furnishing of rides to officers of the camp.

FLYING BY ORDNANCE PERSONNEL AT ABERDEEN

Upon inquiry from the Commanding Officer, Air Service Troops, Aberdeen Proving Ground, as to the propriety of non-Air Service personnel making official flights, attention was invited to paragraph 1586, Army Regulations, and Circular 143, War Department, April 9th, 1920, which in substance provide that only pilots, observers, and aerial bombers of the Air Service shall make official flights and tests.

CAMP KNOX

Detachment of commissioned and enlisted personnel left the Southern Department for temporary duty at Camp Knox in connection with the observation of Field Artillery firing.

The 4th Photo Section, (composed of 1 officer and approximately 10 men) now stationed at Post Field, Ft. Sill, Okla., will proceed to Godman Field, Camp Knox, Stithon, Kentucky, for temporary duty in connection with the making of the photographic mosaic of Camp Knox and the doing of any other work necessary in connection with the aerial observation of artillery fire.

COMMUNICATIONS ACTIVITIES

Mitchel Field

A new umbrella antenna has been erected with counterpoise 15 feet above the ground. Good results obtained.

Visit made to Ft. Hancock in regard to establishing communication between that station and Mitchel Field. Their transmitting set suitable for the work but receiving set not suitable. An SCR-59 receiving set being sent to them which will be capable of receiving signals. As soon as communication is established, meteorological data and wind aloft reports will be forwarded to the Fort for their information in firing.

Western Department

An efficiency chart is being prepared at March Field on which will be recorded the efficiency on Forest Patrol of planes as well as of observers.

Telephonic communication with Rockwell Field will be tried out in the near future.

Development

Airplane Central Power plants to supply electrical power for apparatus in an airplane.

Tests will be made in the laboratory on the voltage regulations and the amount of commutator noises from the central power plant as soon as apparatus is available. A direct connected central electrical power plant is now installed on airplane P-85. A remodeled SCR-68 is now being installed for power and ignition noise tests.

INFORMATION OBTAINED FROM OPERATIONS REPORTS
OF TACTICAL UNITS FOR WEEK ENDING JULY 17th, 1920

STATIONS, FLYING TIME AND AVAILABILITY OF PLANES

<u>Name of Squadron</u>	<u>Location</u>	<u>Flying Time</u>
1st Aero - Obs.	Mitchel Field, Mineola, L.I., N.Y.	35:45
2nd " "	Fort Mills, Philippine Islands	18:25
3rd " "	Camp Stotsenburg, Pampanga, P.I.	14:20
5th " "	Mitchel Field, Mineola, L.I., N.Y.	36:05
2nd Obs. Group (4th & 6th Sqdn)	Luke Field, Ford's Is., Hawaii	54:53
7th Aero - Obs.	France Field, Panama, C.Z.	No report
8th-A " Sur.	McAllen, Texas	36:30
8th-B " "	Laredo, Texas	No report
9th-A " Obs.	Fresno, Calif.	No report
9th-B " "	Mather Field, Sacramento, Calif.	157:40
10th & 99th "	Bolling Field, Anacostia, D.C.	62:32
11th Aero Bomb.	Kelly Field, San Antonio, Texas	13:10
12th-A " Sur.	Douglas, Arizona	Not given
12th-B " "	Nogales, Arizona	10:45
20th " Bomb.	Kelly Field, San Antonio, Texas	28:10
27th " Pursuit,	" " " " " "	6:05
50th-A " Obs.	Langley Field, Hampton, Va.	No report
50th-B " "	Franklin Park, Sarasota, Florida	24:20
88th " "	Langley Field, Hampton, Va.	No report
90th-A " Sur.	Del Rio, Texas	17:05
90th-B " "	Sanderson, Texas	36:00
91st " "	Rockwell Field, Coronado, Calif.	14:45
94th " Pur.	Kelly Field, San Antonio, Texas	16:50
95th " " "	" " " " " "	15:45
96th " Bomb.	" " " " " "	19:40
104th-A " Sur.	El Paso, Texas	3:30
104th-B " "	Marfa, Texas	:00
135th " Obs.	Post Field, Fort Sill, Okla.	29:00
147th " Pur.	Kelly Field, San Antonio, Texas	20:00
166th " Bomb.	" " " " " "	23:20
258th " HTA	Aberdeen Proving Grds., Aberdeen, Md.	11:33
Air Service Troops	Camp Benning, Ga.	4:45
" " "	Pope Field, Camp Bragg, N.C.	:00
" " "	Godman Field, Camp Knox, Ky.	11:00
HdQRS, Det. 1st) Pursuit Group)	Kelly Field, San Antonio, Texas	:45
TOTAL TIME ..		<u>723:23</u>

TACTICAL OPERATIONS, INSTRUCTION AND MISCELLANEOUS
ACTIVITIES BY FIELDS AND UNITS

BORDER STATIONS

DEL RIO, TEXAS - 90th Aero Squadron, Flight "A"

With 100% of daylight suitable for flying, a total of five (5) flights was made including three (3) special missions and two (2) practice flights.

DOUGLAS, ARIZONA - 12th Aero Squadron, Flight "A"

With 96% of daylight suitable for flying, a total of eight (8) flights was made including six (6) practice flights and two (2) cross country flights.

EL PASO, TEXAS - 104th Aero Squadron, Flight "A"

With 100% of daylight suitable for flying, a total of five (5) flights was made for the purpose of practicing.

FRESNO, CALIFORNIA - 9th Aero Squadron, Flight "A"

No report

LAREDO, TEXAS - 8th Aero Squadron, Flight "B"

No report

MCALLEN, TEXAS - Headquarters and 8th Aero Squadron, Flight "A"

With 100% of daylight suitable for flying, a total of fifteen (15) flights was made including thirteen (13) cross country flights and two (2) special missions.

MARFA, TEXAS - Headquarters, 104th Aero Squadron, Flight "B"

Altho 75% of daylight was suitable for flying, no flights were made due to the absence of the officers of this organization.

MATHER FIELD, SACRAMENTO, CALIFORNIA - 9th Aero Squadron, Flight "B"

With 100% of daylight suitable for flying, a total of seventy-one (71) flights was made.

NOGALES, ARIZONA - Headquarters and 12th Aero Squadron, Flight "B"

With 100% of daylight suitable for flying, a total of twenty-three (23) flights was made including one (1) patrol, 2 flights, to El Paso and return and twenty-one (21) practice flights.

ROCKWELL FIELD, CORONADO, CALIFORNIA - Headquarters and 91st Aero Squadron

With 100% of daylight suitable for flying, a total of fifteen (15) flights was made including two (2) complete border patrol flights, six (6) test flights and several miscellaneous flights.

A successful parachute jump was made by an officer from an altitude of about 2,000 feet.

SANDERSON, TEXAS - 90th Aero Squadron, Flight "B"

With 100% of daylight suitable for flying, a total of twenty (20) flights was made including eighteen (18) special missions and two (2) test flights.

Tactical instruction was carried on as specified.

OTHER STATIONS

ABERDEEN PROVING GROUND, ABERDEEN, MD. - 258th Heavier-than-air Bombardment Sqdrn.

With 85% of daylight suitable for flying, a total of twenty-nine (29) flights was made including two (2) sight test flights, one (1) photographic flight, four (4) meteorological flights, one (1) bombing flight, three (3) cross country flights and eighteen (18) miscellaneous flights.

Instructions were carried on as specified.

BOLLING FIELD, ANACOSTIA, D.C. - 10th & 99th Aero Squadrons

With approximately eight hours, per day, of daylight suitable for flying, a total of ninety-six (96) flights was made including three (3) flights to West Haton, Md., one (1) to Logan Field, Md., one (1) to Mitchel Field, L.I., one (1) to Middletown, Pa., one (1) to Bustleton, Pa. and one (1) to Carlisle, Pa. Flights were also made for radio experimental tests for Bureau of Standards.

Twenty-seven (27) officers from the Office of the Chief of Air Service made flights during the week.

CAMP BENNING, GA.

With 95% of daylight suitable for flying, a total of six (6) flights was made including two (2) cross country flights to Souther Field and return, one (1) practice flight and one (1) demonstration flight.

Demonstration of communications with Field Signal battalion in preparation for demonstration to be made to Staff Class at the Infantry School on July 20th, 1920, was carried on.

Captain Dogan H. Arthur, A.S.A., crashed at Deepstep, Ga., July 10th, 1920, while returning from Columbia, S.C. where he had been working with the 39th Artillery Brigade.

FRANCE FIELD, PANAMA, C.Z. - 3rd Obs. Group, 7th Aero Squadron

No report.

GODMAN FIELD, STITHTON, KY. - Detachment Air Service Troops

With 100% of daylight suitable for flying, a total of twelve (12) flights was made including the flying of two (2) planes to Wilbur Wright Field for radio supplies, and three (3) radio test flights.

KELLY FIELD, SAN ANTONIO, TEXAS

1st BOMBARDMENT GROUP

100% of daylight was suitable for flying during the week.

11th Aero Squadron

A total of twenty-six (26) flights was made including twenty-four (24) practice flights and two (2) cross country flights.

20th Aero Squadron

A total of eighty-seven (87) flights was made for the purpose of practice and dual instruction flights.

96th Aero Squadron

A total of nineteen (19) flights was made including solo flights, reconnaissance flights to Austin, Texas and Laredo, Texas; radio test flights, test flights and cross country flight to Laredo, Texas.

166th Aero Squadron

A total of fifty-five (55) flights was made including practice and cross country flights.

1st PURSUIT GROUP

100% of daylight was suitable for flying during the week.

Headquarters Detachment

A total of two (2) flights was made.

27th Aero Squadron

A total of fourteen (14) flights was made, all within the vicinity of the airdrome.

94th Aero Squadron

A total of fifty-eight (58) flights was made, including practice flights and acrobatics.

95th Aero Squadron

A total of seventeen (17) flights was made, all within the vicinity of the airdrome.

147th Aero Squadron

A total of forty-four (44) flights was made.

LANGLEY FIELD, HAMPTON, VIRGINIA

50th Aero Squadron, Flight "A"

No report.

88th Aero Squadron,

No report.

LUKE FIELD, FORD'S IS., PEARL HARBOR, HAWAII (7/9/20)

2nd Obs. Group - 4th & 6th Observation Squadrons

With 95% of daylight suitable for flying, a total of one hundred seventy-two (172) flights was made including one hundred (100) patrols, thirteen (13) formation flights, six (6) photographic flights, thirty-two transformation flights, one (1) bombing flight and one (1) test flight.

Luke Field put every available plane in duty for the Military Tournament at Kapiolani Park on July 5th. A formation of DH-4's flew at varying altitudes over the Park illustrating bombing formation. While flying over the captive balloon two of the planes dropped out of the formation and dived at the captive balloon, necessitating the hasty hauling down of the balloon, and the escape of the balloon observer by parachute, (a dummy was used). This piece of aerial work simulated an attack on observation balloon by enemy aircraft. Single seated combat flying was exhibited by a couple of officers. A photographic plane was on duty, flying over the park and taking photographs of the assembled crowd.

On Saturday, July 3rd, a formation of DH-4's, an acrobatic plane and two (2) HS2L flying boats went out to meet the fleet of six battle ships carrying the Annapolis Naval cadets.

On Tuesday, July 6th, a few of the officers flew a formation of farewell to Admiral Fletcher who is returning to the States. Radio messages of "Bon Voyage" were sent from one of the planes to Admiral Fletcher. A Curtiss HG plane also flew over the departing ship.

This field has had the pleasure in the past several days of giving aerial flights to a score or more of the visiting midshipmen.

MITCHEL FIELD, MINEOLA, L. I., N. Y.

86% of daylight was suitable for flying during the week.

1st Aero Squadron

A total of forty-five (45) flights was made during the week including twenty-four (24) special missions, eleven (11) practice flights and ten (10) test flights.

5th Aero Squadron

A total of twenty-eight (28) flights was made including twelve (12) special missions, five (5) moving picture missions over Vanderbilt cup yacht races, one (1) Artillery adjustment, one (1) Artillery radio liaison, one (1) aerial gunnery, three (3) test flights, one (1) ferry flight, four (4) practice flights.

POST FIELD, FORT SILL, OKLA. - Headquarters and 135th Aero Squadron

With 100% of daylight suitable for flying, a total of thirty-six (36) flights was made including practical cross country flights for training, visual reconnaissance, radio telephone and bombing.

Artillery Fire with the 1st Field Artillery was carried on.

POPE FIELD, CAMP BRAGG, N.C. - Air Service Detachment

With 50% of daylight suitable for flying, a total of ten (10) practice flights was made.

SARASOTA, (Franklin Park) FLORIDA - 50th Aero Squadron, Flight "B"

With 65% of daylight suitable for flying, a total of fourteen (14) flights was made including twelve (12) practice flights, one (1) test flight and one (1) radio test flight.

Eight (8) shoots were conducted with Fort Dade, Arcadia, Florida.

PHILIPPINE ISLANDS

2nd Aero Squadron, Fort Mills, P.I. (6/12)

With 65% of daylight suitable for flying, a total of forty-two (42) flights was made including four (4) test flights, twenty-seven (27) local visual observation flights, eight (8) instruction flights, one (1) photographic flight and two (2) transportation flights between Manila and Cavite.

3rd Aero Squadron - Camp Stotsenburg, Pampanga, P.I. (6/19)

With 100% of daylight suitable for flying, a total of forty-two (42) flights was made including fourteen (14) flights to Manila.

TRAINING DIVISION

1. Langley Field (Field Officers School)

Captain T. D. Milling, A.S.A., is now in command of the Air Service Field Officers School at Langley Field. The general organization, curriculum and details of the course of instruction are now being worked out at Langley Field. It is expected that the first class will start sometime this Fall, no officer of lower rank than Captain being assigned.

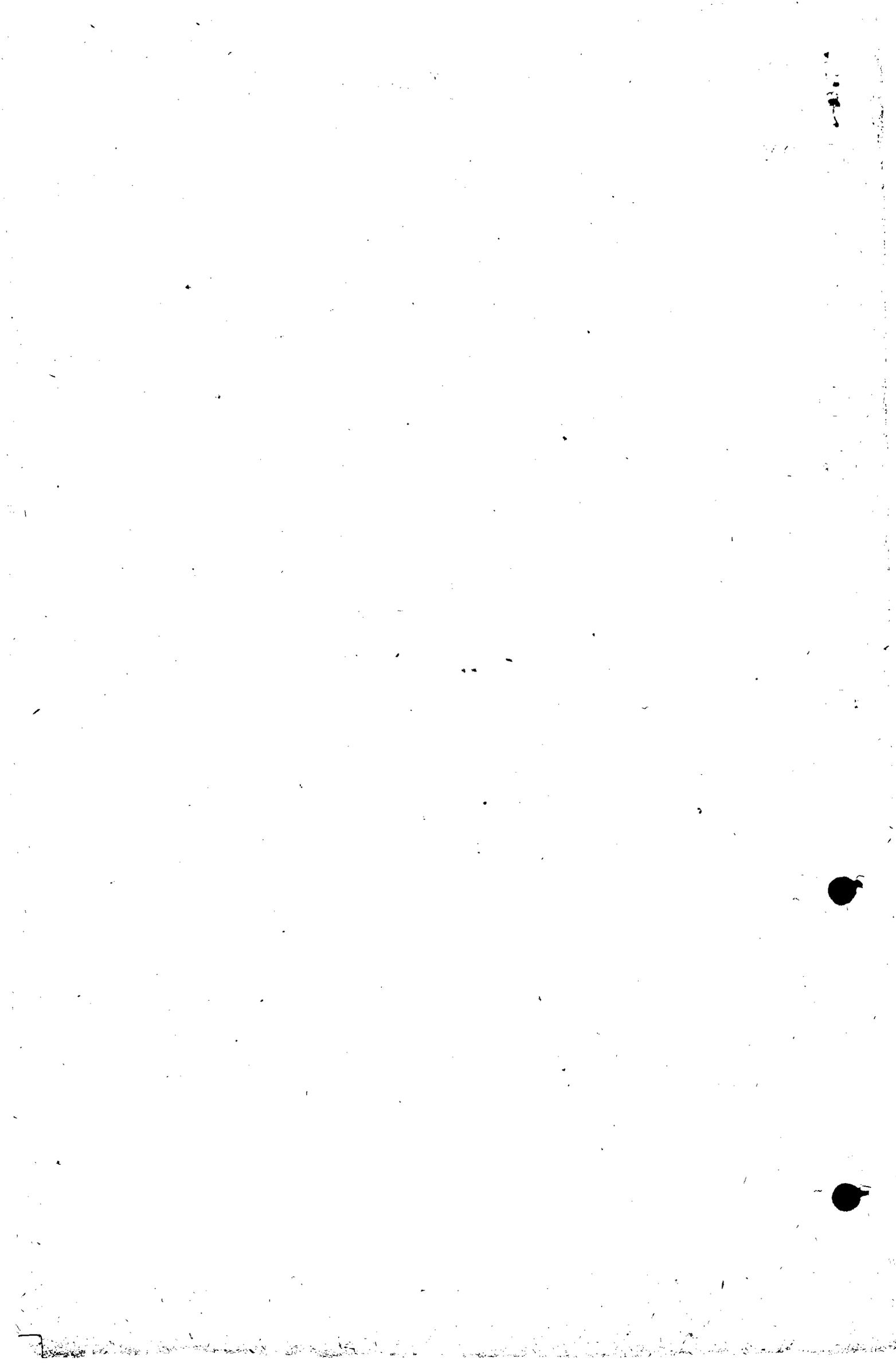
2. Radio.

The 50th Aero Squadron completed its work at Fort Screvens and the results of the radio work with the Coast Artillery were highly satisfactory. The problem was to control the fire of the Artillery guns by observation from an airplane, communication to and from the airplane being maintained by radio. The airplane was never out of communication and very excellent fire was maintained by the Fort over a range up to 14,000 yards. The SCR-73 was used in the plane together with an SCR-59 and a 1/4 k.w. table set was used at the Fort.

A ship at Post Field has been equipped with SCR-59 receiving set for work with Artillery. This ship is now fully equipped for receiving as well as telegraph and telephone transmission. One successful trial flight was made, two-way operation being carried on between the ship and central station as well as a field station.

3. R.O.T.C.

A new function has been added to the work of the Advanced and Tactical Section. This section is now charged with all reserve training, including training of reserve officers, National Guard Air Service Units and preparation of R.O.T.C. curricula and data. This work is at present in embryo stage. Curricula have been prepared for National Guard units and others for R.O.T.C. units are being worked up. It is hoped that several of the latter will be established in some of the leading universities of the country during the coming academic year.



The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE AUGUST 14, 1920.

LONE FLYER TO MAKE FLIGHT OF 2439 MILES

The Chief of Air Service announces that authority has been granted by the War Department to attempt a flight from France Field, Canal Zone, Panama to the United States via Jamaica, during the latter part of September of this year. Lieut. Charles B. Austin, A.S.A. one of the noted American pilots has been selected to make this flight. He will fly a D.H. 4 B airplane and will make the trip alone. This flight has been contemplated for over a year and a careful study has been made of the conditions attending such a flight and it is confidently felt by all that Lieut. Austin will be able to carry it out successfully.

Plans have been drawn up for remodeling the plane which will be used by Lieut. Austin so as to install special gasoline and oil tanks for this trip. The plane when remodeled will have a capacity of two hundred gallons of gasoline which is considered sufficient to reach Jamaica which is the first leg of the journey. The distance between France Field, Panama to Jamaica is 650 miles and it will be necessary for Lieut. Austin to fly directly over the Caribbean Sea with no possible landing place except the water, from the time he takes off until he reaches Jamaica. From there he will fly over the Islands and then over a hundred mile stretch of ocean again to Cuba, landing at Havana. From there he will fly to Florida and thence up the coast to Washington, D.C. his final destination.

The distance between stops is as follows:

France Field to Jamaica.....	650 miles
Jamaica to Havana, Cuba.....	450 miles
Havana, Cuba to Carlstrom Field, Arcadia, Fla.....	250 miles
Carlstrom Field to Souther Field, Americus, Ga.....	380 miles
Souther Field to Fayetteville, North Carolina.....	350 miles
Fayetteville to Langley Field, Hampton, Va.....	200 miles
Langley Field to Washington, D.C.....	<u>159 miles</u>
Total.....	2439 miles

It is hoped to have all plane and test flights completed in time to start the flight not later than the 1st part of September. If it is found impossible because of ungovernable conditions to start by this time it will be necessary to wait until after the hurricane season is over which will be about the latter part of November. However, if the weather in November is unfavorable the flight will not be made until the next rainy season as it is impracticable to attempt a flight of this character in the dry season because of adverse winds.

LANDING FIELDS AND FEDERAL AIR REGULATIONS IMPORTANT TO AMERICA'S FUTURE WELFARE

The future of aeronautics is bound up inseparably with the safety of aeronautics. Manufacturers of airplanes and airplane engines have for years struggled doggedly to make flying safe yet despite the tremendous progress they have made they have not entirely succeeded. In a recent interview with Mr. Frederick B. Rentschler, General Manager of the Wright Aeronautical Corporation, the subject of safe flying was broached and he brought out a number of clearly defined facts all of which were heartily agreed upon. The reason why manufacturers have not succeeded in making flying safe despite the progress made is because of the fact that it does not lie within the power of the manufacturer to make flying absolutely safe. He stated, "There is another element in the solution of the problem and so far this element has been as backward as the manufacturers have been progressive".

That element is the promotion of landing fields, the assurance of the competence of pilots and the institution of proper inspection and regulation of aircraft in commercial or private use.

It is no more within the power of the aircraft manufacturer to institute a national system of good landing fields than it was within the power of the automobile manufacturer to build a national system of good roads. It is no more within their power to control those who fly planes than it was in the power of the early locomotive builders to compel the railroads to employ competent engineers. Neither is it within their power to insure the proper inspection and regulation of aircraft than it was within the power of shipbuilders to establish the present system of marine inspection and regulation of steamships.

After a careful study of the causes of the comparatively few, but nevertheless deplorable casualties in aviation it can be said without hesitation that these three things would have reduced accidents to a negligible quantity, to a point where they would appear startlingly low in comparison with automobile fatalities. For example the item of pedestrians killed by automobiles in New York state for the month of June amounts to 184. The reason why airplane accidents cause more stir is that automobile accidents are too common to have much news value while airplane accidents are considered much more interesting and in most cases are extraordinary and accordingly are "played up" in the newspapers.

The matter is pressing. Already in Great Britain and other European Countries landing fields have been established and laws of the air formulated. America taught Europe how to fly, but Europe is teaching America how to utilize flying. In this country some progressive communities have founded landing fields and some cities have adopted airplane laws. The manufacturers are always glad to hear news of the establishment of new landing fields whether they are established by cities, states or private individuals but all face the danger of a heterogeneous mass of local ordinances which will hinder rather than help aviation. Only Federal laws controlling railroads and steamships can prevent many conflicting local ordinances. Cities and towns every where are demanding or already formulating air

of public affairs and the public generally still think of aviation as a the future or an instrument of war. This is a serious mistake. Aviation is already here in every day life. Little signs of this are daily bobbing up in print. The recent college meet, the carrying of two thousand pounds of grape fruit 1500 miles up the Atlantic coast from Miami to New York by flying boats because of the freight congestion, the commuting of ten prominent New York bankers to their homes at Southampton, Long Island by aerial cruiser, the successful air mail routes, the start of the New York to Nome, Alaska, flight by the Air Service-- all these things show plainly that practical aviation is here.

Although aviation is here, it is here in a very modest way in comparison with its undoubted future. The bringing closer of that future of vast importance is a matter in which our government must cooperate. Once the people realize that flying is actually here for "keeps" there is but little doubt that we will secure our needed regulations, licenses and landing fields.

Cities, too, will realize that air harbors are as important as seaports, and will make haste to establish them lest they be passed by by the great aerial freighters and liners in favor of more progressive and more hospitable municipalities.

That is, briefly, the peace angle of the aerial proposition. As far as war is concerned a close-linked union between plane and motor manufacturers and the government is even more necessary. It is vastly more economical to establish landing fields and formulate regulations now than to endeavor to raise an industry over night by the brute power of vast sums of money poured out on the eve or after the outbreak of war.

Concerning this Mr. Rentschler said, "I can speak authoritatively from a production point of view. We had to start at the very bottom in April, 1917 and although we developed production from four motors monthly in 1917 to 1000 motors monthly sixteen months later, that period of desperate effort to get the factory actually running might be the period in which a wiser enemy who had fostered flying could strike and win. Among the difficulties we had to overcome was to get a foundry running for aluminum castings and parts, and to train 8,500 men and women, not twenty of whom had even touched an aeronautical engine, to make airplane motors and make them quickly and well. Although we are proud of that production record we do not want to be compelled to go through it again in the next war.

Let us, if we are ever unfortunate enough to face an enemy in the future, do so with a highly productive, scientific, 100 % American aviation industry in full blast capable of producing both airplanes, engines and airships, accessories etc., at the rate of production automobiles are made today. We can only be thus prepared by keeping abreast of the times in the field of commercial flying".

AERO CLUB OF AMERICA TO CONDUCT TRANSCONTINENTAL FLIGHT

The transcontinental flight National Aeroplane Race for the Pulitzer Trophy and other prizes to be announced later will start from Hazelhurst Field, Mineola, Long Island, New York and fly to Varney Field, San Francisco, California.

The aviator wins the trophy who during the month of November 1920 makes the best flying time between the two points mentioned, flying over any route selected by him but following as far as practicable the route of the United States Aerial Mail Service.

He may select his own date and time of flight between points provided the Contest Committee are advised in season to arrange with their referees to note the time of starting and landing.

Time will be taken when the aeroplane starts and when it stops on the designated field of landing.

The contest as far as it will be possible to make it will be in the nature of a touring race in which any qualified aviator may participate thereby minimizing accidents and yet ascertaining the fastest flying time that can be made in a flight across the continent over a route chosen by the aviator and under the best possible conditions existing with a view of advancing aviation in a practicable way and one that many amateurs and professionals may enjoy in the future as is now done in sane, sensible automobiling in all parts of the world.

Conditions arising not covered by the above suggestions will come under the general rules of the Club applicable to aeroplane contests.

The points involved in the above have been under consideration by the officials connected with the First Aerial Derby Around the World as practicable in connection with that event.

Further particulars can be secured from the officials of the Aero Club of America.

THE FIRST AERIAL DERBY AROUND THE WORLD

Foreword: The Special Commission appointed by the Aero Club of America and the Aerial League of America made a visit to many countries which included a circling of the globe and has completed an organization making possible the conducting of the First Aerial Derby Around the World.

To ascertain the exact conditions existing a test flight around the world is contemplated. A Handley Page Aeroplane, type W.8, will be used, which is an improvement on the class of aeroplanes now used in the regular service between London and Paris and London and other points in Europe, this aeroplane to be piloted by two of America's well known and most experienced aviators.

The test flight will start from London, the aeroplane moving to the east. Aerodromes and landing fields are now in existence over the entire route from London to Tokio and from Seattle to New York with suitable other landing conditions at points where stops may be advisable or made necessary. Complete details of this test flight including the route, distances, etc., and the cost of transportation is in course of preparation.

The capacity of the aeroplane to be used on this test flight is ten passengers and it is proposed to divide the expense of the trip equally among the ten who may care to participate. Should the number of passengers making the trip be less than ten the expense to each passenger would increase in proportion.

Tentative Route Around the World

New York to Seattle	2929 miles.	
To Yokahama via Aleutian Islands	5418	" Landing places every 150 miles.
Shanghai	1266	"
Bangkok Siam	2095	"
Karachi India via Rangoon, Calcutta and Delhi	2563	"
Bagdad	1532	"
Rome via Greece	1876	"
Ireland (coast) via Paris and London	1528	"
New Foundland	1875	"
New York	1125	" Total -- 22,207 miles.

The route via the Azores, Maderia, Gibraltar, Cairo to Bagdad reduces the Atlantic Ocean hop from 1875 to 1050 miles, and does not increase the distance. It also avoids the congested points to Great Britain, France, Italy and Greece.

ENTRIES FOR THE ELIMINATION RACE

Complete list of entries of the National Balloon Race at Indianapolis, Indiana September 11, 1920 which is the eliminating race for the International Balloon Race at Indianapolis October 23rd is as follows:

1. Air Service United States Army.
2. Three Balloon officers participating.
3. Captain Dale Mabry, 1st Lieut. Byron T. Burt, 1st Lieut. Robert S. Olmsted, 1st Lieut. George W. McEntire, 1st Lieut. Richard E. Thompson, 2nd Lieut. Harold E. Weeks.
4. The United States Navy Lieut. Raffe Emerson, Aide to be announced.
5. A. Leo Stevens U.S. Army Balloon School, Fort Omaha.
6. Ralph H. Upson, Akron, Ohio (Now holder International Trophy).
7. H. E. Honeywell, Clayton, Missouri.
8. William A. Assman (Representing city of Little Rock, Arkansas)
9. J.S. McKibben, St. Louis, Missouri.
10. E.S. Cole, St. Louis, Missouri.
11. Roy F. Donaldson, Springfield, Missouri.
12. Arthur C. Hoskins, St. Louis, Missouri.
13. Captain J. M. O'Reilly, St. Louis, Missouri.
14. Bernard Von Hoffman, St. Louis, Missouri.
15. Warren Rasor, Brookville, Ohio.

In the International Race there will be eleven entries, three from the United States, three from Italy, three from France, one from Great Britain and one from Belgium.

COMPARISON OF FIRST COST BETWEEN AIRSHIP AND GROUND PATROL

With reference to first cost, an airship of the "C" type capable of going 600 miles per day at a cruising speed of about 60 miles per hour for a ten hour day, but which can really cruise twenty-four hours per day at varying speed, costs \$65,000. Its hangar costs \$75,000, total \$140,000. It can cover a sector 200 miles long twice a day, stopping or slowing down if need be. It can carry photographic equipment, wireless and visual signalling gear and powerful telescopes. The observer can see twenty or more miles each side of the route and can locate all objects on large maps. It can report instantly all it sees and can work day and night. To do this it needs only one station for its men.

Cavalry or infantry rendering a similar observation patrol would be obliged to maintain several small stations, probably at intervals of 25 miles or eight such stations per 200 miles. Each horse can be counted upon to go out about 12½ miles and return. Each station must furnish a patrol to go out each day 12½ miles. A patrol should consist at the very least of five men, therefore there should be ten men per relief per twenty-five miles and there should be three reliefs or thirty men per twenty-five miles, to render observation patrol alone night and day, 8 x 30 = 240 men. A horse with its equipment will cost about \$300. Cost for horses and equipment for 200 miles is therefore about \$62,000, for the most mediocre service without aerial photography or wireless to help. A patrol must be backed up by large supports, reserves, and special troops such as Quartermaster, Signal Corps, etc. The number of mounted troops per 200 miles for observation alone will probably run up into thousands and they cannot deliver a class of observation that the airship can. It is safe to say that a thousand men will be needed with a great deal of paraphernalia to even approximate what one airship with a shed detail of 100 men can do, and at \$300 per man, the cost for horses and gear will run up to \$300,000.

It is not proper to claim that the airship can replace ground troops. It can cause a reduction in ground troops and allow them to be kept in larger commands in a better state of health, discipline and contentment. The moral effect of the airship on cattle thieves and marauders will probably be the same as it was on the submarine. The airship can easily observe the progress of dust clouds on the desert, camp fires at night, etc., and after scrutinizing, can call the attention of others to them. This will save enormous mileage for the ground troops and will compel marauders to keep constantly in hiding, thus reducing their activities.

ALASKAN FLYING EXPEDITION

The Alaskan Flying Expedition on arrival in Saskatoon, Saskatchewan, Canada, was accorded a wonderful reception by the people of the city of Saskatoon and the entire surrounding country. Saskatoon was the first stop in Canada of the Alaskan Flying Expedition. Intensive interest in the Alaskan Flying Expedition and aviation in general was exhibited by the people of this section, showing that our Canadian neighbors are fully alive to the possibilities and future of aviation. Every assistance possible has been extended to the United States Officials in arranging for this flight, and the spirit of the reception given the Alaskan Flying Expedition, only proves the sincere friendship of our friends across the border.

The flight is now approaching the most dangerous and difficult part of the flight. The country from Jasper, Alberta to Nome, Alaska is a vast area little known to man, is a country of towering and jagged mountain peaks, covered with snow, and with rushing streams at their base. A flight over places such as are involved in this part of the Alaskan Flight will try the heart of the bravest men. Throughout this part of the flight the pilots are compelled in case of necessity to make landings on fields barely large enough for a plane to land on, attended with great risks, which only can be overcome by the steady nerve of the pilot who will be compelled to use all of his flying knowledge to avert an accident and perhaps ensuing injuries. Many of the supplies in this region have been transported by boat.

On August 3 - 3 planes reached Prince George. Capt. Street after taking off at Jasper found his engine on fire, and side-slipped back into the field.

LANDS SAFELY WITH BROKEN LANDING GEAR

During the week Lieut. Haizlip of the 8th Aero Squadron, McAllen, Texas again demonstrated that he is probably one of the cleverest pilots in the service by landing on the home airdrome with a broken wheel without damage to himself, his observer or his plane. At one thirty P.M. telephonic word was received from Kelly Field that Lieutenants Haizlip and Hickey had just left that station and had knocked off the right wheel and part of landing gear in taking off and were unaware of the fact that their landing gear was damaged. Preparations were immediately made at this station to receive them. Rockets and ground lights were prepared to attract their attention and a signalman placed at an advantageous position to send D.R. Signals. A mechanic was stationed at each corner of the field with a landing wheel. An hour and thirty minutes later as the plane came in sight and was headed for a landing, rockets were set off and the red ground flares lighted, attracting the attention of the pilot and observer. The pilot then climbed to a few hundred feet and the observer picked up the D.R. Signals. Seeing the mechanics with wheels, they immediately suspected the trouble and Lieut. Hickey climbed out first on one wing and then the other, to ascertain the exact amount of the damage. Reporting back to Lieut. Haizlip that the right wheel although not entirely off was bent almost at right angles to its normal position. Lieut. Haizlip then brought the plane for a slow tail low landing settling gently on the sound wheel and rolling to a stop without further damage. A new axle was installed and the plane was again in commission. This is Lieut. Haizlip's second one wheel landing in the past two weeks and was one of the cleverest pieces of work seen on the McAllen Field.

Not to be out done by Lieut. Haizlip, Captain Kenney, the Commanding Officer made a safe landing on the home landing on the following morning with his landing gear completely broken off. On taking off for a test flight, the distributor arm on the right distributor became disconnected causing such a great loss of power that the plane crashed into the roof of the Observation Building completely wiping out the landing gear and most of the roof. Captain Kenney was able to hold the plane in the air and the D.R. Signals again went to work which were readily picked up by his observer, Lieut. Rosenham Beam. It was suggested by D.R. Signals that they land in a nearby plain but as the motor was fast failing after talking it over with his observer, Captain Kenney decided to shoot for it on the airdrome. He maneuvered his plane magnificently, killing his speed to nearly thirty miles an hour and keeping the nose well up with the tail skid dragging and a slight skid to clear wreckage away from the broken landing gear. Captain Kenney landed his plane so gently that he and his observer received nothing more than a slight shock from the impact and were standing clear of the wreck before the ambulance arrived. Captain Kenney and Lieut. Haizlip have demonstrated that it can be done but it is hoped that gearless landings will not become a fad with the other pilots as it is entirely too great a strain on the spectators.

EXPERIMENT IN TELEPHONING VIA CABLE WIRE PROVES INTERESTING

A very interesting experiment is being conducted at the Army Balloon School, Fort Omaha, Nebraska with a "Single Conductor Loud Talking Balloon Telephone". This telephone has only a single conductor. It is being designed in the experimental laboratory at Fort Omaha for balloon use and will eliminate all wires from the balloon to the ground including the reel cart on the ground. The single conductor, being experimented with is the balloon cable itself.

The set is made to connect on each end of the balloon cable and connections provided for the chart room or for any standard telephone system.

Very satisfactory conversations have been carried on at an altitude of 300 meters. The voice from the ground can be easily understood at a distance of from four to five feet from a single receiver.

The telephone does not involve any of the transmitting principles of Radio Telegraphy and cannot be heard with wireless receiving apparatus. The single conductor telephone is being perfected and offers a wide field for experimental work and a great many possibilities.

FLYING TIME INCREASING AT MARCH FIELD, CALIFORNIA

Three hundred and fifty-four flights were made at the Pilots' School, March Field, Riverside, California during the past week. Total flying hours consumed- 351 hours 35 minutes. Preliminary instruction of cadets required 197 hours and 20 minutes; advance instruction, 60 hours forest patrol 56 hours and 10 minutes. The remainder of the total flying time was consumed in miscellaneous and test flights.

New Hart propellers to be used at March Field.

Mr. Seth Hart and Mr. Robert Eustis, both of Los Angeles, reported here under instructions from the Director of Air Service, in connection with the installation of at least five propellers of the adjustable pitch type on at least five of the Curtiss Hispano training planes. Mr. Hart came direct from the Air Service Experimental Station at McCook Field, Dayton, Ohio, where the propeller was first introduced.

According to Mr. Hart it is proposed to equip all training planes at this field with the adjustable pitch type propeller. One has already arrived and will be tested out the first of next week. Some slight changes in the radiators of the planes are necessary before the propeller can be used.

Experiments have already proven this type of propeller superior in many instances to the fixed pitch type, better plane performance having been acquired with less strain on the motor. Take-off's and landings are made with less effort. Men of March Field are interested and are eagerly awaiting the operation of the propeller in California atmosphere.

March Field Men help fight Fires.

Numerous valley and foothill fires in the community during the past week have occasioned the departure from time to time of about 25 men, selected as fire fighters, who returned to camp Thursday evening after successfully extinguishing the various conflagrations. Help was first sent to the Palm Canyon district where foothill fires threatened valuable property. Later a contingent was sent to the Moreno grain fields where, after desperate efforts, hundreds of acres of standing grain were saved by use of back fires.

Other fires were raging in the Diamond Valley and in scattered sections of the Los Angeles reserve. A heavy shower in the vicinity of Moreno, Banning, Beaumont, Hemet and Idyllwild, at noon Thursday, completely extinguished the small and scattered fires. O. K. Kelsey, country fire warden, as well as residents of the numerous communities, were loud in their praise of the work performed by the March Field men.

FIRST AERIAL POLICEMAN KILLED IN CRASH

"Swede" Meyerhoffer, well known aviator of Riverside, California and community was instantly killed last Wednesday when his plane crashed near Redding, California. He at one time owned and operated a flying school near Riverside, and enjoyed the distinction of having been the first aerial policeman appointed in the United States. This "job" was conferred upon him at Venice, at which time he was operating a passenger plane carrying business at the beach city.

DH-4 FALLS INTO SPIN AND KILLS OFFICER AND ENLISTED MAN

Four DH-4 planes left France Field, Canal Zone, Monday July 4th for a formation flight over Cristobal and Colon in connection with the Fourth of July celebration. Lieutenant Elmer F. Degon, A. S. A., who was piloting one of the planes, with Sergeant Theophile Doucett, 7th Aero Squadron as a passenger, fell into a spin at about 700 feet altitude and crashed into the current in front of the hangars, resulting in Lieut. Degon's instant death, while Sergeant Doucett died from internal injuries five hours later. The plane was completely demolished.

Lieut. Degon was born August 26, 1894, in Milone, New York, where he attended the grammar and high schools. When the President sent out the call for men Lieut. Degon enlisted at Boston as a private first class for the Air Service and was sent to the Georgia Technical School for ground instructions, being commissioned a 2nd Lieutenant, A. S., on March 25, 1918. He received his flying training at Carruthers Field, Fort Worth, Texas, and was rated as an R. M. A. December 7, 1918. From here to Washington, D. C. where he served in the Office of the Director of Air Service in connection with statistics for Appropriations fiscal year 1920.

In January, 1919, Lieut. Degon was ordered to France Field, Canal Zone, since which time he had held the position of Supply and Disbursing Officer. He was exceptionally conscientious in his duties, never hesitating to do more than his share. He made friends wherever he went, and his untimely death leaves a gap in the little France Field family which can never be filled.

Lieut. Degon had but recently returned from a leave to the States during which time he buried his father. His own funeral was held on Friday July 9th, at Mount Hope, with a formation of three planes taking part in the ceremonies. He leaves a widow Mrs. Justine Degon, and a 20 months old baby boy, whose home is in Bridgeport, Conn. His mother, brothers and sisters also survive him.

Sergeant Doucett was born March 2, 1892, at Francetown, New Hampshire. He enlisted in the 101st C. A. C. March 11, 1913 - discharged February 11, 1916; re-enlisted in the Q. M. C. February 12, 1916 - discharged August 18, 1919; re-enlisted in Infantry for A. S. at Fort Amador, Canal Zone, August 19, 1919.

His only surviving relative is a sister living at 21 Persons Ave., Nashua, New Hampshire. Sergeant Doucett was a Crew Chief and on flying duty as such. He was extremely well liked by the officers, and an idol among his associates. His body will be sent to the states on the next transport.

EXTRACTS FROM THE BERMUDA ROYAL GAZETTE June 19, 1920

CONGRESS HEARS OF BERMUDA'S AIRPLANE POLICY

Aero Marine Company Official tells
Committee his concern was prohibited
from establishing terminals here.

A Washington dispatch in the New York Times of May 29th, reports a hearing before the Ways and Means Committee of Congress on the bill to prevent what is termed "dumping" of foreign airplanes on the American market.

In the course of the hearing Mr. Charles F. Reddin, of the Aero Marine Company of New Jersey describing his company's efforts to develop the commercial flying boat business in the Bermudas,

"We were prohibited by the Bermudian Parliament from establishing terminals there", he said, "and we learned that this prohibition was inspired in England".

This is the company which was represented here by Mr. Paul Haaren whose petition was refused by our Bermuda Legislature.

AMERICAN AIRMEN IN BERMUDA.

The Bermuda & West Atlantic Aviation Co. Ltd.,
Victoria Block (3rd Floor)
Front Street
Hamilton, Bermuda.

June 10th, 1920.

To the Editor of the Royal Gazette.

Dear Sir:-

With reference to the Article in your issue of June 10th headed "Congress Hears of Bermuda's Airplane Policy". We shall be much obliged if you will give us this opportunity of pointing out to the Public of Bermuda and America, that the policy of our Company, is to work in co-operation with our late Ally, America, and especially with the American Aviators with whom we worked so successfully in the War.

Mr. Charles F. Reddin, of the Aeromarine Company is reported to have stated to the Committee of Ways and Means in America that, "We were prohibited by the Bermudian Parliament from establishing terminals there", and further, "We learned that this prohibition was inspired in England". We presume that this statement was based on the refusal by the House to accept Mr. Paul Haaren's Petition. We have always understood that the House refused Mr. Haaren's Petition as our own Petition was already before them, and our Bill was held up so that it could be re-drafted on lines that would not be objectionable to our neighbor America.

We have always been of the opinion that one of the most popular air routes will be that between New York and Bermuda. With this end in view we have established ourselves here, and will welcome co-operation with any American firm, especially the Aeromarine Company. The idea being that we should run the Bermuda base, being a British Company in a British Colony, while the Aeromarine or any other American Company will run the American base.

Aviation being at the present in its infancy, can only advance by the mutual co-operation of all those interested in this coming industry. We claim that by establishing ourselves here that we will encourage American Aviators to fly to Bermuda, the moment it is a commercial possibility to do so.

* * * * *

Yours faithfully,

The Bermuda & West Atlantic Aviation Co., Ltd.

H. HEMMING, MANAGING DIRECTOR.

COLONEL HARTNEY CRASHES A J.L. -6 ✓

On August 3rd a dispatch was received from the Associated Press stating that Lieut. Colonel Harold E. Hartney piloting a J.L. -6 all metal airplane across the country to March Field, California crashed a short distance west of Omaha, Nebraska.

From the meager information available it seems that Colonel Hartney took off from a small field. Due to the slowness with which the J.L. takes off he could not zoom up high enough to clear a house directly ahead of him with the result that he crashed head on into it.

The plane is a passenger type and was carrying three passengers: Captain Eddie Rickenbacker, Mr. Ernest Buehl, and Mr. T. J. O'Brien. No one was injured in the crash.

HAY CROP AT CHANUTE FIELD NETS PROFIT

The harvesting of the hay crop at Chanute Field, Illinois was completed during the present week. Forty-two car loads of hay were harvested and shipped to Camp Grant, Illinois, for the use of the mounted service troops at that station. These forty-two cars contained five hundred and one tons of hay of excellent quality, which at the present market value of \$35. per ton is worth \$17,535. The cost of harvesting this hay was \$6,513 making a net profit for the government on the hay crop at this station of \$11,022. Plans are being prepared for leveling and re-seeding the south half of the field, during the coming year. These plans include the planting of oats or wheat with the first season's growth of timothy and clover. It is believed that by this method, the surface of the flying field can be leveled and greatly improved, not only without cost to the Government but at a substantial profit.

OFFICERS FROM CAMP PERRY VISIT SELFRIDGE FIELD

On Tuesday Captain William C. Ocker, accompanied by Captain Walter Lawson and Second Lieutenants L.D. Bradshaw and J.P. Rouillot, landed at Selfridge Field, Mount Clemens, Mich. in two De Haviland 4 B's. The flight was made from Camp Perry, Ohio where Captain Ocker is in charge of the aerial work in connection with the National Rifle Competition, which is to be held at that camp next month. Purpose of the trip was to obtain needed equipment such as tow targets, etc., and also to have minor repairs and adjustments made on the planes, which work could not be accomplished with the facilities afforded at Camp Perry. The return trip was made after a two day's stay at Selfridge Field.

LIEUT. BROWNE AND SGT. BURLERSON HAVE FATAL ACCIDENT

It is regretted to announce that Lieut. Rolla Browne and Sergeant Clarence E. Burler son were instantly killed in a crash at the municipal flying field at Oklahoma City, Oklahoma. Lieut. Browne was piloting a new DH-4 B plane on a week end cross country trip and at the time of the accident was returning to his proper station, Post Field, Fort Sill, Oklahoma.

From the meager information received by this office it seems that in taking off his motor went dead causing his plane to fall into a spin. Lieut. Browne was one of the "Old guards" having been stationed at Fort Sill since October 1918, during which time he held many important and responsible offices.

Sergeant Burler son only recently returned from Fort Leavenworth, Kansas with Flight "A" of the 135th Observation Squadron. While at Fort Leavenworth he contributed in a large measure towards helping to make the expedition of Flight "A", 135th Observation Squadron a success.

At Fort Sill he was crew chief of the line and his cheerful attitude and conscientious attention to duty made him one of the most popular and best liked non commissioned officers at Post Field.

PART PLAYED BY THE FREE BALLOON IN MODERN AERONAUTICS

Sometime ago the Balloon and Airship Division ordered about thirty-six free balloons to be made out of surplus kite balloon fabric. This may appear a queer thing to do, with the war over. The question may be asked why this expenditure for these obsolete spherical drifters.

There is no more apology for this step than there is for the Navy when it orders small sail boats to train Annapolis cadets. The free balloon is to the Air Service what the sail boat is to the seafaring. With it the airman can put himself at the mercy of the forces of nature and then extricate himself and get back safely. In no other way can a man more quickly grasp the true meaning and possibilities of meteorological phenomena.

A slight fall of temperature, a warm gust of wind, the drifting of a cloud over the sun, the rifting of a fog bank may mean death or great hardship unless he does the right thing. Pendant beneath this buoyant orb, he is wafted through the realms of fleeting visions to a final safe landing near the utilities and comforts of civilization, to fall in some lone place from which he can extricate himself only by superhuman effort, to fall to death after a period of unconsciousness and chill in the great altocirrus heights, to be left broken and bleeding after being dragged in case he fails to land properly in a wind storm or to be drowned in case his course takes him over some great body of water and then his balloon lets him down.

What better expedient can then be devised to inspire profound research of meteorology, with ultimate true knowledge of the phenomenal of the air?

In our generation we have seen fit to invade the heights and make them the arena of our combats, our routes of communication and our paths of pleasure. So too, in some past dim, distant age, did men first essay to use the ocean. Even in this day with all our accomplishments in engineering, great ships are lost because the masters and crews in times of mechanical failure cannot hoist sails and ride to safety using the very winds, that would destroy them. Still in this day are ignorant adventurers on the deep drifted to death along the shores.

Many a stately ship is stranded and damaged because the powers of even gentle winds are not known to masters training to trust in artificial power alone.

If the airship is to be a success, it will be because those who pilot it know the powers and characteristics of the wind and the meaning of the symptoms of storms. Landings in gales must be made at times. The airship cannot play the part of a pampered beauty who goes out only on calm and sunny days.

The master pilot, by various expedients, can find the direction and speed of wind strata, using this knowledge, can know when to seek safety before his fuel gives out. He can evade or overcome storms. He can effect economies of management or give greater pleasure to the multitudes who from now on will venture up into the blue arch of heaven to satisfy the yearning of their childhood days to be among the clouds and see what it all looks like.

Thousands of people line the shores of New York Bay every few years to see the sailing yacht races. They revive this old sport, why? To see what nation can build most cannily and handle most skilfully the forces of the surface breezes.

How many people watch the skies to sight those brave adventurous souls who leaving all behind, drift on in sunshine, in cloud, in darkness and in profound silence through the remote heavens to distant landings when the skies spurn them.

Which is the greater adventure, to take a horse and a gun off on the plains, to take a sailboat with supplies and compass out onto the blue reaches of the ocean, or to take a sphere of gas and barely enough food to sustain existence for the period of flight and then start off to match your wits and endurance against every peril that nature can provide.

Which of these sports will develop the true air man, the true celestial navigator? Ask yourself these questions and you will know why the Air Service wants free balloons. They are wanted to give proper elemental training to a profession too prone to trust to artificial means alone for gaining distance, too prone to seek a few prepared landing places at the end of flights and too prone to ignore those great economies in power the winds of heaven will provide.

They are wanted to develop the indescribable and profound power of discernment and the type of will and courage needed if we are to be longer rated as a first class power of the world.

THE FIRST ARTILLERY FIRE ADJUSTMENT BY AIRPLANE

In 1911 while Lieutenant Colonel John Ruckman, C.A.C. was in command of the Coast Defenses of Manila Bay, the question of firing at land targets on the heavily wooded mainland and on the distant beaches came up. Lieutenant Colonel Ruckman who was ultra progressive in all matters pertaining to Artillery Fire control suggested the use of the camera from an airplane to locate the target and to catch the bursts.

At about this time, the Signal Corps was starting a small flying school at Manila. In 1912, Lieutenant H. A. Dargue, who at that time was a Coast Artillery Officer, volunteered to take flying lessons, and in due season brought a Wright hydroplane to Corregidor Island where he established a hangar and made frequent flights. He quickly demonstrated the futility of trying to hide submarine mine fields, often bringing in very accurate reports of the number and exact location of the mines.

At about the time the plane arrived, operations were under way to fire at certain earth work created on a tall hill in the forests near Marivales Mountain. Lieutenant Dargue had acquired some skill in using a rather ordinary camera in a seaplane. He would drop his controls and quickly point and snap his camera, then resume the controls. He made many interesting pictures of the neighborhood. In 1912-13, he reported on the shots fired at Marivales redoubt and at the shore targets. Two photographs of what were probably the first Artillery reglages by airplane were taken by Lieut. Dargue.

Many of the photographs taken were of a highly confidential nature. They had great bearing on the principles of camouflage which was in use there at the time. These photographs bore out the theories of Lieutenant Colonel Ruckman on the detection of targets by aerial photography.

The Air Service should know that to this progressive Artilleryman, and the daring and patience of Lieutenant Dargue, we are indebted for the first practical use of the art in artillery fire control.

THE MERCURY AVIATION COMPANY

The Mercury Aviation Company of Hollywood, California has been organized for nearly two years and is operating lines to various points in California from Los Angeles. This company has been able to demonstrate that commercial aviation is a paying proposition and is at present adding on several all metal planes. A service will be established shortly between Los Angeles and San Diego running twice daily. Outlying points have been brought into much closer touch with Los Angeles in this way.

NEWS FROM THE 3rd AERO SQUADRON, PHILIPPINE ISLANDS

The Third Aero Squadron baseball team is putting up a fight for island championship. The winner of the Department Championship each year makes a three month's tour of China and Japan, so the boys are going to make a hard fight for the championship.

The Squadron, however, is badly handicapped since it has only 132 men to choose from, while all of the other teams in the fight represent regiments and have a field of over 1,000 men from which to select a nine. The Third Squadron is still further handicapped by the absence from the game for the next three months of Corporal Henry J. Ritter, Captain of the team and second baseman. Corporal Ritter got his right arm in the way of a De Haviland propeller a couple of weeks ago and the MD's report that it will be at least two months before his right arm will again be good for baseball.

Despite the mid summer heat in the islands, strenuous athletic activities are breaking the routine in all of the posts of the Department. The Camp Stotsenburg Field meet will be on next Wednesday. The Third Aero Squadron will compete with the Ninth Cavalry and the First Philippine Field Artillery in all events.

In practice for the meet the Air Service personnel has made an excellent showing and the team is expecting to carry off honors next Wednesday.

NEWS FROM THE 2nd AERO SQUADRON, PHILIPPINE ISLANDS

Wireless Telephone

Wireless telephone is being experimented with on Corregidor using the Signal Corps Type 67 and 67-A instruments which are the latest models of that size. At present wireless communication is maintained between the Balloon Companies and the Second Aero Squadron. The voice comes in very plain and loud. A special counterpoise arrangement is used and the messages are transmitted on a wave length that does not interfere with other stations. With an amplifier and special circuit it is possible to cover quite a distance. Experiments will be carried on to establish communication across Manila Bay by wireless telephone with the Second Aero and the Balloon Companies at Fort Mills and as conditions seem favorable it is hoped that this will be accomplished in the near future.

Great interest is being shown in the proposed installations of an Air Service control Station, which will have a range of communication of over 500 miles. This will mean complete liaison between the home station and any plane that may be out on a mission. The radius of action of an airplane will never be too great to enable it to receive from the Fort Mills Aero Station. Several small out-lying stations are contemplated that will enable a message sent from the low powered sets in planes to be relayed back to the home station.

Radio telephone sets are now being installed in the H.S. 2 L flying boats which will not only work with the home and sub-stations, but with other stations installed on the boats of the water transportation.

Photographic

Work on the Coast line map of Mariveles was continued this week as far as Bagac. Due to the present shortage of planes this work is progressing rather slowly. This map is being made for use in commercial work by the proposed companies which are to operate between Manila and the China Coast. The Photographic Department has perhaps the brightest future of all departments. A great deal of work in the form of mosaics has been laid out, which includes a map of Mariveles sector to be used in connection with Mobile Artillery.

Maintenance

The Maintenance Department has been taken over by Lieut. Lee, who has started the long hoped for job of uncrating and moving the "H" boats from the mine dock yard to the new station. This is a start in the activities at the new station. The operation of handling these hulls is requiring a great deal of work, in that they must be loaded on a barge, towed about eight miles and unloaded. Derricks not being available all work must be done by hand, so gang labor prevails.

Many of the crates were damaged in transportation from the United States, which will result in a loss of several planes.

Boats

Lieut. Ellicott has the whole fleet in fine shape. The "Geary" is busy every day moving sand and rock, and even served as a fire fighter when a barge of ammunition decided that it would run amuck and start a revolution of its own. However like all real revolutionists it sank. The transport stripes on the ship's funnel have been removed and a neat Air Service insignia substituted. On each side of the bow a neat insignia has been painted. She is being fitted for inter-island trips, in the capacity of a tender.

Personal

Lieut. Colonel Canady was a visitor on Wednesday. Colonel Canady is the Department Air Service Officer.

Colonel Davis made several trips to Manila and return by air this week. Colonel Davis is commanding officer, Coast Defenses of Manila and Subic Bays.

Lieut. Brookley sailed on the "Merritt" as assistant casual officer. The "Merritt" carries some forty Air Service enlisted men on a sight seeing tour thru China.

Engineering Department ✓

Hispano Suiza motors are being used on the N9H seaplanes at the Air Service Station in the Philippine Islands. It has been found that the valves in these motors are very unsatisfactory due to the fact that they are working in such a high temperature. The atmospheric conditions and different temperatures at different altitudes cause the valves to warp and burn, burning as much as one third of the valve completely away and also burning the valve seat in the cylinder rendering them unfit for use and causing them to be discarded. It has been the practice of the Air Service at all flying fields to junk these valves when burnt in this manner.

The fact that it takes from six months to one year to secure new valves for these motors put the Air Service Squadron in the Philippine Islands in such a predicament that they were about to discontinue flying on account of not having the required number of valves. Since practically 75% of the valves for these motors at this station had been junked on account of being burnt Master Electricians Neiswander and Linard requested permission of the Engineering Officer to experiment on these junked valves. After several experiments it was found that by grinding off the burnt portion of the valve and welding new metal to the head of the valve by the Oxy-Acetylene welding process, then setting the valve in a lathe and facing off both top and bottom of the valve using a tool post grinder and then grinding a ~~new~~ seat that it makes these valves as good as new. After several exhausting tests they found that these worked over valves stood up perfectly. When worked against factory valves in a test, the factory valves warped and burned the same as ever while the worked over valves did not warp or burn but stood the test perfectly.

This test proved conclusively that valves made over by this process eliminate a great amount of the valve trouble in the Hispano Suiza Motors and save the government the time and cost of new valves. These valves can be worked over repeatedly with perfect results as long as the valve stem lasts.

The 17th and 27th Balloon Companies from Fort Omaha, Nebraska arrived at their new station, Fort Mills, Philippine Islands, May 4th, 1920. The Commissioned personnel is, Captain Harry T. Lewis and 2nd Lieut. W. E. Huffman of the 17th Company and Captain William A. Gray and 2nd Lieut. Elmer J. Bowling of the 27th Company.

The Air Service garrison where these companies are stationed, being under the course of construction, both companies are quartered in a tent camp. As the rainy season is now on, the men of these companies realize what it is to live out side and battle with the tropical downpour. It is hoped that both companies will be in barracks by August 15th.

In spite of the weather conditions, the morale of the men of both companies is the highest. Due to the fact that the material for the manufacture of hydrogen gas had not arrived from the United States, the mornings have been spent in policing and building the Camp but now a model Camp has been constructed. In the afternoons both Companies take advantage of a fine swimming hole and indulge in various kinds of athletics. Two good baseball teams have been organized, and it is thought that the Balloon Companies with the 2nd Aero Squadron, which form the Air Service garrison will take the honors in the Fort League, in the next Fort Mills series.

Liberal week end passes are granted to the men in order that they may visit Manila and twenty men are being chosen this week for recreation trip to China, where the men will be given an opportunity to visit Tien Tsin, and Peking, and the Great Wall of China and other points of interest in the Orient. This is a form of recreation being granted enlisted men in the Philippine Department similar to the privilege granted soldiers to visit the Leave Areas in France.

SQUADRON NEWS

France Field, Canal Zone

An H-S-2-L flying boat- which was recently assembled at France Field was given its initial tryout Friday by Captain Thomas Boland, A.S.A., Engineer Officer, and 1st Lieut. Charles B. Austin, A.S.A. When the plane was but twenty-five feet out of the water the motor cut out twice, and upon examination later it was found that an error had been made in the gasoline connections. This was remedied and a successful trial flight of twenty-five minutes made the following day. It is planned to use this type of boat mainly for flights down the coast to the San Blas Islands.

Barron Field, Fort Worth, Texas

Orders for the abandonment of Barron Field were received during the week, and as there is something like six or seven hundred car loads of property at the field a big job is anticipated.

Captain C.W. Russell and Lieut. Henry E. Woolridge made a trip to Kelly Field by air, the first part of the week. They report a very enjoyable trip, experiencing no difficulty whatever. The return trip was made in two hours and nine minutes, an average of a trifle over one hundred and twenty miles per hour.

NEWS FROM THE AIRSHIP SCHOOL, BROOKS FIELD, TEXAS

During the week the work on the new Hervieu Hangar has gone on very satisfactorily, and it is expected that within a short time the canvas will be put on and the hangar ready to receive the dirigibles. Also work has been started on the new steel hangar which is to be erected on the flying field. The ground has been broken for the foundation, and the grading of a road which will lead from Hangar #1 to the new location has been done.

SQUADRON NEWS (Cont'd)

The Rolls Royce motors to be used on the new S.S. T airships are being put in shape. The exhaust manifolds which were missing are being constructed by the Air Service Mechanics School at Kelly Field #1. It was also necessary to go over the car and put on new plywood, and this will no doubt be ready within a very short time.

NEWS FROM THE AVIATION GENERAL SUPPLY DEPOT, MIDDLETOWN, PA.

During the week two JN6HB airplanes were flown to Camp Dix, New Jersey by Captain D.J. Neumuller and Lieut. Fred Nelson, for the use of the West Point cadets stationed there.

SCHOOL OF AERIAL OBSERVERS UNDER NEW DIRECTION

The School of Aerial Observers at Post Field, Fort Sill, Oklahoma has been placed under the direction of Captain John Howry, formerly chief Photographic Officer at the Artillery Fire Center at Camp Bragg, Fayetteville, North Carolina. The classes begin each morning promptly at 8:30 and the six officers and six flying cadets are kept busy until 4:30 P.M.

During the past week the classes covered Aerial photography, radio, artillery liaison, aerial navigation, map reading, map making, and visual reconnaissance. Up to the present time all instruction work has been confined to the class room. Beginning next week, however, the subjects covered in the class room will be actually applied in the air.

In addition to their regular studies the flying cadets are undergoing their transition work on De Havillands and are having to apply themselves with the same vim that characterized the flying cadets of war time days.

Selfridge Field, Mt. Clemens, Michigan.

Major C. B. Hodges left Selfridge Field on Monday after making a three day inspection of the field. Major Hodges expressed himself as being very well pleased with conditions in general.

Brig. General William Mitchell is expected to arrive at the field within a few days for the purpose of making an inspection of the Field.

The City of Charlotte, Michigan, has asked the Commanding Officer of Selfridge Field to cooperate in the laying out of a municipal landing field at that town. When constructed this field will be the only one worthy of note between Selfridge Field and western Michigan towns. It will also be favorably located on the Detroit- Chicago aerial route.

Co-operation has also been requested by the City of Detroit in the framing of a city ordinance governing flying over that city. The Commanding Officer has been asked to attend a council meeting to be held some time next month, when this matter will be gone into fully.

Chanute Field, Rantoul, Illinois.

The vegetables in the gardens at Chanute Field are commencing to ripen in considerable quantities, giving the mess a supply of fresh vegetables, which would not otherwise be available. It is expected that the benefits of these gardens will soon be reflected in the mess fund, as fresh vegetables are not very difficult to obtain in this vicinity but are very expensive.

SQUADRON NEWS (Cont'd.)

A DH-4 B airplane was received at Chanute Field during the week. It is now being set up in the shops and will soon be ready to fly. This is the first Liberty motored plane received at this field since its predecessor was flown to the Pacific Coast by Lieutenant Jerome B. Machle, in the Transcontinental Flight and then placed in storage at one of the Pacific fields.

On Monday, First Lieut. Charles M. Leonard, 2nd Lieut. Jack Greer and Private Harold P. Little, mechanic, flew over to Heopston, Illinois in two JN4-H's to attend the funeral of Lieut. Burr Hickman. Flowers were dropped from the planes over his grave. Lieut. Hickman lost his life on May 5, 1919, near Coblenz, Germany, while serving as a member of the 41st Aerial Squadron, Fifth Pursuit Group, Second Army of Occupation. The body arrived in New York from Germany on Wednesday of last week.

France Field, Canal Zone

The Canal Zone Companionship Track Meet was held at Cristobal July 5th, at which Captain Harlan W. Holden, A.S.A., got first place in the running broad jump and the 100 yard dash, while 2nd Lieut. John F. Whiteley took first place in the 120 yard hurdles.

In the 33rd Infantry Organization Track Meet, held at Gatun, Canal Zone, the next day, the different organizations had teams of thirty and forty men entered, and although France Field had but four men they took second place, scoring 28 points, Gatun Infantry being first with 44 points.

Captain Holden was first in the 100 yard dash and the broad jump, and third in the hop, step and jump. Lieut. Whiteley won the 120 yard hurdles; Sgt. Stevens (of the 7th Aero Squadron) was first in the high jump, second in the broad jump and second in the hop, step and jump. Private Eisel, also of the 7th Aero Squadron, was third in the broad jump. Captain Holden and Sergeant Stevens were tied for individual high score.

On Thursday two De Haviland 4 planes piloted by 1st Lieut. R.C.W. Blessley, and 2nd Lieut. Kenneth Garrett, both A.S.A. with Captain Harlan W. Holden and 1st Lieut. Joseph W. Gastreich, as observers, respectively, made a cross country reconnaissance flight to the Pacific Coast and east to the Chepo River to locate possible landing fields that could be used during the present wet season. In this piece of country there are quite a few good fields in the dry season but at present they are all under water. One field that is high and dry- about 2000 feet long and over 200 feet wide at its narrowest point- was located about three miles west of Pacora, where both planes landed.

NEWS FROM THE AIR SERVICE PILOTS' SCHOOL MARCH FIELD, CALIFORNIA

Captain David H. Young, Post Adjutant at March Field for the past four months will be honorably discharged from the service effective July 31st. He will enter the oil game in Pennsylvania, after a period of almost three years service. Lieut. E. S. Norby will assume the duties of adjutant.

Following his ground school course early in 1917, Captain Young was sent to France where he was assigned to the 96th Aero Squadron. He was for a time Commanding Officer of this outfit and participated in 26 daylight bombing raids over German territory. He was shot down twice, once by anti-aircraft fire and again in actual combat with the enemy. He was cited for bravery by General Pershing.

Since his return to the United States Captain Young participated in the trans-continental aerial derby which event brought him to the Pacific Coast and to March Field. Members of this command and the entire Air Service regret the loss of this efficient officer.

Lieut. William E. Farthing reported for duty at March Field Friday from Camp Mills.

SQUADRON NEWS (Cont'd)

Ex Lieut. R. P. Elliott, of Los Angeles, who was assigned to the 96th Aero Squadron in France (DSC) was among the visitors at the field during the past week.

Seven enlisted men reported Tuesday from the Air Service Supply Base at Fairfield, Ohio.

Unofficial reports from the Naval Air Station at San Diego are to the effect that an effort will be made to fly the R-38 from London, England to San Diego, California without a stop. The distance is about 6,500 miles and would mark the longest non-stop aerial flight on record accomplished.

Members of the crew of the R-38 who will fly the craft back to the United States were training at the San Diego base before going abroad.

8th Aero Squadron McAllen, Texas

During the week the 8th Aero Squadron suffered the greatest loss it has thus far sustained, when Captain George C. Kenney, Commanding Officer, and Lieut. Rosenham Beam, Adjutant, Radio Officer, etc., left for Kelly Field enroute for Godman Field, Camp Knox, Louisville, Kentucky to take up artillery reglage with the artillery now firing at that station. Captain Kenney has been in command of the 8th Squadron for nearly a year and has shown throughout his entire period of command, all those qualities most desired in Commanding Officers. It speaks well for Captain Kenney that there has not been a single request for transfer from his outfit and that every man ordered transferred has used every means in his power to remain with the 8th, and since separation has constantly requested a return. It is largely due to the efforts of Captain Kenney for the cooperation of his entire command that the 8th has become the best equipped Squadron on border patrol and also the most efficient and that the Post at McAllen has become, starting as the most hated border post to the most popular post on the border today. In Lieut. Rosenham Beam, the Squadron loses an able Adjutant, an expert radio operator and one of the best all round observers in the game today. Lieutenant Beam also holds an airplane pilot's rating dating back to 1918 and has shown no mean ability in the front seat of a DH. Lieutenant Beam was one of the original members of the Squadron and has been a diligent and tireless worker to make the 8th the best of all Squadrons. It has been promised and the whole Squadron eagerly looks forward to the return of Captain Kenney and Lieut. Beam early in the fall.

Selfridge Field, Mt. Clemens, Michigan.

On Wednesday of this week Captain St. Clair Street, A.S.A. Flight Commander on the New York to Nome flight, landed at Selfridge Field. The other three planes of this flight getting an earlier start from Erie, Pennsylvania, did not land at the field, but continued on to their destination for the day, Grand Rapids, Michigan. Captain Street had lunch with the Commanding Officer, whom he discovered was his flying instructor while at Dayton, Ohio, in 1917. Exceptionally good flying weather has been encountered so far on this trip.

HERE AND THERE WITH THE EDITORS OF THE LEADING DAILIES

"A digest of the latest Aeronautical News"

"THE TEXAS WILDCAT"

The "Texas Wildcat" a one seater monoplane which has a speed of 200 miles an hour was christened yesterday at Curtiss Field, Mineola, L.I. The plane is described as "its white fuselage which is the shape of a large cigar is supported by the amazingly small wing spread of 30 feet and one of the corps of designers said that when the ship is finally made ready for the races, its wing spread will be cut to 20 feet. While this small supporting surface will enable the plane to add twenty or thirty miles an hour to its speed, which is obtained by the use of a

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400 horse power Curtiss motor, it makes the speed at which the airplane must land well over 100 miles an hour. It is readily apparent how hazardous the handling of such a ship will be under anything but the most favorable weather and ground conditions".

The plane which was designed especially for the Gordon Bennett trophy contest in France this fall, will be piloted by Roland Rohlfis and Clarence Coombs. The construction of the plane will probably cost Mr. Cox, who owns the plane and is entering it in behalf of the Texas Aero Club, about \$150,000.

(Sun and Herald 7/31/20)

U.S. -- GERMAN AIR SERVICE

Herr Colsman, head of the famous Zeppelin factory at Friedrichshaven is reported in German papers to have said "prospects are very bright for the establishment of a regular airship service between Germany and America". Herr Colsman has recently returned to Germany from a trip in the United States.

Officials of the Zeppelin factories claim that their latest type of airship can transport 500 passengers with heavy luggage from Hamburg to New York in forty-five hours.

(N.Y. Tribune 7/30/20)

CHINA

Tom Gunn, General Director of the Government Aeronautic Department of Kwang Tung, China has had 18 airplanes shipped from New York to China. In speaking of the possibilities for commercial aviation there, he says "China has not yet awakened to the commercial future of the airplane. From the novelty stand point it is interesting to the Chinese, but as yet they cannot see much in aviation. The government has taken it up seriously but on account of its financial condition cannot do much at this time".

Mr. Gunn has the distinction of being the first Oriental to get an international license for flying, which he received in 1911. (N.Y. Tribune 7/31/20)

GERMANY'S WAR STATUS

During the war, Germany had 123 Zeppelins and Schuette-Lanz air cruisers according to Major George P. Newmann of the German air organization who released the figures for the first time. He reports 79 airships lost, the navy losing 53 and the army 26. The navy airship casualties were 389 officers and men "dead" while the army had 52.

At the outbreak of the war, Germany mobilized 218 airplanes and on January 1, 1919 approximately 47,637 airplanes of all types had been delivered to the army. In battles 2128 planes were lost and another 1,000 are credited as "missing".

(Boston Transcript 7/31/20)

ITALY

Italy is spending \$30,000,000 this year on her aviation program and special stress is urged for the development of the commercial aviation. The program calls for "a complete aerial transportation system for both passengers and goods, a regular air mail service and the establishment of international air routes".

At present air routes are under consideration between Italy, and France, Switzerland, Austria, Jugo Slavia, Greece and the Italian colonies. There is a dirigible service now in operation between Rome and Milan and between Venice and Milan.

(Boston Transcript 7/31/20)

"A digest of the latest Aeronautical News"

ENGLAND--GERMANY FLYING

The Air Ministry announces that British aircraft can fly over German territory without landing and all German aerodromes open to national public traffic are also open for British aircraft, according to the terms of the Peace Treaty between Germany and England.

Germany agrees to enforce the necessary measures to insure that all German aircraft flying over England will comply with the rules as to lights and signals.
(Dayton Herald 7/30/20)

ANOTHER PULITZER TROPHY RACE

A second national transcontinental race for Pulitzer trophy is being considered. The first race which is to take place next November has interested the Aero Club of Los Angeles so much that its president, K.M. Turner has asked for a similar one to be held next January. The route for the second race will be New York via Washington, Atlanta, New Orleans, to Texas across Arizona to Los Angeles. Detailed rules for the first race are being drawn up by the committee in charge.
(N.Y. World 8/3/20)

"CIVIL FLYING PROGRESS SLOW"

W. K. Kelsey, a reporter for the Detroit News 8/1/20 has a pessimistic opinion of the future of commercial aviation, judging from his article on the annual aircraft exhibition which was held in Olympia Hall, London.

He claims there are only three commercial uses for planes (a) "a swift transportation of mails, (b) transportation of a small number of passengers at a high price (c) sport". He says in part-- "The commercial application of the heavier than air machine is too limited so far to encourage men to learn to fly. There is little use spending a large amount of time and money in learning to operate an airplane if no permanent job is in sight at the end of the training period, and if no use can be made of the experience obtained. At present there are only a limited number of pilots who are required. There are daily services between London and Paris and tri-weekly services between London and Brussels and London and Amsterdam. For a stiff price, in fine weather, one can also have a flight from London to Manchester, or some town near where there is an airdrome. But the commercial limit has not extended beyond this. The chief advantage of the airplane on the London-Paris route is that it is not held up by the British Channel or the North Sea. It puts its 100 miles per hour continuous flight against the 40 miles per hour of the train and the 20 miles per hour of the boat and the long waits at Channel ports. It flies to Paris in 2½ hours, where the rail and water journey takes eight or nine hours -- and it costs four times as much. "

"THE AIR POST TO 'FRISCO"

"Daring and resourceful aviators are making amazing progress in annihilating barriers of space. Army aviators are at the present moment engaging in a long distance flight from New York to Nome, Alaska with the purpose of opening up an air highway to our remote and hitherto inaccessible possession under the shadow of the Arctic. The same pioneer spirit is trying to make practicable coast to coast transportation by air of Uncle Sam's mail. It is hoped thereby to cut down by at least a half the time that is now required for mail to reach San Francisco from New York by railroad. If the transcontinental air post proves a success, New York will be brought within two and a half days of the California city. A letter mailed Saturday morning on Broadway might very well thereby be delivered at its destination in San Francisco on Monday.

HERE AND THERE WITH THE EDITORS OF THE LEADING DAILIES

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When this becomes a daily occurrence, the Atlantic and Pacific coasts will be brought nearer each other than a decade ago would have seemed possible, save to visionaries and dreamers."

(Boston Transcript 7/31/20)

BELGIUM

The Belgian aircraft budget for 1920 totals approximately \$2,000,000 at the normal rate of exchange. Of this amount, \$1,200,000 is provided for ground organization such as airports, radio stations etc. and \$200,000 for aircraft subsidies and premiums, \$200,000 for the encouragement of civil aviation, map making and bibliography and \$400,000 for laboratories and research work.

(Aircraft Journal 7/26/20)

"BALLOONS MAY CARRY MAIL"

A New York firm claims it has a blimp which is capable of carrying 15 tons and can travel faster than trains. The firm, the name of which is withheld for the present, has bid for a "blimp route" between New York and San Francisco.

(Washington Post 7/29/20)



INTERCHANGE OF OFFICERS BETWEEN TRAINING AND OPERATIONS ACTIVITIES.

About nineteen (19) officers were transferred from Training Fields to Operations Fields, and an equal number of officers were transferred from Operations Fields to Training Fields as replacements.

The purpose of these transfers was to give the officers who have been on dual instruction for a long period an opportunity to familiarize themselves with the requirements of tactical organization and to inject other instructors fresh from organizations into the training fields.

RUMPLER AIRPLANES FOR PHOTOGRAPHIC WORK

Two (2) Rumpler airplanes are being sent to Langley Field so that the School of Aerial Photography may make some high altitude photographic tests.

TROOPS FOR CAMP BRAGG

Arrangements made to move Flight "B", 8th Aero Squadron to Pope Field, Camp Bragg, Fayetteville, N. C., on temporary duty. This flight is to engage in observation with Field Artillery fire.

The pilots are to proceed by air, and a municipal landing field map of the United States with plotted route between Kelly Field and Pope Field furnished the Southern Department.

COMMUNICATION ACTIVITIESLangley Field

The success of the shoot at Fort Screvens, Ga. has demonstrated that the method of training enlisted radio men and the type of instruments, together with installation system of operation is in the main correct for observation squadrons doing field service.

Flight made to Fort Monroe, observing and spotting their fire. Perfect communication with station at battery.

Mitchel Field.

A $\frac{1}{2}$ K W transmitting set (Simon) has been procured from Camp Vail, N.J., and installed at ground station.

A SCR-59 receiving set was sent to Ft. Hancock and installed there and, with this, good communication should be maintained between the Fort and Mitchel Field.

Eastern Department.

An 80 foot umbrella antenna has been erected at March Field in connection with Tractor Set. This will be used for communication with Rockwell Field and Santa Barbara.

INFORMATION OBTAINED FROM OPERATIONS REPORTS
OF TACTICAL UNITS FOR WEEK ENDING JULY 24th, 1920

STATIONS, FLYING TIME AND AVAILABILITY OF PLANES

<u>Name of Squadron</u>	<u>Location</u>	<u>Flying Time</u>
1st Aero - Obs.	Mitchel Field, Mineola, L.I., N.Y.	42:30
2nd " "	Fort Mills, Philippine Islands	No report
3rd " "	Camp Stotsenburg, Pampanga, P.I.	" "
5th " "	Mitchel Field, Mineola, L.I., N.Y.	23:15
2nd Obs. Group (4th & 6th Sqdrn)	Luke Field, Ford's Is., Hawaii	28:49
7th Aero - Obs.	France Field, Panama, C.Z.	1:34
8th-A " Sur.	McAllen, Texas	50:10
8th-B " "	Laredo, Texas	35:13
9th " Obs.	Mather Field, Sacramento, Calif.	93:45
10th & 99th "	Bolling Field, Anacostia, D.C.	33:15
11th Aero - Bomb.	Kelly Field, San Antonio, Texas	No report
12th-A " Sur.	Douglas, Arizona	NG
12th-B " "	Nogales, Arizona	8:35
20th " Bomb.	Kelly Field, San Antonio, Texas	16:35
27th " Pur.	" " " " "	21:35
50th-A " Obs.	Langley Field, Hampton, Va.	13:45
50th-B " "	Montgomery, Ala.	22:45
88th " "	Langley Field, Hampton, Va.	10:35
90th-A " Sur.	Del Rio, Texas	35:00
90th-B " "	Sanderson, Texas	35:30
91st " "	Rockwell Field, Coronado, Calif.	No report
94th " Pur.	Kelly Field, San Antonio, Texas	14:55
95th " " "	" " " " "	39:00
96th " Bomb.	" " " " "	5:04
104th-A " Sur.	El Paso, Texas	22:15
104th-B " "	Marfa, Texas	75:40
135th " Obs.	Post Field, Fort Sill, Okla.	17:10
147th " Pur.	Kelly Field, San Antonio, Texas	10:15
166th " Bomb.	" " " " "	25:40
258th " HTA	Aberdeen Proving Grd., Aberdeen, Md.	4:40
Air Service Troops	Camp Benning, Ga.	4:40
" " "	Pope Field, Camp Bragg, N.C.	:00
" " "	Godman Field, Camp Knox, Ky.	No report
Hqrs. Det. 1st) Pursuit Group)	Kelly Field, San Antonio, Texas	1:55
TOTAL TIME		<u>694:05</u>

TACTICAL OPERATIONS, INSTRUCTION AND MISCELLANEOUS
ACTIVITIES BY FIELDS AND UNITS

BORDER STATIONS

DEL RIO, TEXAS - 90th Aero Squadron, Flight "A"

With 100% of daylight suitable for flying, a total of twelve (12) flights was made including two (2) practice flights and ten (10) special missions.

Tactical instruction was carried on as specified.

DOUGLAS, ARIZONA - 12th Aero Squadron, Flight "A"

With 96% of daylight suitable for flying, a total of twenty-three (23) flights was made including two (2) practice flights, six (6) test flights and fifteen (15) cross country flights.

EL PASO, TEXAS - 104th Aero Squadron, Flight "A"

With 100% of daylight suitable for flying, a total of eleven (11) flights was made including seven (7) practice flights, two (2) liaison flights with 7th Cavalry, one (1) flight to Kelly Field and return and one (1) flight from Kelly Field.

Tactical instruction was carried on as specified.

Liaison carried on with 7th Cavalry enroute from Fort Bliss to Elephant Butte Dam, First day message dropped - second day, one bag of mail and message dropped.

LAREDO, TEXAS - 8th Aero Squadron, Flight "B"

With 100% of daylight suitable for flying, a total of twenty-two (22) flights was made including seven (7) surveillance, twelve (12) command missions, two (2) liaison missions and one (1) reconnaissance mission.

Instructions carried out according to Schedule of Training with necessary changes to suit local conditions.

Liaison mission was carried out with the 37th Infantry at Ft. McIntosh.

MCALLEN, TEXAS - Headquarters and 8th Aero Squadron, Flight "A"

With 100% of daylight suitable for flying, a total of fifteen (15) flights was made including twelve (12) cross country flights, one (1) special mission, three (3) test flights and two (2) command missions.

MARFA, TEXAS - 104th Aero Squadron, Headquarters Flight "B"

With 75% of daylight suitable for flying, a total of sixty-one (61) flights was made including ten (10) cross country flights and fifty-one (51) practice flights.

Tactical instruction carried on as specified.

MATHER FIELD, SACRAMENTO, CALIFORNIA - 9th Aero Squadron

With 100% of daylight suitable for flying, a total of forty (40) flights was made.

NOGALES, ARIZONA - Headquarters and 12th Aero Squadron, Flight "B"

With 100% of daylight suitable for flying, a total of ten (10) flights was made including one (1) border patrol, El Paso and return, two (2) flights; five (5) practice flights, two (2) photographic missions and one (1) test flight.

ROCKWELL FIELD, CORONADO, CALIF. - Headquarters and 91st Aero Squadron

No report

SANDERSON, TEXAS - 90th Aero Squadron, Flight "B"

With 100% of daylight suitable for flying, a total of eighteen (18) flights was made including fifteen (15) special missions and three (3) test flights.

Tactical instruction carried on as specified.

OTHER STATIONS

ABERDEEN PROVING GROUND, ABERDEEN, MD. - 258th Heavier-than-air Bombardment Sqdrn.

No report.

BOLLING FIELD, ANACOSTIA, D. C. - 10th & 99th Aero Squadrons

With 85% of daylight suitable for flying, a total of fifty (50) flights was made including one (1) flight to Camp Dix, N.J., one (1) to Langley Field, Va., one (1) to Gettysburg, Pa., one (1) to Springfield, Mass., and one (1) to Mitchel Field, L.I., N.Y.

Eighteen (18) officers from the Office, Chief of Air Service made flights during the week.

CAMP BENNING, GA. - Air Service Detachment

With 60% of daylight suitable for flying, a total of six (6) flights was made including one (1) for the purpose of testing radio equipment, one (1) command mission demonstrating attack of machine guns from the air, one (1) Infantry liaison problem with one (1) battalion of the 39th Infantry and one (1) Artillery surveillance mission.

GODMAN FIELD, STITHTON, KY. - Detachment Air Service Troops

No report

KELLY FIELD, SAN ANTONIO, TEXAS

1ST BOMBARDMENT GROUP

100% of daylight was suitable for flying during the week.

11th Aero Squadron

No report

20th Aero Squadron

A total of fifty-four (54) flights was made including practice flights and dual instruction flights.

96th Aero Squadron

A total of fifty-nine (59) flights was made including instruction flights, cross country flights, time stage flights and ferry to Dallas.

166th Aero Squadron

A total of seventy-five (75) flights was made including practice and cross country flights.

1ST PURSUIT GROUP

100% of daylight was suitable for flying during the week.

Headquarters Detachment

A total of six (6) flights was made.

27th Aero Squadron

A total of forty-seven (47) flights was made including one (1) to Dallas, Texas, and return, and flights around the airdrome.

94th Aero Squadron

A total of forty-seven (47) flights was made for the purpose of practice and acrobatics.

95th Aero Squadron

A total of twenty-eight (28) flights was made, all within the vicinity of the airdrome.

147th Aero Squadron

A total of twenty-three (23) flights was made, all within the vicinity of the airdrome.

LANGLEY FIELD, HAMPTON, VA.

80% of daylight was suitable for flying during the week.

50th Aero Squadron, Flight "A"

A total of thirty (30) flights was made including four (4) Artillery reglage missions, five (5) test flights, one (1) cross country flight and twenty (20) practice flights.

Artillery fire at Fort Monroe and at Camp Eustis observed and regulated.

88th Aero Squadron

A total of fifteen (16) flights was made including five (5) test flights, seven (7) cross country flights, two (2) practice flights and one (1) radio test flight.

LUKE FIELD, FORD'S ISLAND, HAWAII (7/17) -

2nd Obs. Group - 4th & 6th Observation Squadrons

With 90% of daylight suitable for flying, a total of sixty-two (62) flights was made including forty-five (45) patrol flights, one (1) photographic flight and two (2) test flights.

A formation of five (5) DH-4's, two (2) HS2L's and a sixth DH-4 comprised the reception party which greeted the Congressional Committee on Board the Army Transport Great Northern bound from San Francisco to Honolulu. The transport was met about twenty (20) miles off Makapuu Point, and escorted into Honolulu Harbor. Messages of greeting were transmitted by radio and message bags to the arriving party. Upon departure of the Naval Fleet, under command of Admiral Hilary P. Jones, which carried as passengers the U. S. Naval Cadets, visitors in Honolulu, for a week, a formation of five (5) DH-4's, and HS2L boat and an extra DH-4 flew over and around the battle ships assembled in Honolulu Harbor, bidding "Bon Voyage" to Admiral Jones and the fleet by radi messages.

MITCHEL FIELD, MINEOLA, L.I., N.Y.

87% of daylight was suitable for flying during the week.

1st Aero Squadron

A total of thirty-five (35) flights was made including six (6) test flights, seventeen (17) special missions and twelve (12) practice flights.

Instructions were carried on as specified.

5th Aero Squadron

A total of thirty-six (36) flights was made including ten (10) special missions, three (3) missions over Vanderbilt Cup Yacht race, six (6) passenger flights to Camp Dix, N. J., three (3) practice flights, one (1) radio practice flight and thirteen (13) test flights.

Instructions were carried on as specified.

MONTGOMERY, ALA. - 50th Aero Squadron, Flight "B"

With 85% of daylight suitable for flying, eleven (11) cross country flights were made.

This flight left Sarasota, Fla., on July 17th, arriving at Montgomery, Ala., July 19th, at noon.

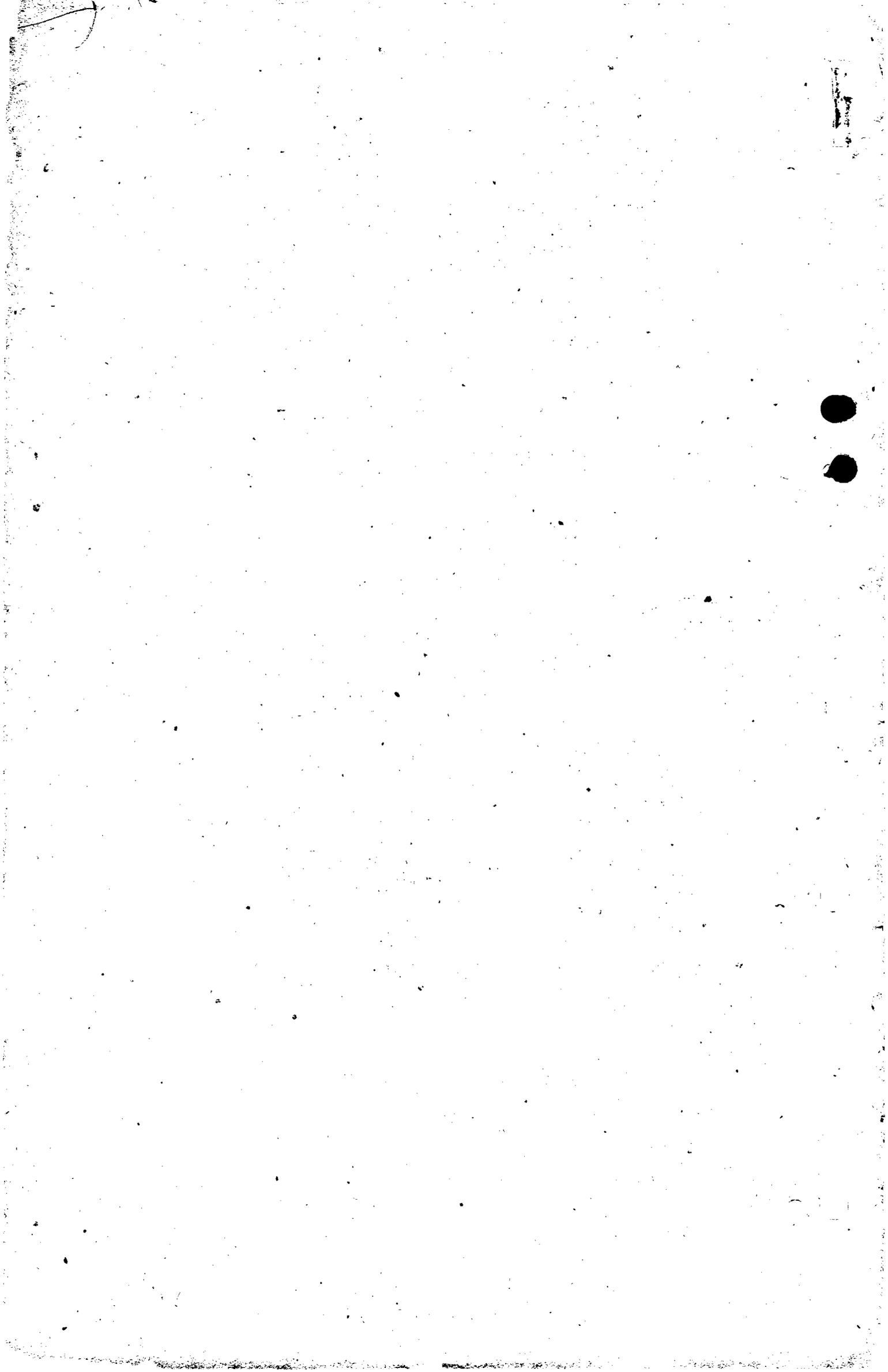
POST FIELD, FORT SILL, OKLA. - Hdqrs. & 135th Aero Squadron

With 100% of daylight suitable for flying, a total of thirty-two (32) flights was made including cross country, test, bombing and practice flights.

Tactical instruction carried on as specified.

POPE FIELD, CAMP BRAGG, N.C. - Air Service Detachment

Altho 64% of daylight was suitable for flying during the week, no flights were made.



Lieut. H. J. Odenthal

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE AUGUST 23, 1920

HANDLEY PAGE BUILD SPECIAL FREIGHTER

It is understood that the Handley Page Company of England will soon construct a special airplane suitable for carrying freight. This has been made necessary owing to the increased quantity of heavy and bulky freight which is now being carried to and from Paris by the Handley Page Company.

The new type will be one of the O-11 types and will have a large freight hold with a passenger cabin for two or three at the back and also a room will be made in the nose of the airplane for two passengers in addition to the pilot and mechanic.

BALLOONING NOT A TAME SPORT

A free balloon flight was made from Brooks Field, during the week which had an ending not expected by the occupants of the balloon when they started. The passengers on board were Lieut. Colonel J. E. Fechet, Department Air Service Officer (making his first balloon flight); Captain John G. Thornell, Commanding Officer, Brooks Field, Pilot Lieut. Harold K. Hine; Sergeants Cornelius C. Muschell and August A. Merian of Brooks Field. The flight was very quiet until near the end when just as a landing was about to be made, a squall in advance of a rain-storm caught the balloon sweeping it up 800 feet before the rush could be checked. The descent was very rapid and the landing rough, the basket tipping completely over on landing. The balloon, moving about 35 miles per hour, bounced three times in thick woods before a place was found where the balloon could be deflated without damage, all hands in the meantime hanging tight to the ropes to keep from being pulled out of the basket by trees. Outside of a few bruises no injuries were received, but any ideas of ballooning as a tame sport were speedily dispelled.

PARTY OF ENLISTED EXPLORERS HAVE AN INTERESTING TIME

Officers and enlisted men of the 3rd Aero Squadron, Camp Stotsenburg, Philippine Islands have voted flying a tame and safe occupation as compared with exploring Philippine rivers in the rainy season.

On Sunday four enlisted men were trapped after a heavy rain in a canyon of the Bamban River which they were exploring. The party originally consisted of six men but only two managed to escape from the Canyon. Both men were brought into camp in a semi conscious condition and gave misinformation that caused a poorly equipped rescue party to be sent out.

The rescue party consisting of Major F. H. Poole, Flight Surgeon, Captain Charles T. Phillips, Lieut. Ira C. Eaker and 9 enlisted men, left Camp Stotsenburg at 8 P.M. Sunday night and fought its way for six miles thru a heavy rain and darkness to the mouth of the canyon. The route was up hill and down hill, through bamboo thickets and cogon grass twice as high as one's head.

Frequently the party walked on trails only a foot wide with drops of several hundred feet on both sides. An attempt was made to lower Lieut. Eaker into the canyon at the point where the men were supposed to be trapped, but after 150 feet of rope had been used, he was hauled up without having touched bottom. The party then continued to the mouth of the canyon arriving at 8 o'clock the following morning. The river while not deep was so swift that one could not stand unaided near the center. It is only from 15 to 20 feet wide but for the entire length of the canyon, five miles, the walls rise straight from the water on both sides to a height of between 200 and 300 feet.

Captain Phillips decided that it would not be wise to attempt to "shoot" the rapids of the canyon in the dark and a halt was called until daylight.

At five in the morning without breakfast Captain Phillips, Lieut. Eaker, a Philippine Scout and four enlisted men of the Squadron, plunged into the canyon. Frequently, they were caught in the current and dashed over the falls sometimes as high as six feet but no one was seriously injured, although all were cut and bruised from sudden contact with rocks concealed by the water.

The four explorers who had started out before the rain were finally found four miles down the canyon, huddled on a little ledge with a 30 foot fall just beyond them. The rescue party tied ropes around them and started the fight up stream against the current.

Shortly before noon the party reached the mouth of the canyon without having lost a man. All were so exhausted however that they dropped on the sand and slept in a boiling hot sun until late in the afternoon when another party arrived with coffee and sandwiches. Fortified with food, the party struggled over a couple of hills to a point that could be reached with horses, and found there a troop of the Ninth Cavalry with spare horses. Late in the afternoon they rode into camp.

FORMER AIR SERVICE PILOTS ON BARNSTORMING TOUR

Pilots Greenwalt, Brown, Graham and Collison, all former Air Service Officers, flying three Curtiss JN 4 D's landed at Chanute Field, Saturday morning. They are all members of the St. Louis Aircraft Corporation with headquarters at Champaign, Illinois. They have been out since May 15th barn storming over Illinois, and advertising the candidacy of Honorable W.B. McKinley for United States Senator.

RICH FIELD TO BE ABANDONED

During the last week activities at Rich Field have afforded a marked contrast to activities during the days that passed when Rich Field was active in training of cadets and the performance of those functions which characterized flying fields during the war. Orders have been received for the abandonment of the Field by October 31, 1920, and the officer personnel force and the enlisted and civilian personnel forces have been organized for expeditious service in packing and shipping materials stored at Rich Field to the various points of destination received in instructions. The De Haviland 4 planes, the Curtiss H planes and the JN 4 D's are rapidly being crated by one force; other materials of a miscellaneous nature are being crated by another force; and still another force is organized for loading the crated planes and other packed materials to be hauled away.

LOCATING A RAILROAD BY AIRPLANE ✓

Locating a railroad by airplane is the latest venture of the Third Aero Camp Stotsenburg, Philippine Islands, and one long flight has enabled railroad engineer to determine which one of three general routes will be

utilized for the new road. The saving of many months and thousands of dollars has resulted. Instead of three parties of locating engineers being sent out to make the preliminary survey only one will now be necessary.

The Manila Railroad Company has planned the extension of its line from Cabanatuan through parts of the provinces of Nueva Ecija and Nueva Vizcaya to Bayombong. Parts of the two provinces are very thinly settled and no comprehensive maps or surveys were available.

The Military authorities are vitally interested in the extension of the Manila Railroad Company line, and accordingly permission was obtained from the Commanding General, Philippine Department to use a government airplane on the preliminary reconnaissance trips.

The first trip was made by Mr. E.S. Von Piontkowski, Chief Engineer, in a D.H. 4 piloted by Lieut. W.C. Maxwell, 3rd Aero Squadron. Lieut. Maxwell, with the railroad official in the gunner's cockpit passed over Mt. Arayat and then followed the Pampanga River until he picked up the railroad line at Gapan. He followed the river from Cabanatuan on to Pantabangan and over Mt. Pangloriahan, thence to Bayombong.

The railroad engineer on the return was enthusiastic over the trip, declaring that the single flight has saved him months of tedious work in running lines through difficult territory. Before his surveying party is sent he plans at least one additional reconnaissance trip.

POLO GAME REPORTED BY RADIO PHONE

During the week a new use was found by the officers of the First Bombardment Group, Kelly Field for the radio telephone.

The Polo team from Camp Travis was engaged in a hot contest with the Kelly Field Team when there appeared in the sky a DH 4 B piloted by Lieut. Speck with Lieut. Doyle as observer. After circling around a few minutes he radiophoned to the ground station. "Is Camp Travis team wearing purple?" The answer was "yes". With this information the observer was able to follow the game closely at an altitude of 7,500 feet. He reported the entire game and often would call team play errors such as "bashing", "Failure to cover your man", etc. It was plainly evident to all that the umpire from the plane was absolutely accurate and plays and errors were detected which had apparently gone by unnoticed, by the ground watchers.

It is believed that this is the first time in the sporting world. that a polo game has been reported from an airplane by radio.

CAPT. NEUMULLER LOSES LIFE IN AN ACCIDENT

Sunday, August 1, 1920, Donald J. Neumuller, Captain, Inf., assigned duty in the Air Service, was killed in an airplane accident near Bainbridge. The accident occurred about 12:30 o'clock, the cause of the accident being forward vertical slip from which the Captain was unable to right his plane due to the fact that he had made a left bank right out of a right bank using his controls too fast, thus causing his plane to lose forward speed and fall into a slip. Having an altitude of only 500 feet, it was impossible for him to right his plane before it crashed.

Captain Neumuller's accident cast a spell of gloom over the Post, as the utmost confidence had been placed in his ability as a flier as he had a great many times displayed wonderful skill and ability in handling a plane.

Captain Neumuller is known by all who were associated with him as one who was ever ready to do a service or kindness for anyone no matter what their standing might be. As Adjutant of the post at Middletown, Pennsylvania he showed his fair mindedness throughout the period thru which he served in that capacity.

As Utilities Officer, he accomplished feats at this post that were nigh unto impossible. As Motor Transport Officer, Captain Neumuller was in the height of his glory, not being satisfied with things being good enough, he had to have the best Motor Transport contingent in the army, and various officials who have visited the Middletown Post from Washington and other stations stated that he had accomplished this beyond any question of doubt. Captain Neumuller's ability was appreciated by everyone and the record he had established in his upkeep of the Motor Transport of Middletown Supply Depot no doubt was responsible for his being assigned to the Bankhead Motor Transport Convoy as Air Service Observer.

Captain Neumuller enlisted in the army November 5, 1915, Co. B, Signal Corps, 1st Aero Squadron. Appointed provisional 2nd Lieut. June 25, 1917, and was appointed 1st Lieutenant the same day. Appointed temporary Captain, August 5, 1917. Appointed Captain permanent establishment, Feb. 24, 1920.

Funeral services were held for Captain Neumuller at Middletown. Lieutenants Brown and Nelson flew over the funeral procession dropping flowers and escorted the train which carried the body several miles on the way toward the Captains home. The body was buried at his home at Lansford, Pennsylvania, August 4th with military honors.

Flying was discontinued this week in memory of Captain Neumuller, with the exception of the flight made to drop flowers and escort the body homeward.

"TOP" PAINE DIRECTS CANTU'S WAR IN AIR

Trouble brewing between Governor Cantu of Lower California and the provisional government of Mexico may yet turn out to be a pocket edition of a real war with all the fixin's, if the plans of the doughty governor of the neighboring province for an aggressive air campaign do not go astray.

Lieutenant "Top" Paine, former flying instructor of March Field and well known in Riverside, both in business and social circles, has been engaged by Governor Cantu as director of air service for the state of Lower California.

Paine was for a time engaged in airplane passenger service on both sides of the border near Calexico. It was while engaged in this business that he first attracted the attention of the governor. His equipment for carrying on Governor Cantu's war in the air consists of three old Curtiss planes purchased from the Curtiss Company at March Field.

12TH AERO SQUADRON ON 21 DAY HIKE

The 2nd Battalion of the 19th Infantry is now on a twenty-one day hike from Camp Harry J. Jones, Douglas, Arizona, to El Paso, Texas via Lordsburg and Deming. The itinerary calls for a total of 265 miles.

Good progress has been made so far and everything is working as per schedule.

Flight "A" 12th Aero Squadron is carrying on daily liaison and dropping the mail.

NEW CLASSES ORGANIZED FOR OFFICERS AT AIR SERVICE MECHANICS SCHOOL, KELLY FIELD, TEXAS

The fourth and fifth officers classes in Engineering and Aircraft Armament, respectively were started Monday, July 26th, 1920, with seven officers attending the engineering course and nine attending the aircraft armament course.

The course in engineering will consist of nine (9) weeks instruction on Mechanics of Airplanes, Airplane Motors and Parachutes. It also includes the procedure of handling engineering forms. The course consists of two-thirds practical and one-third theoretical work. Like all subjects taught in this school, the most stress is placed on the practical side of the work. Officers of course are given a little more theory than the mechanic.

The following is a brief outline of the course by weeks:

- First Week: Carburetion and ignition systems.
- Second Week: Principles of gasoline engines and the study of the Hispano Suiza motor.
- Third Week: Construction, design and operation of the Liberty motor. In these three weeks, stress is placed on the operation, timing and care of these motors under field conditions.
- Fourth Week: Trouble shooting, cranking, switch operation, testing different methods of locating troubles.
- Fifth Week: Airplanes - study of the construction of airplane and propeller, materials used in making repairs, fuselage alignment, balances, tracking and tipping propeller.
- Sixth Week: Motor installation and checking periodical inspection and trouble shooting.
- Seventh Week: Alignment of the S.E.-5 airplane, lectures on organizations of the engineering department of Air Service, engineering equipment accountability and responsibility of the engineering equipment and supplies.
- Eighth Week: Disassembly and assembly of the De Haviland airplane; lectures on procedure of handling engineering forms required in the air service and duties of assisting engineer officers, squadron engineer officers and wing engineer officers.
- Ninth Week: Parachutes- instruction is given in the construction, repair, folding, testing and storing of parachutes. Each officer is permitted to make a live jump from an airplane.

Schedule of instruction in Aircraft Armament for Officers classes.

This course is also for nine weeks duration and is two thirds practical work and one third theoretical. Practical work consists of nomenclature, disassembly and assembly, adjustment and repair of aircraft armament. The class will consist of lectures, both demonstrative and theoretical and examinations on construction, specifications, adjustments, care maintenance and operation of Aircraft Armament.

The following is an outline of the curriculum of training which shows the number of hours of instruction given on each subject.

Marlin Aircraft gun.....	32 hours.
Lewis Aircraft gun.....	32 hours.
Browning Aircraft gun.....	32 hours.
Range work and installation.....	32 hours.
Fire control gears and ring sights.....	32 hours.
Bombs and bomb release.....	32 hours.
Ammunition, explosives and pyrotechnics.....	32 hours.
Camera guns and small arms.....	32 hours.
Range and practical field and shop work.....	<u>32 hours.</u>

Total..... 288 hours.

The officers classes at this school have thus far been very successful. Every officer has been graduated, a booster for the Air Service and for the school. In the Southern Department at the present time there are more officers desiring to take the practical course of instruction at this school to better themselves in their profession than can be spared from their organizations. This fact is very gratifying to the officers associated with the school.

Four and a half months course for electricians will commence Monday August 2nd, with an initial class of twenty men. Due to the time taken to obtain material from different parts of the country, this course could not be opened before this date. Everything is now ready and it is expected that this course like the others, will be a success.

The course covers elementary electricity, motors and generators transformers, interior wiring and high tension lines, telephone, and telegraphy, electrical instruments, alternating and direct current, switchboards, storage batteries, starting systems, lighting systems and ignition systems, and an advanced training period, which consists of three weeks of practical work on field maintenance; such as motor and generator overhaul, ignition repair, battery charging and repair, magneto overhaul and repair and interior wiring.

It is the intention of the school to graduate men from this course that are thoroughly competent to be placed at any point in an Air Service post or with Air Service troops in the field to take care of any and all of the electrical work that may be necessary.

THE FIRST PURSUIT GROUP TELLS WHAT KIND OF PURSUIT PLANE THE FUTURE WILL BRING US

Now that the reorganization of the Army Air Service has commenced in earnest, it is time to consider the types of pursuit airplanes that will be used in the next war, if there be one.

Let us look at the possible air battles of the future. We shall not consider battles with other pursuit planes for we expect our own planes to be the superior to all; in speed, climbing, maneuverability, strength, and armament. What we must consider are the types of bi-place and multiplane planes that our air forces will be called upon to attack.

Biplane planes have been constructed which are capable of making a speed of one hundred and sixty miles an hour. This speed will probably be increased by new types of metal planes and bi-place and multiplace planes will carry very heavy armament and have no "blind angles".

It will be necessary therefore, to have very fast pursuit planes in order that swift surprise attacks can be made, followed by a quick and safe get-a-way. Large bombardment planes will also probably carry armor about their vulnerable parts. Our armament must therefore include one or more large caliber machine guns, firing heavy armor piercing explosive balls. What kind of plane will fulfill these requirements? The M.B. 111 or Ordnance Scout? Here is our idea.

The pursuit plane of the future must be an internally braced all metal monoplane with a high powered radial motor. The pilot will be placed at the trailing edge of the plane, so that he can look over or under easily. The fuselage will be short and the motor just forward of the leading edge in order that the plane will maneuver rapidly. All controls will be delicately counter balanced for the same reason. The cruising radius will be about seven hours and the speed well over two hundred miles.

The armament should consist of four Browning synchronized machine guns, two using 30 caliber ammunition and two using 50 caliber ammunition. The pilot's cockpit must be comfortable and the aviator provided with oxygen and heating apparatus because without doubt most of the fighting with the enemy will take place above 20,000 feet. The plane should be double braced throughout so that part of the bracing could be shot away and the plane still remain in the air. The gas compartments should be in the wings thoroughly protected against fire. These are some of the requirements.

In general appearance the plane from above will look something like a modern Verville, except that it will have a blunt nose. It will, of course, have metal wire covering and metal construction throughout. It may as well retain the original polished bright aluminum finish for it will be so fast that lack of camouflage will not make any great difference. An impossible dream, say you?

Compare the performance of a DH-9, or a Le Pere with their 400 horse power and short cruising radius, with that of the J.L.-6 with its 180 horse power and seven hour cruising radius, then consider the performance of late models 300 horse power pursuit planes of stick and wire construction:- a hundred and sixty

miles an hour, 20,000 feet in twenty minutes and so forth. Now what about the 300 horse power all metal pursuit monoplane, capable of over 200 miles an hour, and carrying heavy armament and a pilot, 20,000 feet in the air in ten minutes and staying there for seven hours. It is within the scope of present day possibilities, is it not?

PURSUIT PROTECTION OF OBSERVATION SQUADRONS

Many of the missions involved in protection of observation planes have been mentioned in previous expositions of the uses of Pursuit aviation. Here we shall cover the same ground in a certain extent, expanding and explaining each phase of Observation Protection in more detail.

The protection varies, of course, with the type of Observation mission to be performed, and there are as many distinct kinds of Observation Protection Missions for pursuit as there are Observation Missions. They include artillery adjustment, infantry liaison, sector reconnaissance, long distance reconnaissance, usually photographic, and special photographic missions. Let us take these up in order.

Artillery reglage planes fly relatively low- as low as they can be comparatively safe, in fact. Whenever possible they fly directly over their targets in order to make accurate observation of hits. Their work is very essential to accurate fire and they must never be left unprotected. Pursuit patrols fly from two to four thousand feet above them, with higher patrols to protect them in turn. The Pursuit Group furnishing these patrols must maintain perfect liaison with the Squadron or Flight during artillery fire adjustment so that they will be in the air all the time during a "shoot" and will be able to pick up the reglage planes and keep them in view all the time. As has been mentioned before, these Pursuit Protection patrols are indirectly of great value to the Artillerymen who depend on the reglage observers for the adjustment of their fire.

A similar kind of protection is afforded to the Observation planes that do infantry liaison work during an offensive. The infantry liaison planes have enough to contend with when flying under barrage and dodging ground machine guns, without having to protect themselves from above as well. That part of it is taken care of by two or more layers of Pursuit Patrols higher up, depending upon the "ceiling" on cloudy days, and upon the altitude to which fighting will be carried in the next war on clear days. As we have stated in a previous exposition, the scout planes that fly such protection patrols are indirectly of great service to the Infantry, in that they enable the infantry liaison planes to work unhampered by enemy craft.

The sector reconnaissance missions were not carried out to any great extent during the last days of the war unless the British continued this work on some sectors, - and it may not be familiar to our readers. A sector reconnaissance mission is simply a zig-zag patrol over a certain strip of battle sector for the purpose of discovering any little surprise the enemy may be about to spring, and is dependent on the observer for its success. He must keep one eye on the ground and the other on his map while he rapidly scribbles data and pin points positions of possible artillery targets on a pad with one hand. Naturally he can accomplish the work much better if his mind is not occupied with the thought that perhaps some enemy formation of scouts is just about to make "cold meat" of him. For this reason there must also be a "Sector Patrol" of our Pursuit Planes. Let us insert ^{here} that it might appear to be possible for a Sector Patrol of Scouts to protect liaison planes, reglage planes, balloons and pursuit contour planes; and this system could be used in a pinch; but even then, it would have to be a very strong patrol to do this work only poorly. The only sure way to afford protection as our reader must by this time have seen for himself, is to have only one thing for any given patrol to protect.

Long distance reconnaissance and photographic missions are carried out by fast high climbing planes that go far into the enemy's territory photographing concentrative points, depots, railroads, and so forth. The same data that applies to protection of the Long distance bombers also applies to them. Thus perfect liaison must be maintained at all times between the reconnaissance squadron and the protecting pursuit group. Also the protection should be composed of pursuit planes that can stay in the air as long as the bi-plane, reconnaissance planes, - like the seven hour S.V.A. for example. These protection patrols must then fly in echelon with the reconnaissance planes from two to four thousand feet above them, never losing sight of them and never leaving them to go chasing after an easy looking victory.

Summer 1920

FIRE BURNS DOWN HANGAR AT SCOTT FIELD, ILLINOIS

During the week a fire was discovered in Hangar #6 at Scott Field, Belleville, Illinois by the Commanding Officer, Major Ira Longanecker. While at work in his office he noticed what he thought was the reflection of the sun on the hangar but on closer observation he noted the flames. Calling to the telephone operator to sound the alarm, he rushed out, attached the hose and turned on the water. All members of the post responded to the alarm. Five lines of hose were laid. The hangar fell in within fifteen minutes after the fire was discovered. Five airplanes stored in the hangar were completely destroyed.

ACTIVITIES OF THE ARMY BALLOON SCHOOL, FORT OMAHA, NEBRASKA

The flying time for observation balloons was 15 hours and 13 minutes and 24 flights.

A free balloon flight was made during the week, leaving Fort Omaha at 1:25 A.M. piloted by Major Jacob W.S. Wuest, A.S. and carrying as passengers Major E.E. McCammon, A.S., Captain Stacy B. Hall, M.G., Second Lieutenant Roscoe G. Conklin, A.S. and Master Sergeant M.E. Maricle. The balloon maintained an average altitude of 900 feet during the hours before dawn. At 5:40 A.M. they were able to orient themselves and found they were passing over Wayne, Nebraska, a distance of 100 miles from Fort Omaha. They continued on in a northwesterly direction at an average altitude of 1800 feet until 8:24 A.M. when they landed 3 miles west of Yankton, South Dakota, the duration of the flight was 6 hours and 59 minutes and a straight line distance of 160 miles.

After landing, all members of the party got out of the basket but Master Sergeant M.E. Maricle. After putting in enough ballast to compensate for the passengers getting out Sergeant Maricle continued the flight, leaving at 8:50 A.M. and landing at 11:10 A.M. 3 miles south of Scotland, South Dakota, the duration of the flight being 2 hours and 20 minutes. The distance flown was 32 miles and the total distance from Fort Omaha, 192 miles. This last flight qualifies Master Sergeant Maricle as a spherical balloon pilot.

The Gas Department has just completed a new gas manifold for the inflation of balloons, the principal features of which are the elimination of risk in connection with fire caused by a static spark and a new method of attaching cylinder end of inflation manifold hose to the cylinder valves without the use of any tools and with the cylinder in any position. Some features of the French manifold are retained but the method of attaching cylinders to the manifold has been greatly improved to the extent that twelve cylinders can be securely attached in the time required to attach two cylinders with the old method.

NEWS FROM THE AIR SERVICE OBSERVATION SCHOOL, POST FIELD,
FORT SILL, OKLAHOMA

In addition to the regular class work, the students of the observation school carried out all tactical and special air problems during the week. The air missions consisted of mapping and photographing the network of trenches on the Fort Sill firing range, battle conditions being simulated. All students successfully handled the problem of mapping the territory flanking the Frisco Railroad between Fort Sill and Chickasha, a town forty miles to the north. All maps turned in were very accurate, and the work was especially well done, and all strategic points, which due to the contour of the territory between the two points are numerous, were carefully noted on the maps.

Reception and Dance for Commanding Officer.

Captain Follett Bradley, who has recently taken command of Post Field and Mrs. Bradley were formally welcomed by a reception and dance given in their honor at the Post Field Officers' Club. Among the guests were Brig. General Ernest Hinds, Commanding Fort Sill, and Lieut. Colonel McIntyre, Assistant Commandant Artillery School of Fire.

The ballroom, reception hall and lawn were lighted by Japanese lanterns, which, together with colored paper streamers tastefully arranged, formed the basis of the decoration scheme. Everyone had a most enjoyable time and only the lateness of the hour caused the party to break up.

Inspection by General Officers.

Major General Haan, of the War Plans Division General Staff and Brig. General Hinds, Commanding Fort Sill, inspected Post Field during the week. They expressed themselves as quite pleased with the Field in general, and especially with the work being accomplished by the Observation School.

Activities of the 23rd Balloon Company.

Although handicapped by insufficient personnel to properly handle the Caquot Balloons, the 23rd Balloon Company has the big bag in the air at least every other day, in order that the men of the Company may receive proper instruction in the practical side of balloon work. The company has a personnel of only fifty-three men, and is commanded by 2nd Lieut. C.F. Bond.

Parachute Jump.

Sergeant Chambers hopped off from a DH-4 B piloted by Lieut. S.T. Agee, at an altitude of 6000 feet, and made a very successful landing. The jump was made Friday evening, and due to very calm air, the landing was made practically beneath the point at which the jump was made.

FRANCE FIELD, CANAL ZONE, PANAMA.

The funeral of Sergeant Doucett, who was killed in an airplane accident on July 5th was held on Tuesday, the body being brought by train from Ancon to Cristobal Station, from which point the funeral procession wended its way to Pier 6 where the body was placed aboard the U.S.A.T. Mercury for transportation to the States.

NEWS FROM THE 8th AERO SQUADRON, McALLEN, TEXAS

On Saturday the 8th Aero Squadron at McAllen, Texas celebrated its first anniversary of border service, Flight "A" having been in McAllen just three hundred and sixty five days on that day. In honor of the occasion the Commanding Officer ordered general fatigue until 10:00 A.M. when all troops were given passes for the remainder of the day. It is an interesting fact that during the year's stay on the border the flight has put in a little over 2200 flying hours. This is believed to be the largest total time put in by any one organization during the past year. Added to this the flight at Laredo has some 1600 hours in the air bringing the total for the Squadron up to approximately 3800 aero hours. The majority of this time has been spent in border patrol and reconnaissance. This is considered a rather remarkable record when it is taken into consideration that the Squadron has never had its full quota of flying officers and also the great difficulty encountered in border flying. An idea of the country covered and flying conditions on the border is given by the fact that the Squadron has sustained twenty-two total washouts in the past year.

Major J. N. Barney, M.C. Medical Officer of the Squadron has been at Fort San Houston for the past week taking the Regular Army examination. It is rather a coincidence that the ambulance has had to be called out twice during Major Barney's absence because of gearless landings. In both cases, however, the officers of the ambulance were not needed.

Number 09, the plane washed out by Captain Kenney last week because of wrecking a landing gear on the take-off, was the oldest type B De Haviland 4 in border service and in fact the first B to be received in the Southern Department. This plane had been in more or less constant service at this station since last December and had put in 185 hours and some odd minutes on border patrol. Needless to say it was the pride and joy of its Pilot, Lieut. Meloy.

NEWS FROM THE 104th AERO SQUADRON, MARFA, TEXAS

Most of the officers have returned from San Antonio where they have been taking examinations for the Regular Army. Stragglers from other flights have been passing through or over all of this week. Most of the activities of the Flight for the week consisted in recovering from the accumulation caused by an absence of two weeks. Without exception the officers were glad to get back home. The heat in San Antonio made them appreciate the climate at Marfa. Any dissatisfaction that might have been growing on account of being stationed on the border especially for the remainder of the summer, was effectively checked by this two week's visit.

This does not indicate that the stay at San Antonio was not enjoyed. It was a great pleasure to meet so many old acquaintances and the affair had more nearly the atmosphere of a reunion than an examination. The officers stationed there were constantly trying to do everything they could in an effort to repay a fancied debt of hospitality incurred by them while visiting the border stations. Unfortunately the 104th Aero Squadron has not had the pleasure of entertaining many of these visitors so it is thought that the hospitality received at San Antonio is payment in advance and the hope is expressed that some of them may find time to get this far out on the border and thus give the 104th an opportunity to show what it can do.

Thoughts of the examination seem to be the least part of the memories of the stay at San Antonio. The barracks were filled with fellows most of whom had met before but had been separated for some time, and the old time sport of "barracks flying" was revived. Reveries of cadet days, incidents of the flying fields and news of fellows not there were the main topics of conversation. The Air Service should have a reunion every year.

The Flight at Sanderson has a "bob-cat" for a mascot. Lieut. Berryhill heard of some young panthers about 8 miles from Marfa and thought it would be quite the thing to have one in case the Sanderson Flight becomes too proud of their mascot. A visit was made to the home of the panther but the party returned empty handed. There seems to be four of these cubs guarded by a mother that is said to measure above ten feet, and their home is a cave that is very dark. Having no panther dogs with which to run the panther out of the cave the party decided to come back and return some moonlight night and slip up on them.

SQUADRON NEWS

NEWS FROM THE PILOTS' SCHOOL, MARCH FIELD, CALIFORNIA

The temperature during the past week has been well above the 100 mark at high noon. Despite the heat the usual training program has been carried out. Unusual close watch was kept for forest fires but only a few small conflagrations were reported.

More than 50 enlisted men of the command were examined during the past week for promotion to the grades of staff sergeant, master sergeant and master electrician. Both practical and theoretical tests were given.

Albert M. LeMoure has enlisted for assignment to March Field. Le Moure is French. Furthermore he is a chef, having performed such duties at the Alexandria in Los Angeles and at the Coronado resort near San Diego as well as numerous other famous eating houses both in France and the United States.

Le Moure is now at Kelly Field but upon re-enlistment requested assignment to March Field. He will be met at the gate by the Post Band and escorted to the enlisted men's mess hall where a big banquet will have been prepared in his honor.

Cadet Gilbert H. Eckerson has re-enlisted as a staff sergeant and will be assigned to the Philippines upon authority from the Chief of Air Service. Eckerson has been flying forest fire patrol from March Field during the past two months.

Dr. Ford A. Carpenter, meteorology expert of the Chamber of Commerce of Los Angeles was an aerial visitor during the week. He was carried as a passenger in an army plane to San Francisco and return.

Squadron "D" of the pilots' School Detachment gave a dancing party at the Service Men's Club last Wednesday evening. Nearly a hundred young ladies of the community were guests of the evening. The affair assumed the nature of a house warming in that the young lady friends of the enlisted men were introduced for the first time to the newly decorated Service Club.

Mrs. Anita Baldwin donated furniture, rugs, curtains, pictures, a player piano and numerous other club room fixtures which makes the March Field Club one of the most elaborately furnished army recreational centers in the Western Department.

One of the new type reversible propellers has been installed on a Curtiss Hispano training plane and will be ready for test flight the first of next week. Captain Charles Melin, test pilot, will be the first to give the new propeller an aerial trial at March Field. Its performance will be watched with much interest by both the enlisted and commissioned personnel.

RICH FIELD, WACO, TEXAS

It is interestingly noted in last week's issue of the Air Service News Letter that the Commanding Officer of Kelly Field had lent encouragement to week-end flights for pilots as an incentive to develop cross-country proficiency. Without doubt encouragement and sanction of this nature can not help but be conducive of beneficial results. Flying itself is an art and a science which is more enthusiastically engaged in by those who have the spirit for adventure and the lure for excitement and thrilling experiences. The elimination of opportunities for such adventures and thrilling experiences in aviation cannot help but retard the development of the more proficient fliers, while the sanction and encouragement to these features cannot help but bring about the highest standard of aeronautical proficiency.

The semi-monthly dances for the enlisted personnel at Rich Field have proven to be a source of social entertainment that has unanimously interested the entire personnel of Rich Field. It has been decided to make these entertainments a weekly affair, hereafter, as the interest manifested indicates this feature of Rich Field's opportunity for amusement to be the most appreciated. Next week the entire personnel of the field will be entertained by the Civilian employees who have expressed a willingness to reciprocate for the social opportunities afforded in the past by the enlisted personnel.

MATHER FIELD, SACRAMENTO, CALIFORNIA

Two aeroplanes on forest patrol flights were forced to land owing to motor trouble during the past week. Both pilots succeeded in finding a place to land their planes sufficiently open to avoid injury either to pilots or observers. The aeroplanes were wrecked.

Lieut. Douglas Martin, pilot, and Corporal Robert LeRoy, observer, 9th Aero Squadron, made a non-stop flight of 4 hours and 2 minutes in a DH-4 B. The flight was the return leg of the regular forest patrol flight to Red Bluff, California from Mather Field. The course is over the rough Sierra Mountain terrain. Ordinarily the patrol takes 2 hours and 30 minutes. The extra time in this flight was due to the pilot leaving his course to inspect a number of fires. The total fuel consumption for this flight was 60 gallons of gasoline and 5½ gallons of oil. The engine was run at 1500 R.P.M. during the entire flight.

Lieut. Russell Maughan, pilot, and Private Andrew Bustamente, 9th Aero Squadron, established a new efficiency record for Forest Patrol this week. On leaving the sub-field at Cooperstown, California sparks from the exhaust of the motor started a fire just outside of the field. Lieut. Maughan and observer landed and extinguished the fire. Since a fire report is 100% efficient when it locates the fire within a quarter of a mile of its actual location, it is hard to compute the percentage when the fire is started, discovered and extinguished by the patrol.

The fires in the National Forests covered by the squadron are becoming more numerous as the weather conditions become hotter and the vegetation scorched. Fifty-six new fires were discovered last week. Most of them were extinguished before much damage was done. Two or three of them however burned up considerable timber before controlled.

During the present hot weather the motors usually heat up to 100% Centigrade before sufficient altitude is reached to attain the cool strata. At 11000 feet the motor temperature hovers between 70 and 80 degrees with the shutters open.

SELFRIDGE FIELD, MT. CLEMENS, MICHIGAN

Brigadier General William Mitchell, arrived at Selfridge Field on Tuesday, on a tour of inspection. General Mitchell also paid a visit to the Packard Motor Company, Detroit, Michigan, inspecting their airplane division, and while there flew a Fokker equipped with the new Packard "8" engine. After the flight he stated that the Fokker so equipped was a distinct improvement over the standard Mercedes installation.

Victory Medal applications have increased during the past week, due to the publicity recently obtained by Selfridge Field in the columns of the Mt. Clemens Leader.

Two D.H.'s from Camp Perry, Ohio, where the National Rifle Competition is to be held this month, landed at the field Thursday afternoon. The Commanding Officer, Captain N.J. Boots, A.S. expects to accompany one of the pilots, Captain H.M. Gallop, A.S. in a flight to Dayton, Ohio.

FIRST PURSUIT GROUP, KELLY FIELD, TEXAS

The First Pursuit Group now boasts a cadet detachment. These cadets are assigned to Kelly Field for advanced training in pursuit work. They are now flying S.E. 5's and their training is progressing rapidly. Lieut. Cleveland W. McDermott is commandant of cadets and Lieut. Hiram W. Sheridan is instructor.

During the past week 100% of the daylight hours were suitable for flying. The group made a total of 296 flights for 126 hours and 29 minutes. The flights were of the following types; 8 practice and test, 4 long distance reconnaissance, 245 short distance reconnaissance, 35 dual and 4 ferry.

The Bombardment Group has been busy during the week preparing for the Artillery Observation exercises to be held in connection with the second Field Artillery Brigade of the Second Division. This brigade consists of the 12th, 15th and 17th Field Artillery. The "shoot" is to be held at Camp Stanley, Leon Springs, Texas.

The present plan is for the 17th Field Artillery to spend one month on the range to be followed by the 12th and 15th Field Artilleries. Each regiment will fire aerial adjustment on four days and the firing will be carried on from 7:30 A.M. to 11:30 A.M.

TRAINING

In compliance with a memorandum from the Operations Office suggesting all pilots request a mission from the Operations Office before making a long distance flight, Lieutenant G.P. Tourtellet, 27th Pursuit Squadron, requested and executed an altitude test in an S.E.5. No sealed barograph was available, so only an altimeter reading could be made. Lieut. Tourtellet reports attaining an altitude of 21,900 feet. He has requested opportunity to make another altitude flight as soon as a sealed barograph can be obtained. He hopes to better his altitude record which is itself believed to be a record altitude for S.E.-5's.

AIR SERVICE DETACHMENT AT GODMAN FIELD, KENTUCKY

With the arrival of Captains Oliver P. Echols, George C. Kenney, 1st Lieut. William S. Gravely, 2nd Lieuts. Rosenham Beam, Henry Burtis, W. W. Carveth, C.M. Cutler, Donald D. Fitzgerald, John T. Lawson and Lyman Patterson, Godman Field has once more taken on the appearance of an active station.

Ten artillery reglage problems were carried out during the past week with excellent results. The 81st and 83rd artillery regiments commanded by Majors Sands and Chamberlain respectively were fired by aerial observers, several fugitive problems being accomplished.

The co-operation of Majors Sands and Chamberlain and their respective regiments with the air service is excellent and both have made suggestions that have been proven by actual firing to be an improvement on the present method of fugitive target work.

Even better results are expected the coming week and it is hoped to demonstrate to the Army at large the wonderful results that can be accomplished by real earnest co-operation and good hard work.

Lieut. Woods and his detachment of three men of the photo section have reported for temporary duty to make a mosaic of the government reservation.

Two planes were flown to the supply depot, Dayton, Ohio during the past week to get urgently needed supplies. Capt. Echols assumes command of the field with 1st Lt. William S. Gravely as operations and information officer, 2nd Lt. Rosenham Beam, Adjutant, 2nd Lt. Henry T. Burtis, Engineer Officer, 2nd Lt. C. M. Cutler, Supply and 2nd Lt. Lyman Patterson as Transportation Officer.

HERE AND THERE WITH THE EDITORS

A Condensed Review of the Daily Press

"FOREIGN AVIATION"

"Those in charge of the development of aviation in this country must read with feelings of chagrin the report of the controller general of civil aviation in Great Britain.

"With a total of more than 70,000 passengers carried during the first year of civil flying in England, there was but one fatal accident. The adaptation of the flying machine to the purposes of trade is but a step, and British officials declaring they already have conquered the air, find their immediate task now to be the exploitation of their success in the interest of commercial development. During this one year British fliers have carried 116,498 pounds of goods and more than \$1,000,000 worth of imports and exports were transported by air between England and the continent.

HERE AND THERE WITH THE EDITORS

A Condensed Review of the Daily Press.

"In Germany there are 25 air transport companies, and the number is increasing monthly. For a country that insists it cannot comply with the economic provisions of the peace treaty this is a remarkable industrial development carried in direct violation of treaty obligations and necessarily requiring considerable capital. Great progress is also reported from France, which has designated air attaches in the chief capitals of the world to study and report all matters pertaining to aviation.

Belgium has organized an air ministry and established air attaches in Paris and London. Presumably it would be useless to send these experts to study in the United States, where the lessons of the war have been so soon forgotten. Belgium has appropriated a considerable sum for the development of flying in the Belgian Congo. France has acquired 5 aerodromes and 24 landing grounds for the use of civilian fliers and is now planning to connect all her colonies with air lines. Italy has appointed air attaches to sixteen countries and large sums of money are being expended to develop flying.

"Isn't it time for the Americans to wake up?"

(Washington Post 8/9/20)

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NEW HYDROPLANE SERVICE

A new aerial passenger and freight service was opened yesterday, when hydro airplane No. 1 of the United States Aerial Express Company landed at 82nd St., New York City. The plane left Detroit coming to New York City via Toronto, Montreal, and Lake Champlain.

This new company is operated under a contract with the Navy. The pilots were all navy trained and the plane was constructed at the Navy Aircraft Factory, Philadelphia. The Government is assisting in establishing this new aerial route because of its recent adopted policy to aid air service reserves.

Three regular routes will be operated by this company, one on the Great Lakes, connecting lake ports with New York, the second on the Mississippi River and the third is the Hawaiian Islands.

The planes are modeled after the F-5 models used by the Navy during the War. Two 400-h.p. Liberties give the planes motive power. Each ship is equipped with three deluxe cabins, parlor, observation and smoking rooms. Twenty one passengers besides two pilots and a mechanic can be comfortably accommodated. A new feature of the plane is the gas tank "which may be released in the event of fire or another emergency in the same manner a bomb was released during the war".

Lieut. Thomas F. Dunn is president of the company. He made the statement last night that the planes will be operated on fixed schedules, regardless of weather conditions.

(N.Y. World 8/10/20)

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ALASKAN FLIGHT AND THE NAVY

The Seattle Times 7/18/20 publishes an unusual comparison between the efficiency of the Alaskan flight and the navy base at Bremerton. The flight is characterized as "an interesting endurance test but viewed from a defense standpoint, this army feat is unimportant when contrasted with the navy's development of the great naval station on Puget Sound".

The writer claims that the territory's first line of defense always must be the navy and, specifically, that portion of the navy based on Bremerton because airplanes alone will never be able to defend Alaska against attack in time of war. Furthermore in an emergency it would be highly improbable to rush American airplanes to the Northland from the Atlantic Coast.

In case of war, with Canada as an ally, it would be difficult to transport men and supplies safely unless it were done by the sea "and here again, the navy and its great Bremerton base enter into the calculation".

He concludes "authorities agree that there can be no martial conflict on the Pacific involving the United States, that will not impose upon the navy the duty of safeguarding Alaska. In Bremerton, the Pacific fleet possesses the key to the defenses of the great Northern territory".

HERE AND THERE WITH THE EDITORS

A Condensed Review of the Daily Press

HART TO REGULATE AIRPLANE TRAFFIC

Governor Louis F. Hart of the State of Washington has made what is probably the first state executive move toward extending public supervision over airplane traffic.

His attitude and intentions are clearly expressed in the following extract from a letter to the State Public Service Commission:

"The matter of aerial transportation is becoming of manifest interest to the public. As you know, there is at this time no statutory provisions relative to the regulation in this state of this means of transportation. There is not even accurate information with reference to landing fields, as to number, location, area, distance from nearest city, compass direction from nearest city and such details.

Consequently I shall be glad if you will make a survey of this situation submitting first, data as to the landing sites and such similar information as you might deem to be useful to the public at this time, and secondly, your recommendations for legislation on this subject with particular reference to safety and police regulations which I may transmit to the general session of the Legislature when it convenes."
(Seattle Times 8/4/20)

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"LONDON - SCOTLAND AIR ROUTE"

Beardmore & Co. airplane builders have completed plans for the inauguration of a new airplane service between London and Scotland. Regular service for passengers, mails and freight will be in operation soon.

The Beardmore biplanes to be used in this service will maintain an average all weather speed of 100 miles an hour.

The air journey to Glasgow or return will be made comfortably in five hours; by train the journey takes at least 10 hours. The fare will be about \$60.

(Brooklyn Daily Eagle 8/4/20)

AIR SERVICE NEWS LETTERInformation Group
Air Service

August 25, 1920

Building B
Washington, D.C.PROGRESS AND ACTIVITIES REPORT OF THE TRAINING AND
OPERATIONS GROUP FOR THE WEEK ENDING
AUGUST 7, 1920Hawaiian Department.

The Inspector General made his annual inspection during the week.

Officers of Fort Leavenworth Class at Langley Field.

At Langley Field on August 4th a number of officers who graduated in the last class at Fort Leavenworth were given demonstrations in connection with Air Service Activities.

Communications Activities at Langley Field.

Test was made of new radio compass direction finder at Fort Monroe. Results obtained were very good. Tests were made of S.C.R.-67 Set.

Mitchel Field.

Communication has been established with Fort Hancock. Calls are given three times daily.

March Field.

Several flights have been made to Santa Barbara and San Diego with a view of improving the efficiency of the receiving sets there.

Development.

SCR-135 long range airplane transmitter and receiver. At a recent conference with the Signal Corps Engineers it was decided that a laboratory model of the set be made up, as it has been developed to date and sent to McCook Field for test.

Two flights were made to compare the throat transmitters with the standard transmitters with very satisfactory results. This is known as the S.C.D.-2 throat transmitter.

SCR Radio Repair Truck.

One model SCR-88 radio repair truck has been received and tests are being conducted to determine the changes that are necessary in the location of the apparatus. The truck weighs 16,000 pounds and is not equipped as per specifications. The radio school of instruction for observers and cadets are being carried on daily.

Special Maneuvers.

At the Artillery Fire center at Camp Knox, installation is being made of SCR-73-68 sets in connection with the artillery activities at said station.

Aberdeen Proving Ground.

Tests were made of radio sets for use on camera obscura work.

Photographic.

During the week the 7th, 4th and 14th Photo Sections flew a total of 12 hours and 40 minutes in connection with the making of special aerial photographs.

TACTICAL OPERATIONS OF BORDER STATIONS.

12th Aero Squadron, Flight "A", Douglas, Arizona.

100% daylight suitable for flying. Number of flights made, 18.

Practice 16, cross country, 2 test flights.

"FOR OFFICIAL USE ONLY"

V-2453, A.S.

8th Aero Squadron, Flight "A", McAllen, Texas.

100% daylight suitable for flying. Total number of flights-22
7 cross country, 7 surveillance, 1 formation, 1 special mission,
4 test flights. 1164 rounds of ammunition fired on strafing mission.
Shadow shooting, 18 dummy bombs dropped, 90% hits registered.

104th Aero Squadron Flight "B", Marfa, Texas.

75% daylight suitable for flying. Total 36 flights made, including
20 cross country, 16 practice flights..

9th Aero Squadron, Mather Field, California.

100% daylight, 111 flights made including 92 patrols, 11 test, 8 ferry
flights..

12th Aero Squadron, Flight "B", Nogales, Arizona.

100% daylight.. Total number of flights 14 including cross country
flights made.

91st Aero Squadron, Rockwell Field, Coronado, California.

100% daylight. Total of 13 flights including 4 border patrols, and
9 test flights..

90th Aero Squadron, Sanderson, Texas.

85% daylight. Total of 46 flights made including 15 special missions,
31 practice flights..

258th Aero Squadron, Aberdeen, Maryland.

75% daylight. Total of 81 flights made including 9 bombing. 11 test
flights, 61 miscellaneous flights.

10th & 99th Aero Squadron, Bolling Field, Anacostia, D. C.

86% daylight. Total of 109 flights made.

Camp Benning, Georgia..

100% daylight. Total of 6 flights made..

3rd and 7th Aero Squadrons, France Field, Canal Zone.

70% daylight, 36 flights made including 3 formation flights and
33 practice flights..

1st Bombardment Group, Kelly Field, San Antonio, Texas

11th Aero Squadron. 95% daylight. Total of 39 flights including 38
practice flights and 1 cross country flight.

20th Aero Squadron. Total of 70 flights.

96th Aero Squadron. Total of 62 flights.

166th Aero Squadron. Total of 36 flights.

Kelly Field, 1st Pursuit Group.

95% daylight, suitable for flying.

Headquarters Detachment, 101 flights made.

27th Aero Squadron, total of 14 flights..

94th Aero Squadron, total of 36 flights.

95th Aero Squadron, total of 24 flights.

147th Aero Squadron, total of 85 flights.

88th Aero Squadron, Langley Field, Hampton, Virginia..

95% daylight . Total of 42 flights made.

1st Aero Squadron, Mitchel Field, Long Island.

96% daylight suitable for flying. Total of 63 flights made, including
41 special missions, 16 practice flights, 4 test flights and 2 radio
test flights..

Liaison with R.O.T.C. Camp Vail, New Jersey, for a period of 4 days.

5th Aero Squadron, Mitchel Field.

229 flights made including 9 special missions, one photographic mission Vanderbilt Cup Yacht race; 15 Artillery and Infantry maneuver exercises, 167 passenger flights, 7 practice flights, 6 instruction flights, 1 Coast defense photography, 7 ferry flights, 3 gunnery flights and 13 test flights.

135th Aero Squadron, Headquarters at Post Field, Fort Sill.

100% daylight suitable for flying. Total of 145 flights made.

3rd Aero Squadron, Camp Stotsenburg, Pampanga, P. I.

20% daylight suitable for flying. 25 flights were made.

Air Service Detachment, Pope Field.

90% daylight suitable for flying. 3 practice flights

50th Aero Squadron Flight "B", Wilmington, North Carolina.

85% daylight. Total of 23 flights made including 15 cross country, 8 radio tests.

INFORMATION OBTAINED FROM OPERATIONS REPORTS
OF TACTICAL UNITS FOR WEEK ENDING JULY 31, 1920.

STATIONS, FLYING TIME AND AVAILABILITY OF PLANES

<u>Name of Squadron</u>	<u>Location</u>	<u>Flying Time</u>	<u>Planes on Hand</u>
1st Aero - Obs.	Mitchel Field, Mineola, L.I., N.Y.	64:40	22
2nd " "	Fort Mills, Philippine Islands	No report	
3rd " "	Camp Stotsenburg, Pampanga, P.I.	6:54	9
5th " "	Mitchel Field, Mineola, L.I., N.Y.	88:14	14
2nd Obs. Group (4th & 6th Sqdrn)	Luke Field, Ford's Is., Hawaii	No Report	
7th Aero - Obs.	France Field, Panama, C.Z.	17:35	162
8th-A " Sur.	McAllen, Texas	39:45	13
8th-B " "	Laredo, Texas	No Report	
9th " Obs.	Mather Field, Sacramento, Calif.	183:14	31
10th & 99th " "	Bolling Field, Washington, D. C.	68:43	12
11th Aero - Bomb.	Kelly Field, San Antonio, Texas	24:30	5
12th-A " Sur.	Douglas, Arizona	23:30	6
12th-B " "	Nogales, Arizona	24:55	9
20th " Bomb.	Kelly Field, San Antonio, Texas	38:05	5
27th " Pur.	" " " " "	7:05	24
50th-A " Obs.	Langley Field, Hampton, Va.	No Report	
50th-B " "	Garden City, Wilmington, N.C.	40:30	5
88th " "	Langley Field, Hampton, Va.	41:12	10
90th-A " Sur.	Del Rio, Texas	No Report	
90th-B " "	Sanderson, Texas	43:10	10
91st " "	Rockwell Field, Coronado, Calif.	18:15	6
94th " Pur.	Kelly Field, San Antonio, Texas	12:25	25
95th " " "	" " " " "	28:20	23
96th " Bomb.	" " " " "	40:20	11
104th-A " Sur.	El Paso, Texas	No Report	
104th-B " "	Marfa, Texas	27:25	5
135th " Obs.	Post Field, Fort Sill, Okla.	47:55	11
147th " Pur.	Kelly Field, San Antonio, Texas	21:30	25
166th " Bomb.	" " " " "	31:55	4
258th " HTA	Aberdeen Proving Grd., Aberdeen, Md.	18:23	36
Air Service Troops	Camp Benning, Ga.	6:30	9
" " "	Pope Field, Camp Bragg, N. C.	1:00	22
" " "	Godman Field, Camp Knox, Ky.	No Report	
Hdqs. Det. 1st Pursuit Group	Kelly Field, San Antonio, Texas	19:55	3
TOTAL		<u>985:55</u>	<u>517</u>

August 27, 1920

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE AUGUST 28, 1920

THE BEACONS OF THE FRONT LINE

There is probably a no more unique sight than that of a system of observation balloons, in a somewhat serpentine path, marking approximately the front line of defense or offense in any great war, such as the recent World War. These silent sentinels, of elephantine resemblance, floating languidly over the lines, disappearing here and there, bobbing slowly to and fro, represent one of many interesting innovations of the war. Each of these balloons, baptized "Sausages" by the French, and called "Drachen" by the Germans, is the center of far reaching activity, for they are connected by telephone to the ground and in this way report enemy activity on their front and for a considerable distance into the back area, and also assist materially in regulating artillery fire.

Historically balloons have an interesting and chronologically successful record since 1783. Somewhat early in central European military history, the appearance and ascent of a balloon although only to a few hundred feet in height, spelled victory to Napoleonic forces. It may well be said that military balloons, free, observation, and dirigible, have advanced in perfection of detail and development in the recent four years of war almost an equivalent to all of the accomplishments of the preceding existence. It is said that "Siege Balloons", captive spherical balloons, were supplied to the principal fortified points in France in 1914 at the outbreak of hostilities. Prior military successes due to advantageous observation brought forward a request to move these captive balloons toward the front. This was accomplished timidly at first and then the success of the experiment brought more general use. The German captive balloons that began to appear along their lines at about this same time were seen to be of elongated design, presenting a queer and unfamiliar appearance. The ridicule instigated by their novelty, soon gave way to profound respect because of the havoc caused by their superior vantage.

Feverish and zealous efforts resulted in the design of the Caquot observation balloon; which alleviated the superiority of the German "Drachen". The new allied balloon soon proved its equality and in fact superiority over the German balloon as to steadiness, air-worthiness, endurance and value as a platform for observation. Simultaneously the ground equipment was improved so that motor truck winches and handling facilities were brought to the same peak of perfection as the balloon and its equipment. This mobility and the fundamental character of the service rendered immediately associated the balloon company as an integral part of the line units.

The public, which from the first was intensely interested in the exploits of American aviators, almost ignored the not less useful but less spectacular and more monotonous work of balloon observers. In their duties there is lacking the rich variety, the infinite diversity, the intensity of the dizzy flights through space, and the intoxication of great speed; the whirl-wind attacks and the joy of striking the enemy from a distance. If superior qualities of judgment, audacity and maneuvering are necessary to the success of the airplane, the balloon observer requires courage to hold out permanently under the continual menace of the enemy, at his post of observation, during many hours, exposed to all kinds of weather and constant attacks. Constantly harnessed into the straps of his parachute which hangs on the side of the basket, with a telephone helmet

#2
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2-2

on his head connecting him with the ground; scanning his maps, the observer watches the line of battle with the aid of his powerful glasses, and inscribes the movements of the combatants. The airplane passes, photographs, flies over the battle and returns, but the balloon remains watching each action of the enemy; signalling the preparation of his batteries; the movements of his troops; suspicious signals; and convoys which it will be necessary to stop, and keeps the commander informed of all the activities on the field of battle. He is the all vigilant eye of the army. He is its safe-guard. Since the day before, a particular field, or a certain wood has changed its aspect. There is something going on there. What is it? The observer tries to pierce the mystery of the enemy's actions and carries on his silent work with attentive tenacity which is only troubled occasionally by an anxious call through the telephone: "Lookout an airplane is coming toward you".

Then comes the exciting and sometimes mortal plunge into space at the mercy of the parachute, while the burning balloon, in its turn also comes floating down. More and more the balloon companies and their observers participate in the general action of the battle and follow its constant changes. In case of an advance the balloon moves forward as the line changes. Powerful auto winches advance over the ground gained, with their balloons at the end of the cable. To all eyes they are the visible symbol of success.

At certain difficult moments the balloon service renders invaluable assistance. Especially when the sudden and furious shock of the enemy forces the lines to waver under the heavy volleys of fire which sweep over the field, a balloon mounted aloft can set an example by remaining in the air in spite of all the efforts of the enemy and by its presence the courage of the men can be heightened and in this way contribute in no small degree to the re-establishment of a situation which for a short time may seem hopeless.

Besides it goes without saying that such results can only be obtained by a sentiment of joint responsibility and abnegation on the part of all those connected with the service. Observers can only carry out their missions if they are backed up by the personnel of each company; officers, privates, mechanics and lookouts. There is necessarily in each balloon company a certain number of specialists: mechanics, cutters and rope men, who every evening carefully inspect the balloon. These men often work all night repairing damage to the balloon caused by shrapnel, or machine guns or the violence of the wind.

By reason of the intensity which the battle sometimes reaches in active sectors and because of the importance of the information which "observation sausages" furnish, the enemy makes strenuous efforts to destroy these observers in the skies. It is difficult to conceal the balloon and as soon as its location is been signalled by reconnoitering planes it is submitted to incessant harassing. Attacks by enemy airplanes against balloons become more and more frequent each day and it is not rare that several of them are brought down on fire. They are not sufficiently protected by a few machine guns placed in proximity to the balloon winch and it is indispensable, if it is desired to obtain the maximum result by "sausage observation", that observers are assured the double protection of barrage fire, by machine guns, cannon and airplane patrols, which guard the front of the balloon lines.

NATIONAL AIRPLANE RACE

Two trans-continental national airplane races are planned to be held as follows:

First, from New York to San Francisco, October 18th to November 20, 1920.

Second, New York to Los Angeles, sometime during the first three months of next year.

GORDON BENNETT AIR RACE

On August 20, 1920 the United States Army personnel assigned to the International Airplane Race to represent the Army Air Service and its entry sailed from New York for France. The famous Verville Packard pursuit airplane, the Army Air Service entry went with them.

Street

As the News Letter goes to press the epoch making and historical Army Air Service Alaskan Expedition achieve their goal. No other single aeronautic achievement for the year 1920 will approach the magnitude and glory of the success of this expedition. A route has been opened and the trail blazed which within a few years can be utilized by commercial aeronautics for providing communication between Chicago and the most extreme parts of Alaska within four or five days as compared to the present time of practically 30 days necessary for communication other than by wire between these points. Certainly no single greater gain could come from the success of such an expedition as this.

It is believed that no other aeronautical expedition has faced greater possibilities of failure than the intrepid personnel that manned those four pioneer airplanes. No other expedition, it is believed, has ever faced the problem of transversing a territory practically unknown to man, fraught with dangers of unknown atmospheric conditions and absolute lack of any landing facilities whatsoever, where the necessity of landing would have meant instant death. It is felt that the landing of these four planes at Nome, Alaska on Bering Strait is equivalent in achievement to the placing of the American flag at the North Pole. The reliability and stamina of American aircraft and aircraft engines can be no better exhibited than in the performance of this flight. The product of the war time industry created almost over night in the United States to meet a tremendous national emergency was put to the supreme test in this expedition and shows an enviable record in its accomplishment. It provides an unanswerable argument for the continuation and propagation of the American aeronautical industry.

AIR TRAINING FOR REPRESENTATIVES OF AMERICAN REPUBLICS

The following number of army officers as representatives of American Republics will attend the American Air Service schools at March Field, California and Carlstrom Field, Florida for the courses commencing about October 1st, 1920, upon the invitation of the Adjutant General of the United States Army. The acceptance by the following has been received:

- Guatemala.. 1
- Venezuela.. 2
- Ecuador.... 2
- Peru..... 2
- Chile..... 2
- Bolivia.... 2
- Paraguay... 1
- Cuba..... 2

It is also announced that the invitation for two non-commissioned officers to attend the Air Service Mechanics School at Kelly Field, Texas for the course to begin about September 1st, 1920 has been accepted by the Republic of Chile.

AIRBOARD OF CANADA

Canada has shown admirable foresight in creating an Air Board which governs both governmental and civil aeronautical activities. The progress report is issued monthly and the first is now available. The Air Board personnel has been partially selected but new appointments are continually being made. The Board has already started in to apply air regulations of 1920 and from the report of their activities in regard to the violations of its regulations it would seem that they are accomplishing much to the end of eliminating ill advised commercial aeronautical activities. Their flying operations branch is making trips to different points within the Dominion by air bringing back complete records, observations, aerial photographs and data regarding the routes surveyed in this manner. This information is to be made available for commercial operators so that they may

not face the establishment of routes over absolutely unknown territory. The examination of specifications and types of machines which are submitted for the control of this branch is also being carried out. A preliminary survey of the air routes of Canada is being prepared in order to issue complete details of these routes for the information of all concerned. All Government air stations are to be made available as commercial stations and will be licensed as such in the regular way. Additional airports are constantly being created and licensed. Licenses of pilots and others for commercial aeronautical activities are being issued upon application with respect to air personnel, air craft and air harbors. The following is a sample type of the log reports which are being made by the Department of Flying Operations and it is felt that similar reports should be instituted by the Army Air Service to be made available upon application to all interested.

REPORT OF FLIGHT

The following report is made of the Flight of 2 H.S.2L flying boats, 330 Naval Pattern Liberty Engines from Halifax, N.S. to Roberval; Lake St. John, Quebec, on Saturday July 17, 1920.

Halifax to Lake St. John

July 17th.

	<u>Time</u>	<u>Distance</u>	<u>Weather</u>	<u>Wind</u>	<u>Remarks</u>
Left Halifax	8.05				
Passed Windsor	8.55	36 miles	Good	N.W.4	Flying at 5,000 feet.
Scots Bay	9.21	25 "	"	N.W.4	comparative safety Numerous large and small lakes
Isle Haute	9.51	35 "	"	N.W.4	
St. Johns	10.55	50 "	"	"	Open sea, O.K.
Fredericton	11.55	78 "	"	W.3	Wide river, landing could be effected across the river if necessary but wind invariably seems to blow up or down stream. Ideal landing conditions.
"	2.15	"	"	"	
Woodstock	3.10	70 "	"	"	
Grand Falls	4.00	63 "	"	"	
Lake Temiscouata	5.10	73 "	Showers	"	This is practically the only bad spot on the trip. The Madawaska River provides reasonably good landing facilities but on the occasion of the trip was absolutely full of logs and if engine trouble had been experienced it would have been necessary to have attempted a landing in an open field of which there were quite a number.
Frazerville	5.45	32 "	"	"	This part of the route is not so good as it might be. Land rather few and even at 5000 feet difficulty would have at times been experienced in gliding into them.
Frazerville	8.30			3	O.K. The Bay at Tadousac provides an excellent anchorage.
Tadousac	9.00	18 "	Showery	N.W.3	
July 18					
Tadousac	4.22		Good	"	Ideal with exception of upper reach of the Saguenay in which there are several rapids.
Roberval	6.45	132 "	"	"	

Total distance flown..... 612 miles.
Total time in air..... 10 hours and 13 minutes.

FLYING BOAT

Hull and wings.

H.S.2L flying boat used on this occasion is a Curtiss production and was designed and built in 1917. The design is very primitive and practically no attempt has been made to cut down the weight on hull or wings. The head resistance in the machine is very high owing to the lack of streamlining of hull, struts, etc. No attempt has been made to counteract the engine torque with a result that practically all machines of this type have a very pronounced tendency to turn to the left both in the air and on the water. The hull is very strongly built and can stand lots of rough usage. The two machines in question had been in hangars for more than 18 months but were found to be quite water tight when launched.

Petrol system

Tank capacity is provided for 165 gallons (American). When throttled down the machine has sufficient fuel to keep her in the air for 4 1/2 to 5 hours.

Engine

The power unit installed is the 330 H.P. Naval Liberty. The engine was found on the trip to be satisfactory in every respect. The engine is started very easily by means of a hand crank.

AIR ROUTE

The air route between Halifax and Lake St. John as followed was found to be entirely satisfactory. There were very few moments in the entire journey when, if engine trouble had developed, it would have been impossible to have glided to a lake or river. Very little improvement can be suggested on the route marked out on the chart with the exception that instead of cutting across country from St. John to Fredericton and from Fredericton to Woodstock the river should be followed over the entire course. The only portion of the route where any real danger was experienced was between Edmundston and Temiscouata, this owing to the fact that the Madawaska River was found to be entirely blocked by logging operations.

Refueling arrangements

It was originally intended to land for refuelling purposes at Woodstock but owing to strong head winds it was found necessary to make a landing at Fredericton. Arrangements had been made beforehand to have a stock of petrol and oil at this point. No difficulty was experienced in refuelling but the operation entailed a considerable delay. A second stop for fuel was made at Frazerville and here again considerable delay was experienced. Neither Frazerville or Riviere du Loup provided good anchorage so course was set for Tadousac where, owing to darkness, machine was moored for the night. The journey was continued the following day and the trip from Tadousac to Roberval completed in two hours and twenty-three minutes. The Saguenay River provided excellent facilities for landing, if this had been necessary, and only on the upper regions where there are a considerable number of rapids would any trouble be experienced. Lake St. John is an ideal sheet of water for seaplane work. The Air-harbor selected at Roberval is all that one could wish as a seaplane base.

Air Routes (Machine No.1)
Lieut. Col. R. Leckie,
Capt. J. A. Glen,
Engineer MacCauley.

Air Routes (Machine No.2)
Capt. Allan Wilson,
Capt. H. S. Quigley,
Rigger Gorham.

Machine No. 2 followed practically the same route but owing to petrol system trouble turned back to Halifax soon after leaving. The ensuing delay compelled this machine to remain the night at Fredericton. Machine No. 1 waited on her consort at Tadoussac and both machines then completed the journey in company.

CONCLUSIONS

Machines.

While this type of machine is rapidly becoming obsolete owing to its crude design it is still fit to carry on useful work. It can take care of a useful load of four men, camera and 4 1/2 hour's fuelling. Owing to its very strong construction it is very useful for operations in localities where repairs are difficult.

It is recommended that strong Sandow elastic be attached to the right rudder to compensate for the torque of the engine. Petrol gauges should be watched closely as it has been found that they do not register correctly.

Air Routes

The Air Routes outlined above are quite good and will be quite useful for commercial purposes. It is strongly recommended, however, that in licensing seaplane air harbors it should be made compulsory to the licensee to provide moorings. This should consist of a sinker of at least 500 pounds weight attached to a chain floated by means of a wooden buoy about three feet below the surface. Above this wooden buoy will be placed a bladder buoy with large ring or eyebolt on top. All seaplanes operating away from their own base should be provided with snap boat hooks attached to towing pennant thus enabling the seaplanes to taxi to the moorings and pick them up without danger of damaging the hull of the boat against a heavy wooden or steel mooring buoy and also obviating the inevitable difficulty which one experiences with motor boats in inexperienced hands. A second requirement for the licensing of air harbors (seaplanes) should be a barge or scow for refuelling purposes. This need not be elaborate but should be large enough to accommodate two fifty barrels of gasoline and a semi-retary pump so that the scow can be brought alongside the seaplanes moorings and gasoline transferred by means of a hose attached to the pump.

Weather reports

The weather reports supplied by the Meteorological Office were found to be extremely useful and absolutely correct. As a result of being in possession of these the only two good days clear of fog and suitable for flying out of a period of about 20 were settled upon to make the flight. It is strongly recommended that early efforts be made to extend the system of meteorological reports as affecting flying throughout Canada.

ENGLAND OPENS UP NEW CONTINENTAL AIR ROUTES

The Airco Company of London, England has announced that they have started a regular service from London to Amsterdam. The airplanes are of the new DH-9 and DH-14 type and leave at 10 A.M. Monday, Wednesday and Friday of each week returning on the following day. In addition to this the same company is operating a daily mail service to Paris. The machines leave twice daily, 9:30 and 4:30 P.M. Thus a man is able to breakfast in London, lunch in Paris and dine in London. The Handley Page Company is likewise increasing the number of airplanes used on their London-Paris service. Altogether there are now 80 airplanes engaged on regular services between England and the continent. This development reflects great credit upon the British notwithstanding the many difficulties which they have had to face, due to post war conditions and the transferring of their industrial machinery back to a peace time basis. These companies have steadily increased their business and have maintained daily service for over a year. If England in the face of such difficulties can operate commercial service at a profit why cannot we do likewise? There are plenty of opportunities. All that is needed in the United States is action.

BANKER COMMUTES TO SUMMER HOME IN MOUNTAINS BY AIRPLANE

Gilbert H. Budwig, ex-civilian flying instructor at March Field landed at said field during the week in a \$20,000 plane, the property of L.C. Brand, President of the Title Guarantee & Trust Company of Los Angeles. The plane is patterned somewhat after the LePere and was built at Venice, California under the direction of H. H. Waterman, aeronautical engineer. It is propelled by a 12 cylinder Liberty motor and has several unique features, among them an ice box.

Mr. Brand will use the plane for week end trips between Los Angeles and his summer home in the Yosemite.

FLYING TIME AT PILOTS SCHOOL, MARCH FIELD

Four hundred sixteen flights were made from March Field during the past week. This represents a total of 394 hours and 50 minutes, flying time. Preliminary instruction consumed 244 hours, 25 minutes; advanced instruction, 35 hours, 45 minutes; forest patrol, 25 hours, 30 minutes; test flights, 10 hours and the remainder in miscellaneous flights.

AIRMAN REFUSED PASS PORT

"Top" Paine, former Lieut. in the U.S. Air Service and Ex- March Field pilot, now director of Air Service for Governor Cantu of Lower California, was refused a passport to cross the border at Mexicali Wednesday evening after he had landed on the American side in a new bombing plane purchased to augment the Cantu forces.

FORMER AIR SERVICE PILOT HAS FORCED LANDING IN DESERT *Earl Ailor*

Surviving for six weeks on sage brush "bunnies" was the thrilling tale told by Earl Ailor, ex-March Field pilot, who returned Tuesday from Nevada after a forced landing on the desert. He was six weeks getting repair parts to the disabled plane having landed 10 miles from a railroad and having had to carry the parts including a propeller, on his back, no means of transportation being available. He pitched a tent near the site and camped for six weeks until able to take off again. Ailor is pilot for Ralph Seeley, real estate dealer of Blythe, California.

SECOND NATIONAL TRANSCONTINENTAL AIRPLANE RACE

The announcement of the National Aeroplane Race for the Pulitzer Trophy is creating an interest in aviation all over the country and in compliance with requests from Los Angeles, and cities in the border, gulf and southern states the Aero Club of America today voted to run a second National Transcontinental Aeroplane on the same plans and during the winter months from New York via Washington, Atlanta, New Orleans, Texas, Arizona, New Mexico to Los Angeles. This contest will be the second transcontinental for the Pulitzer Trophy which is open for annual competition until won three times in succession by one aviator, the donor may on account of the public demand and interest in aviation permit two contests annually that the advantage and practicability of aviation may be demonstrated in every state of the Union.

PURSUIT GROUP GROUND HARASSMENT PATROLS

It will be remembered that, in a previous article on Pursuit Work, it was stated that in Ground Harassment or "straffing", Pursuit Aviation renders a service of inestimable value to our ground forces. In this article we shall endeavor to elucidate in more detail just what a straffing mission is and just how it is accomplished, together with other information of interest.

A strafing mission is usually ordered by the army commander where there is great activity on the sector, to assist an attack by our infantry or to stem a drive on the part of the enemy. A large number of planes is usually sent on such missions.

The patrol flies at very low altitude in loose formation to the lines. There the formation breaks up and each pilot dives erratically on groups of men on the enemy trenches, firing tracer and ordinary ammunition into them. The sudden attack from above, the roar of the motor, and the tracers zigzagging about is about the most efficient "morale-getter" known to modern warfare. All pilots are supposed to keep an eye on the patrol leader who gives the signal to fall in on him again and proceed home as soon as the ammunition is expended. Small fragmentation bombs are dropped upon a signal from the leader before the formation breaks up and takes to individual strafing, unless all pilots are of sufficient experience to choose individual fleeting targets, in which case the bombs are not dropped concertedly.

In the defense the work is carried on in much the same way. The attacks with light bombs and machine guns are made more upon the enemy's combat trains and troops on the road than in the trenches. The whole German Divisions were completely prevented from getting into action in this manner, during the Great War. These attacks on combat trains and troops on the march are usually made in formation.

This type of work is one of the most hazardous, perhaps indeed the most hazardous of all Pursuit Work, for not only does the pilot make himself a target for everything, from a pistol to a field piece, but he also throws away all possibility of making a safe landing in case of engine failure. Even if he should manage to land his plane directly ahead without smashing up he could expect no quarter from the enemy infantry that he had just been firing tracer ammunition into.

The defensive tactics of such a patrol consists entirely of the breaking up of the formation over the area to be attacked and diving and zooming about in different directions to provide a large number of swiftly moving targets and thus confuse the aim of the gunners on the ground.

There can be no doubt of the efficiency of this method of attacking ground troops. One can well conceive of a future war in which no infantry or other ground troops will be able to move about at all until their air service has gained control of the air.

FIRST DAY BOMBARDMENT GROUP, KELLY FIELD, TEXAS

During the past week 95% of the daylight hours were suitable for flying. The Group made a total of 309 flights for 170 hours and 55 minutes. The flights were of the following types: 260 short reconnaissance, 17 long distance reconnaissance, 15 dual instruction, 13 photographic missions, 3 artillery liaison and 1 radio test.

Lieut. J. R. Drum of the 20th Aero Squadron ferried a DH-4 to Dallas for a replacement Monday and returned Tuesday P.M. The trip was made under ideal flying conditions.

During the week Lieut. Speck as pilot and Sgt. Hubbard as photographer in a JN4D took pictures of Kelly Field #1, Kelly Field #2, the Aviation General Supply Depot, Fort Sam Houston and the Remount Depot.

One day last week Captain Muse ferried a DH4 to Dallas and returned on the following day with a new "B".

Lieut. Jimmie Plumb left on Sunday morning with Captain Abbey for Fort Hauchaca, New Mexico. Captain Abbey has been on duty at Kelly Field as a member of the Examining Board and is returning to his organization.

Lieutenants Maynard and Woodward flew to Laredo, McAllen, Point Isabel and Corpus Christi over last week end.

The 166th were unfortunate in losing their faithful "Jennie" last week. She became entangled in the radio wires of hangar 24 on the take off and buried her nose in the lawn of the 20th Aero Squadron. Various reasons have been given for the fall. One was that the green strip of grass between the hangar and the barracks caused a downward current of air. Steps are being taken to have Captain Francis paint the grass white so that there will be no repetition of the accident. Another theory expounded was that the plane was climbing on its glide and this is always fatal near the ground.

Lieut. Pascale made a flight to Marfa, Texas recently, returning the following day. On the way back he encountered several storms thus substantiating the story brought back by another pilot of the Bombardment Group to the effect that there really are storms along the border. Some doubt exists among the pilots of this station as to the veracity of this tale, but now we have Pascale's word for it and maybe there really are dare devil, death defying storms along the border.

Lieut. MacIver ferried Lieut. Billett to Del Rio, Texas during the week and returned two days later, on a photographic mission. They also dropped in at Laredo but reported business poor at that station and although they made several calls on former acquaintances, they were unable to find any of them in.

Rich Field, Waco, Texas

Colonel Fechet, Department Air Service Officer, with 1st Lieut. Bermen, a member of his staff, left Rich Field Monday evening for Barron Field, Fort Worth, Texas and returned to Rich Field on Friday. The Colonel is on duty visiting these fields to formulate plans for their abandonment in accordance with previous instructions from the War Department.

During the last week an unusual number of both army and commercial pilots have landed at Rich Field while enroute to and from various points in Texas. With the abandonment of Love Field at Dallas, Texas and Rich Field at Waco, Texas, the thought of the value of airplane hangars at these places to the postoffice department for an aerial mail route through Texas is suggestive. Waco is on a direct air line from San Antonio and Houston to Dallas and both Dallas and Waco are on an air line with the larger cities of Oklahoma and Kansas.

Mr. L. Kelly of the Auto Wrecking Company, Waco, Texas, and Mr. Marion Sterling, Manager of the Franklin Motor Company, Waco, Texas, are zealously making preparations for instituting a commercial flying field at Waco in the immediate future. On Saturday of last week they secured the services of William E. Beigel and Cleason E. Shealer, formerly Sergeant 1st Class and Sergeant respectively, at Rich Field, to pilot two standard planes, equipped with OX-5 motors from Houston, Texas to Waco. The purchase of the two Standards is noteworthy as being the first privately owned planes that have been secured by Waco citizens. The prospective abandonment of Rich Field gives advance information to the people of Waco of the loss of flying operations which have characterized this locality during the past three years.

Richard H. Magee, 2nd Lieut. A.S., Rich Field, is an airplane pilot possessed of those adventurous qualities that solicit occasional experiences that may afford excitement and thrills. He was formerly an instructor in night flying at Call Field and Brooks Field, Texas, during the early history of operations there and was transferred to Rich Field in 1918, where he has since been on duty as flying instructor and other capacities. He likes the experiences and thrills of night flying. He had a unique and unusual experience one evening last week that will undoubtedly be always remembered. Lieut. Magee was not born and reared "in the land of cotton", consequently he could not be expected to be familiar with the various devices cotton farmers have inaugurated and contrived to prevent damage to their crops by various pests and insects that thrive on the cotton plant, because he is a New Jerseyite where cotton fields are scarcer than hen's teeth.

On the evening in question, the Lieutenant "took-off" for a night practice flight. The motor was "hitting" perfectly and the night air was invigorating at an altitude of about 3000 feet. The flight was not, so far, fraught with more than ordinary thrills that characterize night flying. Lieut. Magee, however, finally decided to come down to earth and cease flying for the evening. He throttled his motor and "nosed her down" for a nice glide to Rich Field, which he, as usual, had attempted to keep within gliding distance. Presently, however, after having glided downward for a few moments, the pilot discovered that his plane was flying directly toward an apparently star-lit heaven; here and there, at seemingly uniform intervals, there were, at first apparently hundreds and then thousands of luminous points that certainly must be stars. He quickly looked above him, then to the right of him, then to the left of him, everywhere, and it seemed that stars were everywhere surrounding him. Momentarily the pilot meditated and wondered whether or not he had lost the "Feel" of his plane and whether he was climbing upward or gliding downward. He was as cool as he ever was under trying circumstances, but the unusual sight of what now seemed to be millions of stars completely surrounding him was, indeed, bewildering. However, fortunately his plane was not far from Rich Field and Waco, and, presently the pilot recognized the twenty-two story Amicable Building of Waco with the agreeable consequence that Rich Field was properly located and the plane safely landed.

The results, however, of a few moments thoughtful consideration after reaching earth again, added to the discoveries of the next day, revealed the fact that the unusually great number of apparent stars was due to the fact that the Central Texas cotton growers about Waco have provided, here and there, specially contrived lanterns which they place at regular intervals in their cotton fields to attract the boll weevil pest toward the light where they fly about and finally drop, blinded and exhausted, into a mixture of kerosene and water, beneath, thus causing their death.

Ellington Field, Houston, Texas

What might have been a serious accident was averted by Lieut. S.P. Mills when, as he landed a De Haviland 4 B the axle broke at the right wheel allowing the landing gear struts to drop. Lieut. Mills quickly put the stick all the way over to the left and back, at the same time opening his throttle slightly

thus lifting his right wing and holding down the tail. The aluminum fairing on the shock absorber acted as a shoe and prevented the ends of the strut from going on the ground and nosing the plane over. No damage was done to the plane, not even the wing skid being broken and the plane came to a complete stop in the remarkably short distance of ninety feet.

Flight "A" 12th Army Observation Squadron.
Douglas, Arizona.

The efficiency of the airplane was clearly demonstrated during the week when Colonel Gaujot traveled from Douglas to Phoenix, Arizona for the purpose of inspecting the records of the National Guard. The trip back from Phoenix was made via the Roosevelt Dam and even then the total flying time was 4 hours and 40 minutes, whereas the same trip on train with lay overs for connections would take twenty hours. After adding the personal pleasures and conveniences with the comparison in time - the joys of aviation are not so few.

1st Surveillance Group
El Paso, Texas

Lieutenant Cyrus Bettis made a successful parachute jump from 3,000 feet during the week. A strong breeze developed after Lieut. Bettis left the ground and the wind and disturbances in the air caused Lieut. Bettis to swing considerably during his descent, however, he made a safe landing in the center of the field and no damage was incurred. Great interest is shown on the part of the people of El Paso in the parachute jumping and large crowds are always present to witness an event of this sort. Five jumps have been made at this station to date and more are scheduled in the near future. The absolute reliability of the parachutes makes every one confident and unhesitating in their use.

In order that the District Commander may keep in absolute touch with troops in his command going to and from Elephant Butte Dam on summer vacation daily contact is maintained by plane and mail delivered to them which would ordinarily not reach them until several days later. There are five or six units on the road which must be relocated every day and messages and mail dropped to them. Flying time averages about three hours for each trip.

Experiments are being carried on to develop a more satisfactory system of signalling from the ground to planes in the air. An effort is being made to create a simple mechanical visual system which will enable line troops on the march or in camp to transmit messages to planes passing over head. The "DR" signal system was tested and proved practicable when used by trained observers in airplanes in connection with Air Service personnel on the ground. However, there was some difficulty encountered when an effort was made to use this system by the line troops. The new system under consideration will require no knowledge of codes or signal methods by the troops operating it.

8th Aero Squadron, McAllen, Texas

Although no regular patrols have been carried out during the week due to the lack of personnel, the Squadron has participated in bombing and target practice formations on three occasions and has also made several trips ferrying patients to and from the Hospitals at Fort Brown and Fort Ringold, Texas.

During the past week with the completion of the third barracks, the enlisted men's tents were completely washed out, this is believed to be the only border station now completely housed in wooden buildings, said buildings having been constructed with Squadron labor.

The 8th Aero Squadron recently acquired a new mascot in the form of a pet coon. The coon was picked up at Fort Ringold and arrived at the Squadron via airplane seemingly enjoying the trip very much. The coon was quite tame but of

a very inquisitive disposition and had a pronounced tendency for robbing ice boxes and an absolute passion for picking pockets. He was not long in mastering the intricacies of screen doors after which he roamed about at will.

Due to the intense heat a number of the Squadron are suffering from prickly heat and it is now a case of work ten minutes scratch five minutes rest five minutes, scratch five minutes and work ten minutes ad infinitum.

PLANES ESCORT COLONEL AND MRS. MILLER'S TRAIN

Two flights of planes, one from the First Pursuit Group and one from the First Day Bombardment Group escorted the 7:45 A.M., I. and G.N. train as far as San Marcos as an honor to Colonel and Mrs. Archie Miller and family who left Kelly Field last Wednesday morning for Washington, for duty at the War College. Colonel Miller and his family remained on the observation platform during the entire escort and often he was almost able to reach out and shake hands with the pilots as they passed the train.

NEWS FROM THE REPAIR AND SUPPLY DEPOTS

Repair Depot, Indianapolis, Indiana

During the past week work has increased rather than decreased at the repair depot. One De Haviland 4 airplane and one Liberty 12 A motor was received for repairs, while one De Haviland airplane, five Hispano Suiza type A motors, two Hispano Suiza 220 horse power motors and four Liberty 12 A's were completed ready for shipment. There were shipped from the Depot twenty-four Liberty 12 A motors and ten Hispano Suiza type A motors. The civilian force is now functioning with the utmost smoothness. Owing to the fact that recruiting has been so heavy at this Post a great many more men than usual are being given the benefit of the training in motor and airplane repair in the shops than were formerly.

Recruiting at the Indianapolis Repair Depot during the past two or three weeks has been extremely satisfactory to all concerned. A recruiting party was sent out in the city of Indianapolis consisting of eight men and a still exhibit of one Thomas Morse airplane, one Liberty Motor, one Hispano Suiza motor and a large board displaying all the latest types of instruments used on airplanes. The exhibit was set up on the State House grounds in Indianapolis and results from the first day were extremely gratifying. An average of four men per day were accepted for the Air Service during the time the exhibit was standing. Arrangements were made by Major Harrell, the local recruiting officer, to send a party of Air Service men to the State and County Fairs in the vicinity of Indianapolis accompanied by a pilot with a Curtiss H airplane. The first day was spent in Muncie, Indiana and it is reported that the party secured over twelve recruits, five of which were accepted for the Air Service. The party expects to be gone for sometime.

The base ball team has been idle for a couple of weeks owing to the fact that a great many of the players are recruits and the para-typhoid inoculation played havoc with their throwing arm. These inoculations are all completed at the present time and it is hoped that the base ball team will get back to the form displayed previously. Boxing bouts are being held weekly on the Post for the benefit of the enlisted men's athletic fund. Bouts between the soldiers are scheduled and one feature bout in the form of an exhibition is usually pulled each week between the celebrities of the square circle, such as Chuck Wiggins, Jack Dillon, etc. These bouts are well attended by the citizens of Indianapolis and the local civil authorities cooperate heartily in the advertising of them, the local newspapers featuring the exhibition at any time they are asked to do so. Great interest has been aroused in athletics at the Post and the set-up of the enlisted men is improving noticeably, while the morale is excellent.

Aviation General Supply Depot, Middletown, Pa.

An order was received at Middletown to ship 152 Liberty 12A engines to the Aviation Repair Depot, Fairfield, Ohio. These engines were all removed from DH-4's used overseas.

In compliance with a letter from the Chief of Air Service, tentative re-organization plans are being worked out by the officers of the Engineering Department of the Supply Depot, with the assistance of several of the civilian superintendents, for the establishment of a repair depot in addition to the present Supply Department.

Work has been started on the erection of an Albans-Richards airplane hangar on the flying field at the Middletown Post. In the past the planes set up at Middletown have had to be housed in the canvas hangars which have proved very unsuccessful, inasmuch as it is impossible to keep them properly stretched and staked, thus causing serious damage to planes in time of storm or high winds.

Souther Field, Americus, Ga.

Due to the continued rains it has been impossible to do any flying during the week except on one day. Lieut. W. B. Wande, while on a cross country flight to Columbia, South Carolina in a DH-4, had a forced landing due to a broken camshaft vertical drive shaft. It was necessary to ship the plane to the field.

A number of planes are expected here from A.R.D. Montgomery, Alabama for storage. Among them are four DH-4B double tankers with a cruising radius of approximately 700 miles.

Aviation Repair Depot, Montgomery, Alabama.

On Wednesday evening, between thunder showers which have been striking at Montgomery at irregular intervals for the last two weeks, three De Haviland 4 B's of the 8th Aero Squadron enroute from Laredo, Texas to Pope Field, Fayetteville, North Carolina, arrived after having, for two hours ducked one storm after another. Lieutenant Stoner was in command of the flight. All of the planes showed signs of severe rains. The copper tipped propellers are as useful against rain as against the sand and gravel and weeds of the Border fields. On Saturday two planes of this flight accompanied by Major H.B. Clagett, Department Air Service Officer, Southeastern Department, took off for Pope Field. Their first stop was to be at Camp Benning, Georgia.

On Saturday, Captain F.M. Bartless and Lieutenant Chauncey piloting a De H-4 (Ardmont) with 170 gallon gas capacity enroute from Carlstrom Field, Arcadia, Florida to Chicago, Illinois landed for gas and oil. They left Carlstrom Field at 5:30 A.M. and arrived here at 9:30. Their next stop was to be at Scott Field. They had figured on reaching Chicago at 6:00 P.M.

On Friday at 10:01 P.M. a Naval "Free Balloon" from Pensacola, Florida bounced its way to a stand still just southeast of the field. The balloon was spotted about half an hour before it landed and two planes went out to welcome it in. The wind however changed its mind just before the "bag" arrived at the field and she started toward town and was landed just southeast of the field. The Secretary of the Chamber of Commerce, who had just made a visit to the Commanding Officer of the Depot, reached the balloon in time to assist in arresting its progress. A short while later a truck and touring car from the Depot put them safely in Montgomery. The passengers were six Naval Officers from the Naval Air Station, Pensacola, Florida. They left Pensacola at 9:00 P.M., the night before and drifted for 15 hours. They paid a call on the Commanding Officer of the Depot late that afternoon thanking him for his assistance and the escort of planes.

France Field, Canal Zone

A flight across the Zone was made in a De Haviland 4 plane, piloted by 1st Lieut. R.C.W. Blessley with 1st Lieut. J. W. Gestreich as observer, for the purpose of sketching emergency landing fields. This flight required one hour and thirty minutes flying time, and four fields were successfully sketched.

Another attempt was made this week to photograph the old ruins of Fort San Lorenzo at the mouth of the Chagres River but due to the deterioration of the plates, the photographs were not successful.

Second Lieut. Homer B. Chandler, A.S.A., pilot, made a trip to Bogas del Toro in a Navy sub-chaser, to make arrangements with The United Fruit Company representatives there in reference to a landing field for our planes. He located one about 500 yards long and 100 yards wide, with a low approach, which will be put in condition. This will be the only available landing field on the Atlantic coast outside of France Field.

Fort Mills, Philippine Islands

Life in the Philippines is certainly great these days, the rainy season has started in full force and the old timers say it will continue for at least three months. The commissioned and enlisted personnel of the various garrisons, in their hip boots, slickers and rain hats, resemble a crowd of animated Uneda Biscuit advertisements. It is expected that a crop of web feet will begin sprouting at any time.

Another queer thing about the precipitation of moisture in the Philippines is that it is liable to hit you from any angle from 0 to 90 degrees and once in a while on rocky ground it will bounce up at you. Back in the old days in the United States this kind of weather would be a blessing for the poor overworked pilots, for these days are the old-fashioned down-pouring kind designed especially for "flying instructors", but out here with all the administration work to do it matters not at all, just as necessary to roll out of the old bunk at six bells in the rainy weather as in dry weather.

Last year at this time the Squadron was going strong back in Coronado and in spite of the many attractions, pleasures, recreations, comforts and inducements of the Philippine Islands quite often one may notice the minds of the officers, especially the bachelors, straying back to the good old days in California. Oh well, they say the first hundred years are the worst.

U. S. Army Balloon School, Lee Hall, Va.

The graduates of the school of the Line, of Fort Leavenworth, Kansas, visited the Post during the week.

There was a regulation of Artillery fire during the week. The observers were: Lieutenants Smith, Healy, Hoyt, Clinton, Bergbom and Wallace. The results were most satisfactory considering weather conditions.

Brooks Field, San Antonio, Texas

The Hervieu hangar is now complete, the canvas is up and the finishing touches have been put on the floor. It is expected that the planes will be ready within a short time. Some motor tests have been made and new exhaust manifolds were made at Kelly Field for the Rolls-Royce motors, none having been received with the engines.

Wireless telephones have been installed during the past week in balloon baskets and tests will be made at different altitudes during the coming week.

SQUADRON NEWS

March Field, California

Seth Hart, detailed to March Field by the Director of Air Service in connection with the installation of some six or more reversible type propellers spent Friday with naval officers at San Diego. Test flights with the new pitch propeller have thus far proved very satisfactory. Captain Charles Melin was the first pilot to take a plane off of March Field with the new propeller.

Lacy B. Mathis, former member of the 215th Aero Squadron first outfit to inhabit March Field in April of 1918, was married Thursday evening to Miss Dorothy Dinsmore of Riverside. After honey mooning at the beach the young couple will make their home in Riverside. Mathis is employed in the Securities Savings Bank.

Mather Field, Sacramento, California

Seven successful parachute tests were made at Mather Field during the week, using 200 pound lead weights. Lieuts. Hackett, Krull, Maxwell and Ridenour of the 91st Aero Squadron, Rockwell Field, ferried four airplanes from that station to Mather Field, turning planes over to the 9th Aero Squadron. The pilots returned to their proper station by rail. Capt. L. H. Smith reported on August 6th in cross country trip from Eugene, Oregon. Captain Robert L. Walsh, Cav., assumed command of the 9th Aero Squadron and Field recently, upon the transfer of Maj. C. Spatz, A.S.

Lieut. John Morgan, in command of Flight "A" at Fresno, California made a 70 minute "Cooperation" flight over Fresno, Recruiting Officer of that city as observer. The flight was for the purpose of advertising the 55th CAC and to arouse interest in the Army Forest Patrol.

Flight "B" at Red Bluff is obtaining excellent results in reporting fires by radio, enabling speedy work to be done in controlling spread of flames. Special reconnaissance flight was made at the request of Supervisor Hall of the Shasta Forest and Liaison Officer, J.C. Davis. The course of Route #6 was changed to cover territory to the west of the previous course. This change was made after consultation with and the approval of the forestry service. Cadet Keadel and Sgt. Bartlo had forced landing five miles West of Alturas; landing gear, radiator and right aileron broken. Pilot and observer uninjured.

One hundred and one new fires were discovered during the week, the greater proportion of this number having been reported by Flight "B" at Red Bluff. National forests covered by patrols out of that station are in very dry condition and the vegetation much scorched. Numerous fires continued smouldering for two or three days.

Rockwell Field, San Diego, California

In checking up its records the 91st Aero Squadron finds that it has established a record to be proud of. Since its re-organization on October 2, 1919 the Squadron has flown in excess of six thousand hours and over six hundred thousand miles. In all that time there has been only one death, two total wrecks, three major wrecks, and two forced landings from engine trouble. When it is considered that practically all of this flying has been done while on Forest or Border Patrol, over terrain that is conceded to be the most dangerous in the country, it is readily understood why the 91st is so proud of its record.

The recent work of the squadron has consisted in ferrying eight DH4B's to Mather Field for use of the 9th Aero Squadron. There still remain four planes to be ferried and they will be taken north just as soon as the Repair Depot has them in condition to fly.

SQUADRON NEWS

Scott Field, Belleville, Illinois

The master Painters of Southern Illinois, in convention at Belleville, Illinois, visited Scott Field during the week.

Over forty-five (45) tons of hay were cut on the Scott Field this season. It is believed that all northern flying fields could be put down to timothy with good results.

Selfridge Field, Mt. Clemens, Michigan

During the week Captain N. J. Boots, accompanied by Staff Sergeant, Elmer Spencer, flew in a DH-4 to Dayton, Ohio. This leg of the journey was uneventful, but on the return trip, two days later the severest electrical storm of the season was encountered.

Luke Field, Hawaii

Lieutenant D. Johnston, Second Observation Group Liaison Officer has been making a tour of the Coast Defense of the Island of Oahu. The object in view is to solicit the cooperation of the Coast Artillery, and have information centers created at each Defense Station. Heretofore, the Group at Luke Field has had the burden of sending out a panel and radio detail with full equipment whenever a problem in artillery adjustment was scheduled. The present intention is to have details of Coast Artillery enlisted men trained and equipped at each Defense Station to conduct the work. In this way an adjustment shoot can be conducted without subjecting the Group at Luke Field to additional work. The Defense Stations will have their equipment and men available at any time, which should mean greater efficiency and a closer cooperation and understanding can be obtained between the two arms by the bond of appreciation of the duties of the work of artillery adjustment.

Sharks mean nothing to the bachelor officers of the Group. Daily long distance swimming from Ford's Island to Pearl City and other points across the channel has become very popular. Altho sharks are commonly seen in parts of Pearl Harbor, often in sight of the swimming platform, as yet none of the swimmers have been molested. It is common to see the natives swimming in shark infested waters but according to tradition they are immune because of their dark skin. It may be that a coat of tan serves the same purpose.

Godman Field, Camp Knox, Kentucky

Several artillery reglage problems have been accomplished during the week with good results.

Several of the officers in the detachment made week end cross country trips, one plane going to St. Louis, Missouri and one to Rantoul, Illinois.

Oregon Forest Patrol, Eugene, Oregon

Captain Smith returned from a trip to the airplane which Cadet Heyer and Observer Davis landed near Dread-and-Terror Mountain in the Cascade Range. The plane was found upside down in thorn bushes about four feet high at a point 145 miles by automobile and twenty-five or thirty miles through rough and crooked mountain trails. The party was supposed to be met there by a Forest Ranger with food, but as he didn't appear and the whole party had mountain appetites, only two or three hours were spent with the plane. It was turned over, all the instruments removed and the plane carefully inspected to locate if possible the cause of the forced landing.

All parts were found in perfect condition, the only possible cause left is the generator. It was brought out and will be carefully tested. The pilot was very fortunate in being able to pick the only spot within miles where a landing could be made without injury to themselves. Three hundred miles by automobile and about fifty or sixty miles by pack train was the total mileage.

Very successful operation of the wireless equipment at Eugene, Oregon caused a great deal of enthusiasm to be displayed by the entire personnel of the station. Messages have been received correctly from the patrol planes all the way around the Medford patrol by the station at Eugene. The stations at Medford and Portland are doing nearly as well. The majority of fire messages are received by two stations.

A large map of Oregon has been placed in the wireless tent at Eugene and the wireless operators show a great deal of interest in placing ribbon at the plane's last wireless location. In this way one can see at a glance exactly where the patrol plane is flying.

Rockwell Field, Coronado, California

Recent reports from Flight "A" of the 91st Aero Squadron in Oregon state that the wreck of Cadet Heyer was so inaccessible that it took a day's travel by motor and thirty or forty miles ride on horseback to reach the location of the wreck. Cadet Heyer and his observer were extremely fortunate in escaping without injury and in being able to find a landing field of any description.

Flight "A" also reports that radio operations recently have been extremely successful.

Two more De Haviland four B planes were ferried to Mather Field for the use of the 9th Aero Squadron by 1st Lieut. Robert Kauch, Infantry and 2nd Lieut. E.C. Kiel, A.S.A.

Pope Field, Camp Bragg, N.C.

During the past week there has been but very little flying due to heavy rain that fell daily.

Flight "B" of the 8th Aero Squadron arrived at Pope Field last Thursday under orders for temporary duty in connection with the Artillery fire at Camp Bragg. For the past year this Flight has been stationed at Laredo, Texas, and has patrolled that section daily in DH airplanes. The Flight was ordered to Kelly Field, Texas, two weeks ago to make preparations necessary to send four planes under the command of Lieut. Rex K. Stoner, by air, and the troops by rail.

Both the formation of planes and flight left Kelly Field, Texas last Monday. When the train bearing the troops arrived at New Orleans, Louisiana they were joined by Lieut. L. A. Walthall who had crashed his plane at Baton Rouge that morning, when his motor cut out on the take off, neither he nor the mechanic being injured. The remainder of the trip by rail was uneventful, the weather was cool and every condition favorable for travel by rail. The formation of planes was not so fortunate, however, they passed through heavy rain and were obliged to make large detours from the course several times. At Montgomery, Alabama, the Flight Commander's plane had to be placed in repair on account of expansion of the wood, due to moisture. The center section struts were bowed and several fittings badly strained. Lieut. Hartman was detailed to wait at that station until the plane was again ready for flying and the remaining two planes proceeded to Pope Field, landing there about Sunday noon.

The Flight is now composed of five pilots, three observers, who are assigned during the temporary duty at Pope Field, and thirty-five enlisted men. Preparations are being made in order that the work while here will be successful. Captain Howard, the Commanding Officer of Pope Field, has organized and assigned his officers to the various departments of the field, and all operations are again in full progress.

HERE AND THERE WITH THE EDITORS OF THE LEADING DAILIES

"A digest of the latest Aeronautical News"

THE FLIGHT TO ALASKA

"The landing of the four airplanes which left Mineola, July 15, in Alaska in twenty-nine days, is not only a notable feat in aeronautics but it promises a quicker mail service to the interior of that inaccessible territory. It now takes thirty days for letters to reach large sections of that country and there is little doubt that the flying time can be reduced much below that of this experimental trip once landing stages have been provided in the territory.

"As these machines are going on from Wrangel to Dawson, Fairbanks, Ruby and Nome, there is little doubt that they will be the forerunners for an air mercantile and mail service for the part of the world which has been often pointed out as the most in need of such a service. The development which Secretary Daniels has been proclaiming as so certain and so rich in the near future, will be accelerated by such a provision." (Brooklyn Daily Eagle 8/16/20)

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"PICTORIAL MAPS"

Speaking of the necessity for aerial maps, the Detroit News 8/15/20 makes this suggestion. "In misty weather, in thickly settled districts it would be extremely hard to identify a town unless some reference is made on the airman's map to some particularly distinctive landmark peculiar to that city. A possible solution for this difficulty of recognizing towns has been suggested in placing within the body of the map or along the border photographs taken from the air which show the distinctive feature of the individual towns along the line of the route. In this way the aviator, seeing these towns should be able to instantly recognize some feature about them. A landmark in this regard might be anything from a tall building or a monument down to the street plan or system on which the town is laid out, Undoubtedly in the future it will be a symbol or a marker laid out in concrete at or near towns which will serve to indicate the municipal landing fields as well as to show the location or identity of the town".

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AERIAL CAMERA DUEL

The Sun & Herald 8/15/20 makes the following comment on the recent aerial photographic duel between Rene Fonck, the famous French ace and Fronval, a Belgian. "Fronval is credited with a victory, having made 78 snap shots of Fonck's plane as against 28 strikes registered by Fonck's camera.

"Without disparagement of the Belgian it must be said that the camera duel will not always measure the usefulness of an aviator in real war. The secret of personal success in aerial warfare is to get the other fellow with one burst of fire, if possible, without giving him a chance to get you. When we read that Fronval scored 78 times against him in the friendly contest, we must suspect that Fonck in earnest and Fonck at play are two different fliers".

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HERE AND THERE WITH THE EDITORS OF THE LEADING DAILIES

"A digest of the latest Aeronautical News"

GOVERNMENT HELIUM PLANT AT FORT WORTH, TEXAS

In spite of the report received some months ago that the cost would be too great to make possible the establishing of a helium production plant at Fort Worth, Texas, we have now from authority a statement that the government will proceed with its original plans and that a plant costing approximately \$5,000,000 will be constructed.

Contracts have already been awarded and the natural gas pipe line from Petrolia to Fort Worth is practically finished. It is expected that the plant will be finished by October 1st. (Aerial Age 8/9/20)

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FIFTY-HOUR AIRPLANE SERVICE

It has been announced that a Fifty-hour airplane service is soon to be opened across Canada. Seaplanes will be utilized for eastern portion of the route and land planes for the west. Complete passenger, express, mail and light freight service will be offered.

Control stations are to be at intervals of every twenty miles and air ports at principal cities along the way. (N.Y. Tribune 8/18/20)

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BALLOON RACES TRANSFERRED

"The national and international balloon races which were scheduled to take place from Indianapolis on September 11 and October 23, respectively, have been transferred to Chicago where they will be held on the same date," the contest committee of the Aero Club of America announced here tonight.

(Philadelphia Ledger 8/10/20)

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TO SOUTH POLE BY AIR

Tokio reports that Lieutenant Shirse Shoo, who attempted to reach the South Pole in 1907 has asked the Japanese diet to appropriate \$100,000 for an aerial expedition to the Antarctic. He firmly believes that naval aviators can reach there after going as far south as possible on boats and then taking the air. (San Francisco Chronicle 7/26/20)

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CROWELL SEES AVIATION AS DYING INDUSTRY

"Our aviation industry which assumed tremendous proportions during the war, is now a dying industry" is Benedict Crowell's opinion. He claims as one proof of this that not more than three or four per cent of the 15,000 trained fliers are in any way now engaged in flying.

He strongly emphasises our need of parachutes.

He gives a brief review of the functions of the Army, the Navy, Post Office and the Signal Corps and explains their "lack of coordination".

According to him, "if we are to have an eye both to industrial development of aviation upon which military development depends and to national defense, we must consolidate our present twenty different governmental agencies, which are now dealing with aviation, into one central department having responsibility for and cognizance over the whole situation".

(Saturday Evening Post 8/14/20)

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HERE AND THERE WITH THE EDITORS OF THE LEADING DAILIES

"A digest of the latest Aeronautical News"

The Philadelphia Ledger reports that "so called 'perils' of commercial aviation do not compare with the devastating motor menace which is exacting one death every thirty-five minutes". It emphasizes the safety in flying as shown in the English record of 75,000 aerial journeys with only one fatality.

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Beginning Monday, mail from incoming steamers will be carried to Berlin by airplanes. The Ministry of Posts has closed a contract for this service with the German Lloyd Air Line. (N.Y. Times 8/15/20)

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Miss Laura Bromwell, 20 year old aviatrix, made 87 loop the loops yesterday in her Curtiss biplane, during the dedication of Curtiss Airdrome formerly Hazelhurst Field, Mineola. Miss Bromwell climbed 10,000 feet before she started her record breaking descent. (N.Y. Tribune 8/16/20)

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The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE SEPTEMBER 18, 1920.

Participation of the U. S. Army Air Service in the National Rifle Matches at Camp Perry, Ohio.

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For the first time in the history of the National Rifle Matches there has been in this season's competition target firing from the air. This was made possible by the participation of the Army Air Service, which sent several airplanes and aircraft armament to Camp Perry to remain during the period of the National Rifle Matches. These airplanes were very well marked and were on exhibit all day. Officers from all branches of the Service have been given airplane rides, demonstrations in acrobatics, formation flying, radio telephones, aerial photography and aerial firing, almost daily. In addition to this exhibition Air Service motion picture reels have been shown at the Camp Perry theatre.

The aerial firing which has been the feature of this meet has been conducted so far with DH-4B's, using both the synchronized and flexible guns. Land and water targets are both being used in this competition and practice firing has been engaged in since August 9th. The regulations which cover the competitive matches have been drawn up and have been approved by the Range Executive Officer. The trophy will consist of a large cup, which will be engraved with the names and station of the winning team, to be delivered to the Chief of Air Service, also a smaller cup to be given to both the pilot and gunner of the winning team. The first firing in connection with the actual competition was held on August 23rd. One of the unique events of this participation has been the demonstration of the 37 millimeter cannon firing from the Martin bomber which was particularly effective during the exhibition given on Governor's day, August 12th, 1920.

Up to August 17th a total of 132 hours and 52 minutes of flying time had been made, notwithstanding the fact that all flying must be done from the rifle range which is in use for the rifle firing until 5:30 PM every afternoon. Consequently all passenger carrying, demonstration flying and aerial gunnery practice must be done between 5:30 PM and 7:30 PM. In accomplishing this amount of flying time a total of 85 officers of other arms of the Service have been given airplane rides to date. On August 12th the feature of the day was a parachute jump made from a Martin bomber by Mr. Higgins, of McCook Field. The Martin bomber used in this demonstration was piloted by Lieut. Wilcox. Also on August 12th a battle formation and maneuvers were flown by Captain Gallop, Captain Lawson and Lieut. Egby. The five demonstrations of aerial acrobatics given to date are as follows:

- One by Capt. Ocker in an SE-5 on August 15th.
- Two by Capt. Lawson in a Fokker on August 8th and 15th.
- Two by Lieut. Miller in a Fokker on August 1st and 12th.

Approximately 12 cross-country flights to McCook Field, Dayton; Selfridge Field, Mt. Clemens; Martin Field, Cleveland and also to Toledo and Akron have been made for the purpose of collecting necessary supplies and equipment. The photographic and radio airplanes have been flown almost continuously. The flying field itself is very rough and there was a danger of crash--airplanes by flying from them,-- but this danger has been eliminated by carefully preparing and rolling the field. In addition to the main field at Camp Perry there has been an auxiliary field established at Fort Clinton for the use of the photographic plane so that pictures could be obtained during the course of the firing competition.

The airplanes that are on exhibition at the Camp Perry meet are as follows:

- 1 Martin bomber.
- 1 US-9A.
- 4 DH-4B's.
- 3 Curtiss JN-4H.
- 1 SE-5A.
- 1 Fokker.

Since these airplanes have been stationed at Camp Perry there have been 2 minor and 1 major accidents. One of the JN-4's nosed over at Akron on account of the soft ground and broke the propeller, one DH-4B axle crystallized as a result of the rough landing field and the landing gear struck on an SE-5A crumpling it so as to completely incapacitate the airplane. On account of the rough surface of the landing field, at first, the planes have suffered from loosened wires, bent axles, etc., thereby increasing the work of the Engineering Department beyond what would be expected for the amount of flying time, but there have at all times been at least nine out of the total of eleven airplanes in commission.

The armament of the airplanes at Camp Perry has proven extremely interesting to those who have attended the exhibition. Three DH-4B's have reported from Langley Field and one DH-4B from Mitchel Field, New York. These machines were equipped with 2 machine guns, synchronized to fire through the propeller, and 2 Flexible Lewis 30-caliber guns mounted on the usual flexible mount. One US-9A arrived at McCook Field equipped with one Milan gun synchronized with a Nelson gun control. The Martin bomber which arrived from McCook Field was equipped with one Baldwin 37 millimeter airplane cannon, two Lewis machine guns, two airplane flares and five bomb traps. There are fifty eight aircraft machine guns on exhibition at Camp Perry. There are 25, 50, 100 and 500 pound demolition bombs on display with all sorts of loading machines, web and link belts, armament accessories, parachute flares, Verie pistols, perotechnical signals, landing flares and ammunition, which is being demonstrated both on the ground and from the air. Almost fifteen thousand rounds of tracer, incendiary and service ammunition has been fired from the air.

The radio activities from aircraft initiated at the National Rifle Matches were of great interest to all. A detachment of the Signal Corps gave a demonstration on wireless telephone, telegraph, amplification, etc. With the installation of this wireless equipment it has been possible to give loud speaking telephone demonstrations and also to receive daily weather reports from the east coast and also messages from New Orleans, Boston, Key West and Darien, Panama.

The photographic work from the air has been taken in charge by Lieut. Goddard of McCook Field. A dark room was established and later a photographic truck was sent from McCook Field. This work has been on constant exhibition during the period of the meet and has enabled Air Service photographs to be taken of the more spectacular events and delivered to the participants prior to their leaving the field. Light conditions and visibility on the whole have been very bad for aerial photography but notwithstanding, many good photographs have been secured.

An extreme amount of interest has been shown in this first air participation in the National Rifle Matches and it is felt that from now on each year the Air Service participation will be a particularly unique and attractive feature of these matches. As time goes on more effective air competition will be worked out for matches of this sort and floating targets as well as moving targets on both land and water will add greatly to the attraction of this newest and most novel sport.

REGULATIONS COVERING AIR SERVICE COMPETITIVE MATCHES IN AERIAL GUNNERY

Events

The Air Service competitive matches will be engaged in by teams of two, using one airplane*, one pilot and one gunner who will work in their same capacity throughout the matches. Both members of the team must hold one of the following ratings:

Airplane Pilot, Aerial Observer, Aerial Bomber, or Aerial Gunner. There will be three events, one in which the pilot only will fire, one in which the gunner only will fire, and one in which both will fire. The highest score for the three events to determine the winning team.

Targets

The Target for the pilot and gunner will be the same, but will be placed vertically in the racks in the 1000 yard butts for the pilot while the gunner's target will be placed flat upon the ground directly behind the erected target. The target will be a side silhouette of an airplane placed upon a frame 10 x 10 ft. A circle of 3 ft. diameter will be drawn enclosing the cockpits, another of 5 ft. diameter encircling the smaller one equally and another of 7 ft. diameter encircling the 5 foot one equally. A hit in the 3 ft. circle will count for a score of five, one in the 5 ft. circle for a score of four, a hit in the 7 ft. circle for a score of three and a hit registered on the frame out of the circles will count for a score of two. A Sample of target and silhouette attached hereto.

Number of Rounds and Burst to be fired at Given Altitudes.

Individual Pilots firing: 200 rds in 20 bursts Alt. optional.

" Gunnery " : (100 rds in 25 bursts 1000 ft. Alt.
 (100 rds in 25 bursts 800 ft. "
 (100 rds in 25 bursts 500 ft. "
 (100 rds in 25 bursts 200 ft. "

Team Firing (Pilot 100 rds 10 bursts)
 (Gunner 100 rds 10 ") Altitude optional.

Note* Except in case of accident where another plane may be used.

Direction of Fire.

Planes will be flying from South to North when PILOTS are firing individual. For GUNNERS FIRING the plane will circle the targets at the given altitude so that the gunner will be in a position to fire at all times. FOR TEAM FIRING planes will fly from South to North and upon completion of the pilots burst will turn to either right or left to enable gunner to fire upon the horizontal target. The gunners burst must be fired immediately following the pilots and before the plane has changed direction of more than 180°. It is not permissible for the pilot to fire, continue on and after turning come back to the target for the gunner to shoot.

Jams.

When a jam occurs which prevents the finishing of a burst, the rounds fired during the burst in which the Jam occurred will be charged against the total number of rounds to be fired but the burst will NOT be considered against the total number of bursts allowed. Where a gun will only fire one or two or any number of rounds below the required number of burst, firing will be discontinued the team will land, repair the gun if possible, if not obtain a new gun and continue the string. It is not intended that the jamming of a gun shall operate to deprive a contestant of firing the full number of rounds prescribed.

AIR SERVICE OFFICERS
participating

in

NATIONAL RIFLE MATCHES
Camp Perry, Ohio.

List of Officers and Their Assignments.

Capt. William C. Ocker, Commanding Air Service Troops.
1st Lieut. Rene R. Studler, Adjutant, Detachment Commander.

1st Lieut. John W. Signer, Asst. Adjutant, Asst. Det. C.O. Radio Officer.
Capt. Felix Steinle, Operations Officer.
2nd Lieut. Leland D. Bradshaw, Engineering Officer.
1st Lieut. Charles H. Wilcox, Supply Officer.
2nd Lieut. Oakley G. Kelley, Armament Officer.
2nd Lieut. George W. Goddard, Photographic Officer.
Capt. Walter R. Lawson, Information Officer & Officers in charge of Aerial Firing.
Capt. Davenport Johnson, Pilot.
Capt. Harold M. Gallop, In charge of repair and upkeep of Flying Field.
1st Lieut. John P. Roullet, Pilot.
1st Lieut. Ralph B. Ragby, Publicity Officer.
2nd Lieut. George C. McDonald, Asst. Supply Officer.
2nd Lieut. Arthur L. Johnson, Asst. Radio Officer.

The winners of the aerial gunnery contest were Lieut. Oakley G. Kelley and Sergt. William Steckel of the Army Air Service. These men are stationed with the Engineering Division of the Air Service at Dayton, Ohio.

LINKE-HOFMANN GIANT AIRPLANES

Type R-11

A new era in aeronautics.

Two of the most successful designs of multi-engined airplanes, with the engines centralized as one unit, have been developed by the Linke-Hofmann Airplane Company of Breslau, Germany.

The designer of the Linke-Hofmann R-1 and R-11, by using the centralized power plant, avoided the conventional construction of locating engines promiscuously on the wings, a practice which will undoubtedly be changed in the future. The advantages of a centralized power plant driving a single large propeller, as in the L.H. R-11, are as follows:

1. The efficiency of the propeller is very high due to the large diameter and pitch, which allow of a low R.P.M.
2. A centralized power plant may consist of two, three, four or more engines which may be used together or separately, thus permitting repairs to be made in case of damage to one of the engines in flight.
3. The head resistance is held to a minimum, being considerably lower than with the nacelles mounted on each side of the fuselage.

The Linke-Hofmann R-11 was the most successful of the two types designed, the aerodynamic efficiency of the R-1 being rather poor when applied to actual construction. The general constructional characteristics of the L.H. R-11 are practically the same as found in other large German bombing airplanes, except for the centralized power plant, and the grouping of the crew close together, facilitating thereby communication between its various members. The most radical constructional feature for such a large airplane is its landing gear, which is of the conventional "V" two-wheel type construction found on smaller airplanes, but modified to a larger scale.

The upper wing is built in two sections joined together and supported over the fuselage by two sets of struts placed in an inverted "V" position. The upper wings have considerable overhang, but are of the same chord as the lower set. The lower wings are rigidly attached to the fuselage. The wings are supported by three pairs of vertical struts on either side of the fuselage. The overhang of the upper wing is braced by two diagonal struts. The inter-plane struts are constructed of steel tubing with wood fairing, the whole being covered with fabric. The large balance ailerons are fitted to the upper wings only.

The fuselage is of conventional construction, similar to that used in the Fokker and Roland airplanes. The front or engine section of the fuselage is constructed entirely of steel tubing. The engines are supported on larger girder type cross members. The gasoline tanks are located aft of the engine compartment and below the pilots' cockpit, this raising the pilots' and gunners' cockpits to the extreme height of the fuselage. The pilots' cockpit is so arranged as to give excellent visibility in all directions, the pilots sitting side by side and using dual control. The usual instruments are carried in the pilots' cockpit, the most interesting of these being the banking indicator and Brexler gyroscopic compass. A master switch for the engines is located in such a position that the pilots may at any time cut off all of the engines. The two gunners are located aft of the pilots' cockpit in a very novel arrangement. The fuselage is of such width at this point that separate compartments are provided side by side for the gunners, thus permitting the use of two tourelles. The fuselage in the rear tapers to a horizontal knife edge.

The empennage is of the biplane type, with two horizontal stabilizers, one attached to the fuselage and the other raised above the three vertical fins. The central fin is the largest with two small fins on either side acting as supports between the upper and lower stabilizers. To the fins are attached three rudders, the center one being of the balanced type, while the two smaller ones are constructed in the form of an ellipse. The large balanced elevators are carried on the horizontal stabilizers. All the empennage controls are carried inside the fuselage. The pulleys over which the control cables run are of the ball-bearing type, thereby facilitating the movement of the various controls. In fact, the pilot may easily with one hand control the entire airplane. The conventional wheel control column is used for the control of the elevators and ailerons, the rudder being actuated by the regulation foot bar control.

As has been previously mentioned the landing gear is novel for such a large airplane, but the results from actual usage have proven it to be very successful. Large steel tubes are used for the vertical struts, axle, and cross braces. The landing gear is braced by two sets of three racking cables each. Due undoubtedly to lack of material no rubber shock absorber cord has been used, but in its stead spiral coil springs commonly called sandow cord are used as shock absorbers, this type of suspension proving more successful than the ordinary rubber shock absorbers, due to the fact of its longer life and greater elasticity. The wheels are of large diameter and are of cast steel, similar to the wheels used on large automobile trucks. To the periphery of this wheel has been fitted, in place of the ordinary rubber tire, a heavy wooden tire, which seems to be very successful and gives less trouble under hard usage.

The power plant consists of four 260-H.P. Mercedes six-cylinder vertical, water-cooled engines. These are located two to each side of the fuselage, which is of the simplest possible type. Between the front and rear pair of engines is located the main driving unit. It consists of one large gear driven by two small gears, one on each side, which are driven from each engine by a gear and clutch arrangement, this permitting any one of the engines being stopped, while allowing full operation of the other three. This airplane has been flown successfully with two of the engines running. The large propeller drive shaft extends between the two front engines. The large 22'6" propeller used has proven very successful, due to its strong construction. It is practically weather proof. The gravity tanks are carried above the rear pair of engines. Within plain sight of the mechanic or engineer, who will in flight be located in the rear of the engine compartment, are various engine instruments which permit him to know exactly whether the engines are developing full power. The carburetor air intakes are carried through the side of the fuselage, thereby permitting fresh air to be drawn to the carburetors. The exhaust pipes extend through the slots in the side of the fuselage. The radiators are carried on either side of the fuselage in a horizontal position, one side being attached to the fuselage, while the other is supported on diagonal tubes, this permitting of a very free flow of air around the radiators. The latter is provided with shutters to decrease the cooling if necessary.

MARCH FIELD RANKS HIGH IN DETECTION OF FOREST FIRES

Major H. H. Arnold, Department Air Service officer, Western Department, was at March Field over Friday where he inspected forest fire patrol operations as conducted from this base. In a statistical reference to the entire patrol throughout the western department carried on by the Air Service Major Arnold stated that 4,000 miles were being covered daily over the various and numerous forest reserves. The average number of fires observed and reported daily average from four to 24, while 75 per cent of all fires reported has been by means of Air Service radio equipment.

* Detection -

March Field - - 85%
Mather Field - 80%
Red Bluff - - - 75%
Medford - - - - 82%
Eugene - - - - -

Communication -

93%
85%
75%
No report.
80%

The patrol operated from March Field is carried on for the most part by cadet pilots, graduated from the pilot school. Captain Ernest Clark, officer in charge of flying is in command of the patrol. Lieut. J. T. Morris, radio officer is responsible for the communication record. Mr. C. R. Benton, of the United States Forestry Service is stationed at this field to co-operate with rangers and keep them informed of observations as reported by radio.

EX-AIR SERVICE PILOTS HAVE EXCITING EXPERIENCE IN LOWER CALIFORNIA

Mr. John Goree, Jr., ex-March Field pilot, who was reported lost in Lower California over last week end, has returned to his home in Riverside, California. He is through flying for Governor Esteban Cantu.

Following his return to Mexicali U. S. Immigration authorities told him he would have to give up his citizenship if he remained in Governor Cantu's domain and employ any longer. He decided to return across the border.

Mr. Goree was employed as an instructor and was on cross country flight with Mr. Paul Dato, brother-in-law of Governor Cantu. A forced landing in marsh land 80 miles south of Mexicali resulted in a broken prop and abandonment of the ship. Two days later Goree and Dato returned to Mexicali with an interesting story of their experiences.

Leaving the plane the two men boarded a fishing vessel and for twenty four hours had nothing to eat except dried fish and black coffee dispensed to them by "a hard-boiled boat crew". For 48 hours they rode a couple of mules across 50 miles of the Colorado River desert. Later they confiscated an old broken down automobile found on a ranch in which after making certain repairs they made their way to Mexicali.

"Top" Paine, formerly Lieutenant in the American Air Service, now Governor Cantu's Chief of Air Service, was allowed by U. S. Agents to make an aerial search for the lost plane and occupants. After an extended search he located the abandoned ship and returned to Governor Cantu's capitol city with a note in Spanish which Dato had attached to plane as he was leaving.

However, Governor Cantu bids fair to acquire the services of an ex-British pilot who is also well known at March Field, having been employed here by the Curtiss Company in re-building old "Jennies" for commercial sale. His name is C. S. Parr. He has been service in Mesopotamia and Egypt with the Royal Air Force. Parr, according to Associated Press dispatches, is ready to give up his American passport, if Governor Cantu can make him an attractive offer.

AN AIRPLANE TRIP FROM WASHINGTON, D. C.
TO ASHEVILLE, N. C.

We came in from an exhibition and recruiting trip to Charleston, W. Va, and were met upon landing by Lieut. McGinnis. It was found that the Commanding Officer wished me to go to Asheville, N. C. as soon as possible, with Col. Halstead as a passenger, and wished to know what time I would be ready to start. Being ignorant of the character of the country and still more so of the weather conditions enroute I was very enthusiastic, and said 1:00 P.M. that day. Col. Halstead was notified and said he would be out at 2:00 P.M. as the notice was too short for him. While waiting I had a bite of lunch and tested the ship which was DH4B No. 63159 having many miles of cross-country to her credit. Both ship and motor were fine, save for flying a little right wing low, which I did not at the time think worth while correcting, but wished afterward that I had as it made the long stretches very tiresome.

Col. Halstead arrived at 2:00 P.M., and we took off directly on our course over the river climbing slowly to 2000 feet altitude. Gas tanks, as well as oil and water, were full to capacity and the ship felt very sluggish. We checked up on our first land mark which is where the R.F. & P. and the Southern Rys. separate just below Alexandria, Va., and shaping our course directly between the two prongs of the "Y" got a compass reading of 210 degrees. We flew at 2000 feet altitude, motor throttled to 1450 R.P.M. with an air speed of 90 MPH with a slight cross wind from the Southeast which did not however materially affect the ground speed of the plane, as I found on passing Culpeper, Va. 5 miles on my right, having flown the sixty miles between that point and Bolling Field in 40 minutes.

The visibility to that point and from there to Charlottesville, Va. was excellent. There were also many good landing fields which always makes a pilot feel cheerful. The story changed considerably at Charlottesville, however, as we began to strike the Blue Ridge Mountains, and at the same time saw rain ahead. Just as the big bend in the James River at Scottsville came in sight we met the rain. I kept my head in the cockpit and flew 210°, taking an occasional squint at the James on the left. The rain lasted about twenty minutes and then we came out in the sunshine once more. It sure did feel good, and the sight of Lynchburg Va., the next landmark, brought forth a smile. This town is very easy to recognize owing to its size and the several bridges which cross the James at this point. I looked back at this point at Col. Halstead, and he seemed to be bearing up well in spite of his surprise at the action of the rain drops from the propeller on his face so we headed on.

Shortly after crossing the N. & W. tracks at Bedford, Va., we ran into another rainstorm, much heavier than the first. We soon lost sight of the ground, and knowing the rough character of the ground ahead, we had no wish to repeat poor Charley Lambourn's feat, so turned at right angles to my course and flew out of it in two or three minutes. Knew by the vibration of my motor that this last battle with the rain had been too much for the propeller as it was badly chewed. I was entirely lost so far as landmarks were concerned, and once more turned to my compass and pushed on.

We picked up the N. & W. just short of Rocky Mount, Va., (which does not belie its name), and got a new start. Up to that time we had thought the country mountainous, but realized our mistake, for after leaving Rocky Mount on our left, the country from there on began to justify the reputation given them by a native of being "so steep that the crows have to double-head from valley to valley". There were no more landmarks from that point on such as railroads, towns, and rivers, and was forced to fly by compass once more. The only things visible were peaks and canyons, and these had a discouraging sameness of appearance. A rather increasingly low ceiling and mist began to complicate the matter somewhat and finally we were flying between two ridges with the clouds down on the peaks on either side, and no sort of landing ground underneath. We began to wonder whether we would have to turn back in case the valley ended. We sweat a little until we saw a gap thru the ridge on our left, which apparently led to open country. We dived down thru this winding gap, which followed a small water course, and in a few minutes were once more in comparatively open country. I smiled for the first time since we had sighted Lynchburg, and turning around in my seat, thumbed my

nose at the low clouds and high mountains. Col. Halstead saw the joke and smiled with me. Was completely lost except for the testimony of the compass, the best of which sometimes lie, but had nothing else so stuck to the course.

We began to observe a good many small creeks all of which we were crossing at right angles, apparently emptying into a fairly large river, the valley of which was recognizable fifteen or twenty miles eastward. I concluded that this was the Yadkin and the position of the towns in the valley which soon began to appear supported this guess. At this time we had been flying for nearly three and a half hours, were not sure of our location, and the vibration caused by the unbalanced propeller had cracked the radiator at the point where it is clamped to the motor bed, and it was leaking furiously. We did not know how much longer the gas in the main tank, which we were still flying on, would last, so I decided to begin looking for a place to land. I headed over towards the Yadkin Valley, and saw a town which I decided would be ideal, as it actually had a railroad, the first I had seen since leaving Rocky Mount, about an hour and three quarters before. There was not a single field a DH4 would fit, around the town, the best available being a 1/3 mile track with a rather poor approach, so went up on the high ground, a couple of miles north of town and landed in an extremely narrow field, with fruit trees on one side and telegraph wires on the other. The field was about 600 feet long with a fairly good approach on the North which I used, and an impossible approach on the south as the pines were fully 75 feet high. Being approximately 100 feet wide the North was all that was possible. Had I wished to keep on, I could not, as my radiator had lost so much water that the motor heated up to a hundred degrees when we circled the field.

I told Col. Halstead immediately upon landing that I thought the town was Wilkesboro, N.C., and this was confirmed by the first man who came up, as soon as he could get breath enough to talk. It was then 6:10 P.M. and we had been flying since 2:20 P.M., and were very tired. However we decided to dash into town and try to get gas and oil in time to push on to Asheville that evening as it was only 75 miles distant. The Garage owner at Wilkesboro however dashed our hopes as he declared it would be necessary to catch and hitch the mules to the gas wagon and haul it out there, this operation requiring at least two hours. We therefore went to dinner, and afterwards returned to the ship and gassed and oiled it in the dark. I was glad it was dark as the kind of gas and oil we got looks better in the dark. The gas was so thick and the oil so thin that one might put them in the wrong tanks without affecting the running of the motor. A farmer lit his pipe by the side of the ship and some one immediately told him to be more careful as the gasoline might explode. I was handling the cans on top, however, and if I can always be as safe as I felt at that moment, I shall be thankful. I did not believe in its ability to burn, much less explode.

We went to bed very early that night as we were a couple of tired mortals, and the waiter had to come and get us up for breakfast the next morning. The hotel, by the way, was a very good one for the size of the town and the proprietor who had been a First Sergeant in the 321st Infantry, of which Col. Halstead was the Regimental Commander Overseas, treated us royally and as his guests literally, refusing to accept a cent for our accommodations. We got out to the field about 9:00 A.M. the next morning and after filling our leaky radiator, took off at 10:20 A.M. with the aid of an artificially constructed bumper at the north end of the field. We found a ceiling of 800 feet in the Yadkin Valley with the clouds down below the mountain peaks so flew up the valley for about fifteen minutes under the clouds, and then went thru and above them. I immediately wished that I had not for the only things visible were solid clouds and a few jagged peaks sticking up thru them. I wondered what the polite and proper thing would be in the event of the motor cutting out. I was spared this decision, however, for after flying over the clouds for 30 minutes by compass, we saw a rift in the clouds and went down thru it into a narrow valley. Flew up this valley for about 15 minutes and finding a possible field landed in it. As soon as the wheels touched I realized that it was soft, and not having room to "gun" the tail down, I cut the switches and calmly awaited results. Luckily it did not turn over. We found that we were at Edneyville, N.C. 22 miles east of Asheville. We waited until two o'clock for the clouds to lift, and meanwhile had lunch with some very nice people from Jacksonville, Fla., who had a summer camp about a half mile from the field.

We took off from this place at two o'clock, and twenty minutes later landed in Asheville, in a beautiful, broad, meadow on the Vanderbilt Estate, which by the way was the same one used by Maynard on his trip to Asheville. We were picked up by some passing motorists and went into town, and I got a room at the Battery Park. Then after getting gas and oil we went back and did some work on the plane. I shaved the propeller smooth, cleaned the distributors, drained the oil, and soldered the radiator, which promptly cracked again, due to the vibration of the unbalanced prop, as soon as the motor was started.

Monday it was raining but between showers we made a short test flight, which was discouraging, as the radiator started leaking again. Tuesday it rained hard all day, but the sun set clear, and we got up and went to the field at 6:30 Wednesday morning, to have our energy rewarded by more rain as we were trying to get out of a mud hole which we struck taxiing down the field for a take-off. We went back for more gas and got off between showers at 12:40 P.M., Washington bound. Twenty minutes out of Asheville we struck a rain which drove us westward from our course. I am fairly certain that we crossed the Eastern borders of Tennessee and Kentucky, as we got so far west that the rivers were running west to the Mississippi. I fell for that fact and began to head Eastward. We had been flying for over three hours by compass, with favoring wind, over some very rotten mountainous country and was quite sure we were somewhere in Virginia but we had a pardonable curiosity to know just where. We were heading still further East in the hope of finding level country to land in when the propeller began to thump as the result of air pockets in the fabric tips. I then began looking a little harder for a field. The generator then burnt out, and under the added stimulant of this, I found one right away, the same being located on Cow Pasture Creek, near McDowell, Va. The creek is appropriately named for nowhere else in the vicinity save along the creek, could a cow graze without taking an awful chance of breaking her neck. McDowell is 36 miles west of Staunton, Va, and its population is 56 persons. I can save the census taker some trouble as I counted them all except one.

The radiator was still leaking and we knew the gas was low, so Col. Halstead went to the General Store after gas and found 35 gallons. Horrible stuff but none nearer than Staunton, so we put it in thru a chemois and hoped it was combustible. Once more I whittled the prop. smooth with a jack-knife and after filling the radiator from the said creek and testing the Batteries, we took off on one switch to save the current. In ten minutes we were in the Shenandoah Valley, and I knew my way home from there so all was merry until we hit Bolling Field, an hour and thirty five minutes later.

We arrived, with the still leaking radiator streaming water, the propeller with a couple of pockets in its fabric tips, screaming like a squad of fire engines doing double time, the battery singing its "Swan-Song" to the Amperage Indicator, the motor reciting in spits and coughs, that famous classic, "I am dying, Egypt, dying", and with struts and wires putting the most vigorous of "shimmy-dancers" to shame, on account of the woodwork warped from the rain. But what cared we. We were home.

FIRST PURSUIT GROUP THE PURSUIT PLANE IN LIAISON MISSION

In our last talk we showed how the Pursuit Plane is used in Ground Harrassment or "Straffing",--one of its regular duties. There is still another type of low altitude mission that is often done by Pursuit Planes in an emergency, though it is no part of their regular work. This is the monoplace contact liaison patrol. We have spoken of the protection of Infantry Liaison Planes. We shall now speak of their work as done by Pursuit Ships.

It is only in an emergency, when conditions render the use of the slower bi-place observation plane impracticable, that Pursuit is called upon to take over their work. Then it is that Pursuit Pilot performs a task most exacting upon his skill and endurance, for he must be both pilot and observer. Furthermore, his means of communication are limited.

While radio apparatus has been successfully installed in Pursuit Planes during peace time, its use during war time is impracticable, for the antenna robs the plane of one of its most valuable features, maneuverability. There remains, therefore, only the dropped message to communicate to the ground and the panel to receive messages from the ground.

Depending upon speed and maneuverability for safety, the Pursuit Pilot must fly low over the advancing Infantry, note their positions, and read their panels, rapidly scribbling the data on a pad strapped to one knee; then he must make all possible speed towards the Division P.C., preparing his message bag on the way. There he drops his message as accurately as possible and returns to the lines for more data.

This type of Pursuit Mission is strictly a solo job, and everything depends upon the nerve, skill, and judgment of the individual pilot. Only the best and most experienced pilots should be selected to perform such a mission.

The principal emergency which requires the use of Pursuit Ships to perform this work is the need for speed in transmitting messages, especially when radio conditions are poor. While the bi-place liaison ships are now being well armored and can, therefore, fly low over the trenches with a fair degree of safety, they are also necessarily much slower than the single seater scouts now being developed. Thus, when their radio apparatus will not work efficiently, rapid communication is greatly hampered by their lack of speed. The Pursuit Plane, on the other hand, is capable of a hundred and fifty miles an hour and is soon to be capable of speeds up to two hundred miles an hour and perhaps more. It is, therefore, the courier plane "par excellence".

The Pursuit Group has already carried on practice in message dropping and a few of its Pilots have had some experience in panel reading. It is proposed to carry on further message dropping practice and to add practice in panel reading to the training list, so that all Pilots will be trained in the performance of this important and hazardous emergency task.

FORESTERS SAVE 45 HOURS BY AIRPLANE

During the week the Air Service Forest Patrol again demonstrated the efficiency with which it works in connection with the Patrol of the great American Forests, within a radius of several miles from Mather Field, Sacramento, Calif.

The Forest Service fire fighters were busy putting out a fire in Merced Forest, and had it well under control, when a Radio message was received from the Air Service Observer flying overhead that a great fire had broken out in Lassen Forest. A few minutes afterwards, planes were dispatched to the vicinity of Merced Forest, all Foresters available were hustled aboard and transported to the Lassen fire. In three hours time the fire fighting personnel was on the job fighting the flames, whereas, had they proceeded by train and pack mule, 48 hours would have been consumed.

The saving of 45 hours in time means to the government the saving of thousands of acres of valuable wooded land, which doubtlessly would have been totally destroyed.

In the short time that the Air Service has been engaged in Forest Fire patrol, many problems have been overcome. Insofar as to the possibilities of the future are concerned, the surface only has been scratched.

The day will come when large numbers of men and equipment will be carried by airships to the scene of fire, both men and equipment dropped by parachute, while the airship will rain down fire extinguishing chemicals from above.

SLIPS PLANE IN FLAMES SAFELY TO GROUND

Lieut. James Meloy, 8th Aero Squadron, McAllen, Texas, had an experience while flying a D.H. 4-B, which doubtless he will remember the rest of his life. Shortly after taking off from the field at Ft. Ringold, Texas, the rear carburetor connection broke, spraying gasoline over the hot engine, which immediately took fire. Lieut. Meloy proved his worth as a pilot by coolly slipping his plane down 800 feet, managing to land safely. The intense heat destroyed the engine, and damaged the plane almost beyond repair.

PREPARATION OF PLANE AND MOTOR FOR ALTITUDE FLIGHT

The Instructors of the Airplane and Motor Departments of the Air Service Mechanics School, Kelly Field, are at present taking a refresher course in the form of tuning up motors and planes for passenger-carrying at high altitudes. One phase worthy of mention is the redesigning of a LePere biplane which will seat ten passengers and which should perform credibly at an altitude of twenty thousand feet or over. The LePere was chosen because of being slightly faster than a De Haviland. It has a different wing curve, permitting it to make greater speed. It is better streamlined, due to the fact that it has no nose radiator and to its design throughout and its cockpit has a larger capacity.

The LePere to be used will be unpainted. The wings will be newly covered, doped and valspared. The whole ship will be streamlined throughout and designs are now in the hands of the Instructors in the Airplane Department for seating arrangements for ten passengers. A stock Liberty Motor will be used which tested 434 horse-power at the factory. As the performance of a Liberty Motor drops from 400 to about 74 horsepower at 25,000 feet, tuning up of the motor was necessary to increase the performance. The following changes have been made: Pistons and rings were all lapped into the cylinders. Intake valves and ports highly polished. The intake manifolds and carburetor bowls polished and shellaced to eliminate skin friction of the mixture. In addition to regular stacks reaching up through the cowl into the propeller stream, auxiliary stacks running horizontally from the rear of the radiator are fitted. These stacks have an opening, larger at the radiator, and are tapered to a comparatively small opening near the carburetor bowl, giving a force draft. The auxiliary air intake ports are equipped with a mechanically adjusted shutter so that the forced air can be regulated. Valves and ignition are timed to within one-fourth of a degree. 175 compensator and a 165 main jet with a 36 choke are used. A nine foot propeller with a seven foot seven and three-fourths inch pitch will be used.

With a super-charger a Liberty Motor develops 322 horsepower at 25,000 feet but by tuning up a motor in the above manner, 2,000 to 2100 R.P.M. will be obtained at sea level. It is believed that from 200 to 275 horsepower can be obtained from a motor without a super-charger, at altitudes up to 25,000 feet.

A total of 537 flights were made from March Field, Calif., during the past week consuming in all 472:15 hours of flight. Preliminary training required 331 hrs. 20 min., representative of 448 flights; advance training 52 hrs. 40 min., and 29 flights; forest patrol 52 hrs. 30 min., in 13 flights; the remainder having been consumed in miscellaneous and test flights.

FOREST PATROL

Following is a tabulated report of forest patrols from commencement of operations at each base up to and including July 31st.

MATHER FIELD (From May 17th, 1920)

Number of patrols - - - - -	120
Area covered - - - - -	1,693,735 Sq. miles.
Flying time - - - - -	411 hours
Fires discovered - - - - -	137
No. planes in commission July 31st - - - - -	5

RED BLUFF: (From May 20th, 1920)

Number of patrols - - - - -	135
Area covered - - - - -	1,456,360 sq. miles
Flying time - - - - -	372 hours
Fires discovered - - - - -	105
No. planes in commission July 31st - - -	6

FRESNO: (From May 16th, 1920)

Number of patrols - - - - -	124
Area covered - - - - -	1,235,000 sq. miles
Flying time - - - - -	439 hours
Fires discovered - - - - -	65
Planes in commission July 31st - - - - -	4

MARCH FIELD: (From May 20th, 1920)

Number of patrols - - - - -	138
Area covered - - - - -	801,171 sq. miles
Flying time - - - - -	500 hours
Fires discovered - - - - -	40
Planes in commission July 31st - - - - -	4

MEDFORD, OREGON: (From July 1st, 1920)

Number of patrols - - - - -	29
Area covered - - - - -	345,180 sq. miles
Flying time - - - - -	110 hours
Fires discovered - - - - -	25
Planes in commission July 31st - - - - -	4

EUGENE, OREGON (From July 1, 1920)

Number of patrols - - - - -	39
Area covered - - - - -	715,645 sq. miles
Flying time - - - - -	163 hours
Fires discovered - - - - -	92
Planes in commission July 31st - - - - -	6

The following is consolidated data of all forest patrol bases in California submitted by the Forest Service for the period ending July 31st, 1920.

Number of fires reported by radio - - -	53
Number of fires reported verbally upon landing	54
Number of fires reported by airplane before having been reported from other source	48
Accuracy of location of fires by airplane observers	85%

SERVICE CLUB AT MARCH FIELD IS NEWLY EQUIPPED BY
MRS. BALDWIN

Thanks to Mrs. Anita Baldwin, a relative of "Lucky Baldwin", the enlisted men's Service Club, March Field, has been fitted out to such an extent that to the average visitor it appears more like a country club than an Army recreational center. In fact Mrs. Baldwin took us all by surprise through the excellent manner and elaborate equipment which she has so generously donated for our pleasure and comfort.

Four big motor trucks arrived at the field completely loaded with furniture and fixtures for the club house.

New curtains were provided throughout, including a large drapery curtain for the stage. There are seven large leather davenport, equally, as many comfortable chairs, a number of tables, lamps, and lamp shades; rugs for the floors, pictures for the walls, a piano player and music rolls with cabinet; letter writing equipment, sofa cushions, ash trays, and in fact most everything to make the interior as club-like as the most up-to-date methods will allow.

In addition to the club room proper, Mrs. Baldwin, on a recent tour of inspection about the field, saw fit to provide dressing tables and chairs and a number of chiffoniers for the ladies' rest room in the Service Club building.

The personnel at March Field is exceedingly grateful to Mrs. Baldwin for her generous deeds and deeply appreciative of the comforts she has provided which makes soldiering at March Field the more pleasant.

NEWS FROM AIR SERVICE SQUADRONS, CHANUTE FIELD.

1. The aerial mail service between Chicago and St Louis, utilizing Chanute Field as the one stopping place between these two cities, was inaugurated during the week, after about six weeks preparation. The planes were piloted on their initial trip, over this route, by Pilots Lee and Jones, two veteran pilots of the aerial mail service. The type of plane used is Curtiss JN4-H, equipped with Hispano-Suiza motor.

2. One of the remodeled DH4-B planes has been recently added to Chanute Field's aircraft. This addition was greatly appreciated by the flying officers of the field, two of whom are old DH4 pilots and who consider the remodeled DH4-B a great improvement over the old DH4.

ELLINGTON FIELD

1. A flight of four DeHaviland planes, equipped with machine guns and radio apparatus, stopped at Ellington during the week, enroute to Camp Bragg North Carolina. The planes were piloted by Lts. Stoner, Walthal, Crockett and Hartman, and carried as mechanics Corporals Rogers and Tibbets and Privates Seidel and Mcchre. After having gassed at this station, the planes took off immediately, the next stop being Gerstner Field. Upon their arrival at Camp Bragg, they will enter into liaison work with the artillery there. Word has been received from Lt. Crockett, Engineer Officer of Flight at the Aviation Repair Depot, Montgomery, Alabama, of the safe arrival of the ships at that field.

MATHER FIELD

In a parachute test, Sgt. Thorne, of Mather Field, California, jumped from a height of 2300 feet. The first parachute opened after a drop of 75 to 100 feet, the second one was released and opened at an altitude of about 200 feet. Lieut. R.L. Maughan piloted the ship. Sgt. Richard L. Thorne is a graduate of the Parachute School at Kelly Field, Tex.

A gritty young recruit, being ferried from Red Bluff to Mather Field, still desired to enlist in the Air Service even after the ship he was being carried in had a forced landing. Both pilot and recruit were rather shaken up but both arrived uninjured at this Station and the young man is now a loyal and interested member of the Aviation Service.

FLIGHT A, 90th AERO DEL. RIO, TEXAS.

1. Flight "A", 90th Aero Squadron is busily engaged in work connected with its new camp which is situated about a mile from the city and almost due west from it. The steel hangars with their concrete floors are the envy of all visiting officers which is considerably more than can be said of the roads leading to them. However if the gravel pits hold out, and the three ton Liberty's continue to develop their rated horsepower future generations will probably be comparing our roads with those of the old Romans, particularly the Appian Way; all this of course contingent on Jupiter Pluvius continuing to observe the existing regulations governing the crossing of the International boundary line.

SIGNALING FROM GROUND TO AIR

Continued experiments are being carried on to develop a better system of signaling from ground to air. The "DR" system which operates fairly well when

operated by line organization. The new system consists of a book 26" x 32" on the leaves of which are painted the letters of the alphabet and numerals. By displaying the letters and numerals successively message is transmitted to plane. The book is kept pointed toward the plane while letters are being displayed and plane flies in circle at about 1,000 feet above the book. To begin message a large dot is displayed as panel while plane signals by one zoom that it is ready to receive. The man operating the book then proceeds to display the letters and spell out the message. Experiments so far indicate that with a few refinements and changes the system can be operated satisfactorily by any one. Book weighs eight pounds and can be easily rolled up and carried by troops or in the plane. The book can be dropped to ground troops and by reading instruction on back the message can be sent by them without any previous instructions. Credit is due Captain John M. Clark, A. S. A., for development and experiments with this system.

LUKE FIELD, HAWAII

The first night flight ever flown on these Islands was made during the week. No preliminary plans were made such as illuminating the field with flares or search lights, for the flight was entirely impromptu. Several of the officers of the field, inspired by the brilliancy of the big full moon, after a brief conference, communicated with Major Curry, Department Air Service Officer, on the phone. The result of the conversation was thoroughly satisfactory but the facts were kept a secret until about eleven o'clock when the unsuspecting post was rudely awakened from its slumbers by the roar of a Curtiss Hiso flying low over the buildings. Some couldn't believe their ears and refused to admit it could be a plane while others thought they had overslept and began rushing into their clothes. In the briefest time possible everyone was out watching the plane as it played around in the sky and finally coming into the field for a perfect landing. Captain Wheeler, Commanding Officer of the Group, climbed out of the plane greatly enthused over his ride. Captain Oldys, who was acting as pilot, then took up Lieut. Laitland who in the meanwhile had gathered up a Very pistol and a pocket full of shells. A flight was made over the City of Honolulu, where the people swarmed out in amazement, for few over here had ever seen night flying, and it was a novel experience to them. After a display of pyrotechnics and acrobacy, a successful return and landing on the airdrome was made.

The recent successful transportation of a captive kite balloon from Schofield Barracks to Fort Shafter, a distance of over twenty miles, by the Twenty First Balloon Company has gained a great deal of praise for that organization. This was one of the longest movements of its kind on record according to balloon men who know. It was a most delicate task and called for considerable skill and knowledge to successfully tow a balloon along a road with many sharp turns and over hills and across gulches.

NEWS FROM THE AIR SERVICE SQUADRONS FRANCE FIELD, PANAMA

Vertical and oblique photographs were made during the week mornings of emergency landing fields on the Canal Zone, namely: Monte Lirio, Gamboa and Camp Clayton. These photographs, together with the sketches made last week, are being used in making location reports as well as estimates of the cost to put these fields in condition. When the fields are made available for landing places it will be possible to set a plane down every twelve miles crossing the Zone. Under present conditions, if the motor stops one has to swim ashore, the only available landing place being the canal.

THIRD AERO SQUADRON, PHILIPPINE ISLANDS

The Third Aero Squadron has recently completed a photographic mosaic of Fort Mills and the Island of Corregidor for the headquarters of the Philippine Department.

The making of the map required a number of trips over the 20 mile stretch of water which separates Corregidor from Luzon, but the work was completed without mishap.

Although the hangars are still incomplete the Third Squadron now has 12 D.H.4's in commission; one for each pilot and two in reserve.

All flying operations are being curtailed considerably, because unfavorable weather. The rains have made the road between Stotsenburg and Manila impossible for automobiles, and the train service is frequently held up by washouts on the line.

AIR SERVICE DETACHMENT GODMAN FIELD, KY.

Excellent results are being obtained in fugitive target work under the methods as laid out by Majors Echols ASA and Sands 81st. Artillery. Under this system the observer after spotting a fugitive target, calls for fugitive battery fire, spirals over target giving altitude of plane and requests that guns be laid on him. The guns are laid for parallel fire and the range is figured mathematically, from the plane's altitude, and the "battery ready panel" immediately displayed. On the observer's request of "Fire", battery is fired by two rounds volley, 200 yds. difference in range, which gives the observer a working scale for rapid adjustment without a map. Observer makes sensing and adjustment continues, battery firing one volley at a time. On the observer's sensing of target the battery commander walks through without command.

Both the 81st and 83rd regiments of artillery having become proficient in Artillery Reglage, the officers and enlisted men of the detachment are looking forward to orders, returning them to their permanent stations.

Captain Kenney and Lt. Burtis were overtaken by bad luck last Saturday, when seven miles east of Rantoul, Ill., the crankshaft of their liberty motor broke, causing them to land. After installing a new motor they proceeded to Dayton, Ohio, to get urgently needed supplies.

AVIATION REPAIR DEPOT, INDIANAPOLIS

Recruiting has been exceptionally good at the Aviation Repair Depot, Indianapolis. War Department Circulars have been received specifying the educational advantages to be demanded from each applicant for enlistment in the Air Service. Under the terms of this circular it will be possible to get material among the recruits for future training as pilots and commissions in the Reserve. A short time ago a call was sent out for all enlisted men enlisted for three years who desired to take training as flying cadets. About 20 men applied from this Post, practically all of whom successfully completed the physical examination. A board of officers has been appointed to determine the educational ability of each candidate as to whether or not he is a fit candidate for a commission in the U.S. Reserve. This action has stimulated the interest among the men for enlistment period of three years and has also served to interest men who are graduates of high school to enlist in the Air Service.

MARCH FIELD, CALIFORNIA

Second Lieut. E. H. Tonkin is reported to have received a check for \$2,500 from Thomas H. Ince as his proportionate share of the purse offered for the first successful trans-Pacific flight. Lt. Tonkin, some time past, became lost in a fog while on cross-country flight, and suddenly, found himself several miles at sea with no gas. He returned on a Jap fishing vessel with his plane on the end of a tow rope, docking, as it were, near San Pedro.

ROCKWELL FIELD, CALIF.

Activities in the Engineering Department, the remodeling, repairing and painting of all the buildings, the erection of new ware-houses along with the activities in athletics makes Rockwell Field look like the days of 1917 and 1918 when this station was preparing and training officers and enlisted men to chase the Boche. During the reorganization of this field from a flying field to a Supply and Repair Depot, a great deal of preliminary work was necessary to obtain the results that are now manifesting themselves.

Major Roy C. Kirtland as Commanding Officer and Major L. R. Knight as Executive Officer and the Engineering Officers with their assistants have established a record of production that reflects very highly upon the command as a whole for the excellent showing made to date.

During the week the following work was satisfactorily turned out of the shops.

Complete overhaul of 33 Hispano Suiza motors and 19 Liberty motors.

Four Spad planes were completely rebuilt, tested and shipped away, together with the assembly of 8 DH4B's.

Major Roy C. Kirtland, Infantry, who has been in command of the Depot since March 1st has been relieved. He will be succeeded by Captain Shepler W. Fitzgerald, A. S. A. who is well known at Rockwell Field and vicinity, having qualified as a flier at this field several years ago.

The entire personnel of the field, including officers, enlisted men and civilians regret the departure of Major Kirtland. He has been not only a popular Commanding Officer but has created an esprit de corps, which has been one of the reasons for the upbuilding of the depot to its present efficient status.

HERE AND THERE WITH THE EDITORS

MICHIGAN MANUFACTURER SENDS REPRESENTATIVES TO EUROPE

"W. B. Mayo, chief engineer for Henry Ford and Colonel E. A. Deeds, whose representation of automotive industries in connection with the American Air Service is well-known, sailed July 17th, for a two months' trip to Europe where they will study the present aeronautical situation. Mayo will devote his attention primarily to the study of dirigible airships, whereas Col. Deeds will interest himself in airplanes. Their trip will take them principally to England and Germany, although other countries will be visited."

According to Mayo this trip is an outcome of a recent visit to Ford of the "Zeppelin officials who have been in this country for some weeks for the admitted purpose of obtaining financial support for their companies."

(Automotive Industries 7/22/20)

COMMERCIAL AIRCRAFT DEVELOPED BY COMPETITION

This year the British "Air Ministry is to hold government competition for 'civil' aircraft with money prizes amounting to £ 64,000, of which £ 14,000 is reserved for seaplanes".

There is also offered a prize of £ 10,000 for a flight to India and back carrying a load of 1,200 pounds. The Royal Aero Club has set aside £ 2,000 for flying prizes this season.

At the last competition of this kind which was held in 1912, the government gave only £ 4,000 for prizes. Comparing this amount with the amount to be used this year gives one an idea of the importance now given to commercial aviation development in that country.

HERE AND THERE WITH THE EDITORS (Cont'd)

"The expenditure of large sums of money for the development of the commercial airplane appears to be accepted as a matter of absolute necessity in Great Britain and France."

In June approximately 300,000,000 francs were voted for French military and commercial airplane development. July report on French aviation reads: "All our factories are turning out machines so fast that there is great demand for pilots". There were more than 18,000 licensed pilots in France at that time.

Such activities as these just mentioned, would appear to put the aviation situation in the United States in a very poor light, but the following extract from a recent editorial in Aviation and Aeronautical Engineering shows that we are making good progress: "American aircraft designers can, without boasting, point out some of their own creations as highly advanced specimens of modern flying machine. Without mentioning any particular makes, we can favorably compare various American designed pursuit machines, ground attack planes, ship's scouts, torpedo planes, etc., with the corresponding foreign products. And the same applies to purely commercial types, such as mail planes and cabin flying boats. This state of affairs is unfortunately not known to the general public, which might gain in being enlightened to the fact that American aircraft designers, far from being back numbers, have steadily come to the fore-front during the last year, until now they hold a position which should be pleasing to all Americans,"

(N. Y. Sun 8/25/20)

The London Times of August 12th, 1920, publishes the following bit of French news: "The L-72 flew from Maubeuge over Paris to its new station on the Riviera. It completed the whole journey from Paris to Cuers, near Toulon, in 10 hours and 20 minutes, the 20 minutes being wasted enroute. The trip from Maubeuge to Paris took four hours, whereas Lyons was reached in another five and one half hours. The flight from Lyons to Marseilles was one of two and one half hours and the journey was completed in two hours more. These times do not compare favorably with an aeroplane, but they are far better than those of train locomotion."

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"PROBLEMS OF DESIGN"

"The time has come already, in the operation of Continental Air Service, when the aeroplane must be designed, not only as a commercial vehicle but as a vehicle easily handled from the point of view of overhaul and repair". If anything goes wrong with the motor in any particular transport machine, you do not want the machine to lose days of money-making capacity while the engine is being repaired. We want a reserve of engines ready for any emergency, and we must have a commercial aeroplane in which the engine installation is such that the whole motor can come out and another one go in with the least possible difficulty or delay."

Mr. Searle, managing director of the Airco, "Air Express", favors the single-engined plane. He also says that we should not jump at once into the all-metal machine project. He says: "I am looking forward to the early use of a passenger machine in the form of a simple 'streamlined' hull with a big powerful motor and over it a single monoplane wing built of wood. Get a machine like this and a well-arranged stock of 'spares' and one comes nearer to real commercial air transport than has been the case hitherto".

Another need he cites is "better international organization". "We want", he says, "an international system for packing goods in specified containers. Such a system would save labor and time".

(London Times 8/14/20)

HANDLEY PAGE INDO-BURMESE TRANSPORT

Commercial flying in India has been undertaken by the Handley Page Indo-Burmese Transportation Company. The company is planning to obtain subsidized government contracts for air mail between India and Burma, and to be appointed sole agent in these countries for the sale of aircraft and other aircraft material held by the Aircraft Disposal Company Ltd. of the British Government.

HERE AND THERE WITH THE EDITORS (Cont'd)

It will also undertake the transportation of passengers and goods, will conduct a flying school and will repair all types of aircraft.

(N.Y. Sun - 8/23/20)

ORDERS CHANGED IN MID AIR

A communication between a business man at his desk and an airplane in flight was made recently when the manager of a large firm of coal dealers in London had reason to change orders which he had given for shipment of coal to Marseilles. These orders were being taken to Paris by airplane. Telegraph and telephone service between London and Paris being slower than airplane it was necessary to communicate direct with the pilot who was taking the orders. The air ministry was appealed to, and their aerial switchboard facilities were supplied, thus making possible the communication with the pilot himself.

(Washington Post 8/21/20).

COST OF PLANES IN COMMERCIAL AVIATION

"The first cost to ascertain in determining the possibilities of aviation is the cost of the planes themselves" says Major Reed Landis in his ninth article on "Aviation and Business".

"Planes are the fundamental necessity in aviation and their cost is the foundation of aviation expense". Operating costs, expenses entailed in running auxiliary services of map-making meteorological bureaus and other items can be computed after the cost of the plane is known.

"Since pioneer ventures have to be made in the present types of planes we must take their costs as the basis for our calculations. The initial costs for our pioneer carriers, then will be \$25,000 for eight passenger craft and \$75,000 for larger twenty-five passenger carrier". These machines, he says, cannot be expected to fly longer than 1,000 hours, therefore, in that time they must not only "pay for the machine that is to succeed them" but also they must pay for the repairs, upkeep, new parts and so forth, needed during the thousand flying hours.

"In order to get these costs, charges, etc., into a form in which we can use them as a basis for figuring passenger charges, we must reduce them to an hourly basis". Taking our eight passenger machine as a starter he calculates that on our \$25,000 investment interest must be earned and replacement fund of 80% of that amount or \$20,000. The 1,000 hours of flying would probably be spread over six month's service. "Interest for this time would be \$750.00 or 75¢ a flying hour" and the replacement fund would be reduced to \$20 a flying hour. The machine itself then would cost \$20.75 a flying hour. Reducing these figures to the unit passenger cost per mile, with a speed rate of eighty miles an hour, we find that it would give us a charge of approximately 3¢ a passenger mile.

"These are present day costs for present day machines. As soon as the present day airplane and the models of the next few succeeding years have built up public confidence in the ability of the airplane to 'deliver the goods', we shall see the colossal planes of the future with a wing spread of from 200 to 300 feet. Then costs will drop."

(Chicago News 8/18/20)

REVIEW OF COMMERCIAL AERONAUTICS

In the Saturday Evening Post 8/14/20, Floyd W. Parsons cites several instances which show that aircraft is destined to play an important part in our commercial life.

"Just as a fleet of merchant vessels is essential to a nation that would command the seas in time of war, so must a country in the future have a large and modern fleet of commercial aircraft to supplement and strengthen its military air forces if it expects or even hopes to hold the mastery of the air."

HERE AND THERE WITH THE EDITORS (Cont'd)

* In the newspaper field experiments have already been conducted that show the possibilities of air delivery for the great metropolitan papers. One investigator states that the cost of newspaper delivery by airplane will already compare favorably with the cost of other methods.

Recently a cargo of 600 lbs. of silks, linens and lingerie valued at \$10,000 was carried from New York to Minneapolis a distance of 1,600 miles in a little less than twenty-four hours. Railroad congestion of freight at that time made this form of delivery desirable if not absolutely necessary. Political candidates are already making use of airplanes and they will bring them into larger use this fall in their campaigning.

The airline between Seattle and Vancouver, which carries 750 lbs. of mails promises to save an entire day in transpacific delivery. Airplanes are used by physicians in making emergency calls and by banks to save time when money is needed on short notice. One rubber company is planning to place a 300 foot dirigible in experimental commercial operation over a distance of 250 miles, thus making it possible to cover the distance in one half the time required by train or boat.

In the rice lands in California, ex-service men, are employed to do patrol work in taking care of these fields. They are paid 50¢ an acre and by means of the airplane three men can take care of an area of 32,000 acres. In the fishing industry also, the airplane is coming into important use. A mining industry in British Columbia is planning to make use of the airplane in transporting the ore instead of having it "packed out which requires weeks."

AIRPLANES AN AID TO COLONIZATION

Mayor Gray of Winnipeg recently made a trip in an airplane over the western part of Manitoba, and the following are statements made by him on his return:

"The best way for prospective homeseekers to survey the land in western Canada open to settlement, is to fly over it. It was a revelation to me to see so much land that has never been touched by a plough. I had been through that part of the province in trains and in automobiles many times, but I had no idea that so much farm land, as rich as any on the continent, was lying idle. The agricultural resources of Manitoba have hardly been scratched. There is room for tens of thousands of farmers". Mayor Gray wishes to show the use of the airplane as an aid in finding these possibilities. (N.Y. Sun 8/24/20)

STRICTER EXAMINATION RULES

Accidents which have occurred from time to time in airplanes lead us to believe that stricter tests of flyers and their machines should be made.

"Measures to require state examinations in California are demanded as a consequence of the accident at the Marina in which two men and a boy were killed. The plane collapsed after flying against high tensioned electric wires and crumpled in flames, burning the bodies of the passengers beyond recognition. Witnesses believe that some engine trouble had developed and the pilot first attempted to land, but was prevented from landing because of the presence of another plane. He started to rise again when he struck the wire which brought them to almost instant death." (San Francisco Bulletin)

INCREASE IN COMMERCIAL AVIATION

That commercial aviation is steadily growing in the United States is shown by reports made by representatives of the Manufacturers Aircraft Association, who have toured the country now served by aerial transport.

"The Southwest and the Pacific contemplate honeycombing that area with a network of aerial transportation lines. In the middle west it is being adopted as the occasion demands and is meeting with encouraging success. New England is ac-

HERE AND THERE WITH THE EDITORS (Cont'd)

cepting it with customary conservatism. The South is using it mainly for private purposes, and Florida and the West Indies find flying a most important method of communication.

"There are in the United States fifteen manufacturers of aircraft and aircraft motors, and eighty-five manufacturers of accessories, with twenty new airplane distributing agencies throughout the country."

Twenty-seven different cities are supporting Aerial Transportation Companies. A 10-passenger service is already in operation between San Francisco and Los Angeles, and a seaplane mail and package line between Seattle and British Columbia.

AIR SERVICE OFFICERS APPOINTED IN
REGULAR ARMY

The War Department announces the following air service officers have been commissioned in the Regular Army. These appointments are made as a result of the recent examination held in accordance with the Act of Congress approved June 4, 1920.

AIR SERVICE

CAPTAINS:

Ford, Christopher William
McFarland, Allan Parker

Shumaker, Floyd Newman
White, Henry Capron

Eagle, Aubrey Irl
Adler, Elmer Edward
Laughlin, Edward
McCullough, Maxwell Latham
Smith, Lowell Herbert

Carlstrom Field, Arcadia, Fla.
520 N. Meridian St.,
Indianapolis, Ind.
c/o San Carlos Hotel, Miami, Fla.
U. S. Army Balloon Sch.,
Ft. Sill, Oklahoma.
Taylor Field, Montgomery, Alabama.
Kelly Field, Texas.
Avia. Repair Depot, Dallas, Texas.
1422 Mass. Ave., N.W., Washington, D.C.
Mather Field, Mills, California.

FIRST LIEUTENANTS:

Austin, Fred
Bartlett, Frank Merrill
Bender, Walter
Blackburn, Thomas Welch
Blair, Shiras Alexander
Burt, Byron Turner, Jr.

Carroll, James Bernard
Clark, John Martin

Coyle, Benedict Arthur
Drake, Alonzo Maning
Duncan, Asa North
Estabrook, Merrick Gay, Jr.
Gravelly, Wm. Seymour
Hunnam, Richard Orleans
Hurd, Leland Charles
Le Boutillier, Sidney Pierre

Arthur, Dogan Humphries
Idzorek, Stephen Joseph

Thompson, Richard Edwin

Carlstrom Field, Arcadia, Fla.
" " " "
Camp Benning, Ga.
Kelly Field, Texas
4 Pinehurst Place, Tuscaloosa, Ala.
8th Airship Co., Camp Bierne,
El Paso, Texas.
Carlstrom Field, Arcadia, Fla.
Hdqrs. 1st Survel. Grp. Airdrome,
Camp Ft. Bliss, Texas.
Air Serv. Tr., Camp Benning, Ga.
Av. Genl. Sup. Depot, Americus, Ga.
Park-Field, Millington, Tenn.
985 Charles River Rd., Cambridge, Mass.
Airdrome 12th Aero Sq., Nogales, Ariz.
Kelly Field #2 San Antonio, Tex.
Av. Rep. Dept., Dallas, Tex.
c/o Mrs. G. T. LeBoutillier,
Newark, N.Y.
A. S. Troops, Camp Benning, Georgia.
A. S. Depot, Wilbur Wright Field, Fair-
field, Ohio.
U. S. Army Balloon Sch., Ft. Omaha, Nebr.

FIRST LIEUTENANTS (Cont'd)

Kenny, Frederick Putnam
Kincaid, Alvan Cleveland
Leonard, Charles Manning
Lunt, Samuel Milhollen
Motley, Langhorne Waldo
Murphy, William Herbert
Patterson, George Beatty
Propst, Rudolph William

Riley, Henry Irving
Russell, Edwin Andrews

Schofield, Earl Spiker
Shoptaw, John W.

Smith, Edgar Lee
Trunk, Otto Gresham
Vaughan, Raymond Edward
Weddington, Harry
Maughan, Russell Lowell
Slattery, John William
Sloan, Kellogg
Sutton, Harry Allen
Turnbull, William
York, John Y., Jr.,
Aldworth, Richard Thomas
Davis, Raymond Ellis
Hutchins, Don Lee
Koontz, Leonidas Lee
Lewis Burton Frederick

SECOND LIEUTENANTS:

Booker, Francis Pat
Hebbard, Albert Faitoute
Holmberg, John Benjamin
Jones, Delbert Emerick
McCullough, Roger Shaw
McPike, George Vardeman
Madarasz, Jesse Anthony
Mann, Merrill Deitz
Martenstein, Austin Walrath
Matthews, Thomas Kennedy
Melanson, Arthur John
Meloy, Vincent James
Monahan, John William
Morris, William Colb

Price, Walter Emmett
Stewart, Malcolm Nebeker
Thomas, Charles Edwin, Jr.,
Tocher, Bernard Joseph
Torney, Stewart Wellington
Wells, Harold Ralph
Wilkins, Paul California
Williams, John Gordon
Wolfe, Kenneth Bonner

Woodward, Fred Evans
Woodward, Mark Rhey
Kirkpatrick, Everett Listeman
Kirksey, Guy
Lindeburg, Alfred

Aviation Repair Depot, Montgomery, Ala.
Camp Benning, Georgia.
Chanute Field, Rantoul, Ill.
Post Field, Fort Sill, Okla.
A. S. Mechanics School, Kelly Fld., Texas
Post Field, Fort Sill, Okla.
McCook Field, Dayton, Ohio.
230 E. Ohio St., Central Depot, Chicago,
Illinois.

Carlstrom Field, Arcadia, Florida.
Wilbur Wright Air Ser. Depot, Fairfield,
Ohio.

Aviation Gen. Sup. Depot, Americus, Ga.
8th Airship Co., Camp Bierne, El Paso,
Texas.

Kelly Field, Texas
Air Service Troops, Camp Benning, Ga.
McCook Field, Dayton, Ohio.
Kelly Field #1, San Antonio, Texas.
Mather Field, Sacramento, California.
9th Aero Sqd., Mather Field, Cal.
McCook Field, Dayton, Ohio.
McCook Field, Dayton, Ohio.
Brooks Field, San Antonio, Texas.
Off. of Chief of A. S., Wash., D.C.
Kelly Field, San Antonio, Texas
50th A. S., Langley Field, Hampton, Va.
Camp Bierne, El Paso, Texas.
Kelly Field, Texas.
Fort Bliss, Texas.

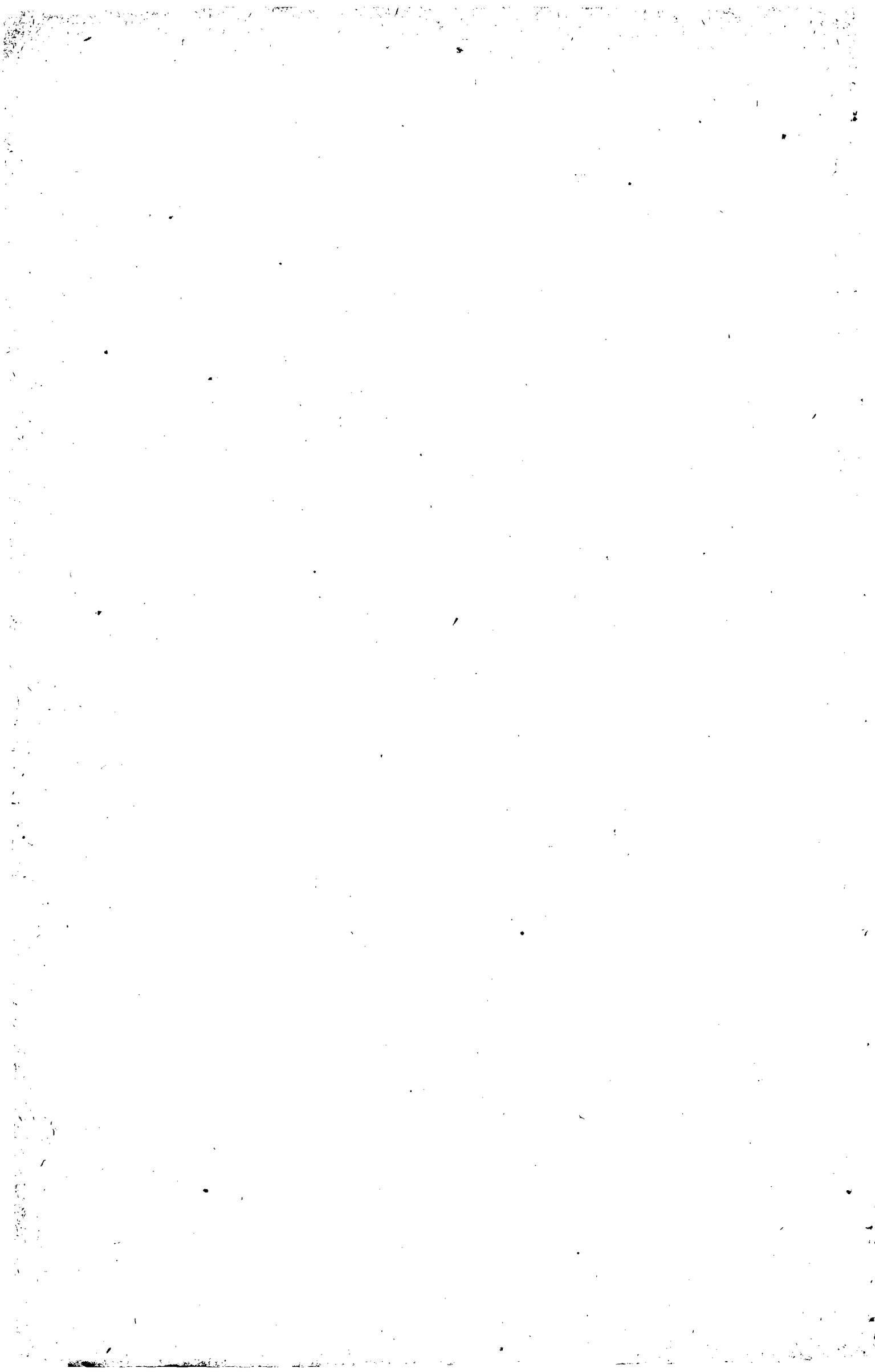
233 W. Romana St., San Antonio, Tex.
Off. Mgr. Eng. Depot, Ft. Omaha, Neb.
Beardsley, Minn.
Regis Hotel, Sacramento, Calif.
1144 So. 33rd St., Omaha, Neb.
A. S. Depot, Wilbur Wright Field, Fairfield, O.
"A" Flight, 9th Aero Sqd., Fresno, Cal.
A. S. Depot, Wilbur Wright Fld., Fairfield, O.
Scott Field, Illinois.
27th Aero Sqdn., Kelly Fld., Texas.
A. S. A. Repair Depot, Montgomery, Ala.
Airdrome, McAllen, Texas.
Carlstrom Fld., Arcadia, Florida.
Yorkton Grocery Co., Ltd., Yorkton,
Saskatchewan, Canada.
1323 High St., Des Moines, Iowa.
A. R. D. 2, Speedway, Indianapolis, Ind.
Wilbur Wright Depot, Fairfield, Ohio.
Carlstrom Field Pilot's Sch., Arcadia, Fla.
Carlstrom Field, Arcadia, Florida.
Army Balloon Sch., Ft. Omaha, Nebr.
12th Aero Sqd., Douglas, Ariz.
Carlstrom Field, Florida.
Av. Gen'l. Sup. Depot, Souther Field, Americus,
Georgia.
Carlstrom Field, Arcadia, Florida.
"B" Flight, 9th Aero Sqd., Red Bluff, Cal.
Chapman Field, Miami, Florida.
Carlstrom Field, Arcadia, Florida.
Dorr Field, Arcadia, Florida.

SECOND LIEUTENANTS: (Cont'd)

MacIver, Clarence Roscoe
McNeil, Guy Lewis
Hornsby, Aubrey
Ladd, Arthur Kay
Nestle, Joseph Harry
Patrick, Frederick Irving
Wood, Edward Huffner
Beaton, Harold Webster
Benton, John William
Gabriel, William Carl
Lawson, John Theodore
LeBrou, Richard Kemp
Liebhauer, Edgar Andrew
Lingle, David Glenn
Lundell, Floyd Albert
McDermont, Corley Perry
MacDonald, Russel Carrigan
Morse, Charles Lester
Nelson, Fred Cyrus
Pardy, George William
Stitt, Donald Gardner
Tourtellot, George Platt
Virgin, Joseph Edwin
Wagner, Paul Theodore
Webster, Lewis Selwyn
Williams, Paul Langdon
Woodard, Jacob Marcellus
Woodruff, James Atwater
Abbey, Evers
Albrook, Frank Potter
Bailey, Joseph Popenjoy
Barnett, Lloyd
Bassett, Lowell Whittier
Biggs, Reuben Dallam
Bobzien, Edwin Barton
Boyd, William Lewis
Brandt, Raymond Joseph
Brown, Raymond Rudolph
Burtis, Henry Thomson
Camblin, Roy William
Carr, Harold Hibbard
Caster, Bernard Tobias
Cavanaugh, Stephen Edward
Chauncey, Charles Carl
Clark, Willard Shaw
Connolly, William Edmund
Corkille, John D.
Cronau, Robert Theodore
Cummings, Charles Milton
Dixon, William Windom
Downman, Charles Hale
Dunlap, Lionel H.
Ennis, Arthur Ignatius
Foster, Angier Hobbs
Frost, Ezra Rice, Jr.
Gibson, Ralph Alfonzo
Hall, John Robert
Hall, Spencer
Halverson, Harry Arthur
Hamilton, Winfield Scott
Kelly Field, Texas.
Camp Benning, Georgia.
Kelly Field #1, San Antonio, Texas.
Airdrome, Del Rio, Texas.
215 S. Main Str., Carroll, Iowa.
1/2 Monett Air Service Corp., Monette, Mo.
2740 Granada Ave., San Diego, Cal.
Kelly Field, Texas.
1250 Pine St., San Francisco, Calif.
Post Field, Fort Sill, Okla.
Rockwell Field, Calif.
Kelly Field, Texas
Fort Bliss, Texas
Kelly Field #2, San Antonio, Texas
A. S. Mech. Sch., Kelly Fld. #1, Texas.
Kelly Field, San Antonio, Texas.
Carlstrom Field, Arcadia, Florida.
McCook Field, Dayton, Ohio.
Post Field, Fort Sill, Okla.
9th Aero Sqd., Mather Field, Cal.
Langley Field, Hampton, Va.
27th Sqd., Kelly Field, San Antonio, Texas.
Airdrome, Laredo, Texas.
Post Field, Fort Sill, Okla.
Langley Field, Virginia.
Mather Field, California.
Kelly Field #2, San Antonio, Texas.
Airdrome, Sanderson, Texas.
1st Photo Sec. Airdrome, Fort Bliss, Tex.
Aviation Gen. Sup. Depot, Little Rock, Ark.
Motor Trans. Gen. Depot, Jeffersonville,
Indiana.
Av. Repair Depot, Montgomery, Ala.
266 Dauphin Str., Mobile, Ala.
McCook Fld., Dayton, Ohio.
Carlstrom Field, Arcadia, Florida.
Carlstrom Field, Arcadia, Florida.
Carlstrom Field, Arcadia, Florida.
Carlstrom Field, Arcadia, Florida.
1st Pursuit Group, Kelly Field, Texas.
Carlstrom Field, Arcadia, Florida.
Carlstrom Field, Arcadia, Florida.
Carlstrom Field, Arcadia, Florida.
Airdrome, Del Rio, Texas.
Carlstrom Field, Arcadia, Florida.
Carlstrom Field, Arcadia, Florida.
U. S. A. Balloon School, Ft. Omaha, Nebr.
Carlstrom Field, Arcadia, Florida.
Carlstrom Field, Arcadia, Florida.
Langley Field, Hampton, Virginia.
Taylor Field, Alabama.
Av. Gen. Sup. Depot, Souther Field,
Americus, Georgia.
Carlstrom Field, Arcadia, Florida.
Carlstrom Field, Arcadia, Florida.
Fort Omaha, Nebraska.
Carlstrom Field, Arcadia, Florida.
Fort Omaha, Nebraska.
Fort Omaha, Nebraska.
9th Aero Squadron, Mather Field,
Mills, Calif.
Hdqs. 9th Corps Area, San Francisco.
Crissy Field, California.

SECOND LIEUTENANTS: (Cont'd)

Haynes, Caleb Vance	Av. Repair Depot, Speedway, Indiana
Hine, Harold Kirkham	Brooks Field, Texas.
Hopkins, Frederick Mercer, Jr.,	Pope Field, Camp Bragg, N. Carolina.
Hurst, Ernest LeRoy	Brooks Field, Texas.
Jewett, Alfred Liljevalch	90 Anderson Place, Buffalo, N.Y.
Johnson, Arthur Lowell	McCook Field, Dayton, Ohio.
Johnson, Bayard	Eng. Div., McCook Field, Dayton.
Johnson, Frederick Andrew	Carlstrom Field, Florida.
Jordan, James Bumer	U.S.A. Balloon School, Ft. Omaha.
Kase, John A.	Carlstrom Field, Arcadia, Florida.
Kennedy, Emile Tisdale	Scott Field, Belleville, Ill.
Liggett, Arthur George	Post Field, Ft. Sill, Oklahoma.
Lundberg, George Godfrey	Fort Omaha, Nebraska.
Lyon, Alfred Jefferson	Sch. Aerial Observation, Post Field, Fort Sill, Okla.
McConnell, Adolphus Rankin	R.F.D. #6, Maryville, Tenn.
Martin, Harry Joseph	234 W. Ellis Str, Syracuse, N.Y.
Monteith, Charles Norton	McCook Field, Dayton, Ohio
Moran, William King	Av. Rep. Depot, Montgomery, Ala.
Morgan, John Ross	Flight A, 9th Aero Squadron, Fresno, California.
Morton, Benjamin Rhoten	Kelly Fld. #2, San Antonio, Texas.
Neely, James Montrose Graham Thomson	24th Balloon Co., Cp. Lewis, Wash.
Physioc, Joseph Allen, Jr.,	Camp Lewis, Washington.
Powers, Edward Michael	LeRoy, Illinois.
Prime, Charles Peter	Post Field, Fort Sill, Okla.
Proctor, Ivan Lewis	Av. Gen. Sup. Depot, Little Rock, Ark.
Pyle, Carl Weston	Eng. Div., McCook Field, Dayton, Ohio.
Robinson, Ward Fisk	Taylor Field, Alabama
Shively, James Cole	Camp Benning, Georgia.
Skow, Charles Theodore	Av. Rep. Depot, Montgomery, Ala.
Smith, Wallace Gordon	Ellington Field, Texas.
Stenson, Irving Carlton	Kelly Field #2, Texas.
Thompson, Bernard Scott	Carlstrom Field, Arcadia, Florida.
Ward, Thomas Harrison	Langley Field, Hampton, Virginia.
Watson, Arthur Gillette	Rm. 813, 101 Milk Str., Boston, Mass.
Woolsey, Clinton Fisk	Carlstrom Field, Arcadia, Florida.
Wyatt, John Albert	Av. Gen. Sup. Depot, Souther Field, Americus, Georgia.
Hamlin, Winfield Scott	Crissy Field, California.



The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE SEPTEMBER 22, 1920.

A MIDSUMMER STRANGER-THAN-FICTION,
LOG.

(Note: Every word of this story is true and is an excellent chronicle from the sky line of to day, but it reads even stranger than fiction. Eds.)

Pilots Capt. Frank M. Bartlett and Lt. C. C. Chauncey.

Saturday, August 14th, 1920--Carlstrom Field, Florida.

The following telegram received from the Weather Bureau, Washington, D.C., at 2:30 a.m. Saturday, August 14th:

"Improving flying weather Saturday. Patches of clouds local thunder showers in gulf states and Tennessee in afternoon. Gentle winds mostly southwest and west southwest at flying levels.

Signed
Bowie.

Preparations made at once to start--cup of luke warm coffee for breakfast, plane rolled out and motor warmed up.

Took off 5:15, Eastern time. Circled over field and took a course of 340 degrees leaving Carlstrom Field at 5:25 a.m., wind Northeast, altitude 3000 feet, air speed 95 m.p.h., r.p.m. 1450, oil pressure 42 lbs., temperature 70 degrees, air pressure 3 1/2 lbs.

Stars overhead, no clouds, sky turning grey in the east. Passed over Arcadia at 5:29, distinguished by street lights.

5:30 a.m. Course 348, wind N.E., altitude 3500, air speed 100, r.p.m. 1450, oil 40, temp. 75, air pressure 3 1/2. Not yet daylight. 5:45, beautiful coloring showing in eastern sky, blue and yellow rays extending high into heavens, lights of Tampa in sight.

6:00 a.m. Course 345, wind N.E., altitude 3000, air speed 102, r.p.m. 1440, oil 40, temp. 75, air pres. 3 1/2. Sun just showing like ball of fire above a rim of clouds that border the entire horizon, beautiful reflection being cast upon the thousands of little lakes below and to the east. Most of these lakes due to recent heavy rains. Passing ten miles east of Tampa, Gulf of Mexico just visible to the West. Very hazy.

6:15 a.m. Ten miles from Gulf. Light low fog rolling in, low area of land to the N.W. covered with a blanket of fog. Very deceiving from a distance-- mistaken for a large lake-- daylight now.

9:25 a.m. Four hours out from Carlstrom Field. Distance covered 445 miles. No vibration in motor and running perfectly.

9:30 a.m. Course 330, wind S.W., altitude, 2000, air speed 110, r.p.m. 1460, oil 35, temp. 75, air pres. $3\frac{1}{2}$. Terrain--wooded, but getting more open. Small emergency fields available, clouds higher, visibility better but still hazy.

9:35 a.m. Montgomery, Ala., in sight about 20 miles ahead. Directly on our course.

9:42 a.m. Landing field at repair depot in sight---now starting to glide in for landing.

9:45 a.m. (Eastern time) or 8:45 Central time landed at Montgomery.

Distance covered 495 miles.

Flying time 4:20.

Average ground speed for entire course 117 m.p.h.

Gasoline consumed 106 gallons.

Oil consumed 11 gallons.

Delayed slightly waiting for oil to be delivered from Montgomery to the field. Truck broke down enroute. Every possible assistance given by the Commanding Officer, Capt. Lackland, and his personnel, in servicing plane.

Took off at Montgomery at 10:15 circled field and laid a course of 333 degrees, leaving Montgomery at 10:25 a.m., Central time, for Bellville, Ill. Weather cloudy and hazy. Wind S.W., altitude 1500, air speed 98, r.p.m. 1450, oil 40, temp. 78, air pres. $3\frac{1}{2}$. Crossing the Tallapoosa river. Terrain--wooded and rolling, scattered cultivated fields.

10:45 a.m. Course 323, wind W-SW, altitude 2200, air speed 100, r.p.m. 1420, oil 40, temp. 75, air pres. $3\frac{1}{2}$. Terrain--hilly, few cultivated fields where possible to get down without crashing. Weather hazy, stratus clouds at 2500 feet, Leaving Coosa river to right.

11:06 a.m. Birmingham 10 miles to the right. Course 325 wind W-SW, altitude 1400, air speed 100 r.p.m. 1450, oil 39, temp. 75, air pres. $3\frac{1}{2}$. Terrain--mountainous, numerous railroads, no landing fields, thickly populated. Very smoky and hazy on account of smelters. Stratus clouds at 1800--visibility poor. Passing over city of Bessemer. Steel works and smelters---very broken country--no possible place for safe landing.

11:15 a.m. Passing over Cordova, Ala., Course 325, wind W-SW, altitude 1500, air speed 110 r.p.m. 1450, oil 40, temp. 75, air pres. $3\frac{1}{2}$. Terrain--mountainous, heavily wooded, no open places suitable for forced landing. Weather hazy, cloudy, cumulus clouds about 20 miles ahead. Local showers visible about 20 miles west.

11:25 a.m. One hour out of Montgomery, Ala. Distance covered 120 miles, making good time, motor's performance perfect.

11:40 a.m. Passing about 5 miles east of Haleyville, Ala., dodging showers which are on both sides of our course.

11:45 a.m. Passing between local showers and thunder storms. Course 320, wind west, altitude 1500, air speed 100, r.p.m. 1420, oil 39, temp. 75, air pres. $3\frac{1}{2}$. Terrain improving. Cultivated land, slightly hilly, possible landing places in emergency. Weather cloudy and hazy--visibility poor.

12:10 p.m. Crossing Tennessee river between Florence, Ala., and Tuscumbia, Ala. Course 330, wind light west, altitude 1800, air speed 105, r.p.m. 1420, oil 39, temp. 75, air pres. 3 $\frac{1}{2}$. Terrain--pastures, cultivated fields vicinity of Tuscumbia and Florence--good emergency fields. Weather--local showers on all sides.

12:16 p.m. Crossing line between Alabama and Tennessee.

12:25 p.m. Two hours out of Montgomery. Distance covered 225 miles. Course 333, wind west, altitude 2000, air speed 110, r.p.m. 1420, oil 39, temp. 75, air pres. 3 $\frac{1}{2}$. Terrain--patches of cultivated fields, general terrain improving. Weather--local showers on all sides but easily going between them without getting off course.

12:30 p.m. Crossing Tennessee river again--Clifton, Tenn. to the east about five miles. Sun shining through openings between showers. Motor performance perfect--leaving Tennessee river to the east.

12:40 p.m. Crossing railroad leading to Lexington, Tenn., which is a few miles west. Course 330, wind west, altitude 2000, air speed 100, r.p.m. 1420, oil 39, temp. 75, air pres. 3 $\frac{1}{2}$. Terrain--cultivated fields, rather hilly but plenty of open country. No good landing fields. Weather--local showers but are not giving any trouble. Still slightly hazy.

12:55 p.m. Crossing railroad at Huntington, Tenn., Course 336, wind west, altitude 2100, air speed 110, r.p.m. 1420, oil 39, temp. 75, air pres. 3 $\frac{1}{2}$. Terrain--similar to that of Lexington. Weather--local showers and lightning. Visibility poor to the north.

1:05 p.m. Passing five miles east of Dresden, Tenn. Weather--threatening sky to the north--dark blue haze--looks like heavy rain storm.

1:10 p.m. Crossing over state line between Tennessee and Kentucky. 320 miles from Montgomery. Severe rain storm a few miles ahead-- extends east as far as can be seen. Clouds closing in overhead--rays of sun- light visible in the west. Changed course to due west, passing just south of Fulton, Ky. Can see clear area to the west and the sun shining on the Mississippi river.

1:25 p.m. Three hours out from Montgomery. Distance covered 360 miles. Just over north end of Reelfoot Lake, and Mississippi river, storm closing in from the southwest---giving up attempt to get around the west end--sun shining through holes in clouds above---now heading due north, passing over Hickman, Ky. Very heavy rain--too dense to get through--altitude 1600 feet.

1:30 p.m. Have decided to climb above clouds. Ship climbing wonderfully and motor working fine. Climbing through holes in clouds now.

1:50 p.m. Altitude 14000 feet. Sun shining on clouds to the N.W.--going through holes in clouds still climbing--motor working fine-- turning north through hole, sun shining on white clouds beyond.

Clouds closing in from all sides---now entirely surrounded by clouds-- heavy clouds overhead---altitude 15000 feet.

Note: The above log was written as the incidents contained therein occurred.

The following was written from memory and is an accurate statement of the events that occurred immediately following termination of the above log.

We were soon enveloped in clouds and encountered an area of snow, very dense and cold. We continued to climb, course N.W. in the direction we had last seen the sun. A very marked drop in temperature was felt and it was becoming intensely cold.

At an altitude of 16000 feet we encountered an icy blast that resembled small particles of hail. Atmospheric disturbances were in evidence as it was terribly rough, making it very difficult to control the plane. The intensity of the hail seemed to increase-- at times the wing tips were not visible.

Through ten minutes of this snow and hail the motor continued to run perfectly, after which it became short-circuited, sputtered a few times, then cut out entirely.

We lost 13000 feet through driving hail, snow and rain in a surprisingly short time by a series of side-slips and dives, gaining excessive speed at times which made it rather difficult to keep control.

At 3000 feet we were still in the blinding rain, so put ship into an easy glide hoping to pick up sight of the ground.

At an altitude of about 50 feet we could see the tops of the trees below. We killed all the speed we could and still retain action on the controls. Just before the landing gear was about to hit the treetops we pulled the ship into a partial stall, pancaking into a patch of Willow trees barely missing the higher Cyprus trees which were on all sides. As we could not see more than 50 feet in front of us there was no choice in choosing this landing place.

The plane hit the trees just as it was falling off on the right wing. This broke the fall but it crashed on through to the swamp below, driving its nose into the mud. The plane was a total wreck at 2:15 p.m. Both cockpits however remained intact and neither of us injured in the slightest degree.

The rain continued to pour down in torrents, the water and mud was knee deep in places. After a survey of the plane and a consultation we decided to start out to find our way out of the swamp. Having only a general idea of our location, we took a compass from the plane and started southeast, at 2:45 p.m., hoping to soon strike the Mississippi river. We were carrying two suitcases containing our personal belongings and correspondence relative to the flight.

We travelled on for four hours through the swamp, sometimes on our hands and knees in order to get under or over the tangled masses of fallen logs and dead timber, or through the thickly matted vines and brush we would occasionally encounter on the ridges or higher patches of ground, the rain continuing in a steady downpour.

Darkness overtook us at 7 p.m. We had not discovered any dry places so far, so decided to stop where we were----to continue in the darkness would have been impossible and we were nearly exhausted, having had only a cup of coffee in the morning to start on. Our ringing wet clothes and baggage were getting pretty heavy. After about two hours of patient efforts we got a small blaze started, using some of our maps that the water had not yet reached and some matches we were fortunate enough to have in a waterproof match box. The difficulty experienced in getting this fire started and keeping it going with wet wood all night long can easily be imagined.

We constructed an improvised bed of wet poles, raised above the ground, which served to keep us out of the mud and water but no protection from the steady rain that continued throughout the night.

At daybreak, after an almost sleepless night, we started on our way again. One of the suitcases had fallen apart and lost all resemblance to its former self. We bound it up and made an improvised sling of shorts by which to carry it.

We continued to travel on through the swamp, (which we afterwards discovered to be so appropriately named "Dead Cyprus Swamp" until we came to a little creek, at about 9 a.m. As this creek was flowing in the general direction of our course we built a raft and started down stream like "Robinson Crusoe and his Man Friday", occasionally hanging up on snags but always getting off without mishap.

The rain finally let up, after raining incessantly, never having ceased since we left the ship the afternoon before, but now the sun came out bright and warm. Things were at last coming our way as shortly afterward we saw a bridge crossing the creek nearly a mile below. When under this bridge, which was our first sign of civilization, our raft, which had endeared itself to us as though it had been a palatial yacht was quickly abandoned.

We plodded on down a road of famous Missouri "gumbo" mud. Soon met a man whom we questioned as to our exact location--he told us we were about fifteen miles from East Prairie. This meant nothing to us so we asked him the name of a larger town--he did not know, so we asked him the name of the State. He then informed us that he had no "education", but we finally found out from him that the Mississippi river was about one mile ahead of us. Shortly afterward we saw a house on the shore of the river to which we made our way, and were soon devouring a hot meal of eggs, bacon, fish, potatoes, bread and coffee, and enjoying a dry place to sit down. This was shortly afternoon.

The nearest telegraph office was across the river at Hickman, Ky., ten miles upstream. No boat or launch being available on our side of the river, we laid out on the bank in the sun to dry out and watch for a means of making our way to Hickman. A small launch finally came along up the river. We hailed it and were soon on our way to Hickman. After several breakdowns and running onto a snag, to get off of which we all had to get over the side into the water, finally arriving at our destination at 6:45 p.m., Sunday August 15th. Our appearance was anything but presentable.

Telegrams were immediately prepared to all concerned but we were informed that they would not go out until the following morning, as the office was closed.

It is estimated our plane is about 15 miles N.W. of Hickman, Ky., in the "Dead Cyprus Swamp". It being in such an inaccessible place it was not recommended that an attempt be made to get the remains out of the swamp, although the damage to the motor might be repaired. It is believed the cost of getting the remains to a place of repair would be unwarranted.

MILEAGE AND TIME:

1st leg--Carlstrom Field to Montgomery:	495 miles	4 hrs. 20 min.
2nd leg--Montgomery up until 1:25 p.m.:	360 "	3 hrs.
Total	855 miles-	7 hrs. 20 min.

Gaining altitude Carlstrom Field	10 minutes.
" " Montgomery	10 "
Climbing above clouds and in storm	50 "
Total	1 hr. 10 min.

Total air time 8 hrs. 30 min.

F. M. BARTLETT, Capt. A.S. (A)

C. C. CHAUNCEY, 2nd Lt. A.S. (A)

THRILLING EXPERIENCE OF CADET KENNETH L. FRAZIER ✓

During the week a series of free balloon flights were made from Ross Field, one of which ended disastrously for Cadet Kenneth L. Frazier of the present class of cadets receiving training at this Post.

After several officers and cadets had taken the balloon up for flights that morning, the big 19000 cubic foot bag was turned over to Cadet Frazier for a solo flight. The previous flights had taken the balloon to a point north of Sunland and Cadet Frazier started his solo from there at 11:20 A.M. He traveled north-west crossing the San Gabriel mountains at an altitude of 5000 ft.; descended on the

north side and not finding a suitable landing place threw out a sack of ballast and rose again. This second rise carried him to 6400 feet and after drifting along at this altitude for a short time he came upon an inviting stretch of wheat country that looked good for a landing. As the balloon neared the ground Cadet Frazier called to a group of farmers working in the fields below, to catch the grab rope. They replied that they were too busy and stood watching the balloon as it drifted by them. As he was rapidly approaching Elizabeth Lake Cadet Frazier decided to rip the balloon and land without any assistance from the ground.

His course was along a small canyon south-east of Elizabeth Lake, but as he neared the mouth of the canyon a gale from the lake struck the balloon and carried it up against the side of the hill. Cadet Frazier ripped the balloon as it neared the ground but it immediately parachuted and catching the wind started to drag. The wind dragged the partially deflated balloon over the crest of the hill and up against a 60,000 volt high tension line of the Southern California Edison Company, shorting two of the wires. The flash that followed ignited the hydrogen in the balloon which instantly became a mass of flames. A jet of fire came down thru the appendix and struck Cadet Frazier in the face, whereupon he dropped into the bottom of the basket throwing up his arms to shield his face from the heat. As the burning fabric fell to the ground the heat subsided and Frazier managed to crawl out of the basket in a semi-conscious condition. A passerby picked up the Cadet in his car and took him to a hospital at Lancaster, about twenty miles from the place of the accident. Here they found that he was badly burned about the face and arms and somewhat bruised, but not seriously injured. An ambulance was dispatched from Ross Field to bring the Cadet back and he is now in the Post hospital well on the road to recovery.

LT. JAMES G. HAZLIP

Lt. James G. Hazlip was officially discharged on August 15, 1920. He has been stationed with the 8th Aero Squadron since his return from overseas. Lt. Hazlip is a very clever pilot and the squadron expresses a keen feeling of loss in his discharge. During Lt. Hazlip's career overseas he was stationed a long time at Issoudon as an instructor. Several border patrol records are accredited to Lt. Hazlip who is also an accomplished acrobatic flyer. A milling company in Oklahoma is the lucky recipient of Lieut. Hazlip's services in the capacity of manager.

DETROIT A PROGRESSIVE CITY

OTHER CITIES WILL DO WELL TO FOLLOW HER LEAD

The City of Detroit, determined to maintain its lead as a progressive aeronautical center, intends establishing its second municipal landing field. At the request of the Commissioner of Parks and Boulevards, the Commanding Officer of Selfridge Field, Captain N. J. Boots, flew over the proposed site and after making an additional ground inspection will recommend its establishment at the next meeting of the city council. The field will only permit one way landings to be made, but in the event of a strong south wind the other municipal field, located several miles away, will be available. The new field is situated along the Detroit River, very close to the heart of the city, and its water frontage makes it peculiarly adaptable for use by seaplanes. In fact, it is already being used by the United Aerial Express Company as a home base for its seaplane flying between Detroit and Cleveland.

The Commanding Officer has conferred with the officials of the City of Detroit relative to the framing of an ordinance governing flying over that city. The opinions of the Chief of Air Service in this matter were given and the city authorities agreed that legislation governing aerial traffic should be enacted by the Federal Government, in order that such regulations will be universal throughout the country. They realize that haphazard legislation by separate municipalities will only result in a confusing tangle of laws. This matter is being held in obedience for the time being.

OFFICER AND CADET KILLED AT KELLY FIELD

Lt. W. C. Stenson and Cadet Everett H. Burson, were killed in airplane crash near Kelly Field during the week. While flying in formation, engine trouble developed which caused the pair to crash in attempting to land.

Lieut. Stenson was a member of the 166th Aero Squadron of the 1st Day Bombardment Group and had been stationed at Kelly Field since September 26, 1919, coming here from Ellington Field. He was in charge of instruction of the cadets at Kelly Field, and was a most capable pilot. He was 27 years old and his home was in Chelsea, Mass.

Cadet Burson was 22 years old and his home address was 829 Bay State Boulevard, Tampa, Fla.

FLYING TIME AT PILOT SCHOOL, MARCH FIELD

Despite early morning fogs rolling in off the Pacific a total 484 flights consummating 546 hrs. and 10 minutes were made from March Field during the past week. Preliminary instruction required 384 hrs. 40 min.; advance instruction 52 hrs. 50 min.; forest patrol, 52 hrs. 50 min.; test flights 6 hrs. 35 min. and miscellaneous flights 49 hrs. and 15 min.

THE RADIO TELEPHONE -- A NEW INDOOR SPORT

"Tuning-in" on wireless telephone communications between San Pedro and Catalina Island is becoming quite a favorite sport in Southern California. All of which illustrates the fact that wireless telephone communication is far from being a private means of vocal intercourse.

For example: One young lady in Los Angeles with a very pleasing voice called the room clerk at the St. Catherines Hotel and requested that a room with twin beds be reserved for her over the week end. Some big gruff voiced gob, presumably on one of Uncle Sam's destroyers, somewhere in the Pacific, "lipped in" and inquired what the argument was about. The room clerk is trying yet to square himself with the prospective customer.

Then again: A young couple were conversing via wireless between Pasadena and Catalina Island. She asked him if he had received her last letter and John said "yes dear". "Well don't pay any attention to what I said in that letter because I didn't mean a word of it and I am sorry". And John said that was alright as he was used to such treatment. Whereupon another receiver went bang upon its hook and all communication was lost.

Then you can hear the afternoon baseball scores being relayed to the resort island and a few late market reports. Believe us - it's an interesting sport.

MASSACHUSETTS FIRE PREVENTION ASSOCIATION INSPECTS FOREST PATROL

Sixteen members of the Massachusetts State Fire Prevention Association were visitors at March Field, California, on Thursday. Mr. Harris A. Reynolds, secretary of the association was taken in a DH over parts of the Los Angeles and Cleveland reserves. The party visited many points along the Pacific coast in connection with their inspection of forest patrol work. They were particularly interested in the aerial operations as carried on from this base, and complimented the Air Service for its efficient work in the protection of our National Forests.

OFFICERS TRANSFERRED TO AIR SERVICE

Special orders No. 188-0, War Department, dated August 11, effects the transfer of the following officers, regular army, from Infantry to the Air Service:

Lieut. Col. Ira F. Fravel and Majors Jacob W. S. Wuest, Barton K. Yount, Henry H. Arnold, Henry B. Clagett, John F. Curry, Jacob E. Fickle, William J. Fitzmaurice, Benjamin D. Foulois, Alfred M. Hobley, John W. Simons, Rush B. Lincoln, Ira Longanecker, Henry C. K. Muhlberg, William F. Pearson, William E. Gillmore, Harry Graham, Harry W. Gregg, Roy C. Kirtland, John D. Reardon, Albert L. Sneed, John S. Sullivan.

AN AERIAL DREAM COMMUNICATED.

Sergt. R. Zaleski and B. Walters, March Field, trans-Pacific flyers, are still undecided as to what type plane they will fly this fall in their attempt to cross the Pacific ocean. They are reported favoring the Mystery Ship if it is possible to convert it into a flying boat. Both men are not keen for mid-ocean swimming.

Men of the Command extend their good wishes and sympathy. Watch for the take-off on September 31. They should reach China on the 32nd.

The flight will be made in three legs; from Long Beach, Cal., to the Semetria Islands 2489 miles; from Semetria Islands to the Philippines, 1741 miles; from the Philippines to Singapore, 1238 miles and thence to China. They will keep on radio communication with March Field at all times.

Should this attempt fail Zaleski reports they will climb to an altitude of 20,000 feet and wait for the world to make one complete revolution, then nose her down and cop the \$50,000 award offered by Thomas Ince.

POST OFFICE DEPARTMENT LETS FIRST AIR MAIL CONTRACT

Post Master General Burleson, on behalf of the Post Office Department, and Major Geoffrey Harper Bonnell, Vice-President of the Florida West Indies Air Ways Company, Inc., concluded a contract for carrying the mail by seaplane from Key West to Havana for a period of one year, beginning October 15, 1920.

Under the provisions of the contract the mail will be taken by seaplane from Key West immediately after the arrival of the forenoon train at Key West and will result in placing the American mail in the Havana post office in time for delivery, at least in the business district, that same afternoon, and thus enable the addressee to reply to the letter in time to have it dispatched by the returning seaplane which leaves Havana at 5 o'clock in the afternoon and connects with the 9 o'clock northbound mail at Key West.

Letters and other first class mail up to four pounds, 6 ounces, and not exceeding 19 inches in length and girth combined, must be prepaid at the rate of 6 cents per ounce or fraction thereof. Letters with this airplane postage and marked "via seaplane" will be insured dispatch through the air from Key West to Havana. Mail arriving at Key West by train after the departure of the seaplane will be given the first steamboat dispatch out of Key West and will not be delayed until the plane departure the next day.

Train No. 86, leaving New York at 9:15 a.m. with the night's accumulation of mail from New England, New York and other points, and arriving at Key West at 10:50 a.m., the following day, is the mail train connection for the seaplane bound for Havana.

This is the first air mail contract made by the United States under the authority of the law provides that the Postmaster General may contract to send foreign mail by seaplane.

The mail is to be carried in an F-5-L flying boat equipped to carry 12 passengers and also freight, and is propelled by two Liberty motors.

ABERDEEN PROVING GROUND

During the week a fire broke out in an ammunition store house on the Main Front at Aberdeen Proving Ground, Md. and spread rapidly to adjoining buildings. For a time it was thought that the entire front would be destroyed but thru the work of the Post Fire Department with the assistance of the men of the 259th Heavy Bombardment Squadron and 18th Balloon Company the flames were put under control and extinguished in three hours.

The damage included the complete destruction of 5 buildings, 100,000 pounds of powder, 60,000 yards of raw silk and much machinery, the total loss amounting to \$246,000.00.

PURSUIT DESTROYER PATROLS

The various kinds of protection patrols executed by Pursuit Planes have already been discussed, as well as offensive action against ground troops. These are all comparatively incidental jobs for the Pursuit Unit. The primary purpose of Pursuit Aviation is to try to keep the air cleared of hostile aircraft. Hence, the most important mission of a Pursuit Unit is the Destroyer Patrol, either offensive or defensive.

The strength of the Destroyer Patrol, acting independently of all other units, depends upon the strength of the enemy on a given sector. In any case, our Pursuit should be strong enough to outnumber the enemy and completely police the lines.

The duties of the two types of Destroyer Patrols are only slightly different.

The defensive patrol does not cross the lines. It is a high patrol, not interfering with the work of the various protection patrols below, and paying particular attention to high flying enemy reconnaissance planes and day bombardment formations. Should an enemy pursuit patrol penetrate our lines, it would be the first to attack them, and in so doing, the Flight Commander would endeavor to keep the fight well inside of our lines so that any enemy pilots that are forced to land alive may be taken prisoners, and conversely, so that any of our own pilots forced to land will not be captured. Thus, the defensive destroyer patrol is in reality a barrage through which any enemy aircraft that may elude our offensive patrols must pass before they can bomb or photograph our lines of communication, railheads, depots, and so forth.

The offensive destroyer patrol is a patrol operating at any altitude, that penetrates well inside the enemy lines looking for trouble. It is, perhaps, the most important of all; because, if it should meet with a hundred per cent success, there would be nothing for any of the other patrols to do, for there would be no enemy aircraft aloft and the air would be ours. This is a result which we cannot hope to achieve, unless we can locate all of the enemy's airdromes and keep a patrol hovering over each one until they are all destroyed by our Bombers.

During the past war, the importance of the offensive destroyer patrol was emphasized by the fact that what little Pursuit that we had was used for this work almost exclusively; and to excellent advantage, for we gained an average of three victories to the enemy's one.

Inasmuch as the destroyer patrol is the general type of Pursuit Mission, it might be well here to explain the preparation necessary to a Flight, before executing such a mission.

The condition of the Pilot equipment must be of the best. Each pilot should have a reserve ship, tested and ready to fly, in case he finds that his motor has developed some fault during his last flight. It is important that the ship be perfectly aligned and as strong as it was when factory tested. Next, the motor must be running smoothly and consistently, delivering its full designed horsepower. Last, and very important, the guns must be in perfect condition, fully loaded with carefully calibrated ammunition; and special care should be taken that belt links will not stick. Immediately after leaving the ground and before assembling at the rendezvous point, each pilot should fire a short burst at the ground target to assure himself that his guns are functioned properly.

In the work now being carried on by the First Pursuit Group Kelly Field, it is training those of its pilots not already experienced in Pursuit Work to take their proper place as patrol leaders should another war break out in the future.

Continual rainfall for seven days and nights has resulted in washing out railroad and wagon bridges between Camp Stotsenburg and Manila and many stretches of a mile or more are under water. Naturally there was no flying during the seven days downpour, but Friday the sky cleared for half an hour. Captain Roy S. Brown, the Station Commander, hopped off to Manila for a conference with the Chief of Staff. The rain was coming in torrents a few minutes after he landed so he was forced to remain overnight at the Curtiss Field at Paranaque Beach in the suburbs of Manila.

The field at this station is so sandy that it is fit for flying, if one avoids ditches, immediately after a rain that would put the average field out of commission for days.

Quarters at the Air Service Station are slowly being completed. Captain and Mrs. Roy S. Brown, moved from the Ninth Cavalry garrison to their new quarters during the week. Four officers, Lieuts. LeRoy E. Russell, John Blaney, Charles L. Webber and William C. Maxwell have been installed in the "Bachelor Building" several days, although it has not been completed.

KELLY FIELD

KELLY FIELD WINS POLO GAMES

Kelly Field is slowly but surely putting itself on the map in the Southern Department polo world. They have had many difficulties to overcome since last winter when the idea of having a polo team to represent Kelly Field was first started but these difficulties are being overcome, and although the first two match games were defeats the last two have been victories, by a narrow margin to be sure, but victories nevertheless.

The first difficulty to be encountered was the lack of a polo field, but now one is available that bids fair to be one of the best in the vicinity of San Antonio. The field lies just inside the entrance to Kelly Field on the Frio City road, across the road from the Kelly Field Stadium, athletic field. A small temporary grandstand has been erected on the eastern side of the field and the picket lines are along the southeastern sideboards. For the first few weeks the field was rough and the grass fairly long but for the next game the field will be as smooth as a billiard ball and the grass will be well clipped.

For several years the proverbial question by civilians has been, "Why do aviators wear spurs"? The question is being answered, for since February aspirants for the polo team have been taking a course in equitation under Major William H. Garrison and the results are beginning to show in recent games. It is evident that the training a man gets in flying formation, in combat work and other aerial activities fits him to be a polo player.

Through the courtesy of the Fort Sam Houston Polo Association, the Kelly Field Polo Association has been able to obtain horses, polo balls and other equipment necessary. At first they were given "Hacks" to play on and 1911 cavalry saddles, but now that they have shown that they are fit to use horses we are to weed out our present stock and replacements will be made from the Remount Station.

On Saturday afternoon July 31st the Kelly Field team defeated a strong aggregation from Fort Sam Houston by a score of 4 to 3. Kelly Field was given a handicap of four points for a full eight period game, but on account of rain the game was called at the end of the fourth period so the handicap was halved. Major Garrison scored one goal for Kelly Field and Lieut. Eubanks the second. Captain Schaufler was injured in the fourth period of play, sustaining a badly sprained right ankle, but he continued the period until the finish of the game. He will probably be back in the game this coming week. Captain Howell scored two goals for the visiting team and Captain Foster one.

AIR SERVICE MECHANICS SCHOOL, KELLY FIELD

Parachute tests to determine whether or not the opening speed of a parachute equipped with a Pilot-chute exceeded that of one not so equipped were made on this field. The U.S. Army type of parachute with a two-hundred-pound weight was used. Tests were made from a DeHaviland-4B plane from an altitude of two hundred feet while traveling at a speed of sixty miles an hour. Official split-second watches were used to record the time. The Time Keepers were: First Lieutenant Harry Weddington, Second Lieutenant Owen E. Spruance and Second Lieutenant James S. Eldredge. The result of the tests showed that the Pilot-chute accelerated the opening of the main chute from three-fifths of a second to one second.

Since the Armistice, great strides have been made in Trade Test work. By Trade Testing we mean the placing of the right man in the right place which is done by means of examinations, oral and written and practical performance tests. In November 1919, orders were received at this Field to establish a Master Trade Test Board for the installation and standardization of Air Service Trade Tests. This work, which involved the complete construction of tests in the various trades, has been consistently carried on. Trade tests for the Air Service are now completed and are being installed in the various Air Service Stations. The Master Trade Test Board of this School is the center of this work. This Board, headed by an officer, consists of seven specialists who handle the work. The instructions now completed are compiled in sets arranged so that intelligent trade testing can be accomplished without previous experience. These instructions are so explicit that almost any person can conduct a successful trade test and find the exact qualifications of each soldier and the degree of these qualifications, that is, whether he should be classed as an expert, a journeyman, an apprentice or a novice. Trade testing is nothing more or less than an interview and an examination, but by this means the efficiency of the Air Service is greatly improved. The time consumed for the trade test of a soldier varies from fifteen minutes to one hour, depending, of course, upon the ability and experience of the man.

ARMY BALLOON SCHOOL, OMAHA

"The United States Army Number One" Spherical Balloon has been completed and is ready for inflation. This balloon is to be the army entry in the National Balloon Race, Birmingham, Ala., Sept. 23.

A trial flight will be made immediately after the christening.

Several airplanes will fly overhead while the balloon is being christened. The public has been invited and a large assemblage of people from Omaha and vicinity were present.

KELLY FIELD

ARTILLERY OBSERVATION WITH 2ND FIELD ARTILLERY BRIGADE

During the week the Bombardment Group got under way in earnest with the Field Artillery at Camp Stanley, Leon Springs, Texas. The first shoot was scheduled for Monday at eight thirty. At that hour the clouds were black and very low, being not higher than five hundred feet. However, Lieuts. Guidera and MacIver were right on the job as were the radio and panel detail. The observer tuned in and prepared for firing when the artillery telephone line from the Observation Post to the Battery broke down. The line was not repaired for an hour. The first plane was sent home without having observed one salvo. The second plane with Lieut. Maynard, observer, and Lieut. Shankle, pilot, immediately tuned in. By a pre-arranged ground signal, they were told to land at the field at Camp Stanley. Lieut. Doyle then got into telephone communication with Lieut. Maynard and gave him the co-ordinates of another battery that requested observation. Lieut. Maynard then went aloft and observed a successful problem for that Battery.

On Tuesday, Lieuts. Guidera and Speck both went through two very good shoots. On Wednesday, Lieut. Maynard got through trial fire, but landed owing to a mistake in reading a ground panel. Lieut. Doyle, observer, and Lieut. Lawson, pilot, then took up the work and completed two very rapid and successful percussion bracket problems in one hour. Their work was accurate and fast, the average time between salvos being one minute.

All the past week, the mornings have been threatening with extremely low clouds. This condition makes aerial observation difficult; but despite this handicap the teams have been doing splendid work. Great credit is due to Lieut. Burgess, the Wing Communications Officer for the efficient manner in which he is handling the radio and panel work. These details are normally taken care of by the batteries but as they have no trained specialists it was necessary for Kelly Field to carry on the work.

TACTICAL TRAINING

During the past week the First Pursuit Group has been participating extensively in the tactical manouvers being carried out at Leon Springs Military Reservation, about thirty miles north of Kelly Field, by the 17th Field Artillery and the First Day Bombardment Group. These manouvers were originally designed only to afford practice in Artillery Regulation from the Air, but the opportunity for a valuable course of training in protection patrols and attack patrols was too good to be missed by the First Pursuit Group. Consequently, permission was obtained from the Department Air Service Officer to take part in the manouvers and liaison was established with the Bombardment Group and with the 17th Field Artillery. One or more patrols was scheduled for each day's shoot. The first few patrols were practice protection patrols only, one patrol leaving early in the morning and being relieved toward the middle of the morning by a second patrol.

These patrols flew up and down the B.T. Lines outside the zone of fire, keeping between the Artillery Reglage Plane and the direction from which an enemy would be presumed to approach.

On the fourth day of the exercises, only a short shoot was held towards the middle of the morning, giving up an opportunity to use our two patrols in opposition to each other. The result of these exercises showed the importance of the protection patrol flying in the proper position with respect to the Reglage Plane; for, in this instance, the patrol which acted as the enemy succeeded in jumping both the protection patrol and the Reglage Plane.

On the following day, the last of the current week's exercises, the First Pursuit Patrol participated in the action against the ground, dropping loaded dummy bombs upon the targets and firing upon silhouette targets with machine guns. After the practice Ground Harrassment, the Artillery opened up and the patrol took up a position in protection of the Reglage Plane and was attacked by a second patrol which represented an enemy patrol. Both Ground Harrassment practice and the Combat practice were plainly visible to the Advance Observation Post from which Generals Harbord, and Moseloy were observing the manouvers. While motor failure prevented several of the pilots from taking their scheduled parts in these manouvers, they were very well executed by those remaining and the mission must be regarded as a success.

ROCKWELL FIELD, CALIFORNIA

A course of instruction has been planned for further training of officers and enlisted men of the 91st Aero Squadron at Rockwell Field, California. It is extremely thorough in its scope, covering instructions in radio and gunnery in a manner guaranteed to bring proficiency to all those participating. It is contemplated that as soon as instruction in these two lines has been completed, to institute a course of instruction in mapping, photography and other kindred subjects.

The patrol this week has been very successful - no forced landings or motor trouble of any kind. Colonel Alonzo Gray, Cavalry, Commanding Officer of the Arizona District, was invited to inspect that part of the border patrolled by the 91st Aero Squadron from Rockwell Field to Monument 189. Captain L. O. Matthews also made the patrol and enjoyed the trip very much. Such patrols are of extreme value to the service in that they foster the spirit of friendliness between the Air Service and other branches of the service, bringing them in closer touch and resulting in a keener appreciation of the problems of the Air Service, its possibilities and limitations.

NEWS FROM THE AIR SERVICE SQUADRONS, POPE FIELD

During the past week much time was devoted to reorganization of the Field and establishment of operations. Officers assigned to the various departments attended daily meetings and reported the progress of their work.

A three days maneuver by the Field Artillery of Camp Bragg was conducted from the Air and though the work with this branch of service was new to our officers, the work done was favorably reported on. In a critique, held at Brigade Headquarters after the march, the Commanding Officer of the column and all officers on duty with the Organization stated that this had been their first experience in the use of Air Service in conjunction with ground troops and that they were most favorably impressed, and highly pleased with the results obtained.

The positive and rapid means of communication between the air and ground and the speed with which road sketches and reconnaissance reports were furnished was particularly mentioned. All of the line officers manifested interest and desire to co-operate throughout the march and stated upon several occasions that they were very much in favor of using the Air Service when ever possible in the future work of this nature. In addition they have arranged means whereby reglage can be conducted and a regular schedule of this work between the two branches of service has been formed.

OBSERVATION NOGALES, ARIZONA

On Tuesday of this week Lieut. L. M. Wolfe made the first parachute jump attempted at this Airdrome. The drop was made successfully from an altitude of 3600 feet, and was witnessed by a large crowd.

The only accident that marred the occasion was the death of one of the cats owned by Lieut. Knapp. The parachute failed to open and the cat is now listed among the departed. These cats first came into prominence when the squadron moved to this Airdrome from El Paso, as they were born enroute in a plane, and are the only ones on record thus distinguished.

The sole survivor of this illustrious family is being carefully watched, and it shall not be allowed to participate in any more hazardous performances.

MATHER FIELD

During the past week another transfer of Forest Supervisors took place when Mr. Elliot was sent back to the Stanislaus fire which broke out during his absence, making this trip in three hours which under ordinary conditions would have taken thirty-six hours.

RED BLUFF

The past week has given greater development to the use of aircraft in furnishing information on fire outline and spread control than at any time during the previous month's operation. This has been brought about by the fact that exceedingly large fires have sprung into being overnight thereby preventing their being spotted in their early stages and reported to the Forestry Service.

Upon the request of the Forestry Service, a special radio station was established on the brink of Mill Creek Canyon in order that a closer liaison might be maintained between the plane and the fire fighters. It is believed that its operation has been entirely successful and that through its establishment the fire has been kept under control with fair measure of efficiency. Mill Creek fire was reported as having burned over 25,000 acres. At the present time one plane from Flight "B" is operating out of Montague over an exceedingly large fire located at Medicine Lake in the Shasta National Forest. Regular patrols have been generally discontinued as requests for special reconnaissance have been made.

FT. SILL OKLAHOMA PROGRESS IN AIR SERVICE OBSERVATION SCHOOL

The past week has been devoted to practical work, the students of the observation school carrying out Artillery Reglage and Infantry Liaison problems, both actual and simulated. The fact that the Oklahoma National Guard has been stationed on the Ft. Sill Reservation for the past two weeks has afforded the Students opportunity to carry our Infantry Liaison in connection with troops in the field under simulated battle conditions. In the absence of such troops, it is necessary for the students to pin-point positions of panels that are laid out by panel Details for that purpose.

MINE RESCUE WORK

Lieuts. Wagner and Walker, with Sergeants Chambers and Moore, will leave for Denver, September 4th, reporting upon arrival to the Chief of the Bureau of Mines in connection with Mine Rescue work in and around Denver. DeHaviland 4B's will be used and the assignment will be from September 4th to September 12th, whereupon the ships will take-off for Ft. Leavenworth to join Flight "A" of the 135th Observation Squadron.

ACTIVITIES OF THE 23rd BALLOON COMPANY

The Twenty-Third Balloon Company, stationed at Post Field, is enduring a number of hardships these days for the sake of flying. With a strength of 37 men and only 21 of these, including non-commissioned officers, available for duty on the Balloon Field, the captive balloon was up two days during the past week for a total of five hours. In order to fly the big bag, it was necessary for every man to assist and all the Non-Commissioned Officers and the Winch Driver were called into action, and had not the greatest cooperation existed the flights would have been failures. At times it was a test of grit and nerve for the men to handle the balloon. The slightest gust of wind would make the balloon almost uncontrollable, and it was only pride in the Company and in themselves that kept the men from losing it.

LONG DROP MADE VIA PARACHUTE

We have published numbers of articles on all kinds of parachutes, and such articles, attract but little interest these days. But here comes a new one from Ft. Sill, which warrants the assertion that all thrills have not been eliminated in parachute jumping, as can be attested to by Sergeant Chambers of Post Field, Fort Sill, Oklahoma.

Sergeant Chambers flew in a new model DH-4B piloted by Lieut. Agee to an altitude of 5000 feet. At that altitude Sergeant Chambers hopped off into thin air. He kept on dropping, still the parachute did not open. At an altitude of 4000 feet it opened, much to the relief of the spectators. At a height of 3000 feet the sergeant cut loose from the first parachute and dropped another 500 feet before the second parachute opened. He made a neat landing in the middle of the field. When asked if he experienced any difficulty in opening the chute, he replied: "The chute was O.K., it opened when I pulled the chord".

HERE AND THERE WITH THE EDITORS

MAINTENANCE OF AIRCRAFT INDUSTRY

Facts relating to the aeronautical situation in different countries prove that maintenance of aircraft industry is being considered a necessity.

"France has adopted an out and out subsidy system, based on the amount of service rendered." The British have set aside a small allowance in the interests of aircraft manufacturers. The British are somewhat opposed to government assistance in this way, pointing out the possible "loss of personal efficiency and initiative". They express a preference for the policy adopted in this country where the industry is kept on its feet by the Postoffice Department.

"Canada has just arranged to open a mail service between Halifax and Vancouver, while the successful arrival of the four army planes in Nome points to the possibilities in that direction, where other transportation facilities are lacking. Problems on this side of the Atlantic will be more difficult than in Western Europe because of the tremendous expanse of this country and the corresponding difficulty in working out a complete and co-ordinated organization.

The substitution of the all-metal plane for that of the old style wood and fabric construction promises to put the industry on a more certain commercial basis. The loss from fire is much less while the original costs are little greater and depreciation greatly reduced." (Cleveland Plain Dealer 8/29/20)

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MONSTER SHIPS FOR COMMERCIAL AIR SERVICE

"Out of the ashes of the air service into which the United States poured \$600,000,000 during the war, is being developed commercial aviation along lines destined to make the fullest possible use of the unmeasured expanse of the air - for the transportation of passengers, express, messages, for photography and advertising.

An international corporation has been organized, backed by the biggest financial interests in this country which is now making arrangements to have at least two ships for passenger and express, in operation within a year between Chicago and St. Louis and Jacksonville and Havana. The New York to Atlanta air mail route is also expected to be in operation soon. It is intended that as soon as the big airships and other equipment can be constructed, a network of air routes covering all the principal cities in the country will be opened.

War Department experts on aviation and American business interests have been watching closely the organization of a great international air corporation in Germany. American capital has been invited to join this corporation, but the control would remain in Berlin. It is believed that Germany is endeavoring to re-establish under the guise of commercial aviation, the greatest war machine the world ever knew. American interests are proposing to establish a great fleet of airships - as vehicles of international commerce - but with the controlling interest in America, which would be of inestimable value in case war should ever again come to the United States.

Aeronautical engineers are now figuring on airships to carry 200 passengers and 100 pounds of baggage to a passenger. The proposed monster ship will not land in way cities, but will make 'through trips'. It is to be built of steel rather than aluminum, and with girders supporting a roof. As this ship nears a city a wireless message will be sent out regarding the time it will pass over the city. An airplane with passengers from that city will rise to the proper altitude and circle around until the big dirigible slacks up. With the aeroplane resting on the back of the big gas ship, passengers will descend in an elevator to its cabin, and any passengers wishing to alight in that city will be taken off in a similar way."

While transportation of passengers and express is the big feature of the corporation's program, there is to be special arrangements for aerial photography. It is recognized that there is an immediate demand for the services of such a bureau in laying out a new city or sub-division, for great engineering projects, for street and railway construction and for taking pictures of estates.

Special ships for advertising are being built, which will not only distribute handbills, but will also send out little parachutes which will contain small amounts of the article advertised, and attached to the ship there will be a loud-speaking telephone device which will enable a demonstrator to announce his goods

while the ship circles not many feet above the city.

This great international organization is known as The North American Aerial Transportation Co. with offices in Washington, D.C.

(Washington Star 9/5/20)

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VIENNA CENTER OF EUROPEAN AIR NAVIGATION

Chicago is being considered as the world's future aeronautical center. In the N.Y. Tribune, 9/7/20, we have facts which show the possibility of Vienna becoming the great center of European air navigation. The Aspern aviation field is located only a few miles from Vienna and it is abundantly equipped with hangars, repair shops, gasoline tanks, and all paraphernalia of a great war plant.

"Companies subsidized by the British government are arranging for an air line from London by way of Brussels, Coblenz, Munich, Vienna, Budapest, Belgrade, and Sofia to Constantinople. Vienna is exactly in the center of this route, which is 2,400 meters long". Other lines and enterprises are being planned which will make use of the Aspern field for the care of planes, trans-shipment of cargoes and look-after passengers.

"It is reported that the Lloyd Air Service has pooled interests with the North German Lloyd and is understood to have concluded arrangements with the Vienna Aircraft Navigation Company for the latter to take entire charge of its interests on Austrian territory."

(N.Y. Tribune 9/7/20)

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"TESTING AEROPLANE MATERIAL"

"Prof. C. F. Jenkin, in his presidential address to the section of Engineering, said that in no branch of the Services was more research work done than in the Air Service. His own work has been confined to problems connected with the materials for construction. Timber was one of the oldest materials of construction and was of prime importance in aircraft. The material was anisotropic, that is to say, it had different qualities by three axes along the grain, radially across the grain and tangentially across the grain. A very few tests were sufficient to show that the strength was enormously greater along the grain than across it. During the war he had to reject numerous types of built up struts intended for aeroplanes because the grain of the wood was in the wrong direction to bear the load. The most perfect example he has ever seen of the building up of a plywood structure to support all the loads on it was the frame of the German Schutte-Lana airship."

(London Times 8/25/20)

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CHICAGO-WORLD'S AERONAUTICAL CENTER

During the last few months an "organization of organizations" has been perfected in Chicago which has for its goal the making of that city the world's chief aeronautical center - "the industrial heart of aircraft manufacture and the principal terminal for the commercial and pleasure ships that will ultimately sail the air lanes of the globe".

"Factors that have made Chicago the railroad center of the world will operate with equal force to make it the aeronautical center. Like the railroads, airplanes will probably continue to be a predominant overland rather than overseas means of transportation. In any case the similarity of airplane transportation to the present fast train service will make Chicago the logical center of great air routes.

Situated near the geographical center of the United States, Chicago for airplane transportation has many advantages in position as well as of industrial facilities. Detroit has become the fourth city of America by capturing the leadership in the automobile industry. Chicago should not be blind to the possibilities of the airplane".

Colonel Bion J. Arnold, president of the Chicago Air Board suggests for Chicago a terminal built from 16th street extending along the west side of the river as far north as Randolph Street and as far west as Canal Street. This terminal would be an "uninterrupted floor of concrete at least eight stories high - a giant roof laid across the tops of all buildings in the area mentioned". Such a terminal would prevent the necessity for condemning and razing buildings as it

would be eight stories above the ground". The time is not remote when some such facility as this will be needed to supply the demands of the city's air traffic. Chicagoans of vision and enterprise are giving careful thought to this and other basic problems of air transportation".

According to the Chicago Tribune, 8/31/20, it is proposed to have at Chicago an air reserve corps. This project will be entirely independent of Federal aid. A group of wealthy Chicagoans are prepared to expend a large sum of money to keep trained aviators in practice. Eighteen planes of the very latest type have been purchased and the construction of a hangar has been ordered. The planes will be at the unlimited disposal of certified aviators. It is further proposed to "establish a school for the teaching of automotive parts of airplane science". This school will be free to any prospective aviator".

"General William Mitchell, chief of training and operations of the army air service expresses enthusiasm over the proposed plan and declares that the "military establishment offers every possible bit of assistance".

(Chicago Daily News, 7/14/20 & Chicago Tribune 8/31/20)

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COMMERCIAL AIR RATES

The New York-Chicago Air Route being the best, all things considered under present conditions, we take that route into consideration in applying our costs to a typical airplane run. A route like this, sprinkled with business interests is better than one in California where the traffic is mainly for tourists. Where business is at stake time means money, therefore a service that will save time will be patronized by business men. The airplane can save twelve hours in the above mentioned route.

The distance between New York and Chicago is 725 miles by air line. Our operating cost for one passenger mile we found to be 7.48 cents. Multiplied by 725, gives \$53.23. To this the overhead charge of \$15 per passenger should be added, which makes \$68.23. Then there should be something allowed for days when full loads are not carried, and for surplus of cash to be used in developing and extending the business. Fifteen per cent for that consideration would make the total cost of a passenger's ticket from New York to Chicago, \$78.50.

The question is: "Can enough tickets be sold at this price to make the business pay?" It is thought that there will be plenty of people to whom the saving of time will be of such great value that such a service will be amply supported. After awhile the number of passengers will increase, then the fare will be less. "The more passengers there are the less will have to be exacted from each to pay overhead expense". (Major Reed Landis- Chicago Daily News 8-27-20)

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COMMERCIAL AIR SERVICE FOR CHINA

"European observers have been struck with the facility with which young Chinese army subalterns have taken up the study and achievement of aviation under instructors." These instructors are French, American and British.

The Chinese are very thorough and have plenty of nerve. A timid Chinese is almost unknown.

Efforts are being made for developing China by means of flying routes. It is foreseen that aviation will bring about a greater change, in a shorter time, in China than has ever occurred in any country because the contrast between the speed of the airplane and that of the present modes of travel is so much greater than in any other country where transportation by airplane has been introduced. The bullock cart and the courier on foot have been almost the only means of transporting mail or messages of any kind over roads in the interior of China.

One of the largest shipments of airplanes ever sent out of the United States was recently made to China. Its American value was more than half a million dollars. This shipment included five Curtiss H-16 flying boats, two Curtiss HF-2 flying boats with wireless equipment, three aeromarine 39-B pontoon airplanes and one Boeing seaplane, -- eleven in all. One machine purchased by the Chinese has a carrying capacity of ten passengers, and fuel for a distance of 675 miles.

Air routes have been carefully mapped out which will link the cities of Macao, Hong Kong, Canton and Shanghai. Very soon routes which will extend so as to include Manila, Hai-Phong and Saigon will be established.

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"PROBLEMS OF DESIGN"

"The time has come already, in the operation of Continental Air Service, when the aeroplane must be designed, not only as a commercial vehicle but as a vehicle easily handled from the point of view of overhaul and repair". If anything goes wrong with the motor in any particular transport machine, you do not want the machine to lose days of money-making capacity while the engine is being repaired. We want a reserve of engines ready for any emergency, and we must have a commercial aeroplane in which the engine installation is such that the whole motor can come out and another one go in with the least possible difficulty or delay."

Mr. Searle, managing director of the Airco, "Air Express", favors the single-engined plane. He also says that we should not jump at once into the all-metal machine project. He says: "I am looking forward to the early use of a passenger machine in the form of a simple 'streamlined' hull with a big powerful motor and over it a single monoplane wing built of wood. Get a machine like this and a well-arranged stock of 'spares' and one comes nearer to real commercial air transport than has been the case hitherto".

Another need he cites is "better international organization". "We want", he says, "an international system for packing goods in specified containers. Such a system would save labor and time".
(London Times 8/14/20)

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Lt. Odenthal

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE SEPTEMBER 25, 1920.

PARACHUTE STORIES AS TOLD BY THE JUMPERS

CARLSTROM FIELD

20,000 FT. DROP PROVES A REAL THRILLER.

All records for parachute drops went to smash at Carlstrom Field August 21, 1920, when Lieut. A. G. Hamilton fell twenty thousand nine hundred feet thru space in the quick time of twelve minutes, bettering by at least a thousand feet the record for altitude made by Lt. Wilson in Texas. It might be noted that Lt. Hamilton jumped; his method of leaving the plane was not a "drag off".

Hamilton, who has had quite a little experience with parachutes had remarked upon hearing of the previously established record that he thought he could better it and last Friday the attempt was made. He went aloft in a La Pere piloted by Lt. P. H. Downes who has carried him on the occasion of most of his other drops. The day was anything but ideal. A heavy broken layer of clouds lay at 4000 ft., a lighter cloud formation at 10,000 ft. and a gathering of mist at about fifteen thousand feet. Downes pushed on until an altitude just short of twenty one thousand feet had been reached when a miss in the motor made it impossible to continue higher. At four miles above the earth the air was biting cold.

Circling about for a glimpse of earth thru rifts in the cloud floors, the aviators descried what they deduced to be Dorr Field, nine miles east of Carlstrom Field. Judging the speed of the wind and its effect on the chute during the drop, Lt. Downes moved west some two miles and signalled for Lt. Hamilton to jump.

Right here mention might be made of a circumstance which puts an added thrill into parachuting at high altitudes and lends interest to the establishment of a new record. The parachute used by aviators is folded snugly inside a pack carried on the back. The operator steps off, allows himself a couple of seconds to fall clear of his machine, then pulls a wire depending over his shoulder. This wire opens the spring doors of the pack and releases a small pilot chute some couple of feet in diameter. This pilot springs open automatically and catching the rush of air, draws the main chute from the pack. In the top of the main chute is an automatic vent which, opening to a width of five feet when the big parasol first unfolds, gives the air compressed within a chance to escape and lessens the danger of blowing the chute apart. When the fall has been checked rubber springs or shock-absorbers in the vent close it in until but a small hole remains. At the atmospheric pressure wherein most parachute drops from ordinary altitudes are made the speed attained by the operator in his couple of seconds fall is sufficient to create enough pressure under the pilot chute to cause it when released to yank the big one at once from its pack. Usually the operator is descending at normal speed after falling less than two hundred feet. However at high altitudes the atmosphere has not sufficient effect on the pilot chute until the operator has fallen a great distance and attained terrific speed. The shock when the parachute does open is accordingly severe and there is quite a sporting chance of the silk flying into ribbons.

Upon receiving his pilot's signal, Hamilton climbed to the edge of the cockpit, waved his hand and dropped into space. After the usual interval he pulled his release cord nut instead of having his drop immediately checked, he fell a distance which was estimated by both him and Lt. Downes to be 2,000 ft, before his parachute snapped out and opened with a loud report. Looking aloft he saw that the springs which close the vent were broken. The chute is of a size designed to enable a man to reach the ground as quickly as is consistent with safety in landing and the shock upon touching earth is always severe. With the vent wide open the best Hamilton could hope for was a few broken bones for his speed was such as kept the La Pere whistling in keeping up with him. In the higher strata he encountered tumultuous atmospheric disturbances similar to those met with by Lt. Wilson and severe oscillations set in swinging him thru an arc of over one hundred degrees at times.

To add to his dismay he found upon piercing the lowest layer of clouds that Carlstrom Field had been mistaken for Dorr and that instead of drifting toward the former he was due to land in the timber between there and the town of Arcadia, with good prospects of serious injury to himself. Almost below him he discerned the outlines of Joshua Creek and to preventing his drifting past this he devoted all his energies. Climbing the rigging to windward he managed to pull that edge down and create a planing effect which held him pretty well into the wind. By the best of luck he dropped between the overhanging branches on either side of the creek and was saved a crash against its bed by the cushioning action of the parachute which had become entangled in the branches of the trees. It took him a quarter of an hour to extricate himself from a mass of tangled cordage and two hours for a searching party to discover him none the worse for a somewhat harrowing experience.

He used an Irving Military Air-chute type 'A'.

PARACHUTE STORIES AS TOLD BY THE JUMPERS

PROVING A PARACHUTE CAN BE MANOUEVERED

① The first of the week found a very heated argument going on in the Parachute Department of this School between Staff Sergeant Shoemaker, Chief Instructor, and his Assistant, Staff Sergeant Kamensky. Sergeant Shoemaker had just finished telling the boys that he could land a parachute within fifty feet of a given mark when Sergeant Kamensky opined that, if the Chief Instructor could land that close to a mark with one parachute, he could land within one hundred feet with two parachutes on a double harness. The argument waxed hotter and hotter until both contestants delved deep into their pockets and produced all the cash they had, which amounted to eighty-five cents, and the result was an arrangement for a jumping contest--"Winner take all". The parachute jumps took place on Saturday from a D. H.-4B plane, piloted by Lieutenant Harry Weddington. The contestants jumped from an altitude of 3500 feet. Sergeant Shoemaker, by side-slipping his parachute landed within the prescribed distance--fifty feet of the predetermined mark. Sergeant Kamensky was not so successful as he missed his mark by three times that distance, leaving Sergeant Shoemaker to victoriously pocket the eighty-five cents. These two jumps were made over Kelly Field No. 2 with no regard to placing the ship in a favorable position to hit the given mark. After the chutes were opened the jumpers side-slipped their chutes into position for landing near the mark. Due to the construction of this type of chute, which has four main lift webbs or straps, two of which join the harness on each shoulder, the chutes can be very easily side-slipped in any direction by simply pulling down on one of these webbs.

DRAG JUMP MADE FROM A DE HAVILAND PLANE

② Even the oldest inhabitants of Kelly Field sunburned the roofs of their mouths yesterday afternoon watching Staff Sergeant G. A. Shoemaker, A. S. M. S. Detachment, stage a "Pull-Off" from the upper wing of a D. H.-4B airplane with a

a U. S. Army Type Parachute to demonstrate the practicability of this chute. The plane used was one rigged by the students of this School and which had previously made a World Passenger-carrying Altitude Record. Every detail of this jump was carefully worked out on the ground before an attempt was made in the air. A light platform was built on the top of the left upper wing just over the intermediate struts. A rope was fastened along the entering edge of this wing to give the jumper a suitable grip. At 4:45 P.M., the D.H. piloted by Lieutenant Harry Weddington, took off with Sergeant Shoemaker lying flat on the platform of the wing. Little difficulty was experienced by the pilot in balancing the plane with this added weight and he climbed to an altitude of 3500 feet. He was followed by another ship piloted by 2nd Lieutenant Warren R. Carter carrying a Pathe Cameraman as passenger to photograph the jump. The two planes flew in formation over the Field at Kelly Field No. 2 where Sergeant Shoemaker stood up on the platform and prepared his jump. The ship was side-slipped slightly to the right and at a signal from the pilot the Sergeant gave his rip-cord a yank. The spectators on the ground saw the white flash of the parachute and a speck which proved to be Sergeant Shoemaker shoot straight out from the plane and swing easily down to the normal position below the parachute and make a successful descent. The jump proved that "Pull-offs" can be staged from a DeHaviland plane with little or no danger of striking the tail surfaces.

NEW PLANE BEING BUILT ON WEST COAST

Army, navy and civilian airplane pilots of Southern California are anxiously awaiting test flights of a new plane designed by Donald W. Douglas, ex-Glenn-Martin designer, now under construction in Los Angeles. The new craft is said to embody a number of distinct improvements in design and construction which will not be fully divulged until the plane is ready for flight.

The plane is of biplane construction with a 55 ft. wing span and carries sufficient fuel for 5 hrs. flight at 110 miles an hour and will carry over a ton in passengers, baggage or freight. It is propelled by a single Liberty motor of 400 horse power, its exceptional performance being made possible through the utilization of a new wing section which has proven highly satisfactory after extensive experiments.

Eric Springer, who was one of the original Glenn Martin test pilots will handle the plane on its initial flights.

EDUCATIONAL CLASSES AT MARCH FIELD WELL UNDER WAY

March Field has retained her educational title. With 95 per cent of the enlisted personnel attending educational and vocational classes this school leads all army camps in the Western Department according to a report from Commanding General, Major General Hunter Liggett.

Because of this record and by way of encouraging this work and additional allotment of \$8,200 has been granted. Additional allotments for recreational, athletic and morale training activities are expected during September.

By October first educational and vocational work will be resumed on an intensive scale. Plans are being made to allow enlisted men of the Command to attend classes at the Riverside High School when it will not interfere with their military duties. In addition other courses are to be added to the army Post school with capable instructors being employed in each instance.

STRANGE PEOPLE ENCOUNTERED BY AIR SERVICE OFFICERS

One of the longest reconnaissance flights ever attempted from France Field, Panama, occurred when an H. S. 2-L flying boat left on Wednesday for a flight along the Caribbean Sea from the Canal Zone to Colombia. The flying boat was accompanied by the launch "LT. DAVID PUTNAM", - a base for operations having been established at Porvenir Island in the Gulf of San Blas.

The San Blas Indians, who live on the Islands in the Gulf of San Blas, are short of stature, their heads being unnaturally large. The women, with their brightly colored smocks and a sort of blanket wrapped around their hips as a skirt, are very picturesque. Their legs and arms, both above and below the muscles, are tightly bound with strings of brightly colored glass beads; and their rings - of which they wear many, such as in ears, nose, etc. - are of solid gold.

A characteristic of this tribe is the broad, flat nose, and the object of their women wearing the nose rings is to attain pointed noses which are considered a mark of beauty. The children mature very young, and are married when the girls are about twelve years of age. The respective fathers decide on the marriage, and the newly acquired son-in-law lives at the home of the bride and works for her father. Thus, the more daughters one has, the richer he is.

The chief foods are plantain and fish, which two are boiled together - a dish evidently greatly relished by the natives. The coconuts raised on these islands and mainland are supposed to be the best in the world, and are reported as bringing the highest price in New York City.

One morning, with 1st Lieut. Austin as pilot, and 1st Lieut. J. W. Gastreich, A. S., A., as observer, with the governor of San Blas as a passenger, the flying boat successfully made the non-stop flight along the coast to the Northern boundary of Colombia and return. Lieut. Gastreich took seventeen oblique exposures of principle points, and many errors in the existing maps were noted. This flight was of four hours and fifteen minutes' duration, and covered a distance of about 280 miles.

SPURS ARE A USEFUL ASSET TO AVIATORS AT KELLY FIELD

Some five months ago peculiar things were happening in one corner of the big Flying Field at Kelly Field No. 2. Regularly four times a week there would be a group of ambitious Officers wend their way to the appointed spot to display their dexterity along equestrian lines.

This display took the form of bareback riding in a circle which filed around Major W. H. Garrison, Jr., who has for a long time been "Polo King" of Kelly Field. Major Garrison's talents, however, are not restricted to playing Polo for he has proved himself a very able instructor to this bunch of stiff, sore but nevertheless undaunted aviators. A notable feature of each afternoon's exercise was the large number of "stalls, side-slips and forced landings" indulged in by most of the members of the club. Needless to say, the fame of the prospective Polo players spread and soon these bareback exhibitions-- sometimes termed "Keystone Comedies"-- were given before large audiences. But that did not deter the athletes in the least, they rode and fell, took pithy suggestions from their Instructor and still more slighting remarks from the bystanders with unfailing good humor and by and by, out of this chaotic mess of raw material, emerged a Polo Team, the first in the Air Service. This Team is the never-ending source of pride and joy to the natives of Kelly Field.

No longer can the Cavalrymen of Fort Sam Houston or the Infantrymen or Artillerymen of Camp Travis look at the spurs on our shining boots with a derisive curl of their nether lip, for we can ride and we can play Polo as well as they. The Kelly Field Team is a recognized organization in the Southern Department league. We have emerged victoriously with three of the five games played, much to the surprise of the Officers of other branches of the Service, who were prone to consider Flyers in the light of "Pink Tea Officers".

The members of the First Team are:

Major W. H. Garrison, Jr., A.G.S.D., Commanding,
Capt. E. E. Adler, C.S.O., Kelly Field No. 1,
2nd Lieut. E. L. Eubank, A.S.M.S.,
2nd Lieut. G. N. Bogel, A.S.M.S.

The Polo bug is firmly implanted among the Officers of Kelly Field and the Polo season for the coming year promises to be very successful.

DEVELOPMENT OF THE PURSUIT PILOT

We are now about to tread near dangerous ground. There was a time when everyone connected with flying conceded the wreath of aerial supremacy to the Pursuit Pilot. Only those pilots who made the best records throughout their primary training were permitted to elect Pursuit as their specialty. Consequently, there has naturally been some bad feeling exhibited by the other pilots, aggravated, no doubt, by a certain amount of egotism on the part of some of the Pursuit Pilots. Since, however, so many pilots have transferred from Bombardment and Observation to Pursuit, and have developed into excellent Pursuit Pilots, this feeling has commenced to die out and harmony to grow up in its stead. In order not to stave the growth of harmony or to re-open old contentions, let us here state that nothing in this discussion of the development of the Pursuit Pilot is to be construed as in any way comparing him with any other specialized pilot in or out of the Service.

The development of all pilots in their primary training should be the same. Records made by various schools have shown the Gossport system of primary instruction to be the best. Throughout his entire course of training the Pilot intending to specialize in Pursuit should be allowed to use his own initiative as much as possible. Further, he must never be given an opportunity to "lose his nerve". If he breaks up a plane while landing, he should immediately be sent up in another plane, and not put on the ground for a week or sent to the flight surgeon before being allowed to fly again. The same policy should be pursued in case he has a forced landing. The only possible excuse for placing a student pilot on the ground as a punishment is a complete and flagrant violation of a sensible flying rule.

"Hedge hopping" or "contour chasing" should be deemed a violation of rules of the air only when the pilot is endangering the life and property of some person or persons other than himself, for there is nothing that so rapidly improves a pilot's accuracy as flying close to the ground and banking around or zooming over obstacles. True, if his motor cuts out, it generally means a broken plane; but it does not necessarily mean a broken pilot, -- not if he uses his head. Pilots who are trained along "safety first" lines usually develops into ultra conservative pilots, and are therefore not suitable material for pursuit work.

On the other hand, an ultra wild pilot cannot be considered the best type for Pursuit. He may be daring and a good shot, but he is inclined not to maintain his position in a patrol, preferring to wander off by himself. His activities are usually short lived, even though he may be highly successful for a time.

So much for the relative amount of freedom to be allowed the prospective Pursuit Pilot. Now let us review the course.

After the Gossport course should come what may be known as Primary Pursuit Training, consisting of formation flying, stunting in formation, combat with camera guns, elements of bombing, elements of observation, and elementary aerial gunnery, carried on in training planes of the Vought type.

Next comes the transition from training types to service types of ships. Every Pursuit Pilot should receive dual instruction on a small sensitive ship before being allowed to do solo work on service or obsolescent scout planes. Furthermore, every Pursuit Pilot should master some small touchy rotary motored plane before he can be considered fit for advanced training. He is then ready for an intensive course in Pursuit tactics.

His tactical training should include landing in a small field, aerial acrobacy, fancy formation flying for the development of accuracy in handling his ship, --cross-country flying, battle formation flying, individual combat practice battle manuevers between patrols, and further instruction in aerial gunnery for the development of absolute accuracy of fire. He should also receive instruction in bomb dropping from single seater ships in connection with his gunnery course. After becoming thoroughly familiar with Pursuit ships and Pursuit work, he should have a course in night flying. After successful graduation from such a complicated course, he is ready for the front.

It can readily be seen by anyone who understands piloting airplanes in general, how the various phases of the training mentioned above develop the requisities of a good Pursuit Pilot. In our first discussion of Pursuit Work, we defined the ideal Pursuit Pilot as being a confident, accurate flyer, having quick keen judgment, and being an expert shot with the fixed synchronized machine gun.

The aerial acrobacy and accurate landing practice serve to familiarize the pilot with his ship and give him confidence in it. The fancy formation flying teaches accuracy in the air, develops the pilot's judgment, and further develops his confidence in himself and his fellow pilots. The combat flying not only teaches the Pursuit Pilot his work, but it also aids in developing a quick judgment and flying accuracy, while the use of the camera gun in this part of the training makes accuracy with the machine gun come easier to him.

After he is assigned to a service squadron, his tactical training continues and he is also given an opportunity to put into practice the ground school training in administrative work, operations, armament, and engineering that he should not be allowed to forget during his flying training.

Many of the Pilots of the First Pursuit Group came to us already equipped with the better part of this training. Others, however, had not been so equipped, some never having flown Pursuit planes. For their benefit, as well as to keep the experienced pilots in practice, all of the training manuevers mentioned above, with the exception of dual control work, are included in our tactical training schedules. The ultimate object is not only to make an efficient Pursuit Pilot out of every flying Officer in the Group, but also to train each one to eventually become a Patrol Leader. Thus, the development of the successful Pursuit Pilot is being carried out by the First Pursuit Group on a scale unequalled anywhere today, and equalled only by the best advanced Pursuit Schools in operation during the Great War.

The First Pursuit Group continues its work of carrying out practice battle tactics at Leon Springs Reservation. At this time of writing, we are sending out protection patrols to cover our "balloon lines", and simulating aerial battles by having the relay patrol at first represent an enemy formation, attacking the protection. After five or ten minutes of combat, the patrols reform and fly in echelon until it is time for the first patrol to return to Kelly Field, after which the relief patrol flies protection until the morning's "shoot" is finished.

This is further volunteer work on the part of the Pursuit Group. It is distinctly to our advantage to carry on this work, and it is being carried out with enthusiasm by all of our Pilots.

'WARE THE AIR PIRATES':

Who has not listened with enjoyment to tales of the sea, picturesque and breezy romances of swashbuckling pirates, of ships sailing a black flag, of Spanish doubloons and pieces of eight? Who has not melted with Byronic pathos at the fate of the "Corsair" or been thrilled with stories of our own Lafitte, and the legends of the mythical though musical "Pirates of Penzance"?

From such tales of adventure we were wont to gather a by no means insignificant number of sensations and emotions in the past, but for similar thrills of the future, we must look to the air.

When Tennyson made his wonderful and oft-quoted forecast of the times we now live in, with characteristic altruism he left out of his picture of "the purple twilight" any vision of the air pirate; but it is from this very altitudinous highwayman that we must expect our best thrillers of the near future. The field for sensational performances in this particular line is boundless - there is no limit but the sky.

Up to now the possibilities of this phase of the great aerial question has, apparently, presented itself only to the fertile brain and vivid imagination of our ever-increasing clan of sensational fiction writers. But, we have only to resurrect our ancient and much thumbed volumes of Jules Verne for evidences that those same fiction writers are prophets of the future. What the brain of man can conceive the hand of man can devise. Therefore, let the powers that be take notice, let those in authority over us and under us and all around us, beware the speedy entrance of the air pirate.

'Tis to this some speedy entrance and to his ability to make an equally speedy get-a-way that the air pirate will owe the success of his raids. Having familiarized himself with the locality in which he plans to operate, having also, perhaps, provided himself with a "pal" it will be a matter so easy to drop down from the sky, possess himself of whatever loot he has designs on or his accomplice may have laid hands on, and hop off and away to safety, that no dare-devil of a thief will hesitate to take advantage of a means so full of hazard and yet so packed with daring and adventure. To the bomb thief, the bank robber and the jewelry and precious stone specialist, the airplane will offer exceptional opportunity by reason of the compactness and lightness of the loot in question. But with bigger and sturdier ships being constructed every day, the possibilities for airplane thievery are increasing and expanding. With the price of porterhouse at its present altitude, what's to hinder the air pirate from capturing as well as coveting his neighbor's ox or anything that is his neighbor's?

Nothing at present nor will there be till our air lanes are policed and patrolled and safe-guarded; till an elaborate and efficient system of air control is worked out and adopted by the government. What, at present, is there specifically to hinder an air pirate from dropping from behind a sheltering cloud and attacking an air mail rider as he wings his solitary flight across one of the many waste places that stretch their arid length below him on his way from New York to San Francisco?

What chance of his life or protection to the property entrusted to him would the mail carrier have against the combined attack of two or more highwaymen of the air? What safe-guards are we planning for these brave and adventurous public servants? What protection have we in mind for commercial airmen and aircraft of all kinds? The opportunities for crime are appalling, and the imagination shrinks from the picture of horrors presented. To still other and quite distinct classes of adventurers the air plane will offer a fruitful means of operation, namely, the boot-legger, the abductor and the kidnapper. In a lighter vein, and with due regard for the romantic side of the situation, innumerable young Lochinvars will fly out of the north, south, east and west to wed as many fair Ellens with spirit and a taste for adventure. That is as it may be, since

the way of a man with a maid is the same today as it was in Job's time, which is by way of saying before women had the vote. But, with deeper significance, the motor-car abductor will extend his operations to the use of the air-plane also and the boot-legger and kidnapper will find it an admirable aid to their nefarious practices.

But, perhaps the most far-reaching, wide-spread and persistent use of the airplane by the criminal class will be because of the unquestioned and unequalled opportunities it offers to the multitudinous and ubiquitous genus, smuggler. No matter what safe-guards the long arm of the law has thrown around our shores, no matter what extensive operations may have been put forward by our elaborate system of coast defense and border patrol, there will still be "free air" for a long stretch ahead of us, and during this period of immunity, the smuggler will initiate his little game and get away with it.

Our coast patrol will be on its job, of course, and our radio and aerial telephone units will work true to form, but a whole new system of legislation will have to be enacted and miles and miles of national and international red tape wound and unwound before the air pirate in the form of the smuggler shall have lost his place of supremacy as a best thriller.

A whole new set of customs laws and many hundreds of customs officials will be necessary before contrabandage of the air may be adequately dealt with by Uncle Sam. When the air smuggler starts on his raid of the sky there'll be quite other ways of dealing with smuggling. No chance as now for the customs men of a line-up of passengers in the ship's saloon and a "declaration" before landing: there'll be no keeping each passenger sitting on his luggage under the initial letter of his name, while the inspector makes his leisurely and alphabetic tour of the crowded pier, once the boat has landed: there'll be no perfunctory going through an incoming train from across our borders and tumbling the luggage and viewing it with a bit of chalk. There'll be no chance for anything like the present customs inspection. In an instant, in the twinkling of an eye, the air smuggler can hop over our border line and wing his way as free as the bird that he is.

Smugglers, speaking largely, are divided into two classes: One, those who break the law of the land deliberately and for harmful gain. This, by far the most numerous, being in the criminal class, are interesting to the criminologist. Second, those whose somewhat perverted consciences permit them to secrete a jewel in the boot-heel, or a bit of rare lace sewed in a coat lining, in order to save a few dollars thereby. Both of these types are interesting to the psychologist, and both will find the airplane fit excellently well into their plans. To cheat the Government or to outwit the inspector will be easy little games, and both will have their followers.

The questions of bulk, weight, value, and so forth, will be prominent ones in determining the character of goods to be smuggled by the air route; but in an instant of thought, an interminable list presents itself as among the possibilities, such as jewels, laces, silks, gloves, books, leather goods, the smaller musical instruments, non-explosive chemicals, drugs, dressmakers' and milliners' supplies, paintings, and the king and queen and all the royal family of minute but priceless objects of art.

Opium, cocaine and other habit-forming drugs may be expected in large quantities in the Air Smugglers bag of tricks, and a whole new set of laws must be enacted, among them the raising of the duty on these articles to deal with this one phase of the question alone.

If it were a question alone for a custom's man of being Johnny-on-the-spot when the air smuggler comes down to earth, that matter might eventually be dealt with. But why come down to earth and be caught with the goods? The air smuggler will be a much wiser guy than that. He'll have the lay of the land all mapped out: he'll know where he may fly low with safety and drop his carefully prepared package of unbreakables, or he will know where his pal is waiting to salvage the parcel when it falls from the sky.

Also, by far and away the greater part of air smuggling will be done by fly - by nights. Whatever system of colored lights may be adopted by the Government to designate the different kinds of aircraft, it is a foregone conclusion that the smuggler will instantly imitate the specific kind of a craft that will best suit his purpose. Under cover of darkness, with his tail light trimmed and burning, his headlight glowing true to form, he will sweep securely over the heads of the patrol; with a signal of security he will pass the radio man and telephone operator, winging his own sweet way across the border and out again leaving his loot behind him.

With our long stretches or easily approachable coast-line by reason of our near island neighbors, and our equally long border-lines, an adequate system of air patrol sufficient to prevent the frequent and persistent raids of the air smuggler, is a problem that will keep our legislative branches and our department heads puzzling for a long time to come.

MARCH FIELD

NEW CADET CLASS TO OPEN NOV. 1st

March Field, Riverside, California, will begin training her third class of cadets, since the field's designation as a Pilots School, November 1 instead of October 1 as previously planned. This delay is made necessary in order to make proper preparations for the new class and is in accordance with instructions from the Chief of Air Service. Over a dozen commissioned officers from various branches of the Army and from home and foreign stations have arrived here for training. They will be assigned to duty in connection with the schools administration until Nov. 1 when they will begin their course.

FLYING RECORD MADE AT THE PILOT SCHOOL

Here's some flying record for one week. Eighty-two planes at March Field made 649 flights; total hours 570. Preliminary instruction consumed 411 hours; advance instruction, 62 hours 30 minutes; forest fire patrol, 51 hours 05 minutes; test flights, 5 hours 20 minutes and miscellaneous flights 40 hours. Total distance approximately 30,327 miles.

FLYERS AID IN SEARCH FOR MISSING CHILD ✓

March Field was called upon Thursday by city authorities of Riverside to aid in the search for 22 months old Elna Simmon who had wandered away from her home Tuesday evening. Belief was expressed that the little girl may have fallen into an irrigation canal which ran through an orange grove next her home. It was ^{for} this purpose that an airplane was sent aloft to follow up the canal and to penetrate from the air the depths of Mockingbird canyon reservoir. Lieut. A. W. Foster was pilot and Major W. W. Vautsmeier observer. Because of the mossy undergrowth, however, they were unable to see the body beneath the water. Rescuers a few minutes later brought the body to the surface by using dynamite.

NEWS FROM SQUADRON, ROCKWELL FIELD

91ST AERO SQUADRON

Major W. A. Robertson, Commanding Officer of the 91st Aero Squadron has been ordered to Walter Reed Hospital for observation and treatment. In all probability, his leave will be extended for at least another month due to his physical condition, which was brought about by continuous flying and overwork during the war.

The classes which have been established for enlisted men and officers of the 91st Squadron have progressed very satisfactory during the past week. Instructions have been given in radio, machine guns, bombs and bombing sights. Work has also been started at traps. The enlisted men are showing up very well at the traps and it is hoped to develop a team in trap shooting with which to meet rival organizations.

The radio station which the 91st has established at Rockwell Field is rapidly nearing completion. Very satisfactory results are being obtained even at the present time. A radio telephone set is installed and the officers and enlisted men of the squadron derive a great deal of enjoyment in listening to the wireless telephone conversation from Catalina Island to the mainland. It is extremely amusing to listen to an extravagant wife asking her husband to send her more money or a couple of sweethearts separated by a vast distance telling each other how much they are missed. Family secrets are certainly no secrets when given to the radio telephone because each radio station from the rankest amateur to the big high powered stations at extreme ranges are privileged to listen to any conversations which are submitted to the care of the air.

19TH AERC SQUADRON, SANDERSON, TEXAS

Flying at this station has been practically impossible during the past ten days due to heavy rains. Hardly a day has gone by without some rain and recently five inches fell in about four hours causing a number of washouts on the Southern Pacific Railroad to the east and west of Sanderson, effectually cutting off our only sources of supplies, the nearest two being Marfa, Texas, approximately 100 miles to the west and Del Rio, Texas, 100 miles to the east.

Lieutenants Fogarty and Robertson who were caught in one deluge, while attempting to deliver some rations to a party of our week end fishermen whose truck had become mired some twenty miles from camp on their return trip had the fabric completely torn off their propeller, causing such excessive vibration that the radiator was cracked in numerous places and almost dislodged from its place. They managed however to reach the airdrome and make a safe landing.

Between the dates of December 8th, 1919 and August 1st, 1920, the pilots of this station have flown a total of 2264 hours, which is an average of approximately 11 hours per day or 340 hours per month. In addition to the above time fliers without ratings have flown 373 hours, this gives the personnel of this flight a total of 2637 hours in the past seven months, exclusive of the flight at Del Rio.

Any one who has flown over this territory can readily appreciate the difficulties pilots of this station have to surmount. Take the country from the Devils River on the east to Boquillas Canyon and Hot Springs in the Big Bend on the west, particularly that classed by the pilots here as the West Patrol, then it can be easily seen that it is a matter of trusting to luck and your motor. Not only is the record excellent, but it speaks well of the pilots who have flown this patrol day after day as well as the hard work and mechanical ability of the men on the line.

NEWS FROM THE SQUADRON, MARCH FIELD

The Goodyear Pony blimp which landed at March Field a few weeks ago will return to Riverside during the Southern California Fair, October 13 to 19 inclusive. Flights will be made daily from a landing field near the fair grounds. A large tent hangar will be erected on the site.

On or about Sept. 15th twelve F-5-L type seaplanes will leave the North Island Naval Air Station for Puget Sound, according to San Diego dispatches. The boats will make but one stop, at San Francisco, on their way north. The naval aviators are also planning a 4,000 mile flight down the Pacific Coast to Balboa, Panama Canal Zone. January 5th is the date set for the hop-off. Twenty-two planes will participate in this last flight.

Capt. Clarence L. Tinker, until recently R. O. T. C. officer at Riverside High School, has been detailed to the Air Service and has been placed in Command of the pilots School Detachment at this field.

Capt. Tinker began his military career in the Philippine Constabulary in 1908. He was commissioned a second lieutenant in 1912 and for five years served with the 25th. Infantry in Honolulu. Promoted to first lieutenant he was assigned to the 13th Infantry at Camp Douglas, Ariz., in 1916. He was made a Captain in 1917 and for a time was adjutant of the 62nd Infantry at Camp Fremont.

Promoted to the temporary grade of Major in 1918 he was placed in command of the border district at Yuma, Ariz., coming from that post to the R. O. T. C. staff of the Riverside High School. Captain Tinker will receive flying training while at this field.

CHANUTE FIELD

Major John N. Reynolds, Commanding Officer of Chanute Field, has been at Scott Field for a few days in connection with examination of additional candidates for commission in the Regular Army. Major Reynolds made the trip from Chanute Field to Scott Field, Belleville, Ill., a distance of about 165 miles in one hour and forty-five minutes going and one hour and forty-eight minutes returning. The gas consumption of the SE was about forty-five gallons for the round trip.

NEWS FROM THE SQUADRONS, MARCH FIELD

Col. William F. Pearson, administrative executive of the Air Service and a personal representative of the Chief of Air Service, is scheduled to arrive at March Field during the week of Sept. 15th.

Capt. Walter W. Vaustmoier who reported here recently from Fort McArthur, coast artillery base, has been promoted to the permanent rank of major. He is a West Point graduate and was formerly a major with temporary rank in the Air Service obtaining his training at Kelly Field and in France during the war. He has been made Commandant of "B" Squadron of the Pilots School Detachment.

Lieut. Harold Brand is flight commander of a new flight formed during the past week for cross-country and formation flying only. Cadets who have reached that stage in training make up the personnel.

Cadet Spradlin was in Los Angeles recently when the JL-6 all metal monoplanes arrived at De Mille field. Upon his return he was telling of the "piano-petal" operated rudder. He declared the rudder was operated "by a blast of air turned loose by means of a soft pedal".

Six naval officers from the Naval Air Station at San Diego, in a land plane, visited this field Wednesday morning. They were much interested in the adjustable pitch type propeller and were taken for short hops about the field to demonstrate its operation. In the party were: Captain Mustin, Lieut. Commander Mitscher and Lieutenants Young, Taylor, Austin and Calloway.

NEWS FROM THE SQUADRONS, ROSS FIELD

LIEUTENANT COLONEL CHANDLER VISITS ROSS FIELD

During the week Lt. Colonel Charles DeForrest Chandler, Chief of the Balloon and Airship Division of the Air Service, paid an informal visit to Ross Field. He inspected the Motor Transport Department and expressed himself as being very much pleased with the satisfactory condition of things that he found.

PROGRESS OF CADETS

The cadets at this Post have started their Air Course. It is planned to have this Course extend over a period of four weeks, and includes Sector Surveillance and Conducting Shoots. When not in the air the cadets are acquiring practical instruction in the chart room. The instruction of the present class of cadets finishes with the completion of this Course.

Because of the amount of instruction work being carried on at this Post, it has been necessary to put two observation balloons in daily use instead of one as formerly. The addition of still another is expected in the near future.

THE PONY BLIMP

Recently Captain George F. Parris, A.S.M.A., made a flight over Los Angeles in the new Pony Blimp that the Goodyear Tire and Rubber Company is operating from their Field at Ascot Park. Using a large aerial camera Captain Parris secured some excellent views of the city, following which the Goodyear pilot put his

little ship thru a series of startling maneuvers. He gave the people of Los Angeles a real show and incidentally demonstrated the remarkable controlability of the Pony Blimp.

A dirigible of this type has been shipped from the Goodyear factory at Akron, Ohio, for use at this field.

HERE AND THERE WITH THE EDITORS

First Lieut. James H. Ewell, Jr., the officer who fired the first American anti-craft gun in France during the war was buried in Arlington cemetery the afternoon of September 11 with full military honors. Lieut. Ewell died in Oct. 1918, on his second trip to France when he was taking over with him the anti-aircraft battalion which he had trained at Norfolk, Va. His body was brought back on the Princess Matoika. (Washington Star 9/11/20)

* * * *

So far as is known Temple, Texas has the only hospital in the world that utilizes aircraft for ambulance purposes. A new machine has been fitted out as an aerial hospital for the purpose of responding to emergency calls within a radius of 200 miles. (Galveston News 9/8/20)

* * * *

FIREPROOF GASOLINE TANK

A fireproof gasoline tank for airplanes, said to eliminate the danger of fire in the air, has been invented by former United States army aviators, and was demonstrated recently at the American Flying Club in New York City by John M. Gose one of the young officers who developed it. The invention consists of a tank with double walls, built much in the manner of a thermos bottle, the feed pipes leading to the engine also having double walls. In the space between the walls a fire-resisting chemical is used. Lieut. Gose lost his right leg and severely injured his left in an accident caused by a gas tank fire when flying in England Oct. 26, 1918. (Dayton Journal 9/5/20)

* * * *

NEW TYPE OF FREIGHT AIRPLANE

"American concerns are watching closely tests now being in England of a w type of freight airplane. This plane is radically different from any type of plane now in use, with the exception that it is a monoplane and has the same sort of controls. The new wing, which is of mahogany, is known as the 'Alula' has a weight lifting capacity 35 per cent greater than the ordinary wing. The body of the machine is fitted to hold a container that will carry four tons of freight. The container is loaded in a warehouse or store room and the plane is run up to a loading platform and the container shoved in to the body of plane on roller bearings. The same procedure is followed in unloading." (New York World 9/10/20)

* * * *

AVIATION OUT OF SPORT REALM

Stunt flying is being looked upon now as a hindrance to the development of commercial aviation. It must be "brought out of the realm of sport and placed on a business sphere" is the opinion of a representative of a big motor car company in this country. He says further that the future of commercial aviation is assured if we can only make our flyers show how safe a plane is rather than to demonstrate how near to death they can go. (Seattle Times 9/5/20)

WEATHER FORECASTS TO AID

"To comply with the demands created by increasing air travel, the United States Weather Bureau at New York is now including in its daily report of weather conditions a statement as to wind direction and force in the upper regions. One such report recently issued contained the following: 'The winds up to 10,000 feet are easterly, but shift abruptly to westerly above 18,000'. This indicates that the importance of air travel is being recognized on a parity with sea travel. Data is obtained through the army and navy authorities at Mitchel Field and at Rockaway Beach." (Washington Evening Star 9/9/20)

* * * * *

AERIAL PHOTOGRAPHS

"Photographs were recently made from a navy V-E-7 airplane, from altitudes of from 1,000 to 10,000 feet. It is intended to make further mapping photographs up to an altitude of 15,000 feet for use by the board of surveys and maps in determining the value of mapping photographs taken at various altitudes." (Washington Post 9/12/20)

* * * * *

RAILWAY SURVEY BY AIRPLANE

"Locating a railroad by airplane is the latest venture of the Third Aero Squadron, Camp Stotsenburg, Philippine Islands, and one long flight has enabled a railroad engineer to determine which one of three general routes will be utilized for the new road. The saving of many months and thousands of dollars has resulted.

Military authorities are vitally interested in the extension of the Manila Railroad Company lines and accordingly permission was obtained from the commanding general, Philippine Department, to use a government airplane on the preliminary reconnaissance trips. The railroad engineer on the return was enthusiastic and declared that one flight has saved him months of tedious work in running lines through difficult territory."

(Dayton Evening Herald 9/7/20)

* * * * *

Foresceing the day when airplanes will more frequently visit its valley the Town Council of Fairbanks, Alaska has set forth a set of rules governing the conduct of spectators at airplane landing fields, and also certain rules for the aviator to follow. (Los Angeles Times 8/30/20)

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Baron von Gemmingen, nephew of Count von Zeppelin, denies the report of the New York papers that Germany is constructing two giant Zeppelins for use on a New York to San Francisco transport line. (Dayton Journal 9/9/20)

* * * * *

L. Odenthal
AIR SERVICE NEWS LETTERInformation Group
Air Service

September 25, 1920

Building B
Washington, D. C.COMMUNICATIONS ACTIVITIESMitchel Field

One DH4B plane being equipped with SCR-68 set.
A 5 H.P. motor has been installed in station to drive a 1/2 K.W. generator.

Southern Department

Nothing to report.

Western Department

March Field - Cadets are now receiving instruction in buzzer work in the evening because their time to take flying instruction is limited and time has to be taken from the ground course for that purpose. Forest Patrol continues to be effective. Five different fires were reported by radio. A class in radio instruction will be organized for officers who are taking flying instruction. Officers who successfully pass this course will be qualified for recommendation for Radio Officers.

Rockwell Field - Radio Shack completed. Sets erected, Navy 1100 Telephone Undamped and Damped Telegraph and Telephone. "73 Transmitting and 59 Receiving." 14 enlisted men being instructed in transmitting, receiving and general principles of radio telegraphy.

Development

✓✓✓ Experiments carried on at Wilbur Wright Field by Capt. W. H. Murphy on the receptive efficiency of Radio Loop Aerials.

School

A flight of five ships was equipped with SCR-73 transmitters and left Post Field for Ft. Leavenworth. Some radio personnel was sent with this flight.

Special ManeuversCamp Knox

Artillery adjustment with the 81st and 83rd F.A., all problems successful. Two panel exercises with the 83rd F.A., both successful.

Hawaii ✓✓✓

Training consisted of regular routine Coast patrols and practice flights, together with several photographic missions and a considerable number of radio experimentation flights, a new radio station having been erected on the top of Diamond Head. This station will be used as a central receiving station during the September maneuvers. One SCR 59 installed at this station, also SCR-67 and SCR-73.

ARMAMENT ACTIVITIES

Pistol practice has been conducted by the Air Service at Luke Field, Hawaiian Territory, in the past week and 8,000 rounds were expended. Some work was also carried on in the use of pyrotechnics. Wing tip flares were used and landings made after darkness.

PHOTOGRAPHIC ACTIVITIES

The Commanding Officer, 15th Photo Section, Crissy Field, reported that during the week ended August 28, 1920, mosaics of Forts Barry and Baker were completed.

The Commanding Officer, 14th Photo Section, Mitchel Field, reported that during the week ended September 7th, 1920, there were four hours' flying for the purpose of making aerial photographs and that a mosaic of West Point is fifty percent complete.

Commanding Officer, 2nd Photo Section, Kelly Field, reported that during the week ended August 28th, 1920, one hour and thirty minutes flying were devoted to aerial photographic work comprising border reconnaissance, officers' and enlisted men's field meet, wrecks and construction work.

Commanding Officer, 12th Photo Section, France Field, reported that during week ended August 28, 1920, a number of photographs were made for historical purposes.

Commanding Officer, 11th Photo Section, Luke Field, Hawaii, reported that during the week ended August 20th, 1920, two hours' flying were devoted to photographic purposes; that two photographic flights were made over the area of the Department Engineer's project for the survey of roads next to Schofield Barracks; that low clouds required the first flight be made at a low altitude but that on the second flight it was possible to work from an altitude of 8,000 feet, ninety successful exposures being made. A mosaic of Ford's Island is ninety percent complete, and the mosaic of the site intended for use as a reservoir is thirty percent complete. The report also states that owing to the light conditions, photographic work is not possible at all times.

INFORMATION OBTAINED FROM OPERATIONS REPORTS OF TACTICAL
UNITS FOR WEEK ENDING SEPTEMBER 4, 1920

STATIONS, FLYING TIME AND AVAILABILITY OF PLANES

<u>Name of Squadrons</u>	<u>Location</u>	<u>Flying Time</u>	<u>Planes On Hand</u>	<u>Planes Avail.</u>
1st Aero - Obs.	Mitchel Field, Mineola, L.I., N.Y.	13:11	17	15
2nd " "	Fort Mills, P.I.		No report	
3rd " "	Camp Stotsenburg, Pampanga, P.I.		" "	
5th " "	Mitchel Field, Mineola, L.I., N.Y.	28:30	16	14
2nd Obs. Group (4th & 6th Sqdns)	Luke Field, Ford's Is., H.T.	96:00	22	15(8/28)
7th Aero - Obs.	France Field, Panama, C.Z.	18:25	162	14(8/28)
8th-A " Sur.	McAllen, Texas	18:55	13	7
9th " Obs.	Mather Field, Sacramento, Calif.	146:50	27	22
10th & 99th "	Bolling Field, Anacostia, D.C.	38:29	20	11
11th Aero - Bomb.	Kelly Field, San Antonio, Texas	18:25	5	4
12th-A " Sur.	Douglas, Arizona	8:45		2
12th-B " "	Nogales, Arizona	15:00	9	4
20th " Bomb.	Kelly Field, San Antonio, Texas	4:55	5	1
27th " Pur.	" " " "	14:35	24	8
50th " Obs.	Langley Field, Hampton, Va.	14:35	18	6
88th " Obs.	" " " "	22:00	9	6
90th-A " Sur.	Del Rio, Texas	9:40	8	8
90th-B " "	Sanderson, Texas		No report	
91st-A " "	Eugene, Oregon	85:55	10	10
91st-B " "	Rockwell Field, California	24:40	8	6
94th " Pur.	Kelly Field, San Antonio, Texas	10:05	25	10
95th " " "	" " " "	17:50	24	18
96th " Bomb.	" " " "	19:45	8	6
104th-A " Sur.	Camp at Fort Bliss, Texas	14:20	17	3
104th-B " "	Marfa, Texas		No report	
135th " Obs.	Post Field, Fort Sill, Okla.	56:20	11	7

STATIONS, FLYING TIME AND AVAILABILITY OF PLANES

<u>Name of Squadrons</u>	<u>Location</u>	<u>Flying Time</u>	<u>Planes On Hand</u>	<u>Planes Avail.</u>
147th Aero Pur.	Kelly Field, San Antonio, Texas	18:20	25	6
166th " Bomb.	" " " " "	10:20	5	4
258th " Bomb.	Aberdeen Proving Grd., Aberdeen, Md.	17:53	34	24
Air Service Troops	Camp Benning, Ga.		No report	
" " "	Godman Field, Camp Knox, Ky.	23:35	20	5
" " "	Pope Field, Camp Bragg, N.C.	53:40	23	7
Hdqtrs. Det.)				
1st Bomb. Group)	Kelly Field, San Antonio, Texas	NG	8	3
TOTAL		820:58	573	246

"TACTICAL OPERATIONS, INSTRUCTION AND MISCELLANEOUS ACTIVITIES
BY FIELDS AND UNITS"
BORDER STATIONS

STATIONS	SQUADRONS	PERCENTAGE DAYLIGHT	TOTAL NO. FLIGHTS	PRACTICE FLIGHTS	SPECIAL MISSIONS	CROSS COUNTRY	FORMA- TION	TEST	PHOTO	ARTIL- LERY	FOREST FIRE PATROL	MISCELLANEOUS
Fort Bliss,	104th Flight "A"	90%	6	2	-	3	-	1	-	-	-	
Del Rio	90th " "	80%	9	8	1	-	-	-	1	-	-	Tactical Inst.
Douglas	12th " "	100%	5	-	-	4	-	-	-	-	38 Patrol	
Eugene	91st " "	90%	40	-	-	-	-	2	-	-	-	1 Surveillance
McAllen	8th " "	100%	14	6	4	-	-	3	-	-	-	
Mather	9th	100%	79	-	-	-	-	-	-	-	-	
Marfa	104th " "B"	No report	-	-	-	-	-	-	-	-	-	1 Patrol
Nogales	12th " "B"	91%	25	15	-	4	-	-	-	-	-	3 Border Patrol
Sanderson	90th " "B"	100%	20	-	-	2	-	5	-	-	-	3 Meteorological
Aberdeen	258th Heavier than air	-	42	-	-	12	-	5	1	-	-	23 Misc.
Bolling	10th & 99th	-	91	-	-	17	-	-	-	-	-	11 Demonstration
France Field	3rd Obs. & 7th	72%	36	19	-	5	-	1	-	-	-	4 Instruction
Godman	A.S.D.	93%	38	-	-	4	-	23	-	6	-	34 Instruction
Kelly	1st Bombardment	100%	-	-	-	-	-	-	-	-	-	19 Reconnaissance
"	Hqrs. A.S.D.	-	54	-	-	-	-	-	-	-	-	52 Instruction
"	11th	-	95	40	-	2	-	-	-	-	-	
"	20th	-	8	-	-	8	-	-	-	-	-	
"	96th	-	24	10	-	5	-	3	-	-	-	6 Reconnaissance
"	166th	-	14	-	-	14	-	-	-	-	-	
"	1st Pursuit	100%	-	-	-	-	-	-	-	-	-	
"	27th	-	36	-	-	-	-	-	-	-	-	
"	94th	-	18	-	-	-	-	-	-	-	-	
"	95th	-	27	-	-	-	-	-	-	-	-	10 Patrol-6 Acrobatic-5 Recon.-4 Bombing
"	147th	-	99	-	-	-	-	-	-	-	-	
Langley	50th	100%	20	15	-	2	-	-	3	-	-	
"	88th	-	27	8	-	5	-	-	-	-	-	
Luke	2nd, 5th, 4th Obs.	-	182	-	-	4	-	9	12	-	-	155 Patrol 2 Night Flying
Mitchel	1st	89%	30	11	-	-	1	6	6	-	-	3 Inst. 1 Acrobatic
"	5th	-	53	8	-	1	5	22	4	-	-	13 Inst. 1 Alt.
Post	Hqrs. & 135th	100%	135	-	-	-	-	-	-	-	-	
Pope	A.S.D.	100%	70	-	-	-	-	-	-	-	-	

* 48 dummy bombs dropped, 95% hits, 2 Surveillance, 1 G.S.M.

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE SEPTEMBER 30, 1920.

ARMY AIR SERVICE MOVIES FOR THE
VETERANS OF FOREIGN WARS.

The Central High School Auditorium was the scene of a showing of the special Army Air Service feature moving picture films entitled "Teaching Young America to Fly" and "Parachute Jumping" under the auspices of the Army Air Service for the meeting of the Veterans of Foreign Wars.

The Veteran's Encampment had over 10,000 members in attendance. These men, who have seen service in Cuba, the Philippines, and other points outside of the territorial limits of the U.S., including those who participated in the World War overseas, were very anxious to learn all they could about the Air Service, which is the newest branch of the service. "Teaching Young America to Fly" gave everyone the most complete and detailed insight into the building of an aviator from his beginning, while still in civil life, through all his training until he is commissioned as a pilot in the Air Service and goes forth on his career.

On the other hand, "Parachute Jumping" carried the audience a little farther on, even into the realm of the future. While the film is very thrilling yet those who viewed it bore in mind that the parachute will be the life saving apparatus of the future air transports, and it has been said by the majority of parachute jumpers that they experience no bad feelings. In fact, most of them retain the sensation of continuing along with the airplane, peculiar as it may seem.

This particular contribution to the Veterans of Foreign War's Encampment by the Army Air Service proved to be one of the largest and best enjoyed features of the encampment.

ARMY'S LARGEST DIRIGIBLE FLIES TO
RICHMOND AND RETURN

DAILY AIRSHIP FLIGHTS FOR TRAINING PURPOSES
BEING MADE AT LANGLEY FIELD, VA.

Residents of Richmond, Va., were treated to the spectacle of a large Army Dirigible flying over their city recently, when the Zodiac, the largest Airship in the United States, under the Command of Captain Dale Mabry flew over their city. The start was made at Langley Field, Va., from the largest steel Hangar in the United States and the entire trip was flown without trouble. Some very valuable photographs were made from the airship, including views of strategic points in and around Richmond. During the entire trip the Zodiac was in constant touch by Radio telephone and Radio telegraph with the Langley Field Radio Station.

It is no uncommon sight now at the Balloon and Airship center, Langley Field, Va., to see the three Army Airships in the air at once, making practice flights to train and qualify officers as Airship Pilots. The A-4, C-2, and the Zodiac are frequently in the air together and make frequent practice flights to surrounding points of interest. Occasionally the Navy Airship stationed at

Norfolk pays a friendly visit to the Airship center and on one occasion all four Dirigibles were to be seen in the air at the same time. All of the Army Dirigibles are equipped with Radio telephone by means of which the Dirigible Commanders are in constant communication with the ground, and with one-another.

Three large Dirigibles of the Army Air Service made a very successful flight in formation on Saturday, at Langley Field, Va. Taking the air at Eight A.M., for two hours the Zodiac, A-4, and C-2, maneuvered back and forth across the sky in formation, file formation, and front formation, at the will of the Commander. The Radio Telephone was used for communications between the dirigibles. Major William N. Hensley Jr., Commanding Officer of Langley Field, was a passenger on the Zodiac.

The following officers participated in the flight:

Major William N. Hensley, Commander of the flight.
Zodiac,

Captain Dale Mabry	Pilot
Lieut. James C. Cluck	Ass't Pilot
Lieut. George C. Cressy	Directional Pilot

C-2

Lieut. Bruce N. Martin	Pilot
Lieut. Orville A. Anderson	Ass't Pilot
Lieut. Otto J. Stockman	Directional Pilot

A-4

Lieut. Wilfred M. Clare	Pilot
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AERIATED EGGS

Lieut. Stoner and Lieut. Usher gave all of us a thrill last week when they landed their plane on this field with the tail filled with a case of fresh eggs, a half dozen live chickens, several water-melons, a number of cantaloupes and all sorts of fruit and vegetables. They gave us the following story which we are compelled to believe.

While flying north on a reconnaissance mission one morning last week they experienced a little motor trouble and were forced to land in a small field located on the side of a hill near the "city" of Geldston. They were forced to remain there a few hours, during which time the natives had collected for miles around. Lieut. Usher, our enterprising mess officer, thought that he would take advantage of this time and try to locate some fresh eggs, which are so difficult to get around Fayetteville. He did not carry his inquiry very far before one of the "congregation" stepped up and acted as spokesman. The latter announced to the crowd, which had reached tremendous proportions by this time, that the aviators who had just "lit" would return in several days provided each visitor would bring along some eggs. The plane left with a promise to return the following Wednesday morning.

The following Wednesday morning found Lieut. Stoner and Lieut. Usher in Geldston at the appointed time. They found the landing field fairly crowded with people who had evidently arrived there the night before, and had camped on the field in order to be there on time the following day. Most of the people around this part of the country had never seen a plane before.

Lieut. Usher had not been out of the plane five minutes before he saw eggs, chickens, vegetables, fruit of all kinds, and in fact every thing that a truck merchant could wish for, scattered all over the upper end of the field ready to be turned over to the aviators. Of course Lieut. Stoner and Lieut. Usher fully intended to pay for all of the eggs and vegetables they received but these folks were quite insulted when money was offered them and refused to accept a cent, so the aviators returned with only a small portion of the contribution, but at the same time a heavily loaded plane.

PROHIBITION'S FOURTH DIMENSION

Major A. V. Dalrymple, prohibition commissioner of the central district, in attendance at the State Convention of Police Chiefs, held at Mt. Clemens this week, announced the innovation of a pursuit plane to hunt down river bootleggers along the international boundary. This plane will be flown by a former army flyer.

PARACHUTING A DAILY SPORT

A study of parachutes from the standpoint of design is allotted one-half day of time at the Air Service Engineering School, Dayton, Ohio. The effect of this course was to assure student officers of the safety of our standard type of parachute, and as a consequence, most of the officers took vigorous steps toward obtaining authority to make a practical jump with these parachutes.

The Martin Torpedo Airplane was employed to take up the officers, two at a time, who jumped, one from either wing. The jumps were made from approximately 2000 feet altitude, each officer wearing an emergency pack in addition to the regular parachute. Captain Herbert A. Dargue, one of the oldest flyers in the service, and Major Walter H. Frank, former Commanding Officer of Ellington Field, and also of the Advisory Board, were the first to leap, taking off via the lift-off route. Major Lawrence W. McIntosh, formerly in command of Ellington Field and also in charge of the Armament Function of the Technical Division, D.M.A., also lifted off. Major Albert L. Sneed, formerly in command of Love Field and also Commandant S.M.A., Massachusetts Institute of Technology, who was paired with Major McIntosh, leaped off, pulling his chute simultaneously.

The last pair consisted of Captain Charles C. Benedict, formerly Commanding Officer, Chanute Field, and Lieutenant Edwin E. Aldrin, formerly Instructor in Aeronautical Engineering, Massachusetts Institute of Technology, and at present in charge of the Air Service Engineering School. Lieutenant Aldrin leaped and pulled his chute after dropping a short distance of some fifty feet and landed successfully. Captain Benedict furnished the thriller of the day by having the shroud lines of his parachute become twisted in such a way as to prevent the full opening of his parachute. Not realizing the quick descent, he paid no attention to the matter of untwisting the shroud line, which had been caused probably by his spinning jump. When he finally realized the circumstances by noticing the quickly changed position with respect to the other parachute, he pulled his emergency chute which opened properly. He then straightened out his original chute, and landed successfully with both chutes in perfect order.

AMERICA'S FIRST BALLOON CHRISTENING AND LAUNCHING.

During the week the "United States Army Balloon No. 1" was christened and made her trial flight.

"In the name of the United States Army and the Chief of the Air Service, I do christen thee, United States Army Balloon No. 1." With these words Miss Mary Amstead of Cleveland, Ohio, broke a bottle of Mumm's extra dry champagne over the big 80,000 cu. ft. balloon, while in a smaller balloon held over the former, thereby christening the first balloon ever constructed in the Army by soldiers.

More than 3,000 spectators witnessed the ceremonies which rivalled any ship's christening. Long before it was time for the big balloon to be released from its moorings, people assembled on the grounds to get a glimpse of the balloon which will represent the Army in the national balloon races on September 23rd. Three airplanes flew over the balloon during the ceremonies and the 20th Infantry Band from Fort Crook, Nebraska provided music for the occasion. A drizzling rain began about 3:30 o'clock, but in spite of this the crowd remained for the christening.

Major General Leonard Wood and staff, were present during the ceremonies. As soon as the balloon was inflated and rigged it was christened and then started on its maiden voyage with First Lieutenant R. E. Thompson, A. S., A. as pilot and Mr. A. Leo Stevens, Mr. Harry Lester, Master Sergeant C. M. Maricle, Sergeant P. L. Prom and Corporal J. M. Doud as passengers. The balloon left at 4:25 P.M. making a beautiful take off and going in a northwesterly direction, reaching a maximum altitude of 1900 feet. After remaining aloft 2 hours and 35 minutes the balloon landed 2 miles northwest of Craig, Nebraska, an air line distance of 55 miles.

All the members who participated in the flight are confident that the Army will be well represented in the national balloon races. After the big balloon had taken off the smaller balloon, a 9,000 cu. ft. capacity type, was taken up by Master Sergeant B. T. Starkey who made his solo flight thereby qualifying him as a Spherical Balloon Pilot. This balloon left at 4:30 P.M. going in a northwesterly direction and after remaining aloft one hour and fifteen minutes landed at Kennard, Nebraska, an air line distance of 20 miles.

After the ceremonies and the leaving of the balloons the officers of Fort Omaha entertained the officers of Fort Crook.

ARMY AIR SERVICE OUT TO WIN

THE GORDON BENNETT ENTRY OF THE U. S. AIR SERVICE

The U. S. Air Service in its entry in the Gordon Bennett International Airplane Race of 1920 may be said to be more truly represented than possibly any other competitor. This is because the army of the United States traditionally represents the country as no other organization can, and the machine entered by the Army Air Service is truly an army airplane, designed first of all as a "chasse" plane for war purposes, by a member of the Air Service. Fully in keeping with the details recorded above, is the fact that the pilot of this airplane is to be none other than Major R. W. Schroeder, justly famous for his past altitude work and now holder of the world's altitude record.

The main and outstanding characteristics of the airplane itself is that it embodies all of those features, which have come to be known among airplane designers as making for speed and efficiency. Every portion of the machine that can be, has been carefully streamlined from the nose projecting beyond the propeller hub to the fairing placed behind the pilot's head, and the vertical stabilizer which like some of its European sisters is built integral with the fuselage. The horizontal stabilizer is carefully faired into the sides of the fuselage, which itself is of the pisciform, monocoque type. The wing construction is more or less unique for American made airplanes in that the upper wing is continuous, there being no "center-section", and the inter plane bracing consisting only of one strut on either side of the fuselage, together with the four crossed flying and landing wires, which gives the proper incidence setting to the wing section. The only other struts are the four "chandels", which support the center of the top wing at the fuselage above the pilot and power plant. The two main struts mentioned are similar to those employed in the Spad Herbemont, though possibly slightly wider. The ailerons are of the balanced type and appear only on the lower wing.

The airplane has been known to the Air Service as the "Verville Scout" and is the same as herein described except that for the usual Hispano-Suiza engine, a new 12-cylinder Packard has been substituted. The main dimensions are: spread 28 feet 2 inches, over-all length 24 feet 2 inches, over-all height 8 feet 8 inches, weight empty 2485 pounds, fuel and oil 536, pilot 180, parachute 12, instruments and equipment 20 pounds, making a total of 3233 pounds. The weight per square foot of wing surface is 14.12; per horsepower slightly over five pounds; endurance full throttle is one hour 15 minutes.

The weather in Yuma is wonderful for photography. It is the natives one grand boast that never a day passes but what the sun shines. It's true, but Gosh, how she shines.

Did you ever sit in a ship and have the darn thing radiate so much heat that you looked around for the fire? Try Yuma. The mechanics start the motor, you hop in, see that your observer is O.K. and take off in a cloud of hot alkali dust with the centegrade hard down on the pin, past boiling. How delightful.

The territory to be mapped extends from Yuma east to Tucson, from the thirty third parallel south to the Mexican border.

Just look at a map of this territory and you find nothing but mountains and valleys. Pretty rotten for forced landings and if one did, happen to have such a thing, take the compass and walk north. You will hit the rail road-- sometime.

Nearly all trips were three hours and over and quite often the pilot would land on the last bit of gas in his reserve tank.

The cameras covered a little over three miles on either side of the ship flying at 11,000 feet altitude consequently the maps were plotted in courses six miles apart running east and west to conform as nearly as possible with the prevailing winds.

A pilot and photographer were assigned to certain strips so that it was possible to have all four ships in the air taking different courses. After attaining the altitude of 11,000 feet, the pilot would start off on his course, he would signal the observer to start taking pictures. Photographic pilots have a hard job to handle, as it is necessary to keep the ship straight and level, maintain the altitude and keep a perfect course.

The flight would consist of approximately 120 miles one way and then return as a course six miles to the right (or left as the case might be) keeping the ship absolutely parallel to the previous course for the least deviation will cause a gap in the succession of pictures when the map is finished.

From Yuma the camp was moved to Ajo, a little mining town half way between Yuma and Tucson. As far as the weather goes, Ajo differed from Yuma in name only.

The work was carried on from Ajo, matching up with Yuma territory but always proceeding east.

Tucson, Arizona was the next and last stop. Their conditions for flying were par excellence, compared with the others. This enterprising little town has a municipal landing field that really is excellent. There the work was completed and the final check made on all photographs.

Developing the films was done right on the field so that from day to day the work could be checked over and see whether the film was a success.

The negatives were then numbered by perforating them and sent to the Engineers for printing and the making of the Mosaic Map.

It all sounds so simple when written down but the pilots and observers on this trip are pioneers of a job that was not thought possible a few years ago and through their efforts they have proven that there is a phase of Aviation that is practical and that the maps of the future will be made in this manner.

THE REAL CIRCUS CAME LATER

Recently, Second Lieutenant J. B. Machle, A. S. A., accompanied by Staff Sergeant Elmer J. Spencer as mechanic, left this station in a DeHaviland Four for Chicago, Illinois, for the purpose of participating in the First Division Circus being held in that city. The trip to Chicago was uneventful, but all the tameness was dispelled by succeeding events. Flights were made in conjunction with a sham battle, the work consisting of low flying over troops, dropping of smoke bombs and acting as a target for anti-aircraft guns. An altitude test of an new gas mask was also made by the Department Chemical Warfare Service Officer. The big thrill, however, was reserved for the homeward journey. On approaching Holland, Michigan, a section devoid of suitable landing places, a leaking gas line made a landing necessary. The most likely looking place was picked out, but while still at an altitude of two hundred feet the plane went into a flat spin and crashed. Lieutenant Machle was thrown clear of the wreck, and with the exception of being rendered unconscious for a few minutes, was uninjured. Sergeant Spencer sustained a few minor bruises. As the plane was completely "washed-out", the remaining portion of trip was made by rail.

NO TRANSCONTINENTAL RACES THIS YEAR

It has been definitely decided that the two transcontinental airplane races announced for 1920 and the early part of 1921 will not be held. Cancellation of these events was made necessary by a long series of circumstances which tended to point to the inadvisability of attempting this competition this year.

H O W D O W E L O O K F R O M A B O V E ?

Far and away the biggest problem that scientists are working on today is that of "ampler space". Professor Simon Newcomb is authority for the statement that "with the discovery of the fourth dimension we shall be able to turn a rubber ball inside out." That, of course, merely by way of illustration. The person who discovers the fourth dimension will have added not only twenty-five per cent to our knowledge of space, but also that exact percentage to human understanding.

Though we have not, as yet, accomplished the discovery of the fourth dimension by which we can turn a ball inside out or project ourselves into space regardless of such present day obstructions as floors, walls and ceilings, yet more than any other known factor, aviation has brought us nearer to its discovery by acquainting us with the ampler space we already possess through our knowledge of altitude.

Just as the man of genius in that charming and instructive allegory, "Flatland", was laughed at, scoffed at, called crazy when he announced his discovery of the third dimension; height, and exemplified his ability to step over the inconsequent barriers with which the "Flatlanders" had surrounded themselves, and to look down from above into their roofless, two dimension houses, so the early geniuses of aviation passed through their period of scoffing and misunderstanding. But on that December day, when the Wrights made that memorable altitude flight of 852 feet, not only was the impossibility of flying disproven, but the marvel of the ampler space that stretched far and away above us began to open up its wonderful possibilities to the mind of man. From 352 feet in 1903 to 33,000 feet in 1920 is no mean distance to have gained in a space of seventeen years, for, along with that gain, has gone, by leaps and bounds, the acceleration of human thought.

As the motor car typifies evolution, so the airplane typifies evolution plus elevation, and, to that extent, it not only quickens and develops thought, but it lifts it and clarifies it. In the "ampler space" within which it operates, it links our thoughts with the blue sky, with the sun, moon, the stars; with the heavens that emanate mystery, attempted solution of which quickens the mind to that degree of capability assigned to super-man.

The man in the air has come to be as real a factor in our social body as the man on the street, and it is, perhaps, merely a question of time before he shall have become a numerically significant one, and, with his increase, the question of how we shall look to him as he wings his way above will be quite as important as the now insistent one, how do we look from the front.

A few days ago an engineer in an airplane made a satisfactory preliminary survey for the building of a railroad in the Phillipine Island, being able from above to select the best of three routes suggested, the one that offered fewer difficulties in the way of engineering and construction. The possibilities of the airplane for this particular character of work needs no further suggestion. The men, time, labor, money saved in making a survey by this overhead means, as compared with any ground method, are immeasurable. The whole matter was solved in the engineers mind once he saw, with his well trained eye how things looked from above.

With this ample space now at one's disposal, engineers, builders, designers, architects of all kinds, will have to take into their calculations the overhead look from the man in the air. In the construction of government buildings of all kinds, arsenals, barracks, bridges, defenses, depositories, there must be taken into consideration not only the questions of appropriateness of the design, beauty, strength, durability, impregnability, but, that their security may be additionally safeguarded, the appearance they will present to the observer in the air must be worked out to the last fraction of a detail of the camoufleur's art and skill.

To come still closer to details, the entire scheme of present day construction will have to be altered or, in some ways, modified and adjusted, such, for example, as road-making, house-building, national and other park systems, city-planning, landscape-designing.

The engineers and artists in each of these several lines must plan for the overlook, and eliminate, with that in view, anything that mars or obstructs the usefulness and the beauty of his production. As we have, in times passed, removed obstructions and disfigurements from our streets and highways, so, in future, we must eliminate them from our air lanes.

The binoculars and the camera of the observer will discern and reveal ones obstructions, our shortcomings, our blemishes, everything that detracts from or mars the usefulness, security and beauty of the things we build and which unfold themselves as on a scroll to the ample vision of the man in the air.

SQUADRON NEWS

ARMY BALLOON SCHOOL, FT. OMAHA, NEBRASKA

Lieutenant Harold E. Weeks of Ross Field, Arcadia, California, aide to Lieutenant R. E. Thompson of Fort Omaha, Nebraska, who will pilot "United States Army Balloon No. 1", in the national race at Birmingham, Alabama, arrived at Fort Omaha during the past week.

"United States Army Balloon No. 1", the official Fort Omaha entry, and a sister craft built by A. Leo Stevens, will be shipped to Birmingham during the next week.

The flying time for Observation Balloons at the Army Balloon School, Ft. Omaha, Nebraska, was 667 minutes during which 20 flights were made.

GODMAN FIELD, CAMP KNOX, KENTUCKY

Though very few days have been favorable for photography, about 100 exposures were made with very good results and it is hoped that the mosaic of Camp Knox will be completed during the coming week.

Due to the 83rd F.A., leaving for a recruiting campaign and the 81st F.A., preparing for strike duty no Artillery reglages were accomplished, but one successful panel exercise was accomplished, with good results.

Lieutenant Patterson flew to Dayton, Ohio, for supplies and to get a DH4B.

Several of the officers were guests of the 81st F.A. on Friday evening at a dinner-dance.

As the artillery firing is completed and the photography near completion, the detachments are expecting travel orders in the near future.

BOLLING FIELD, ANACOSTIA, D. C.

Captain Felix Steinle who has been on detached service at Camp Perry, Ohio, during the recent national shooting matches returned to this station recently.

Lieut. Grissom Haynes in a DeH 4 "B", with Mr. John Larsen, of the Larsen Aeroplane Company, as passenger, made a swift business flight to New York. The return trip to Bolling Field on Friday was accomplished in ninety-one minutes flying time with ideal flying conditions predominant.

Bolling Field is, at the present time, well supplied with serviceable planes and this fact can be attributed directly to the meritorious work of the Engineering Department under the supervision of Lieut. Lotha Smith, assisted by Lieut. Stanley S. Ames, the latter-named officer being our most recent acquisition, having reported to this station from Kelly Field.

Capt. Steinle, who has served as Operations Officer at this station for nearly two years, has been raised to the position of Executive Officer, and there is no doubt that Capt. Steinle is admirably fitted for this post. Lieut. R. F. Dunne, who has for nine months been the Officer in Charge of the Line at this station and directly responsible for the active flying on the Field, will assume the duties of the Operations Officer. Lieut. Harold McGinnis will be the Officer in Charge of the Line.

KELLY FIELD, SAN ANTONIO, TEXAS

POLO

In a fast exciting game with the 2nd 16th Cavalry, the Kelly Field Polo Team went down in defeat with a score against them of 8 to 6.

Garrison, Brophy and Adler did the scoring for the Kelly Field Aggregation which consisted of Garrison, Schaufler, Adler, Brophy, Bogel, Eubank and Frierson.

Major Garrison was as usual the star performer for the flying horsemen and Lieut. Brophy is deserving of special mention, for playing an excellent game.

Casualties were numerous, including a collision between Garrison and Bogel, resulting in hard falls for both. Eubank sustained a badly sprained wrist and Schaufler received a severe clout on the neck from the business end of one of the opposing polo mallets.

The field was very dusty and the ball was lost in the haze several times. Kelly Field mounts leave much to be desired but hope is advanced of improvement by replacing within the near future.

The next game is with the 1st 16th Cavalry Team at Fort Sam Houston, Texas.

FIRST PURSUIT DANCE

The First Pursuit Group Dance went off with the usual success which attends their functions.

About 10:30 P.M., an entertainment was staged by two pilots in SE5's taking off and landing by the aid of Milburn landing lights which were however hardly necessary owing to the brilliance of the moon. After about a 15 minute flight consisting of low flying over the open air pavillion and acrobatics silhouetted against the moon, the flyers returned to earth and the dance was resumed.

SCOTT FIELD, BELLEVILLE, ILLINOIS

Major Reynolds from Chanute Field, Captain Weir from Wilbur Wright and Captain Boots from Selfridge Field, were at post as members of an examining board.

Mr. Kearney, of the Plant Protection Branch, visited post, ^{recently.} He came from the Aviation General Supply Depot, Middletown, Pa.

Major J. H. Reynolds, Commanding Officer Chanute Field, visited this post Tuesday. He took off in his S. E. 5 at Chanute at 3:20 P.M., landing at Scott Field at 5:00 P.M.

One hundred new books were received for the Post Library this week. We have now a very well stocked library.

The Post Restaurant was opened on September 1st. It is being well patronized, and its success is assured.

POST FIELD, FT. SILL, OKLAHOMA PROGRESS IN AIR SERVICE OBSERVATION SCHOOL

Practical problems constituted the work of the Observation School the past week, consisting of Artillery Regulation by Airplane and Photographic work in which the latest type cameras were used.

The Gunnery classes fired from the ground on the machine gun range using both the Marlin and Lewis guns. The primary purpose of the target practice, however, was to test out all guns to be used on ships.

RECRUITING TRIP TO OKLAHOMA CITY

Three ships took-off from Post Field Saturday to participate in the National Guard review at Oklahoma City. Captain Follett Bradley led the flight, with Lieutenants Nelson and Bunting piloting the two other ships. Valuable recruiting work was accomplished for the Air Service by the flight, and the Recruiting Officer

at Oklahoma City expressed himself as pleased at the prospects. The ships flew over the parade Saturday afternoon, and shortly after they had returned to the Municipal landing Field, large numbers of people came out to see the Army Planes. On Sunday morning, Sgt. Encil Chambers, piloted by Lieut. Nelson, rode the wing of a DH4B to 6000 ft. and at that altitude hopped-off. Lieut. Kennedy riding in the rear coxpit snapped a number of good pictures of the parachute on its way down.

CAPTAIN T. J. HANLEY, JR., A.S. ARRIVES AT POST FIELD, OKLA.

Captain T. J. Hanley, Jr., A.S., reported to Post Field from Camp Knox, Ky., to assume command of Flight "A" of the 135th Observation Squadron, which is scheduled to leave for Fort Leavenworth, Kansas. Upon arrival at Ft. Leavenworth, Capt. Hanley will have command of all Air Service troops at that Station, which will include the 4th Balloon Company which will report there from Camp Funston.

POND CREEK, OKLAHOMA, RECRUITING EXPEDITION

Lieut. J. J. Burns flew to Pond Creek, Okla., to take advantage of the fall fair and carnival at that town in gaining recruits. It is believed that Army planes participating in carnivals during the fall months will be of great assistance in awakening interest in the young men of this part of the country in the numerous advantages offered to the enlisted personnel of the Air Service, and thereby a number of valuable men can be recruited for that branch of the Service.

PROGRESS IN THE AIR SERVICE OBSERVATION SCHOOL

Practical problems constituted the work of the Air Service Observation School the past week, consisting of Artillery regulation by airplane and Infantry contact patrol, in which very satisfactory results were obtained.

FLIGHT "A" LEAVES FOR FORT LEAVENWORTH

Five ships, constituting Flight "A", 135th Observation Squadron, left Saturday morning, to cooperate with the General Service School, Fort Leavenworth. The Flight was led by Captain T. J. Hanley, Jr., A.S., flying in formation with Lieutenants Walker, Wagner, Agee and Davis and five enlisted men. A short distance beyond Fort Sill, Lieutenant Walker broke formation and proceeded to Denver, Colorado, to take part in the Bureau of Mines Meet to be held there September 9th, 10th and 11th. He will then rejoin Flight "A" at Fort Leavenworth. Sunday morning the remainder of Flight "A" entrained for Fort Leavenworth in charge of Lieutenants Duke and Armstrong. All the planes arrived at their destination on schedule time and without incident.

POPE FIELD, NORTH CAROLINA

"B" FLIGHT 8TH AERO SQUADRON PREPARE FOR ARTILLERY WORK

This was one of the busiest weeks Pope Field has ever seen. Extensive preparations were carried out for the Artillery shoots scheduled for the coming week. Radio stations were erected and tested, all available planes were thoroughly equipped and tested. Maps of the surrounding country were coordinated and all batteries and targets were plotted on them, pilots and observers were assigned to permanent teams and all necessary data for the coming work was collected and thoroughly studied.

During the preparations actual demonstrations of the methods used by the Air Service in conducting an Artillery shoot, were given on Pope Field before the Artillery Officers of Camp Bragg and also the New York National Guard who are participating in these shoots.

Temporary radio stations were erected on the field for the purpose of conducting a practice shoot before these Officers.

The first part of these demonstrations consisted of lectures by the Commanding Officer of Pope Field, Captain C. W. Howard, who took the Officers in groups to the planes which were fully equipped and ready for action, and explained in detail very carefully the many intricacies involved in successfully using the huge "Implement of War". After these explanatory remarks the Artillery officers had the privilege of observing at close range an Artillery adjustment sent down over their heads to the radio station directly before them.

These demonstrations were excellent practice for the observer and pilot and at the same time very instructive especially to the Artillery Officers.

After these demonstrations were completed many Artillery Officers were given their first flight in order to familiarize them with the work and troubles of an observer.

Final arrangements were made and schedules completed for seven Artillery shoots to be conducted the next two weeks with Artillery units at Camp Bragg and the New York National Guard. Each shoot includes from two to four problems.

Conferences were held during the latter part of the week with the Battery Commander and the Air Service Officers participating in these shoots.

A very successful shoot was conducted Saturday morning, with the New York National Guard at Camp Bragg. Colonel Daniel W. Hand, representative of Chief of Field Artillery, who was present at this shoot remarked that it was the very best conducted shoot that he had ever witnessed. The shoot was so perfect that all targets were completely demolished. The shoot consisted of two problems both of which were demolition problems. Lieut. G. L. Usher was observer and Lieut. Rex K. Stoner was pilot.

During the beginning of the week the Artillery Officers were taken on flights to Carthage for the purpose of selecting from the air a continuous route from Camp Bragg to Carthage that might be used by batteries, tractors and troops on a practice maneuver. One Officer selected a route for his batteries and tractors, while another Officer mapped out a route for his troops.

Department Air Service Officer, Southeastern Department, Colonel H. B. Clagett is visiting Pope Field on his tour of inspection, having flown from Columbia in his famous "Ardmont's Pride".

ARMY BALLOON SCHOOL, LEE HALL, VIRGINIA

The 20th Balloon Company and the 26th Balloon Company left this Post recently for Rockport, Mass., their services to be used in the Regulation of heavy artillery fire. From Rockport both companies will go to Provincetown, Mass., for the same purpose.

The 20th Balloon Company consisted of 85 men and is commanded by Lieut. Junius A. Smith. The 26th Balloon Company consisted of 86 men and two officers, - Lieut. R. D. Ignico commanding, and Lieut. A. V. Clinton.

The Artillery firing is expected to consume about two weeks, and the two Balloon Companies will return to this Post at the conclusion of the Artillery firing.

EUGENE FOREST PATROL, EUGENE, OREGON.

The recent rain has cleared up all the smoke and has given us excellent visibility during the week.

The tractor and grader loaned us have been placed in commission and are being run by air service men. About ten acres have been levelled off, which places our field in very good condition.

With the beginning of a new month extra efforts are being made by observers to locate fires on a 100% basis. Enlisted men connected with the radio department are showing great interest in having radio sets O.K. so that all fires for the month will be reported by radio.

The machine shop truck that arrived last week is set up and ready for business.

September 2nd was a record day for number of new fires discovered by the patrols: 36 new fires were reported, all but two being received by radio. These two reports were not sent on account of indefiniteness of location.

During the last 15 days of August 169 new fires were reported by the Eugene base, 69% of which were reported by radio.

Forest Examiner W.B. Osborne of the Forest Service visited the Eugene base September 2nd. He was very much pleased with the operation of the patrol and was particularly pleased with the quick dispatch of reports from the time the fire is sighted until the suppressive force is notified.

ELLINGTON FIELD, HOUSTON, TEXAS.

Lts. G.M. Palmar, D.H. Dunton and R.C. MacIver arrived at this field from Kelly Field, for the purpose of ferrying the Handley-Page back. This big ship was brought to Ellington in May, 1918, from Elizabeth, N.J., by Lt. Palmar, after being four months in transit. After the customary test flight, the officers who were assisted by Inspector of Airplanes and Engines, D.H. Cramer and Sergeant Kelsey of Kelly, took off for San Antonio.

LANGLEY FIELD, HAMPTON, VIRGINIA.

AIR SERVICE CO-OPERATES WITH INFANTRY MANEUVERS AT CAMP LEE, VA.

Captain Lawson and Lieut. Ward of the 2nd Wing Air Service, Langley Field, Va., are now on temporary duty at Camp Lee, Va., participating in the Infantry maneuvers now taking place at that post. These officers will carry on Infantry contact work and will communicate with Brigade Headquarters while in the air by means of Radio telephone supplemented by pyrotechnics and dropped messages. Captain Lawson saw several months service in the A.E.F. in this work and will give a series of lectures to Brigade Officers at Camp Lee outlining the value of close co-operation between the Air Service and the Infantry.

LANGLEY FIELD OFFICERS RETURN

Captains Johnson and Lawson, and Lieutenants Signer, Bagby, and Bradshaw have just returned home from the rifle matches at Camp Perry, Ohio, where they spent several weeks participating in Aerial Machine Gun competition. The entire trip to and from Camp Perry was made by Airplane without accident, the standard service DH-4-B airplanes being used.

PHOTOGRAPHIC OFFICER TAKES PICTURES FROM SINGLE SEATER.

Lieut. James C. Hodges of the Photographic School, Langley Field, Va. has equipped an S.E.5 Airplane with a complete K#1 Automatic Aerial Camera, which he mounted under the fuselage just back of the landing gear. Lieut. Hodges has taken some very remarkable views from the air with this equipment, which compare favorably with views taken from a bi-plane machine by an observer who had nothing else to do.

MOVIE LABORATORY AT LANGLEY FIELD, VA.

A laboratory for the development and printing of movie films has been completed at Langley Field, Va., and officers of the photographic school are now enabled to make moving pictures from start to finish as a part of their course of instruction.

AIRDROME, McALLEN, TEXAS.

Regular bombing and gunnery practice formations were carried out during the week.

The Squadron carried on quite a bit of message dropping and signal practice with a local Boy Scout Organization who are encamped at San Juan, and is believed that the practice proved very beneficial to both the Scouts and the Flyers. Officers from the organization have delivered several lectures to the Scouts on Aeronautical and Military subjects.

Lieuts. Robertson and Mallison of Sanderson were the only visitors of the week.

The Squadron is very badly handicapped because of lack of transportation facilities. No spare parts, tires or tubes being available throughout the Valley, and requisitions seem hopeless.

During the week Lieut. Archie R. Harwood was discharged at his own request to take up farming and kindred pursuits, so once again the officer personnel of the Eighth shrinks; about one more little shrink and the new officer of the day will meet himself coming off duty as the old officer of the day.

The "Brownsville Herald" of September 2nd, notes the acquisition by Texas of an island of some eighty or a hundred acres due to change of a course of the Rio Grande. This island was noted and reported by two observers from this station some days before a notification of the acquisition to American territory was contained in the Operations Reports.

During the week Lieut. Archie R. Harwood, lately discharged, left to visit his home and will shortly return to the Valley to take up farming.

The usual bombing and gunnery formations were carried out during the week and the observers are rapidly becoming past masters in the general art of bomb dropping.

During the week orders have been received limiting the use of transportation which was at best far from adequate for the actual needs of this station. Just how we are to operate, obtain supplies and the like, has not yet been determined, as we are without pack mules and have not sufficient man power to replace the trucks.

During the week Lieuts. Wilson and Blackburn of Kelly Field, and Lieuts. Mallison and Robertson of Sanderson visited the Squadron.

MARCH FIELD, RIVERSIDE, CALIFORNIA.

March Field's second cadet class, since this school designation as a Pilot's School for preliminary training, will graduate Sept. 30. Fully 75% of the original class will have completed their flying by that date. The rating of this class is much higher than the previous class graduated in May.

Most of the men are now in the cross-country and formation stages of their training and next week some few will be turned loose in T.M. Scouts. Upon graduation they will be transferred to advance schools and service units, in various parts of the country. Travel orders, however, are not expected for some time.

The next class is scheduled to start training November 1, allowing the entire month of October for vacation and preparation for the new course. Fully a dozen commissioned officers from various branches of the Army have already reported at this field and will begin their training with the next class.

Despite heavy morning fogs rolling in from off the Pacific 471 flights were made from this training field during the past week. Total flying hours 474. Preliminary instruction consumed 331 hrs. 15 min.; advance instruction, 71 hours 55 min.; forest fire patrol, 41 hrs. 15 min. test flights 13 hrs. 25 min., and miscellaneous flights, 16 hrs. 10 min.

Major Charles King, retired, died at his home in Riverside recently, following a lingering illness which confined him to his bed for the past three months.

Major King during the war held an emergency rank of Colonel in the Medical Corps. He was Sanitary Inspector at Hoboken, N.J., the port of embarkation for the A. E. F. In November, 1918, he was transferred to March Field and for several months just prior to his retirement was Post Surgeon.

The body was escorted to the train by a military detachment from March Field. Burial was in San Francisco.

Col. William F. Pearson, administrative executive and personal representative of the Chief of Air Service, will arrive at March Field the first of next week. Col. Pearson is making an inspection of the Air Service Posts in the Western Department.

Joe Bailey, ex-March Field pilot and flying instructor who was transferred to the motor transport corps, has been commissioned a second lieutenant in the regular army and transferred back to the Air Service. He is at present stationed at Jeffersonville, Ind.

Stephen McAlko, ex-service man with 16 years to his credit, and expert photographer, re-enlisted for three years at March Field during the past week. After a brief schooling in the vocational school of this Post, McAlko will request transfer to the Philippines.

First Lieut. Evan M. Sherrill reported for duty at this field on Thursday. He will enter the next pilot's training class Nov. 1

R.E. Warfield, ex-March Field officer, advises that the management of Hotel Talac on Lake Tahoe has prepared a good landing field, near this popular mountain resort for the convenience of visiting planes. The field is at 6,200 feet altitude and is on the direct trans-continental air mail route. Warfield is now manager at the Hotel.

Football practice will be in order at March Field next week. Captain Andrew Smith, former all-American tackle when playing with Michigan University, will coach the team.

Miss Helen Coffin, formerly librarian in the city of Corona, Calif., has been appointed Librarian and Camp Hostess for the Service Men's Club. She takes the place of Miss Marion Higgins, who resigned to accept a position as librarian of the Agricultural College of the University of Wyoming.

ROCKWELL FIELD, CORONADO, CALIFORNIA.

In the news items released on August 28th, it is noticed that the 8th Aero Squadron claims 3600 hours of flying during the past year. This might be taken as a typical example of the squadrons doing Border and Forest patrol in this country, and furnishes splendid comparison between the average squadron and the 91st Squadron. During the ten months the 91st Squadron has been operating, it has flown approximately 6500 hours, and has exceptionally small record of wrecks and casualties.

Athletics for the past week have consisted of base ball, trap shooting and fishing. The 91st team defeated the 10th Naval Destroyer Division team in a base ball game by a score of 6 to 1, in a close, fast game. This makes the fourth winning out of the last six games played.

There was little competition between the officers of the 91st Squadron and the officers of the Aviation Supply and Repair Depot at Trap Shooting last Thursday. The officers of the 91st had the lowest score, but it is hoped that with a little more practice and some luck that we may be able to defeat our opponents.

Thursday morning a group of the 91st officers left on a deep sea fishing trip off Point Loma. The trip was very much enjoyed, but with the usual luck - no catch.

Progress is being made in the instruction of enlisted men as observers. The quarters during the noon hour and in the evening sound as if a bee-hive had been turned loose, but it is only the men practicing radio. Along this line, we have secured a JN6H for use in low target work in gunnery practice.

HERE AND THERE WITH THE EDITORS. DEVELOPMENT OF RADIO

Because of the possibilities it will suggest to aircraft and to the Air Service, the recent proofs of the development of radio and its extended use in new lines of endeavor will be of interest. Those possibilities are fully exemplified through experiments just made by both the Army and the Navy.

News gathering by wireless, a remarkable experiment in reporting first successfully tried by the London Daily Mail, was given a most convincing and conclusive test by the Los Angeles Examiner on the morning of September 4, through the cooperation of the United States Army, Western Department, headquarters at San Francisco, which authorized Major Yount, Commanding Officer at March Field, to direct the experiment. Lieut. Joseph T. Morris, Radio Officer at March Field, was detailed to the job and cooperated with the Examiner in demonstrating the possibilities of wireless telephony as a practical, rapid and reliable news-getter.

When experiments now in operation shall have simplified and condensed the apparatus, and the matter of "tuning" the instrument is correctly adjusted, it will be possible for a reporter to carry a radio "set" in his pocket, and by touching a button, send in his story at any time and from anywhere. Newspapers that employ the services of both the airplane and radio are sure of leadership in the newest and the most interesting news.

In line with the above, the Detroit News, through its radio-phone department, has established a system of giving as well as receiving news by wireless. Thanks to the radio-phone service which the News has in operation in its wireless room, "ships that pass in the night", through the river from lake to lake, may be the airship that passes over the lake and may no longer go unnoticed and without greeting.

Piloting by radio received its successful preliminary test in the Ambrose Channel approach to New York Harbor Aug. 29. The test was made with the tug, Algoma, which navigated the sixteen-mile stretch from the Ambrose Channel light-ship to the Narrows entirely on the bearings received from the armored cable. What radio can do for ships on water it can do also for ships in the air.

(Los Angeles Ex. --Detroit News, and New York World)

In line with the Chinese Government's purpose to train its own aviators, five young Chinese were sent to Manila for post graduate training in flying. (Dayton Journal 8/30/20)

Tanks and aircraft will participate in a maneuver to be held on the anniversary of the attack on Montfaucon Sept. 17, at Camp Meade, Md., during the twenty-first annual encampment of the veterans of Foreign Wars. A reproduction of a typical French village will be constructed, with trenches and barbed wire entanglements. (Pittsburgh-Post 9/9/20)

A Martin bombing plane carrying a crew of four men and a 1,000 pound torpedo flew from Washington to Yorktown, a distance of 125 miles, in 64 minutes last Friday. Naval officers say that the flight established a new record for planes of that type. (Dayton Herald 9/9/20)

The Lafayette wireless station at Bordeaux, France, has established a world-velocity record in sending a message circling the globe in one-seventh of a second. The Lafayette radio was built in 1918 by American Engineers, but since the war it has been acquired by the French who contemplated opening it about the last of October as a regular unit in the French wireless service. (Philadelphia Public Ledger 9/15/20)

AIRSHIP C.M. - 5

The C.M. 5 is one of the airships ordered by the United States Navy from the French Government during the war. It was recently completed and flown in France and has been bought by the Goodyear Tire and Rubber Company. It is understood that, on its arrival in America, it will be assembled at the Wingfoot Lake Air Station, near Akron, Ohio, and will be placed in service between that city and Detroit.

This ship is of the non-rigid type and has a total capacity of 320,550 cu. ft., including 131,455 cu. ft. divided between the two air ballonets, one forward and the other aft. In the extreme bow of the car, which is 52.5 ft. wide, is a small glass enclosed cabin abaft and above which is the navigating bridge with its separate altitude and directional control stations. Two Salmson radial engines, each developing 230 h.p. at 1450 r.p.m. are placed on outriggers on the sides of the car amidships. Each engine drives a direct Rogy propeller 9.8 ft. in diameter. Above each engine is placed a radiator in the propeller slipstream.

A 13-gallon gasoline tank and a 21-gallon oil tank are arranged in a streamline casing behind each engine, where is also found an airstarter and an Astra fuel pump. Eight gasoline tanks, totalling 466 gallons are carried in the car. This fuel capacity gives a radius of action of about 1400 miles at the cruising speed of 40 m.p.h.

The ballonets are kept inflated with air by means of a scoop placed in the propeller slipstream on each side of the car. 12 h.p. Ballot engine drives two Sirocco blowers, which keep the ballonets inflated when the engines are stopped. The blowers have a total capacity of 140 cu.ft. of air at 80 m.m. water pressure.

The car also contains the 500-watt wireless telegraph installation, lighting dynamo, etc.

A rather unusual type of patchwork is used to connect the car and envelope. The tail surfaces are also interesting. There are four fixed fins suitably braced to the envelope. The horizontal fins and the vertical fins carry frames to the ends of which the elevators and rudders are pivoted. It is a question whether the advantages gained by having the control surfaces work in comparatively undisturbed air counterbalance the additional complication and head resistance over the customary practice of attaching the rudders and elevators to the trailing edges of the fins.

(Automotive Industries 7/29/20)

AIR SERVICE NEWS LETTER

Information Group
Air Service

October 5, 1920

Building B
Washington, D. C.Photographic ActivitiesKelly Field. 1st Photographic Section.

Only two men are on duty with the First Photographic Section at Kelly Field. No photographs were made during the week due to the fact that there was no flying.

El Paso. 2nd Photographic Section.

No aerial photographs were taken during the week due to the fact that there was no flying. However, a considerable number of ground photographs were made.

Godman Field. 4th Photographic Section.

7 hours were devoted to photographic purposes. Mosaic of Camp Knox 1/4 complete.

Langley Field. 7th Photographic Section.

10 hours photographic flying. Report from this section for the week shows that a considerable amount of photographic work was done.

Luke Field, Hawaii. 11th Photographic Section.

10 hours of photographic flying in connection with the making of a mosaic of Ford Island which is composed of 600 acres. The mosaic is 80% complete. The mosaic of the Schofield Drainage system comprising 24 square miles is 20 percent complete.

France Field, Canal Zone. 12th Photographic Section.

6 photographic enlisted men arrive from Langley Field bringing the personnel at France Field up to 8. Report does not include any record of the photographic work done during the week.

Mitchel Field. 14th Photographic Section.

No photographic flying was done during the week on account of weather conditions. Mosaic of West Point 75% complete.

Crissy Field. 15th Photographic Section.

No photographic flying during the week but a considerable amount of ground photographic work was completed.

Miscellaneous

1st Lieut. Charles B. Austin, A.S.A. who expects to fly his re-modeled DH-4 plane to the United States from France Field, Panama has completed his final test flights. He took the air with all his gasoline and oil tanks full, this being a fuel load of about 1500 pounds. The machine took off beautifully with its heavy load and flew for two hours and fifteen minutes. An arrangement has been put on the plane whereby Lieut. Austin can empty one of his main gasoline tanks while in the air, and thus make it easier to land the plane. On the test flight in question, he emptied one tank and then landed successfully. He is now in readiness to make the flight to the United States via Jamaica, Havana and Florida, as soon as he receives official authority from the War Department.

Mitchel Field.

On September 9th two successful parachute jumps were made. One from an altitude of 2400 feet and the other from an altitude of 19,800 feet.

Camp Stotsenburg, Philippine Islands. 3rd Aero Squadron.

On August 12th, 2nd Lieut. William C. Maxwell, A.S.A., was killed. He was piloting the plane when a missing motor forced a landing in a small field. In maneuvering into the field the plane struck a flag pole causing it to crash to the ground. The mechanic was seriously but not fatally injured.

Photographic Activities

The Adjutant General was furnished for recruiting purposes with photographs of the kind requested by him of the activities of the Balloon School, Lee Hall, Virginia. These photographs were made by the personnel from the School of Aerial Photography at Langley Field.

The Chief of Engineers was furnished with Aerial Photographs of the following coast defense stations in the vicinity of New York City: Fort Michie, Mansfield, H.G. Wright and Terry.

Photographs were made by a photographic officer from airship Z.D.U.S. #1 with a type F-2 aerial camera. The excellent results obtained show that the airship furnishes an ideal platform for oblique photography at low altitude. It is planned to test its suitability for the kind of vertical photographs needed for mosaic making.

Radio Activities

Langley Field

The telephone plane has been at Camp Lee, Virginia, and made one test and demonstration flight. Worked 4 miles and signals were very strong. Indications were that receiving range is at least 5 miles. Increased range due to installation of extra 2-stage amplifier.

Western Department.

Officers who are taking flying instruction at March Field have begun their radio instruction. An hour each day is devoted to buzzer instruction at present.

Forest patrol has been hampered a great deal by heavy fogs. The patrol planes are often forced to wait until afternoon before starting. The Radio Department makes use of the 2 K.W. Tractor Set to inform the substations of Santa Barbara and Rockwell Field when the planes are starting.

Aberdeen Proving Ground.

One flight was made during the week. Partial failure due to it being too hazy to see puffs of smoke at 9,000 feet.

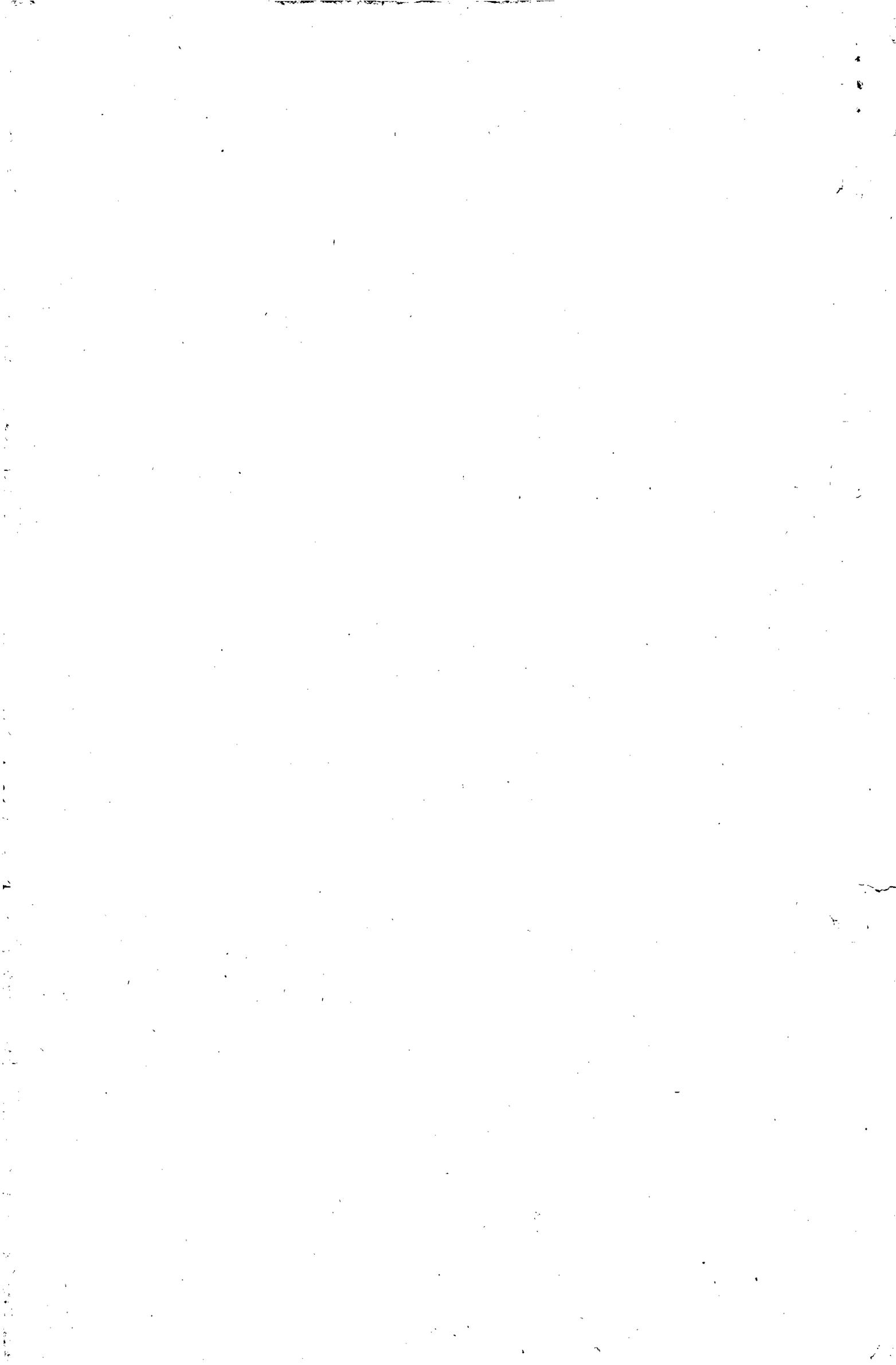
Hawaiian Department

Installed one SCR-59 and one CP1110 in HS 21. Lieut. Gray at Molokai set up a small V antenna and using an SCR-59 set, received news from the press. Then by running a lead from a DH to this antenna, used the transmitting set in the plane by running the motor. With this improvised station, he talked easily with the Navy Station at Oahu. This station was not able to talk to him because of interference and low powered set.

INFORMATION OBTAINED FROM OPERATIONS REPORTS OF TACTICAL
UNITS FOR WEEK ENDING SEPTEMBER 11, 1920

STATIONS, FLYING TIME AND AVAILABILITY OF PLANES

<u>Name of Squadrons</u>	<u>Location</u>	<u>Flying Time</u>	<u>Planes On Hand</u>	<u>Planes Avail.</u>
1st Aero - Obs.	Mitchel Field, Mineola, L.I., N.Y.	27:35	17	14
2nd " "	Fort Mills, P. I.	No report		
3rd " "	Camp Stotsenburg, Pampanga, P.I.	8:30	12	12 (8/14)
5th " "	Mitchel Field, Mineola, L.I., N.Y.	18:55	15	9
2nd Obs. Group (4th & 6th Sqdrns.)	Luke Field, Ford's Is., Hawaii	NG	24	11 (9/4)
7th Aero - Obs.	France Field, Panama, C.Z.	14:35	161	14 (9/4)
8th-A " Sur.	McAllen, Texas	13:10	13	7
8th-B " "	D/S Pope Field, Camp Bragg, N.C.	No report		
9th " Obs.	Mather Field, Sacramento, Calif.	144:49	32	21
10th & 99th "	Bolling Field, Anacostia, D.C.	30:17	21	13
11th Aero - Bomb.	Kelly Field, San Antonio, Texas	12:05	5	3
12th-A " Sur.	Douglas, Arizona	16:30	2	2
12th-B " "	Nogales, Arizona	16:25	9	4
20th " Bomb.	Kelly Field, San Antonio, Texas	11:55	5	2
27th " Pursuit	" " " " "	15:40	24	7
50th " Obs.	Langley Field, Hampton, Va.	8:25	19	10
88th " "	" " " " "	3:51	13	6
90th-A " Sur.	Del Rio, Texas	:30	8	8
90th-B " "	Sanderson, Texas	26:00	9	8
91st-A " "	Eugene, Oregon	No report		
91st-B " "	Rockwell Field, Coronado, Calif.	27:45	7	5
94th " Pursuit	Kelly Field, San Antonio, Texas	15:15	24	9
95th " "	" " " " "	10:50	24	15
96th " Bomb.	" " " " "	No report		
104th-A " Sur.	Camp at Fort Bliss, Texas	15:20	18	6
104th-B " "	Attached to 135th-B, Post Field, Fort Sill, Okla.	No report		
135th-A " Obs.	Fort Leavenworth, Kansas	20:40	5	4
135th-B " "	Post Field, Fort Sill, Okla.	20:15	8	7
147th " Pursuit	Kelly Field, San Antonio, Texas	23:45	25	6
166th " Bomb.	" " " " "	26:00	5	4
258th " "	Aberdeen Proving Grd., Aberdeen, Md.	14:16	34	24
Air Service Troops	Camp Benning, Ga.	13:20	10	10
" " "	Godman Field, Camp Knox, Ky.	16:35	20	5
" " Detach.	Pope Field, Camp Bragg, N.C.	6:40	22	5
Hdqtrs. Det.) 1st Bomb. Group)	Kelly Field, San Antonio, Texas	42:30	6	1
TOTAL				



**"TACTICAL OPERATIONS, INSTRUCTION AND MISCELLANEOUS ACTIVITIES
BY FIELD AND UNITS"
BORDER STATIONS**

STATIONS	SQUADRONS	PERCENTAGE DAYLIGHT	TOTAL NO. FLIGHTS	PRACTICE FLIGHTS	SPECIAL MISSIONS	CROSS COUNTRY	FORMATION	TEST	PHOTO	SURVEIL- LANCE	ARTIL- LERY	FOREST PATROL	MISCELLANEOUS
Ft. Bliss	104th Flight "A"	100%	21	17		1			3				
Del Rio	90th " A	95		1									
Douglas	12th " "	100	11	1		10							Tactical Instruction
Eugene	91st " "												Tactical Instruction
McAllen	8th " "	100	8	1	6					1			No Report
Marfa	104th " "B"	Enroute to Post Field, Ft. Sill to be attached 135 Aero Squadron											
Mather	9 Aero Squad	100	106			11		21				74	Tactical Instruction
Nogales	12 " Flight B	91	17	9		4		4					
Sanderson	90 " "	100	21	2	15			4					Tactical Instruction
Rockwell	91 Aero	100	17			4		6					7 Miscellaneous Flts.
Aberdeen	258 H. A.	100	15	4		8			1				2 Meteorological Flts.
Bolling	10th & 99th	71	52			32							10 Radio Flights
Camp Ranning	A.S.D.	100	28		2	1		15					4 Reconnaissance
Franco	3rd Obs. & 7th Aero.	80	26	21				1					
Ft. Leavenworth	135th Aero. Flt. A.	No Flying on account of Bad Weather.											
Godman	A.S.D.	75	19	4		2		7	6				
Kelly Field	1st Bombardment												
Headquarters	Detachments	100	98										
"	11th Aero	100	13	6		2							5 Instruction
"	20 "	100	14										
"	96	100	No Report										
"	166	100	45										
1st Pursuit Group		100											
	27 Aero	100	24										
	94 "	100	53										
	95 "	100	23	4	3		3	3					10 Aerobatic Flts.
	147 "	100	45										
Langley	50th Aero	85	10	1		6							3 Meteorological
"	88th Aero	85	4										
Lake Fld. H.	4th & 6th Obs.	100	135	60	23	45		7					
Mitchel	1st Aero	86	24					2	1				19 Parachute Flts.
"	5th Aero	86	24	7		2	4	7	1				1 Parachute Jump. 2 Instructions
135 -	Flight B	100	24										
Pepe Field	A.S.D.	90	7										
"	8 Aero Sqd.	No Report											
Philippine Islands													
2 Aero "		No Report											
3 Aero "		90											
Jan. - 6	Bombs	missing 90% Flts.											

Rec'd Lt. H. J. Edwards

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE OCTOBER 9, 1920

CADET TRAINING

The training of Cadets continues apace. Some of the men take the Pursuit Course and some take the Bombardment Course. The schedule that has been laid down for the Cadets taking the Bombardment course is as follows:

1st Week

No flying. Class instruction only.

Morning.

- 1. Radio 8-9:45
- 2. Photography 10 - 10:45
- 3. D. R. Signalling 11 - 12:00

Afternoon.

- 1. Theory of Radio.
- 2. Study of sets and their installation.
- 3. In Planes - This to include both Telephones and Telegraph.

2nd Week

Morning.

- Flying 8:30 - 11:30
- Radio 7 hours.
- D. R. Signals 1 hour.
- Photograph 2 hours.

Afternoon.

- Radio 1:00 - 2:00 P.M.
- Bombing 2:10 - 3:00 P.M.
- Infantry Contact and Message Dropping 2 hours.
- Theory.
- History.
- Bomb Sights.
- Formations.

3rd Week

Morning.

- Flying 8:30 - 11:00.
- Photography 2 hours.
- D. R. Signals and Message Dropping 2 hours.
- Accuracy 1 hour.

Afternoon.

- Radio 1:00 - 2:00 P.M.
- Gunnery 2:10 - 3:10 P.M.
- Reconnaissance 3:20 - 4:30 P.M.

4th Week

Morning.

- Flying 8:30 - 11:30
- Infantry Contact 2 hours.
- Camera Obscura 3 hours.

Afternoon.

- Monday, Wednesday and Friday.
- Radio 1:00 - 2:00 P.M.
- Artillery Adjustment 2:10 - 4:20 P.M.
- Tuesday and Thursday.

10/ V-

5th Week

Morning.
Flying 8:30 - 11:30.
Photograph (aerial) 3 hours.
Camera Guns 2 hours.
Afternoon.
Artillery Adjustment 1:00 - 2:00 P.M.
Uses and kind of Aviation History of Development.
Possible development 2:10 - 3:20.
Miniature Range 3:20 - 4:30 P.M.

6th Week

Morning
Flying 8:30 - 11:30
Photography 3 hours.
Puff Targets 2 hours.
Afternoon.
Surveillance 1:00 - 2:00
Miniature Range 2:10 - 3:20
Reconnaissance 3:20 - 4:30

7th Week

Morning.
Flying 8:30 - 11:30
Puff Target 1 hour.
Camera Obscura 1 hour.
Photography 1 hour.
Dummy Bombing 1 hour.
Reconnaissance 1 hour.
Afternoon.
Monday -- Radio Test.
Tuesday -- Gunnery Test.
Wednesday -- Artillery Adjustment, Miniature Range Test.
Friday -- Summation.

At the end of this specialized training Cadets are assigned to squadrons for an additional three months training.

A COMMENCEMENT THAT WAS NEARLY A FINISH.

The Engineering Division of the Air Service has been conducting an engineering school at McCook Field for the past ten months. A number of field officers of the Air Service have been attending this school. The final exercises at the close of the school consisted in taking the entire class aloft two at a time and letting them have the thrill of a parachute jump. The Martin Bomber was the airplane employed as the commencement rostrum, and the "speeches" were all delivered (alho unheard) from an elevation of 2500 feet. Graduating or rather catapulting the class in this way consumed practically the entire day. Towards the end of the day Col. Benedict was one of a pair taken up, and like the insomnia stories sometimes heard, stepped off the wing of the airplane at the proper signal into - space. Space and lots of it, for when Col. Benedict essayed to look about a bit he discovered that unlike Halley's comet, he had no tail, and that his team mate was not in his class at all for speed. Col. Benedict's 'chute had not opened. Sensing the rapid approach of the Miami River he quickly pulled the second parachute and approached China more in accordance with the printed directions and negotiated the last 500 feet in ease and undoubtedly greater comfort.

A TRUE "FLYING SQUADRON" ✓✓

A telephone call was received on last Monday afternoon from a citizen of Mt. Clemens, stating that a motor-boat party from that town which had started on a cruise of Lake St. Clair the preceding day, had failed to return, and it was feared they had come to mishap in a storm which had blown up shortly after

their departure. It was requested that a plane be sent out over the lake in search of the missing party. Word was given to Lieutenant J. B. Machle, who, as it happened, was about to make a practice flight, and search was instituted immediately. In less than an hour Lieutenant Machle returned with the information that the party had been cast up on an uninhabited island situated about ten miles from the field. A speed boat was immediately sent out and the party taken off. With the exception of one woman, who had suffered slightly from exposure, the party was in good shape and were very thankful that their discovery had been expedited by the use of the plane.

ARMY AIR SERVICE SCHOOLS

Without doubt the Army Air Service Schools are among the finest technical schools in the country. So much interest has been exhibited in them that the following curriculum and syllabus of trades taught at the Air Service Mechanics School at Kelly Field, Texas, is given as an example of the thorough and complete nature of this work. All of these courses are either in operation or are ready to function.

Curriculum and Syllabus of Trades

COURSE FOR ENGINE MECHANICS.

Applied Mechanics	128 hrs.
Battery and Magneto Ignition.....	64 "
Overhaul, Adjusting and Repair.....	192 "
Testing, Cranking and Trouble Shooting	64 "
Installation and Testing.....	64 "
Advanced Field Training	64 "
TOTAL	576 hrs.

COURSE FOR AIRPLANE MECHANICS.

(Woodwork,)	
(Metal Work,)	
(Wire Work,)	
Airplane Repair ... (Wing Repair,)	192 hrs.
(Fuselage Alignment,)	
(Fabric Work,)	
(Propeller Repair,)	
Engine Overhaul and Adjustment	96 hrs.	
Installation, Testing, Cranking and Trouble-shooting.	96 "	
Rigging and Alignment	128 "	
Advanced Field Training	64 "	
TOTAL	576 hrs.	

COURSE FOR AUTO REPAIRMEN

Engine Mechanics, including Overhaul and Adjusting...	128 hrs.
Ignition and Carburetion	64 "
Transmission, Differential, Clutch, Starting Gears, Axles.	64 "
Chassis, Overhaul and Adjustment	64 "
Road Work, --covering Driving and Road Trouble Shooting	64 "
Vulcanizing	64 "
Motorcycle Overhaul, Adjustment and Repair	64 "
Field Maintenance.....	64 "
TOTAL.....	576 hrs.

COURSE FOR MACHINISTS

Elementary Mechanics	32 hrs.
Bench Work, (Hand)	64 "
Drill Press Practice	32 "
Lathe Practice	64 "
Shaper Work, Milling Machines and Grinding Machines	96 "
Gasoline Engine Mechanics	32 "
Furnace Work and Annealing and Tempering	32 "
Machine Repair	22 "
Advanced Machine Shop Practice	128 "
Machine Shop Maintenance.....	64 "
TOTAL.....	576 hrs.

COURSE FOR ELECTRICIANS.

Technical Electricity	64 hrs.
Motors, Transformers and Generators	128 "
Interior Wiring and High Lines.....	64 "
Telephony and Telegraphy	64 "
Electrical Instruments, incl. A.C. and D.C. Switch Boards,..	64 "
Storage Batteries, Starting and Lighting Systems and Ignition Systems	128 "
Advanced Field Maintenance.....	64 "
TOTAL	576 hrs.

COURSE FOR BLACKSMITHS.

Blacksmithing.....	128 hrs.
Forging and Welding.....	64 "
Rough Tool Making	64 "
Oxy-Acetylene Welding	96 "
Electric Spot Welding	32 "
Furnace Tempering and Annealing.....	64 "
Advanced Tool Making and Shop Practice.....	64 "
Advanced Field Maintenance.....	64 "
TOTAL.....	576 hrs.

COURSE FOR AIRCRAFT ARMAMENT.

Marlin Aircraft Gun, including Shop and Range Work.....	64 hrs.
Lewis Aircraft Gun, including shop and Range Work.....	64 hrs.
Browning Aircraft Gun, including Shop and Range Work.....	64 hrs.
Fire control Gears and Range Sights.....	32 hrs.
Bomb Releases.....	32 "
Ammunition and Pyrotechnics.....	32 "
Camera Guns and Small Arms.....	32 "
Advanced Field Training.....	64 "
TOTAL.....	384 hrs.

COURSE FOR INSTRUMENT REPAIRMEN

Technical Electricity and Principles of Physics.....	64 hrs.
Calibrating, Connecting and Reading Electrical Instrument.....	64 "
Elementary Mechanics and Shop Practice.....	64 "
Pressure Measuring Instruments.....	32 "
Temperature Measuring Instruments.....	32 "
Directional Indicating Instruments.....	64 "
Air Speed Indicating Instruments.....	32 "
Time Indicating Instruments.....	32 "
Revolution Indicating Instruments.....	64 "
Installation of Instruments and Review.....	64 "
Advanced Field Maintenance.....	64 "
TOTAL.....	576 hrs.

COURSE FOR PARACHUTE REPAIRMEN

Folding Parachutes.....	32 hrs.
Parachute Repair and Maintenance.....	32 "
Testing and Field Work.....	32 "
TOTAL.....	96 hrs.

COURSE FOR ARMY PAPERWORK AND STENOGRAPHY

Army Paper Work.....	75 hrs.
Typewriting.....	165 "
Shorthand.....	66 "
English.....	75 "
Spelling.....	25 "
Study and Application.....	233 "
TOTAL.....	640 hrs.

COURSE FOR ENGINEER OFFICERS.

Carburetion and Ignition.....	32 hrs.
Mechanics of Gas Engines.....	64 "
Cranking, Testing and Trouble Shooting.....	32 "
Mechanics of Airplane Construction and Repair.....	32 "
Motor Installation and Testing.....	32 "
Rigging and Alignment.....	24 "
Engineering Forms.....	8 "
Parachute Maintenance and Repair.....	32 "
TOTAL.....	256 hrs.

Instruction in the following Trades has not been authorized to date, but has been incorporated in the Courses now being carried on:

- | | |
|-------------------------------|-----------------|
| Carpentry and Cabinet Making, | Motorcycling, |
| Coppersmith, | Propeller Work, |
| Fabric Work, | Vulcanizing, |
| Magneto Repair, | Welding. |
| Metal Work, | |

The Training Department personnel of this School consists of nine Officers, twenty-one enlisted instructors, fifty-six civilian instructors, and three hundred and ninety-three students--fourteen of which are Student Officers, eight Student Officers are attending the Course in Aircraft Armament and six the Engineering Course.

It is the aim of this School to train Air Service personnel properly. The co-operation of all Air Service Stations is solicited in selecting good material among their enlisted men for courses at this School.

AIRSHIP PERFORMANCE FACTS.

A little over a year ago the R.34, Great Britain's giant rigid airship, pushed her blunt nose out into the West at East Fortune, Scotland and sailed thru the air across the North Atlantic Ocean for 3100 miles to Hazelhurst Field, Mineola, Long Island, New York. This epoch marking event historically compares with America's Declaration of Independence, for with our far flung frontiers and, being as we are, the chosen spot of all the world for airship transport, it is significant of the future commercial domination obtainable with super-transportation via air.

A little insight into your own future air trip to London from New York via airship in two days, a reality but few years removed now will be of interest. Leaving New York behind at an elevation of two thousand feet gives one a radius of view of well over a hundred miles, barring haze, so that to the right, as the air ship swings onto the great circle course to England, is a vast expanse of

shimmering blue water, and to the left is a map like aspect of the coastal portion of north-eastern United States. Now that the thrill of the voyages' first impressions are past, let us look at the great ship itself. Our ship which was built in America at a great middle-western airship factory, is motored with six powerful motors, three on each side, each mounted on a gondola or car suspended outward from the main body of the ship. Each motor drives a huge propeller ten or twelve feet in length. Fitted snugly to the underbody of the great, gaunt, silvery pencil shaped mass is the passenger car, radiating every possible homely comfort and cheer. An assembly hall, a dining salon, attractive cabins, observation salons, and far forward the silent, dimly-lighted, navigating rooms. Everything is electrically lighted, the galley has electric stoves; there are electric running lights, and search-lights emblazon the path of the aerial grey-hound as she pulses swiftly onward poised between the firmament above and the earth below. We learn the weight of the airship itself is over 120 tons and that it practically carried an equivalent weight in passengers, express, mail, gasoline, oil, crew, supplies, and so forth. Our passenger list was 400 strong, and dancing, games, moving pictures were being enjoyed by some, while others listened in awed silence to the opera in New York, which was coming to them by wireless telephone. Frequently the passengers were paged by a small nattily dressed youth, seeking some man who was wanted on the wireless phone to talk with his office, now well over a thousand miles astern.

As we had seen various members of the crew glide silently about on their duties in spic and span uniforms which were of special design so as to give warmth and freedom of movement, we inquired as to the organization that manned these aerial leviathans. The crew is divided into watches which take alternate periods of duty and rest, following the ancient custom of the sea. On Trans-Atlantic journeys the watches are divided into four hours each with the dog watch intervening. The first and second officers of the ship take command, under the Captain, on alternate watches. The riggers correspond to the seamen of ocean going vessels. The riggers also are divided into watches and the first and second coxswains take alternate charge. The flight duties of this group consist of height control, steering and watch on the keel. In leisure periods the crew obtain their meals and rest in quarters built into the massive keel of the ship. These quarters are excellently furnished with bunks, tables, chairs, and means for recreation, including a phonographic connection from the big electric phonograph that supplies music to all parts of the ship.

The dining salon on our ship was very sumptuous, containing many comforts. Food is selected scientifically to provide the least weight and the greatest caloric values. Menus are varied, and eagerly consumed, for who of us have not felt the pangs of hunger superinduced by clear, crisp, pure air.

Our informant suggested that perhaps a tour of the ship might prove of interest so we readily acquiesced. We went forward and entered the dimly lighted navigating room where all was silence. In the bow was the lateral steersman and close beside him, watching his instrument board carefully was the horizontal control pilot. The first officer paced slowly back and forth watching everything and now and then sending word over the voice tubes or signalling to the engine compartments. In one corner entirely closed in was the wireless room which was a busy corner compared to the rest of the scene. Speed is so increased that a man sits at the chart table and constantly plots the course, the various positions being ascertained by wireless goniometry. Leaving this impressive and awe inspiring sight where everything went with clocklike precision we climbed a short ladder and emerged into the most colossal vastness of the mammoth ship's interior. Our way was lighted by dim, elaborately projected lights, while above us, as we walked along the keel for nearly 800 feet, the gas bags hung like soft ghost-like clouds. There was somewhat of a chill warmth here and we marvelled at the structure, so perfect, so massive, and yet so simple. Here also in row after row were the gigantic gasoline tanks, and oil reservoirs, with huge water ballast bags suspended here and there above them. All this vast array of supplies were connected and inter-connected so that the trim of the ship can be maintained at all times and the control exercised from the navigating compartment. Near the center was a group of engine spare parts which included blocks of cylinders, connecting rods, pistons, valves, magnetos, spark plugs, and so forth. In case of engine trouble on an airship of course major repairs can be accomplished with relative ease.

We turned back and soon entered the doorway to the passage to the upper tier of staterooms. As we went back our guide told us of the new ship which the company had on the way, and which would soon be launched. The new ship has cabins on top as well as below, a shelter deck outside, an elevator for its complete height, and carried a thousand passengers. The trial flight for this ship was to be one complete trip around the earth at the equator without landing in $10\frac{1}{2}$ days before acceptance.

Bidding our guide good-night we turned in to our attractive and comfortable stateroom with the thought that tomorrow evening we will dine in London.

AERIAL PHOTOGRAPHY A GROWING INDUSTRY.

As happened in the practical application of many other valuable inventions, aerial photography, which had remained dormant, though quite well known for so many years, waited but for the war to come into its own. Needing but the occasion to give it power and purpose, it sprang into sudden and conspicuous usefulness, and now, with the ever-increasing development of the airplane, its logical and closely related industry, aerial photography extends itself inevitably into broader channels.

As far away as 1858, attempts were made by Goddard and Nadar in Paris to take pictures of the earth from the air, but so unsatisfactory was the experiment that no effort at repeating it is of record till 1892 when Shadbolt, an Englishman, took several quite distinct views of London from a balloon. It was the airplane, however, that gave the art of photography its wings thereby establishing the position of aerial photography in industry, the arts and sciences.

From the beginning of the war, all of the belligerents recognized the value of the aerial camera, and, throughout the conflict, utilized it for an increasing number of purposes. Its work in spotting, masked batteries, in recording the results of artillery fire, in locating the movements of troops and supplies no less than the lay of the terrain over which a particular engagement was taking place, the roadways, watercourses, bridges, mountains, hills, valleys and so on, and the pictures and mosaics prepared were invaluable at military headquarters and to the Intelligence Department. So expert did the photographer become and so efficient the service, that, within forty-five minutes from the time an order was issued, the camera man could ascend, shoot the picture, drop down to his field laboratory, develop the film and deliver the finished photograph. The photo-lorry, with its perfectly appointed laboratory, became a necessary part of field equipment and aerial photographs constituted a considerable part of its output.

Aside from its technical use in military operations, the aerial films flashed on our motion-picture screens from day to day while the war lasted did their very material bit toward informing us of movements on the other side, and, more especially, in keeping us in touch with the boys in whom our interest centered. They gave us current history made visible in a new and striking way, thus quickening the perception and impressing the memory.

The high school pupil will study the history of the war with keener zest because it has all been visualized for him from a new and original angle by the aerial photographer, while the student of geography will find the dull pages of his textbook grown suddenly exciting and wonderfully illuminating by the addition of the airman's mosaics. It will bring about the apotheosis, so to speak, of a dry subject, this geography with "pep" in it, a wonderful picture-puzzle with a thrill.

The manner in which these mosaics are produced is in itself most interesting. First a series of films is produced with the machine operated at a definite height and at a given rate of speed. It is of supreme importance that every film in the series be shot from exactly the same altitude, the difference of a few feet in height making a most perceptible difference in the scale of the picture.

After the films are developed and completed, the pictures are cut into sections and pieced and fitted together by trained workers according to designated indices, making the aerial "mosaic" as it has come now to be quite generally known.

The adaptability of the aerial photograph to such enterprises as surveying, geodesy, cartography and meteorology is self-evident, and an increasing demand from these sources is being made upon the War Department for copies of the photographic mosaics that it is constantly making through the Air Service.

Necessarily the questions of the character and quality of the camera used in aerial photography are most important ones. Throughout the war, the great difficulty was in securing suitable lenses, the best obtainable being those captured from the enemy.

The British aerial photo work was practically all done with their standard R.F.C. camera which was fastened beneath the machine and operated by a lever at the pilot's side. By a quite well devised system of springs and levers the plates were changed and stored.

American cameras, however, far outshone, in brilliance both in design and performance, anything produced by the Allies. These cameras were completely automatic, were run by electric motors, and took as high as a hundred exposures at one loading on film of practically 8 x 10 inch size. The simplicity of the American aerial camera is marked, although it functions perfectly and produces results that more than favorably compare with foreign competition.

Today we have available a vast amount of aerial photographic experience data, records, and apparatus ready to go to work for commerce. There is no business or industry that does not have an adaptation for aerial photography. Call for an aerial photographer and find out your needs.

TRANS-OCEANIC FLYING

The next great flying operation to engage the attention of the whole world is the crossing of the Pacific ocean. Looked at from any point of view, it will be the most difficult feat attempted by aircraft, and the man who succeeds in the undertaking will have won the highest place in the annals of aeronautics.

As early as March, 1920, the Manufacturers Aircraft Association announced that the United States Navy had in preparation two boats of triple engine power designed especially for trans-Pacific flying.

Of the two routes proposed for crossing the great expanse of water, one stretches from San Francisco to Hongkong, China, a distance of 7,616 nautical miles. Stops could be made at Honolulu, Wake Island, Guam and Manila. These jumps measure approximately, as follows: San Francisco to Honolulu, 2090 miles; Honolulu to Wake Island, 2000; Wake Island to Guam, 1320; Guam to Manila, 1320; Manila to Hongkong, 675:

The shortest route possible, however, would follow somewhat closely the Great Circle steamship route, and would cut the distance to, approximately, 3500 or 3700 nautical miles. Supposing the flier to hop off from Victoria, his first jump would bring him to Sitka, thence next to Unimak Pass in the Aleutians, and so to Yokohama.

While the more northerly route offers the advantage in point of distance, so long as we are in the present experimental stage of knowledge as regards aeronautics, other questions suggest themselves that must be taken into consideration before a choice could be determined. The fogs familiar to the Great Circle route would add to the airman's difficulties provided they extend to a very great altitude into the air lanes. It is probable, however, that fairly good visibility would extend, say, to 20,000 feet above sea level from December to February, during which period the fogs are less apparent.

In this region, also, high winds, another factor to be reckoned with in the airman's calculations, come, broadly speaking, from two main sources and operate in two different directions. A strong south-easterly wind from southern Japan sweeps up across the Pacific to the Aleutians, while from South America a gale sweeps up the coast in a north-westerly direction.

It must be borne in mind, however, that one of the indispensable aids to trans-oceanic flying, the directional wireless, which came into general use during the last two years of the war, proved its efficacy in the trans-Atlantic flight, giving bearings accurately in spite of wind and mist, and leaving to the navigator the simple matter of plotting accordingly.

While plans are being considered on this side for the trans-Pacific flight, from England comes the announcement that an airplane is being built for a flight from Sidney, Australia, to San Francisco. From Sidney to the Fiji Island the jump would be 1,748; to Honolulu, 2,736, thence to San Francisco, 2090.

It is a pretty safe bet, however, that the first trans-Pacific Flight, like the first trans-Atlantic, will be made by an American flying an American built machine.

In anticipation of this event and of its logical results, a schedule of trans-oceanic flights might be made out reading somewhat as follows: Halifax to Ireland in two days: New York to Liverpool, two and a half days: San Francisco to Sidney, three days: Vancouver to Yokohama, three and a half days: around the world in twenty-eight days allowing for four stops of two days each.

These figures, much as they excite the imagination, are no longer staggering, and cool, clear-headed, calculating business men are putting not only a lot of thought, but also, a lot of hard cash, into projects that they expect will make their dreams come true.

And now, with our routes fairly well-defined and our time-table announced, it remains but to construct our ocean-flying aircraft to suit the needs of trans-oceanic transportation. As to the construction of the machine itself, and for matters of comparison, let us remind ourselves that the NC-4, first airboat to cross the Atlantic, is of the type known as a tractor biplane, is equipped with four Liberty motors of 400 horse power each and each weighing 825 pounds. The length of the boat is 68 feet over all, with a hull measuring 45 feet. The total wing area is 2380 square feet, the upper wing measuring 126 feet, and the lower, 94 feet. Without crew and equipment, it weighs eight tons, and, loaded for its trans-Atlantic flight, it weighed 14 tons. It is capable of carrying fifty people with the necessary impedimenta.

It is reasonably safe to predict that the plane that performs the trans-Pacific flight will be larger - perhaps, twice as large - as any of the NC class. This without regard to any announcement that may have been made, but simply by reason of the fact that everything now, both here and in Great Britain, points to bulk in aircraft building.

When it comes merely to a matter of aerial acrobatics in the crossing of the ocean on wings, or for the purpose of carrying important mail or passengers dispatched on a special mission, the question of size need not intrude itself. In the heavier-than-aircraft, of course, the smaller the machine and the less parasitic weight the better, so long as it holds up and does its highly specialized work.

But it is to lighter-than-aircraft that manufacturers are looking in their hopes for aerial transportation on an extensive scale.

The R-34, which made the trans-Atlantic journey, has a gas capacity of 2,000,000 cubic feet, while her next larger successor, the R-38 has only about 2,500,000 cubic feet capacity. However, in all schemes now contemplated for a weekly transportation service between New York and London, ships of a gas capacity

of 10,000,000 cubic feet capacity are planned for. Such a ship would dwarf anything so far attempted, but there is no intention to stop here, since there is suggested an air leviathan with as great a capacity as 20,000,000 cubic feet and with a hull more than 1,000 feet in length.

"Some boat", says the man in the street, and like everything else of this nature its advocacy rests upon a basis which can be expressed in dollars and cents.

It is figured that to build and operate four large airships of the 10,000,000 cubic feet capacity, providing service between New York and London and carrying both passengers and mails, would need a capital of about \$25,000,000. The number of passengers hauled would depend, of course, upon other matters such as the purpose and plan of construction. An airship of 10,000,000 cubic feet capacity would have a disposable lift of 200 tons. Allowing a fourth of this for gasoline, a quantity sufficient for a 5,000 miles flight, there remains a possible weight of 150 tons, or 336,000 pounds, to be utilized.

Figuring roughly, 2,000 passengers of an average weight of 150 pounds would only consume 308,000 of our spare pounds, and a crew of 20 would only add, 3,080 more. However, we can not figure our passengers as merely dead weight. A voyage of 5,000 miles at a rate of 53 miles per hour would mean a journey of 94 hours or, roughly, four days. Such a journey, therefore, would imply food, service, impedimenta in the way of beds, baths, luggage. But it needs no efficiency expert to reckon upon a basis of 1,000 to 1,200 passengers, with the necessary food, service and accommodations. For the purpose of illustration, we might reckon, of this number, on, say, 300 first class passengers paying each a one-way fare of \$500. As for the rest, it is easily calculated. It remains but to build the big ship. But, incidentally, it may be hinted, in passing, that our friends, the English, are figuring on an airboat with super-accommodations, one or two self-contained suites de luxe to be placed forward on top of the ship, which, they say, millionaires will gladly pay the price for.

So, that's to be that in the very near future, unless the best laid plans of aerial transportation go awry.

TRAINING

Bomb dropping and patrol work are the two main features of the First Pursuit Group's present tactical training program. Nearly a hundred dummy bombs have been dropped, and most of the pilots are ready to drop the required Cooper fragmentation bombs.

When the bombing work commenced, it was thought that the English method of diving at the objective at an angle of 45 degrees and using the Aldis telescopic sight would be effective. It has been found, however, that this method is not feasible with the bomb racks now in use, as the bombs would not be certain to clear the axle fairing. No bomb sights were available. Consequently, part of the fabric was removed from the fuselage section of the wings so that the landing gear could be used as a bomb sight. The results have been surprisingly good.

Arrangements have been made between General Harbord, Commanding Officer of the Second Division, and Major Pratt, Commanding Officer of Kelly Field, to institute a brief course in aerial work, for a class of ten officers from Camp Travis, Texas. The course started on Monday, September 13, 1920. On that day, B. A. Doyle, 1st Lieutenant, will deliver a lecture on Aerial Observation. The schedule for the balance of the course will be as follows:

Tuesday: 40 minute flight for each officer to allow them to become familiar with the ship and air.

Wednesday: 40 minute flight, in which the pilot points out and identifies for the passenger, various topographical features.

Thursday: 45 minute flight of short reconnaissance. Pilot and passenger to be supplied with identical maps. Pilot to fly given course and to require passenger to point out the known points as they are flown over.

Friday: 45 minute flight. Reconnaissance to a given point, pilot to be directed by the passenger. A report, written while in the air, to be submitted by the passenger. This report will contain all valuable military information pertaining to the objective, and also what is seen while going and returning.

Saturday: Critique and lecture by Lieutenant Doyle.

It is expected that upon the completion of this brief course the line officers will be able to orient themselves, while in the air, and be able to pick up and identify various topographical features as well as be able to check and read aerial maps.

Ross Field, Arcadia, California.

Three balloons in daily operation. With the recent addition of another balloon to the training equipment there are now three Caquots in daily operation. The cadets are finishing their Air Course and this with the regular flying calls for the daily use of the three balloons.

The weather is holding good and nearly every day can be used for this sort of work. On those days of relatively poor visibility at least a part of each one is clear enough to be utilized for observing.

New Officers for Air Course. Six student officers reported to this Post recently, to take the course in observing and general balloon work. They are Captains Hawthorne C. Gray, A.S., from the Presidio of San Francisco, California; Raymond E. O'Neill, A.S., from Camp Bending, Georgia, and Lawrence F. Stone, A.S., from Camp Harry J. Jones, Douglas, Arizona; 1st Lieutenants Francis M. Brady, A.S., from Camp Pike, Arkansas; Orlo H. Quinn, A.S., from Camp Kearny, California, and Roland W. Wittman, A.S., from Nogales, Arizona.

It is expected that the course of instruction will last several months.

Replacements arriving slowly. Within the past few weeks several small detachments of men have arrived at the Field from Lee Hall, Virginia, and Jefferson Barracks, St. Louis, Missouri. They are coming in at about the rate that men are being discharged, and thus the Post is holding its own, for the first time in many months.

Two subsequent attempts were made to adjust the same battery but as our vertical visibility was only 100 feet due to low clouds, no adjustment was made.

We expect to turn in an excellent mosaic of the reservation soon, as all the exposures have been made, and it is only a question of assembling. Approximately 200 pictures were made at an altitude of 8400 feet.

France Field, Canal Zone.

On Tuesday afternoon visiting midshipmen from the "Pennsylvania" and "Michigan" were given flights over the Northern end of the Canal Zone. These two battleships are part of a fleet on its return trip to Annapolis after a cruise to Hawaii.

On Thursday morning one formation of three De H. 4's made a cross country flight to Chorrera, R.P. (which is on the Pacific side), where a successful landing was made. On the return trip - the planes being about 8000 feet and above the clouds - the ground was visible only at times, and as far as could be seen in any direction was a solid blanket of soft, white clouds, about 4000 feet deep. Both above and below this layer of clouds the atmosphere was free from haze - as is usually the case during the wet season, and objects could be clearly seen at a great distance. The next morning was typical of this condition; the clouds were at about four thousand feet, and from half that distance over France Field one could see the cities of Balboa and Panama, forty miles away.

Two new De H. 4's are being assembled for use in bombing practice. These planes are expected to be turned over in about two weeks, and officers will be given a thorough course in bomb dropping.

Upon the arrival of the forty-five new men due next week, a course in aerial gunnery will be started. The present shortage of men to take care of the planes and guns makes this course impractical at this time.

Brooks Field, San Antonio, Texas.

The foundation work on new Steel Hangar is going on very satisfactory since the pouring of the concrete.

1st Lieutenant William Turnbull, and eleven enlisted men have gone to Birmingham, Ala., to assist in the Balloon Races.

Eugene Forest Patrol, Eugene, Ore.

At a recent celebration at Medford a large demonstration was provided by the American Legion. The Field at that place being dedicated and named after a pilot by the name of Mewell Barber, who was killed in action Overseas. Capt. L. H. Smith, Lieut. E. C. Kiel and Lieut. Grandison Gardner were present, from the Base at Eugene and all the officers and men at Medford attended the ceremonies. Formation flying and an aerial race also a parachute jump was made by Lieut. W.D. Coney which added to the program of the day.

2nd Lieuts. G. Gardner and E. C. Kiel arrived from Medford about noon. Major Arnold and Capt. L. H. Smith arrived later in the afternoon, and Major Arnold was here for an inspection of the Bases of the Oregon Forest Patrol.

Major Arnold and Capt. Smith, after an interview with Mr. Geo. H. Cecil, District Forester, made a trip to Portland. Capt. Smith taking Mr. Cecil with him. Major Arnold and Capt. Smith returned later in the afternoon.

Major Arnold was unable to return to San Francisco on account of weather so took a short trip up the McKenzie River and staid over night at Nimrod Hotel, returning on Friday.

Lieut. Gardner, the Radio Officer, has completed a graph showing the efficiency of the Radio in Oregon, and states that the Radio has been very successful.

Major Arnold left for San Francisco recently, Capt. Smith accompanying him as far as Medford. Capt. Walsh reported for temporary duty and Capt. Smith returned from Medford in the afternoon.

No patrols have been flown, due to low clouds and rain. A detachment in command by Lieut. Gardner is preparing to leave for Camp Lewis, American Lake, Washington for artillery reconnaissance.

Luke Field, Pearl Harbor, Hawaii.

After a week on the Island of Molokai, which was used as a base for activity, the Molokai Flight, as it was conveniently called, composed of Captain Oldys in command, Lieuts. Duncan, Hynes, J.T. Johnson, D. Johnston, L.S. Johnson, Medical Officer, Rice, Gray and Weddington, and ten enlisted men, broke camp. Seven of the officers returned to Luke Field by plane, while two officers and the ten mechanics came back by steamer, arriving at Luke Field on the following day. To say that the trip was a success would be putting it mildly, for the highly tanned (even for this part of the world) countenances gave evidence of a vigorous out-in-the-open, and yet enjoyable week.

The site on Molokai used as a base by the Flight was well adapted for that purpose having a good approach, plenty of room and a fairly smooth surface. It is situated on one of the large tracts of land owned by the Cooke brothers, two of the most prominent men in the islands. Everything possible in the matter of cooperation with the members of the Flight was done by Mr. George Cooke, manager of the ranch, and his men, to assist them in their work. The greatest appreciation was expressed by the men on their return of the generous hospitality and assistance extended to them. In fact, this spirit of good will and hospitality has been encountered by the fliers of the Second Observation Group, on every flight they have made away from the home base.

Recently two planes were flown from the Molokai base, Captain Oldys and Lieut. Hynes, pilots, Lieut. J.T. Johnson and Lieut. Duncan, observers on a reconnaissance mission to the Island of Maui. On this island is Haleakala, one of the largest and most famous extinct craters in existence. As the planes approached the island a heavy cloud bank seemed to have settled down over the crater obscuring it entirely. But, assuming a steady climb, until an altitude of about 13000 feet was reached the fliers were surprised to suddenly find themselves directly over Haleakala and in an open break in the clouds which extended around the rim of the crater forming a sort of funnel of clear sky above the crater, thus affording them an excellent view. In the crater which has a depth of about 1500 feet and a diameter of ten miles, could be seen tourists who were evidently astonished to see the planes appearing in this hole in the sky directly over their heads. A strange fact which the pilots reported was that although there was a strong wind and a great many bumps in the air on other parts of the island, the air was perfectly calm and smooth over Haleakala. This was the first flight ever made by planes over the famous crater.

Some of the reconnaissance flights over the Islands of Maui, Lanai, Kahoolawe and Molokai were made at a very low altitude, the object being to ascertain the surface of the ground for military purposes. It was on one such flight that one of the pilots flying along the mountainous region of Molokai scared up several herds of goat and deer. The result of this observation was evidenced several days later when one of the planes ferrying back to Luke Field for butter, ice

and spare parts was observed with the heads of deer sticking up out of the rear cockpit of the plane instead of the customary passenger. When the contents were unloaded there were the hides and meat of five deer which had been killed that morning. According to the pilot a party of the officers could not resist the temptation to do a little hunting, so a car was procured and an early start was made for the hills. Within an hour after arriving at their destination five deer had been bagged by the party.

As there were no newspapers to be had at the camp, which was several miles from the nearest ranch house, Lieutenant Gray, radio officer, spent his evenings at his field wireless set where he received all of the commercial messages with the latest news from the states. When this form of entertainment palled on him he would be starting up one of the DEH's and attaching his set, call some of the stations at Oahu with whom he carried on lengthy communication. In this way, the men at camp got their news in the quickest and most direct way, and never missed their daily paper.

One of the planes taken with the flight was equipped with a full complement of guns. Thus, pilots and observers in addition to performing reconnaissance missions were able to get in some good practice in gunnery. A target was set up out in an open space and several thousand rounds of ammunition were fired at it using both fixed and Lewis guns.

Good advantage was made by the observers of their knowledge of "D-R" signaling. On all missions away from the base the planes traveled in pairs. As the planes generally flew comparatively close together, communication between planes was maintained by using D-R signals. The observers, standing up in the planes became quite proficient in sending and receiving messages under the more or less adverse conditions of flying.

The flight during its seven days on Molokai, crowded into that time a maximum of activity and experiences. They were able to locate several good landing sites for planes on the various islands over which they flew, which should be of value in the future. In addition to their work they saw some of the most beautiful and famous spots that are to be seen anywhere, such as Moana Lea and Moana Kea on Hawaii, visible from the air from Maui, the beautiful and numerous shoe string falls on Molokai some of them having a drop of 1000 feet, and the Island of Maui the Valley Island of the Hawaiian Group with its crater of Haleakala.

A near mishap occurred the second time that night flying was attempted on these islands. Major Curry, Department Air Service Officer, and Lieut. Maitland, returning from a night flight over the City of Honolulu where they had put on a display of pyrotechnics and acrobacy encountered such heavy rains that they were unable to get back to the base and were forced to land on the parade ground at Fort Kamohameha. A little uneasiness was felt for a time, because of a report that they had landed without the use of their flares, rigged on the under side of the wings. But this was soon dispelled when it was learned that the landing had been skillfully executed without the slightest damage.

Motor truck and wagon train movements covering a period of four days were closely observed by patrol planes flying from Luke Field. The trains were picked as they assembled and photographs were taken of them going into camp on the north coast of the island. Further reconnaissance of their movements were made, with accompanying photographs on the two following days when camp was broken and the units dismissed.

Rockwell Field, Coronado, California. Aviation Supply and Repair Depot.

The Repair Depot at this field continues to produce very satisfactory quantities of rebuilt motors and planes and for the month of August turned out of the shops and test blocks; 17 Liberty 12 cylinder motors, 16 Hispano Suiza motors and 5 LaRhone Motors.

Five steel hangars are being erected for storage purposes and with their completion, the temporary canvas hangars will be removed.

Much aerial activity, both from the Army and Navy keeps San Diegians well informed on all new types of planes. It is not unusual to see 2 blimps, a kite balloon, several F5L twin motored seaplanes, Dh4B's, Spads and Curtiss Hiss in the air all at one time and since they have 365 flying weather days out of every year in San Diego, it is seldom that someone is not in the air.

The officers at Rockwell Field motored to Riverside, had lunch at March Field and then had a clay pigeon meet of 100 birds to the man in which the March Field officers took the measure of the Rockwell Field officers by 17 birds. A return match of the two teams will be held at Rockwell Field in the near future, in which the Rockwell "scatter gun" artists will attempt to even up matters. A movement is under way to get a Departmental Trap team from the officers making the best consecutive averages.

91st Aero Squadron.

Yesterday marked the beginning of the second series of ferrying ships to March Field for the 9th Aero Squadron. Lieut. Frank D. Hackett and Lieutenant Warren A. Maxwell acted as pilots for the first two ships of the series of ten which are to be taken up.

Liaison work during the week was very light, Captain E. L. Hubbard, Cav., being the only officer of another line of organization taken on patrol.

A great deal of interest was shown on the arrival of J16 all metal plane from Los Angeles, property of the Mercury Aviation Company. Its performance in the air was all that had been promised, the most remarkable feature seeming to be the large amount of weight, which the ship was capable of carrying with the small amount of horse power with which it is equipped. It has, however, two decided disadvantages for patrol work over hazardous country, these being its long gliding angle and low take-off. It requires a field of at least half mile run to get down in, and its take off distance is approximately the same.

A Naval flier from the Naval Air Station had a very fortunate landing on the Army end of the Island this week in a Nicuport 28. The magnetos and the engine broke loose from the engine bed and were hanging by the main crankshaft. He was forced to land on the beach, and made a very successful landing, not even mesing up.

In a recent letter from Department Air Service Officer, orders were received to stop the patrol in Oregon. Ten days were allowed for breaking camp and giving the men a chance to have a vacation. They are to report at the Presidio of San Francisco for work in cooperation with the Coast Artillery Shoot. This is a new scope of work for the squadron, and a great deal of interest is being taken in the successful completion of same.

The school that has been in operation for the last three weeks was postponed during the past week on account of inability to secure sufficient ammunition to carry on this line of work.

Camp Stotsenburg, Philippine Islands.

Thanks to sandy landing fields and five trusty D.H.'s, who did not mind 300 pounds of "chow" in the rear cockpits, the Third Aero Squadron did not suffer last week when this post was cut off from its base of supplies by heavy rains.

Unceasing rain fell here for 12 days. At the end of the fifth day the Manila Railroad ceased to function. Bridges were dangerous and in several places embankments or fills had washed away leaving rails and ties with no support. The Commissary announced no meat, and then no sugar, no milk, no potatoes, etc., and the word was passed around that even the supply of can goods was getting short.

Efforts were made to get trucks into Manila, but they were stuck at the first river. An investigation developed that the automobile road for ten kilometers south of San Fernando was in the center of a lake. The water for miles was waist deep on the road, and the only traffic was by native bancas, and they had to steer by the tops of the telegraph poles.

Captain Roy S. Brown, station commander, had five D.H.'s turned up and sand bags placed in the rear cockpits. Then with four of his pilots he stood by for a break in the rain. In the meantime the commissary at Manila had been notified by radio, the only means of communication, that the ships would be down for supplies.

The first break in the rain came on Friday, and the five planes pushed off in formation. This marked the first formation flight possible during the month, and was a part of the training schedule which is being followed as closely as conditions permit. The Curtiss field at Manila is high and sandy, so no difficulty was experienced in landing, although several Manila streets were under water at the time. The sand bags were discarded and hundreds of pounds of "chow" put in their places. The ships returned to the posts just ten minutes ahead of a storm. The rain continued to "carry on" for several days, but before the supplies were exhausted, the railroad track was repaired and an emergency train put through.

The routine work for the station has been greatly hindered during the past week by the absence of all the officers except Captain Roy S. Brown, A.S., A. and 1st Lieut. Ira C. Baker, Infantry. All other Air Service Officers have been on leave in Manila undergoing examination for commission in the permanent establishment.

The 6th Photographic Section has reported to this station for duty. This section is in command of 1st Lieut. J. W. Frewer, A.S., A., and consists of twelve men. The Section has been attached to the Third Aero Squadron for rations and quarters. The presence of these men will permit this station to rapidly complete the map of Corregidor Island and Coast Defense of Manila Bay; and it will also greatly assist in the work of the Aerial Observers School.

The weather has been much more favorable to flying during the past week, in fact about 90% of daylight was available for flight, and although only two pilots were present at the station over twelve hours were flown. Railroad bridges have been rebuilt and rail communication has been resumed with Manila.

The Third Aero Squadron suffered its first casualty from flying on August 12, when 2nd Lieutenant William C. Maxwell was killed in a wreck at the Del Carmen Sugar estate, 30 kilometers from here.

Lieutenant Maxwell was one of the Squadron's most popular officers, and his death is keenly regretted not only by the officers and men, but by the entire post.

Lieutenant Maxwell was on a practice flight in a D.H.4 with Private Jorge Chase as passenger. Over the sugar estate, some 25 kilometers from the post, his motor began to miss. Lieut. Maxwell headed for a small field. To reach this field it was necessary for him to pass just over a row of houses. It is believed that he was so intent on "jumping" the houses, that he failed to observe a flag pole in front of the Del Carmen Club. His right wing struck this pole and the ship turned to the left and crashed.

Lieutenant Maxwell was killed instantly. Private Chase escaped with a broken thigh. The accident was witnessed by Dr. John C. Mason, Surgeon on the sugar estate, and he reached the wreck in less than two minutes after the crash. Friends of the dead officer are seeking consolation from the fact that adequate aid was immediately available after the crash. That is probably the only place 50 miles of the post where dead or injured could receive intelligent first aid from American physicians and nurses.

The body of Lieutenant Maxwell was returned to the post in the afternoon and his funeral was held on Friday afternoon.

A Battery of the First Philippine Field Artillery formed the escort and fired the first salute.

The entire squadron, commanded by Captain Charles T. Phillips, followed the official escort.

Captain Roy S. Brown, Lieut. Ira C. Baker and Lieut. Newton Longfellow flew a formation over the funeral procession, dropping flowers on the hearse.

The following officers acted as pall-bearers:

1st Lieutenants LeRoy E. Russell and A.J. Logan,

2nd Lieutenants Harry P. Disher, Chas. L. Webber, John Blaney, and William R. Sweeley.

The body of Lieutenant Maxwell will be returned to his home at Atmore, Alabama.

Lieutenant Maxwell has been in service since the beginning of the War, and served principally as an instructor at Kelley and Ellington Fields,

Kelly Field, San Antonio, Texas.

TRAINING SCHEDULE

Group Commanders and Wing Headquarters are very busy working out the training schedule for the period October 1, 1920 to February 28, 1921.

The course as marked out to date promises to be of considerable interest and value. Unlike the specialized War courses it is planned to make the training for both Pursuit and Bombardment Officers practically identical insofar as the ground work is concerned, and to a considerable extent in the air as well, as it is agreed that the Peace time Air Service Officer should be thoroughly familiar with the work of all branches of Aviation.

The ideal to be worked for which is of course impossible of realization in its entirety owing to the personal factor, is to have every Air Service Officer in the regular establishment capable of handling any Air Service problem that he may be confronted with. He should be able to lead a pursuit flight on a special mission, conduct a bombing raid or an Artillery Shoot, make a mosaic or successfully cope with any of the other flying duties by day or night that the Air Service might be called upon to perform in time of war, to say nothing of the tremendously important supply and administrative work with which he should be familiar.

It is with this aim in view that the combined course will be given.

The pace will be set by the slowest man and every effort will be made to do away with the situation which has existed in the past when a call for any type of mission from either the Bombardment or Pursuit Group has always been carried out by a few of the best men while the less experienced officer has been compelled to look on as a spectator, to his own detriment and no particular advantage to his more experienced comrade.

NEWS FROM THE SQUADRONS

Post Field, Ft. Sill, Oklahoma,

PROGRESS IN THE AIR SERVICE OBSERVATION SCHOOL:

Ground Gunnery constituted the work in the Air Service Observation School during the past week. Very good results were obtained in Machine Gun firing, which was supplemented by excellent work at the traps.

FLIGHT "B", 104th AERO SQUADRON ARRIVED:

Flight "B", 104th Aero Squadron, commanded by Lieutenant Raley, arrived during the week from Kelly Field for temporary duty. Lieutenant Meyer and thirty enlisted men arrived by train on September 8th, and Lieutenant Raley, Sheridan, Moon, White and Larson, with one mechanic each, arrived in five DH-4-B airplanes September 10th, 1920. They have been attached to the 135th Observation Squadron and are cooperating in the activities of the School.

Godman Field, Camp Knox, Kentucky:

One artillery reglage was made during this week with the 81st Field Artillery with good results.

Pope Field, North Carolina,

"B" Flight, 8th Aero Squadron.

Three very successful Artillery shoots were conducted with the 5th Brigade, Camp Bragg, N.C. during the week. Remarkable results were obtained in all problems fired. This success is due greatly to the wonderful co-operation we are receiving from the Artillery Officers of Camp Bragg.

Three weeks ago we started with an Air Service organization that had practically no experience with work of this character. The three observers were of course familiar with the Artillery work but they had not conducted a shoot for over a year. New panel detail had to be trained, radio men had to be trained to receive the usual coded messages and the pilots have to acquaint themselves with the requirements of the particular observer assigned to him. From the first shoot all teams and details took a great interest in their new work and rapid progress was made toward the equipment of a very efficient organization, which we are very proud to possess.

The Artillery shoot carried out last Tuesday with the 21st Field Artillery was fired in three problems with the heavy 155 M.M. Howitzer guns. A total of seventy five rounds was fired. The first problem was a demolition problem in which the target (a Block House) was about 5500 yards from the Battery. The adjustment consisted of Percussion, Precision, Trial and Amelioration fire by piece and the excellent results obtained pleased the Artillery Officers to such a degree that they decided to repeat the last adjustment to see how perfect the problem could be fired.

The second problem, also a demolition problem, and Battery in position as a target, was fired in an extremely short time and with very good results. The same Battery of 155 M.M. Howitzer guns was used and the system of fire was, Percussion, Precision and Trial fire for adjustment. Six salvos of four rounds each were fired.

An Artillery Reglage was also conducted with the 20th Field Artillery, Camp Bragg. Two very interesting problems were fired with very good results.

The first, a precision problem, was fired with a Battery of 75 M.M. guns and approximately 100 rounds were fired.

The second problem was a zone fire problem in which the target was changed at the command of the Observer. The adjustment consisted of Precision to zone fire on fugitive target. Approximately eighty four rounds were fired.

A very successful Artillery Reglage was conducted with the 19th Field Artillery, Camp Bragg. Five problems were fired and no time was lost changing from one problem to another.

One Air Service Team conducted the first three problems and five minutes before they had finished a second team was in the air ready to finish the shoot without causing the slightest delay.

In problems 1 and 2 the targets which were cross roads about 1000 yards apart were fired upon by both Batteries at the same time at the call of the Observer. After these targets were demolished the two Batteries were trained on a new target - Infantry advancing. Approximately eighty four rounds were fired in these problems.

Problems 4 and 5 were adjusted by the second team which reported to Battery immediately after first team was ordered to leave. Both problems were zone fire with one Battery of 75 M.M. guns firing approximately a total of sixty four rounds. Two Batteries fired the fifth problem concentrating their fire of twelve rounds each for effect on one target.

This was a very successful week, both for the Artillery and the Air Service.

The difficulties and troubles experienced during the previous week were completely eliminated during this week's work. Some of the time only one plane was available for one day's shoot as the other two (we have only a total of three planes for Artillery work) developed trouble - one had to have the motor changed and the other the gas tank repaired. The equipment in the available plane was very carefully inspected and tested before each flight and luckily no trouble was experienced.

All communication between plane and battery was carried on without the slightest hitch. All radio both on planes and at ground station worked perfectly and the planes and Liaison detail performed their work in a very creditable manner.

An interesting and instructive Critique was held at the Officer's Club, Camp Bragg, Wednesday of this week, in connection with a very enjoyable dinner given by the Officers of the 5th Brigade. These Critiques and conferences have proved very instructive both for Artillery Officers and Air Service Officers.

Major H. G. Clagett, Department Air Service Officer who was visiting Pope Field, left for Washington, D.C. to attend a conference.

Captain C. W. Howard, Commanding Officer of Pope Field, and Lieut. Rex. K. Stoner, Flight Commander had a very successful flight to Washington, D.C. and return.

Airdrome, Sanderson, Texas,
90th Aero Squadron.

Weather for the last week has been favorable, though little practice flying has been engaged in due to the shortage of personnel and the extensive improvement work which is being carried on. Although this station has a total of only thirty five enlisted men, this work is being enthusiastically pushed forward with everyone expecting to see this place rated as the best border airdrome in the course of a few weeks.

Under the direction of Lieutenant McMullen, and only after an extensive search for over a radius of twenty five miles or more a mower was borrowed and on last Wednesday work was begun mowing the field, a timely thought, as the grass and weeds on parts of the field were beginning to get high enough to injure the tips of the propellers of ships taking off. The next week will see this work completed.

The late lamented radio section has been revived for the first time since cessation of patrols. The men are busy upon what will be the most efficient Air Service radio station in this Corps Area, with the exception of the high power tractor sets maintained for the Air Service by the Signal Corps. The antenna for this station has just been completed and hangs eighty feet above the level of the airdrome. The piles are marked by white flags and were placed in positions with a view to reduce the hazard to strange ships to negligible minimum.

Barrack building number two is fast nearing completion while the other permanent buildings are shining forth in new white paint, with green, making a very conspicuous landmark. The new steel hangars have been found quite a luxury after our struggles with the tent hangars and all hands are anticipating staying in bed these cold nights instead of persuading tent hangars that the ground was made to stay on during the winter storms.

The outstanding feat of the week, however, was the sensational landing made at Marfa, Texas by Lieutenants Woodruff and Fogarty, while participating in the annual manoeuvres of the Fifth Cavalry at that Station. Bystanders say that there was never seen a prettier landing than they made on a pile of gas drums while taking off. The Lieutenants said they took off in the usual manner over the drums and an unexpected settling of the ship in the light air of that region caused their stellar performance. Two mechanics have been sent to repair the damage.

Among our visitors this week were Captain Walton, Group Commander and Lieutenant Gaffney of El Paso, passing thru on their way to Kelly Field. Lieutenant Barnes in a DH Four was also serviced, being enroute from Kelly Field to El Paso.

Our wildcat mascot, which made good its escape some time ago has escaped the charge of desertion by returning to the fold and is again reposing peacefully in its box in the rear of the officer's club. They all come back to the Ninetieth.

Army Balloon School, Ft. Omaha, Nebraska.

A free Balloon flight made with Captain Henry C. White, as pilot and Captain A. C. McKinley, 2nd Lieut. T. N. House, 2nd Lieut. H. E. Weeks and Corporal H. Lang as passengers, proved very interesting.

The balloon left Fort Omaha at 1:16 P.M. going in an eastern direction and attaining a maximum altitude of 4,100 feet. The balloon was landed at 3:54 P.M. at Minden, Iowa. Homing pigeons were released at 3:00 P.M. and at the landing.

The flight was uneventful but interesting. This is the first free balloon flight ever taken by Lieutenant House who is a heavier-than-air man.

"The United States Army Balloon No. 1", official army entry in the National Balloon race from Birmingham, Alabama on September 25th, 1920, was shipped the early part of the week.

Airdrome, Nogales, Arizona.

Headquarters and Flight "B", 12th Army Observation Squadron.

Lieutenants Baez and Pascal from the photographic section, stationed at El Paso, stopped over night at this Airdrome Wednesday returning the following day. Lt. Wolfe accompanied them on the return trip.

"Billy" Rahn, former Lieutenant in the Air Service, brought a Standard plane equipped with a six cylinder Liberty motor to this Airdrome, which he intends selling to the International Aviation Company at Nogales. Mr. Rahn has been engaged in flying for civilian concerns since his discharge from the army

in the early part of 1919, but expects to retire from the flying game as soon as the sale of his plane is completed.

Mr. Wright of Tucson, also had a Standard plane at this field on Labor Day which was used for carrying passengers at ten dollars a ride. The ride consisted of a trip around the airdrome at an altitude of approximately two hundred feet, and lasted about eight minutes. A number of citizens of Nogales took advantage of this opportunity and are now full fledged aviators.

Chanute Field, Rantoul, Illinois.

Major John N. Reynolds, commanding this field, made a flight to Scott Field, Belleville, Ill., September 7, on official business. Major Reynolds made the flight in an SE-5 airplane.

Major Reynolds and Lieutenant Jack Greer flew to Chicago recently in a Curtiss JN4-H airplane, making the trip in one hour and five minutes. Major William C. McChord, Department Air Service Officer, returned to Chanute Field with Lieutenant Greer the same day. The return trip against a head wind was made in one hour and forty-five minutes. Major McChord returned to Chicago by airplane, accompanied by First Lieutenant Charles M. Leonard. The use of the airplane, for the return trip, enabled Major McChord to keep an appointment with Major General Charles T. Mencher and Brigadier General William Mitchell, which would have been impossible for him to keep, had it been necessary for him to depend upon railway service for his transportation. Major Reynolds and Lieutenant Leonard then returned to Chanute Field, making the trip in one hour and twenty-five minutes, there being very little wind. On these trips the field of the Aero Club of Illinois was used. This field was formerly a Government flying field known as Ashburn Field. It is an excellent four way field, equipped with hangars and necessary supplies. However, the experience of the pilots making the trip to Chicago via this field indicates that if aerial transportation to centers of population, such as Chicago, is to be a success, a better location for landing field must be provided. The trip via automobile from Ashburn Field to the business section of Chicago consumes practically as much time as the one hundred twelve mile flight from Chanute Field to Ashburn Field. The old landing field used by the army and aerial mail service, in Grant Park, provided a central location accessible to all important points within the City in a fifteen minute trip. While this field had a number of defects as a landing field, and the reasons for discontinuing its use were excellent, it is unfortunate that no action is being taken to provide a suitable landing field on the Lake front near the heart of the City. It would seem that such a landing field could be prepared on a portion of the made land, which is included in the new water front parkway scheme. Such a field would provide an excellent air port, both for land planes and hydroplanes, and would be a stimulus to commercial aviation in the vicinity of the city of Chicago. Its cost would be slight compared with the advantages to be obtained from a centrally located air port. It would be, to aerial travel what the Chicago Municipal Pier is to steamship travel, and should be similarly located.

The assembly of the new DH-4B airplane has been completed and several test flights have been made by Major Reynolds. The performance of the ship on the test flights has been very satisfactory.

Mr. H. A. Collison and Mr. Bates, of the St. Louis Aircraft Corporation, arrived at Chanute Field this week. They were accompanied by Mrs. Collison and Mr. Wm. Graham, pilot and mechanic. After making minor repairs on their planes, they proceeded to southern Illinois, where they have been engaged in passenger carrying.

ANTARTIC AIR EXPEDITION

The British Imperial Antarctic Expedition under command of John L. Cope plans to start from England this month to the South Pole by air. Cope hopes to make a dash for the world's axial point in December. This expedition carries the first airplane to the Southern continent. They expect to be gone four or five years. The large plane, which is to be piloted by Capt. G. H. Wilkins, British Air Forces, is equipped with skis instead of landing wheels. It will carry two passengers, food for a month, and photographic gear. Mr. Cope plans to use airplanes extensively for photographic chart and aerial mapping. Besides mapping the country, their purpose is to locate minerals which are believed to be hidden there. It is known that there is coal, marble and some rubies in this region. He thinks he will also be able to locate the breeding places of the South Atlantic whale.

The expedition will keep in touch with civilization through a powerful wireless station, which is to be built at Macquire Island.

(Vancouver Sun 9/6/20)

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TRAINING FOR JAPS

Report from the Nichinichi newspapers is that the Japanese navy department has secured the services of thirty British flyers as instructors in the Japanese navy. They expect to open a big flying field early in 1921, and then the training will begin. The Japanese have estimated the expense of the British training to be about \$3,000,000.

It is said that Col. Faure, who headed the French army aviation mission in Japan recently, recommended the British for this work, declaring that the "British naval flyers led the world in aviation".

The French themselves are disinclined to fly with the Japanese, it having been stated that they consider them "unsafe air companions".

(Tokio News in the Chicago Tribune 9/13/20)

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"NEW WING STRUCTURE"

The new wing which is being introduced by the Handley-Page Company has become of much interest in British Aeronautical circles. It is of a new departure in structure which increases its lifting capacity, without increasing wind resistance or decreasing speed. It is claimed that a plane equipped with this wing can carry a greater load than a machine with the ordinary wing. The Handley-Page wing is not sufficiently developed for immediate application to large commercial machines. Mr. Handley-Page says: "We do not need to build larger planes or install more motors. We have discovered a means to carry a greater load with the same wing surface, through re-designing the wing".

(N. Y. World, 9/12/20)

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The first flying school for women has been opened in England, where an aspirant may learn all the ins and outs of aviation for a fee of \$500.

(N. Y. Tribune 9/15/20)

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A search is being made for a large hydro-aeroplane which was last seen over the Alps in the St. Gothard region last week. It was on its way from Italy to Finland piloted by an Italian aviator and with a Finnish officer as passenger. It is believed that the plane has fallen into an abyss. Aviators are searching the heights and Swiss guides are exploring other stretches of the mountains.

(N. Y. Times 9/16/20)

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HERE AND THERE WITH THE EDITORS (CONT'D)

The inhabitants of the little island of Runo in the Baltic Sea recently had their first news that the Allies had won the war through Lt. Lee D. Butler, of Dunmore, Penn., the first American to set foot on the island and the first outsider to reach there since it was cut off by floating mines in 1915. Lt. Butler flew there from the American Red Cross Headquarters at Riga about sixty-six miles away. His purpose was to investigate conditions among the marooned people. He reports that medicine and Hospital supplies were entirely lacking, but aside from these the community was self-supporting in every sense of the word.
(S.F. Chronicle 8/8/20)

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An example of the success of planes as news bearers was demonstrated recently when the Varney-Lincoln plane employed by the San Francisco Call breezed into Santa Cruz with the results of the Dempsey-Miche championship match, in two hours less time than it could have been taken by train.
(San Francisco Call 9/7/20)

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The International Aeronautic Congress which is in session at Geneva, Switzerland, under the presidency of Prince Roland Bonaparte, has officially ratified several records, among them the record of 307½ kilometers per hour made by Sadi Lecoq, the French Aviator at Villacoublay. For successive looping the loop by M. Fronval 962 times an award was also made.
(Detroit News 9/12/20)

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/// EXPERTS FOR ACCIDENT INVESTIGATION

Aerial passenger transport has come into existence, but some of us still gaze with wonder at aeroplanes in the mere act of flying. Road accidents with loss of life are increasing, and we may offer the inquiry as to whether aeroplane accidents are relatively more numerous than were the disasters in the early stages of motor cars. We know that the air is a new field of danger to human life. Mishaps may be due to defects of skill or of conduct, to unwise or inefficient regulations, to the condition of the road or aerodromes, to the absence of proper danger signals or directing marks, to imperfections in design or construction of machines.

At present there seems to be no adequate provision for full inquiry when an accident occurs. An inquest follows, but coroners cannot be expected to have the technical knowledge requisite for a full inquiry. The sifting of railway accidents by impartial experts has been carried on for many years with zeal and efficiency, and undoubtedly has been a great public safeguard, and has led to the detection and removal of many remediable sources of accidents. We should be reluctant to ask for a new government for this purpose; at most a single new assistant with some knowledge of motors and aeroplanes is all that is required. His business would not be to suggest improvements in construction, but to observe, classify and report.
(London Times 9/2/20)

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AIR COURIERS AT RIGA

The Polish delegation which is assembling at Riga to discuss peace terms with the Bolsheviki are arranging for an airplane courier service between Riga and Warsaw while the conference is in session. This stands out in striking contrast with the lack of communication between Warsaw and Minsk, where the first conference was held.

(N. Y. Times 9/18/20)

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USE OF GERMAN PATENTS

"It is reported from Washington that when Congress re-convenes aircraft manufacturers will apply to Congress for the granting of permission for private airplane concerns to utilize certain German patents that are considered indispensable to progress in designs which have been turned over to the War Department by the Alien Property Custodian". The manufacturers say that these patents will advance commercial construction by 100 per cent.
(N. Y. World 9/12/20)

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15,000 MILE FLIGHT

Two British aviators are credited with having recently made a 15,000 mile flight. Lieutenants Parer and McIntosh flew from England to Australia in a DeHaviland one-engine plane.
(London Times 9/2/20)

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SEAGOING AIR FLEET ESTABLISHED

As a result of recent maneuvers off the south eastern coast of Cuba, we have now a seagoing aerial fleet as a permanent part of our Navy. This fleet was made up of six big flying boats of the F-5L type, scouting planes of the float-equipped type, of which there were four, and the U. S. S. "Shawmut", which served as a mother ship to the nine aircraft. The "Shawmut" picked up the scout planes at Hampton Roads and proceeded to Guantanamo Bay. The flying boats left the same day and after making stop for fuel at Miami, Fla. they reached Guantanamo Bay, having covered the distance of 1,500 miles in 32 hours. Work of the fleet was in four parts: Bombing practice, reconnaissance (enjoyed as real sport), spotting the fire of big guns, and cooperation with the submarine flotilla, in offensives against an enemy fleet reported in the vicinity. The business of the fleet on these occasions was to locate the hostile force then to report the position course and speed to the commander of the submarines by radio.

Kite balloons also played an important part during the maneuvers off Guantanamo. An interesting photograph snapped during the time shows the peculiar basket. Two men getting ready to make the ascent, one is inside the basket, the other is climbing up the ladder to the basket. Each man had a parachute, one of which is seen hanging from the basket.

(Popular Mech. Magazine September & October, 1920).

AIR SERVICE NEWS LETTER

Information Group
Air Service

October 16, 1920.

Building B
Washington, D. C.INFORMATION OBTAINED FROM OPERATIONS REPORTS
OF TACTICAL UNITS FOR WEEK ENDING - SEPTEMBER 18, 1920STATIONS, FLYING TIME AND AVAILABILITY OF PLANES

<u>NAME OF SQUADRONS</u>	<u>LOCATION</u>	<u>Flying Time</u>	<u>Planes On Hand</u>	<u>Planes Avail.</u>
1st Aero - Obs.	Mitchel Field, Mineola, L.I., N.Y.	10:05	17	14
2nd " - "	Fort Mills, P.I.		No report	
3rd " - "	Camp Stetsonburg, Pampanga, P.I.		" "	
5th " - "	Mitchel Field, Mineola, L.I., N.Y.	14:00	15	10
2nd Obs. Group (4th & 6th Sqdns.)	Luke Field, Ford's Is., H.T.		No report	
7th Aero - Obs.	France Field, Panama, C.Z.	24:05	161	14
8th A " - Sur.	McAllen, Texas	12:05	13	7
9th Aero - Obs.	Mather Field, Sacramento, Calif.	189:20	32	22
10th & 99th "	Bolling Field, Anacostia, D.C.	67:42	21	12
11th Aero - Bomb.	Kelly Field, San Antonio, Texas	16:35	5	3
12th-A Aero - Sur.	Douglas, Arizona	10:10	2	
12th-B " - "	Nogales, Arizona	18:20	9	4
20th Aero - Bomb	Kelly Field, San Antonio, Texas	11:55	5	2
27th Aero - Pur.	Kelly Field, San Antonio, Texas	17:00	24	9
50th " - Obs.	Langley Field, Hampton, Va.	14:10	19	11
88th " - Obs.	Langley Field, Hampton, Va.	15:25	13	6
90th-A " - Sur.	Del Rio, Texas	5:30	8	7
90th-B " - "	Sanderson, Texas	32:55	9	9
91st-A - "	Eugene, Oregon		No report	
91st-B " - "	Rockwell Field, California	23:25	8	7
94th Aero - Pur.	Kelly Field, San Antonio, Texas	17:55	24	9
95th " - "	Kelly Field, San Antonio, Texas	14:50	24	13
96th " - Bomb.	Kelly Field, San Antonio, Texas	19:54	8	5
104th-A Aero - Sur.	Fort Bliss, Texas	22:10	18	7
104th-B " - "	Attached to 135th-B, Post Field, Ft. Sill, Okla.		No report	
135th-A Aero - Obs.	Fort Leavenworth, Kansas	26:55	8	7
135th-B " - Obs.	Post Field, Fort Sill, Okla.	73:15	8	7
147th " - Pur.	Kelly Field, San Antonio, Texas	15:33	25	6
166th " - Bomb.	Kelly Field, San Antonio, Texas	6:25	5	4
258th " - "	Aberdeen Proving Grd., Aberdeen, Md.	8:08	34	24
Air Service Troops	Camp Benning, Ga.		No report	
" " "	Godman Field, Camp Knox, Ky.	23:45	20	5
" " Detach.	Pope Field, Camp Bragg, N.C.	2:10	22	3
Hdqtrs. Det.)				
1st Bomb. Group)	Kelly Field, San Antonio, Texas	47:55		8
		759:07	557	235

MISCELLANEOUS

The report from the 10th and 99th Aero Squadron from Bolling Field shows 5 DH's, 2 SE-5A's, 1 Curtiss and 1 Fokker flew in conjunction with the Artillery, Infantry and Tank Corps during a sham battle held at Camp Meade, September 17th.

MISCELLANEOUS. (Cont'd.)

France Field, Panama.

Arrangements have been completed to co-operate with the Coast Defenses of Cristobal in numerous firing problems which are to be carried out during the next four months. The problems will begin on September 21st when forty rounds will be fired from 4.7 Howitzers on railroad mounts. There will be problems on the next seven successive week days, involving in all the firing of about 400 rounds at both stationary and moving targets. Later there will be firing from the 12 inch guns. Both radio telegraph and telephone will be used during this firing.

Mitchel Field, Mineola, L.I.
5th Aero Squadron.

On September 15th photographic studies of the underwater formation of Jamaica Bay were successfully carried out. Studies were also made of the adjacent coast line. This work was done in connection with the preparation of certain papers which will shortly be put into print for the United States Geodetic Survey.

"TACTIC OPERATIONS, INSTRUCTI AND MISCELLANEOUS ACTIVITIES
BY FIELDS AND UNITS"
BORDER STATIONS

STATIONS	SQUADRONS	PERCENTAGE DAYLIGHT	TOTAL NO. FLIGHTS	PRACTICE FLIGHTS	SPECIAL MISSION	CROSS COUNTRY	PA-TROL	TEST	PHOTO	SURVEIL-LANCE	ARTIL-LERY	FOREST PATROLS	RECON NAISS.
Ft. Bliss, Tex.	104th - Flight A	100%	36	31		1		1	3				
Del Rio, "	90th " "	100	8										
Douglas, Ariz.	12th " "	100	8	1		2	2	3					
Eugene, Oregon	91st " "	N O	R E P O R T										
McAllen, Tex.	8th " "	100	8	1	4			3					
Mather, Calif.	9th Aero	100	92										
Nogales, Ariz.	12th Aero Flt. B	100	59										
Sanderson	90th - Flight B	100	28		15			5					
Rockwell	91 Aero	100	20										
Aberdeen	258th Bombardment	100	21										
Bolling	10th & 99th Obs.	100	15										
Camp Benning	A.S.D.	N O	R E P O R T										
France Field	3d & 7th Obs.	90	44	36				4					
Ft. Leavenworth	135th Flight A	75	68										
Godman	A.S.D.	85	35	10		1		16	4		4		
Kelly Field	1st Bombardment												
"	Headquarters Detach	100	186										
"	11 Aero.	"	70										
"	20 "	"	38										
"	26 "	"	15										
"	160th "	"	14										
1st Pursuit Group		100											
	27 Aero	"	34										
	94 "	"	67										
	95 "	"	49										
	147 "	"	37										
Langley	50 Aero	100	13			2			1				6
"	88 "	"	28										
Luke Field	2-4 & 6 Obs.	N O	R E P O R T										
Mitchel	1st Aero	94	16										
"	5th Aero	"	20										
Post Field	135th Flight B	100	134										
Pope Field	A.S.D.	100	9										
"	8th Aero F B	100 N O	R E P O R T										
Philippines	2 - Aero	N O	R E P O R T										
"	3 - Aero	"	"										

IONS, INSTRUCTI AND MISCELLANEOUS ACTIVITIES
 BY FIELDS AND UNITS"
 BORDER STATIONS

ROSS COUNTRY	PA-TROL	TEST	PHOTO	SURVEIL-LANCE	ARTIL-LERY	FOREST PATROLS	RECON-NAISSANCE	RADIO	METRO-LOGICAL	BOMB-ING	PARACHUTE FLIGHTS	ACRO-BATIC	DUMMY BOMBS RECEIVED	FORMA-TION	CAVALRY LIAISON	MISCELLANEOUS
1		1	3													
2	2	3														
		3														
		5													8	
		4								1				3		
1		16	4		4											
2			1				6									

Infantry Manawers

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE OCTOBER 23, 1920.

NATIONAL ELIMINATION BALLOON RACE

As a preliminary to the International Balloon contest for the Gordon Bennett trophy which will be held in Birmingham, Alabama, October 23, the National Elimination race held in that city September 25 is of special interest. It was this race that determined two of the three entries from the United States in the International contest, the world championship being already held by an American, Ralph H. Upson of Akron, Ohio, winner in the last race held - 1913 - when he flew from the Tuilleries Gardens, Paris across the English Channel, landing at Bridlington, England, a distance of 400 miles, with a duration record of 43 hours and 20 minutes in the air. Regardless, therefore, of his position as third in the elimination contest, Upson will captain the American team in the International competition against three entries from France, three from Italy and one each from Great Britain and Belgium.

First place in the elimination race, however, was won by Homer E. Honeywell, with Dr. Kingsbury as aid, who piloted the "Kansas City II", covering a distance of 700 miles. Lieut. Richard E. Thompson with Lieut. Harold E. Weeks, aid, took second place for the Army, covering 690 miles in the "Omaha No. 1", while Upson, piloting "Goodyear II" came third with 620 miles.

"The Omaha No. 1" which will be one of the competitors for the International trophy, is an Army product, having been built at the Omaha Balloon School, and has a gas capacity of 80,000 cubic feet.

Interest in the elimination race never lagged in spite of the difficulties that delayed its consummation. It was announced early in the year by the Aero Club of America under whose auspices the contest was held, that the race would take place at Speedway, Indianapolis, Ind., Sept. 11. Owing to a shortage in coal gas, it was found imperative to change both the date and the location, tentative announcements being made later for White City Park, Chicago, but these plans also were abandoned. Not until September arrived was it definitely decided to hold the contest in Birmingham, Alabama.

Meanwhile, the War Department through the Training and Operations Group of the Air Service, expressed its vital interest and hearty co-operation by entering three balloons, "Goodyear Army No. 4", "Goodyear Army No. 2" and "Omaha No. 1", in charge of six officers: Capt. Dale Mabry, 1st Lieuts. Byron T. Burt, Robert S. Olmsted, George W. McEntire, Richard E. Thompson, and 2nd Lieut. Harold E. Weeks. The Navy made one entry in charge of Lieut. Raafe Emerson, and the original list of fifteen included the following civilians: A. Leo Stevens, instructor U.S. Army Balloon School, Omaha; Ralph H. Upson, of Akron, Ohio; H.E. Honeywell, Clayton, Mo.; W. A. Assman, representing the City of Little Rock, Ark.; Roy F. Donaldson, Springfield, Mo.; Warren Rasor, Brookfield, Ohio; and J.S. McKibben, Arthur C. Haskin, Capt. J.H. O'Reilly, E.S. Cole, Bernard Van Hoffman, all of St. Louis.

The list of fifteen narrowed to twelve, of which eleven only made the start on Sept. 25, entry No. 6 piloted by William A. Assman, Capt. J.M. O'Reilly aide, broke the netting and failed to ascend.

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In the take-off "Goodyear Army No. 4", Lt. McEntire, pilot, drew second place; "Goodyear Army No. 2", Lt. Burt, pilot, third; and Lieut. Thompson, flying "Omaha No. 1", fourth.

The money prizes for the elimination race were; first, \$500; second, \$300; third \$200.

From the publicity officer of Omaha Balloon School comes the following interesting first-hand report.

Captain Harold E. Weeks, A.S., and First Lieutenant Richard E. Thompson, A.S., pilot of "U.S. Army No. 1" spherical balloon, arrived at Fort Omaha the night of Oct. 2 after a very thrilling and interesting flight to Ridgetown, Ontario, Canada. The two balloonists left Birmingham Sept. 25 at 5:05½ P.M. with an 80,000 cu. ft. balloon, being the fourth entry to start, and landing at 9:14 A.M. Sept. 27 at Ridgetown; flight duration, 40 hours and 10 minutes; approximate distance, 690 miles. An official check of the distance has not as yet been made, however, it is known that Lieut. Thompson won second place by landing one and one twelfth miles shorter distance than Mr. H. E. Honeywell of Kansas City.

But for the handicap placed upon the balloonists by a man who thought he was aiding them, they probably would have won the race. When they were crossing Indiana at a very low altitude a man noticed their rope trailing on the ground. Thinking they were trying to land, he caught the rope, hurriedly made a knot in it, and held on to it until he was obliged to let go. This knot made a serious obstruction for it caught on trees and fences, sometimes bringing the balloon up with a sharp jerk that would almost throw the occupants from the basket.

While crossing Lake Erie the rising sun expanded the gas and caused them to shoot up several thousand feet. Then a down draft caught them and the balloon dropped almost to the water. Before they could throw out ballast enough to check their descent, they were within two feet of the water, so close, in fact, that the life-preservers attached to the basket struck the water. After throwing overboard more ballast and more equipment the balloon rose until they were across the lake. On reaching Canada, the balloon began to descend once more and they threw out life-preservers, seats, clothing and canned goods of the most expensive kinds. But for the fact that they were heading back to Lake Erie they would have gone on. However, the narrow escape from a cold plunge in the lake caused them to look askance at the prospect of again going over the water.

Another incident of the trip was a man firing a revolver at them as they were passing over Indiana about 300 feet from the ground.

While watching the gathering of a storm from its inception they noticed a little cloud which took the form of a vortex which seemed to draw other clouds until the mass took the anvil shape of a true storm cloud. When they saw the clouds gathering they ascended to a height of 20,000 feet and there, riding a cumulus cloud, watched the phenomenon. Later, they found it advisable to rise to 30,000 feet to keep above the storm. At this height they found it difficult to breathe and the cold was intense, nevertheless, they remained up at that altitude more than an hour.

The first night out, at about 2:30 A.M., and at an altitude of 6000 feet they noticed a balloon passing beneath them and going at a much faster speed than they were. Thereupon they descended into the faster current of wind. Shortly after, they espied another balloon laboring along overhead in the slower current.

This race qualifies Captain Weeks and Lieutenant Thompson for the International Race to be held October 23, starting from Birmingham, Alabama.

Interest will now reach forward to the International Race October 23. The winner of the trophy in the International event will decide where the next contest is to be held, and it will be a matter of national moment to have the race of 1921, also, held in the United States.

LIEUT. CHARLES B. AUSTIN'S
DARING UNDERTAKING

It is difficult to conceive a feat of more clean-cut, sportsmanlike fearlessness than that of Lieut. Charles B. Austin, Air Service, who, at 6:30 A.M., Oct. 6, absolutely alone in a remodeled De Haviland-4 B airplane, left France Field, Panama, for Washington, D.C., a flight of 2439 miles, a total of 1350 of which would be over-sea flying in hops of 650, 450 and 250 each. To add to the hazard of the undertaking, Lt. Austin's machine was without radio equipment.

The fact is simply this: Lieut. Austin, in a machine built for over-land flying, took the air as a sea-bird flies, winging his solitary way across the Caribbean Sea for a straightaway flight of 650 miles to Kingston, Jamaica. From Kingston another hop of 450 miles would bring to Havana, Cuba, thence, 250 miles across the gulf to Carlstrom Field, Arcadia, Florida, after which the journey would become overland 380 miles to Souther Field, Americus, Ga., 350 to Fayetteville, N.C., 200 to Langley Field, Hampton, Va., and 159 to Washington, D.C.

The remodeling of the plane was made in accordance with Lieut. Austin's own ideas, and under his direct supervision. Four oil tanks were installed directly under the engine, and emergency oil and gasoline tanks were placed in the upper wing of the center section. In the back of the engine, and including the forward cockpit, were installed a series of gasoline tanks so connected that the level of the gasoline in the forward and rear tanks is always the same. By this arrangement gasoline would be available from any of the three tanks as desired, without affecting the balance of the plane in the slightest degree.

The remodeled plane has a capacity of 225 gallons of gasoline and 18 gallons of oil, the total weight of which is, approximately, 1500 pounds. It was estimated that with this fuel capacity he could make a non-stop flight of 1000 miles. In a final test under full load made several days before the take-off, the machine functioned perfectly with the propeller working at 1500 revolutions per minute. The plane is equipped with the Liberty engine which has very few instances of failure to its credit, and is constantly adding new laurels to the service.

Details of the flight are meagre, as no Panama Mail has arrived since, but telegraphic reports state that Lieut. Austin left Canal Zone at 6:25 A.M., Oct. 6, returning to France Field after 10½ hours of flying, having completed over 400 miles of the trip when heavy storms damaged his propeller, forcing him to turn back, no further attempt being made.

This flight proves conclusively that a wooden propeller, notwithstanding the fact that it is covered with doped fabric, cannot be depended upon in stormy weather. The wooden propeller, revolving at the rate of 1500 revolutions per minute simply chews the fabric to pieces and cuts the propeller itself into bits. When Lieut. Austin returned to the base at France Field, it is stated, the propeller looked as though it had been chopped with a hatchet. This would not have happened, had his plane been equipped with a Bakelite, or so-called Micarta propeller which has recently been developed by the Air Service. The propeller, when made, is poured into a mold between layers of fabric and then compressed under high pressure.

Under a 24 hour whirling test, with a stream of water projected against the Bakelite propeller, it showed, practically, no evidence of strain, the only damage done being the roughening of the paint. With this propeller, Lieut. Austin could have battled with the elements indefinitely so long as his gas lasted.

Lieut. Austin enlisted in the Air Service in October, 1917, and completed his flying training at Rich and Ellington Fields. He also served overseas with the 140th and 92nd night bombardment squadrons, and participated in many notable events in the World War. Upon his return to the United States he was ordered to Panama, his present station. Lieut. Austin's keen interest and enthusiasm in his great adventure were shared by his wife and three sons.

The following cablegram was sent to Lieut. Austin by Gen. Charles T. Menoher, Chief of Air Service, Oct. 9: "The Chief of Air Service extends to Lieut. Austin congratulations and appreciation of gallant effort against great odds in attempting flight to Jamaica".

CADET LOST IN THE DESERT
FINDS WAY TO CIVILIZATION.

Lost over desert country in the vicinity of Superstition Mountain, his gasoline tank dry, and forced to land, Cadet Walter C. Reames of Perfection, Mich., was returned to March Field Monday, noon, after three days of trying experience. After two days wandering about the desert, Reames reached El Centro in the Imperial Valley, about an hour before the arrival of Lieut. Harold Brand and Sergt. Clyde Taylor, who had been sent out on an aerial search for him and his plane when, after twelve hours, he was reported missing.

Leaving March Field in squadron formation with five other cadets early Friday morning, Reames lost his course, and instead of making San Diego, he flew southeast until forced to land when his fuel supply was exhausted. He stayed with his ship, so it is reported, without food for nearly 24 hours, drinking water from the radiator of his plane to quench his thirst.

Saturday afternoon he started out across the burning desert sand to find a highway, but, after two hours, returned to his ship for more water. Finding two bottles nearby he filled these with water and at night-fall and with a full moon again set out to locate civilization. After wandering aimlessly over about 50 miles of desert country he came upon an irrigation ditch about noon Sunday. The temperature, incidentally, registered 130 in the shade and no shade available.

Following the irrigation ditch, Reames reached the highway leading into El Centro to which city a passing motorist carried him. Famished for food and with parched lips he was given first aid treatment by natives of the town.

Meantime Lieut. Brand and his observer had located the lost plane but could not find Reames. They had spent Saturday night at Calexico on the Mexican border and in addition to an aerial survey of the desert country, secured the services of a troop of cavalry which started in search of the lost pilot.

Business men of the valley had raised a fund of \$1,000 which was offered as a reward for the party which might locate Cadet Reames. Shortly after noon Lieut. Brand and Taylor landed at El Centro. They were advised of Reames' safety and all three were placed under the care of a physician. With swollen tongues, parched lips and empty stomachs both Reames and his searching party had suffered privations.

Monday morning with the fuel supply replenished it was possible to fly both ships back to March Field, with no further damage than a flat tire.

NEW EDUCATIONAL AND VOCATIONAL SCHOOL OPENED AT ROSS FIELD

A new school for educational and vocational training, will be opened at Ross Field. This school will be different from any previously conducted here inasmuch as it offers more thorough and complete courses of training than has been possible heretofore.

The school year will comprise 640 hours, 3½ hours a day, 5 days a week allowing two months for a summer vacation. Each man may take one or as many subjects as he wishes and with the successful completion of each course a certificate of proficiency will be issued.

The work will be divided somewhat as follows: There is to be a basic course for men who cannot read and write English, or who do so in a poor way only. A more advanced course is offered for those who have completed the Americanization course, for those who wish to review their education in a general manner and for those who wish to study a trade but find that their education is not sufficient to enable them to progress with the greatest degree of rapidity. For men who wish to prepare themselves for high school or college work, course in elementary and advanced electives are to be given.

In the vocational line a considerable variety is offered and the list will be added to from time to time. The following vocations are included: Automobile, Business, Radio, Telephone, Blacksmithing, Music, Photography, Canvas working, Cordage Working, Tailoring, Gas Production, Carpentry, Lino Work, Drafting.

These courses are to be taught by the "Job Sheet Method" which does away with the old time tiresome theoretical method of teaching and presents the course in a new and practical method by which the student is constantly learning by actual practice. The time that each course will take depends almost entirely on the interest and effort that each one puts into his work.

AIR SERVICE DETACHMENT, ABERDEEN PROVING GROUND

1st Lieut. Joseph E. Hall, formerly a 1st Lieutenant, Ordnance Department, was appointed a 1st Lieut. Air Service, and is to be stationed here according to his notice. He was Armament Officer with the 88th Aero Squadron, overseas.

Sgt. Laurens Claude, a 2nd Lieutenant, Air Service, and for the past year an enlisted man in the 258th Heavy Bombardment Squadron, has received notice of his appointment as 2nd Lieutenant, Air Service, Regular Army, and is assigned for duty at this station.

The Photographic Section has made a mosaic of the Main Range, Water Range and Plato Range at this station, also the Balloon Field. We are now working on, and well under way, with a mosaic of the whole reservation. This is quite a task as all we have to do it with is a four by five plate camera.

In order to take advantage of the natural opportunities at this Field and for the promotion of morale, recreation and sports of Air Service troops, steps are being taken to provide facilities for duck shooting this season. It is intended to turn out decoys on the shaper, from salvaged cypress and later to construct sink-boxes and blinds. The famous Susquehanna Flats, which are located adjacent to this Field, furnish the best duck shooting in the world, not only from the standpoint of numbers, but also as pertains to quality.

AIR SERVICE MECHANICS SCHOOL, KELLY FIELD, TEXAS

This month saw the fiftieth successful parachute jump made under the direction of this school. Nine jumps have been made this week, mostly by the student officers who are completing their Engineering Course. The last jumps took the form of a double pull-off from the upper plane together with a jump from the cock-pit of a D.H.4-B. The jumpers were all dropped within ten seconds of each other and landed approximately two hundred feet apart. The following named men, including the last two who are Instructors in the Course for Parachute Repairmen, made successful jumps this week:

2nd Lieut. E. L. Eubank	
2nd Lieut. R. C. Milyard,	2nd Lieut. E. A. McReynolds,
2nd Lieut. James J. Doolittle	Staff Sgt. G. A. Shoemaker,
2nd Lieut. L. L. Biery,	Staff Sgt. F. A. Kamensky

A special demonstration in parachute work was given for Lieut. Colonel James E. Fechet, Corps Aeronautical Officer, in the form of a double pull-off from the upper plane of a ship. Lieut. Colonel Fechet rode in the rear cockpit. The demonstration was entirely successful in every detail and met with the approval of the Colonel.

The First Day Bombardment Group successfully flew a Caproni bi-plane this week. The gas capacity of this ship has been increased to nine hours. This work has been carried on under the direction of Mr. D. H. Cramer, an instructor in this school in the course for Airplane Mechanics. All tests and flights with this machine equipped with the new gas system have proved entirely satisfactory.

Candidates for the Football Team have been trying out for the past week. As yet no team has been picked and practice has been confined mostly to conditioning the men. The Air Service Mechanics School has over nine hundred men to draw from, and Lieut. C. A. Sullivan, Athletic Officer, feels confident of a very good team for this season. Interest in athletics is reviving with the coming of cooler weather. An enthusiastic rally was held September 17th. All officers and a large number of enlisted men were present. Plans for the coming season were discussed. After an opening address by the Chairman, Captain Stratemeyer, the meeting was turned over to the crowd for open discussion and suggestions. Many impromptu speeches were made and the pithy remarks of the speakers stirred the assembled throng considerably. At the close of the rally football held an important place in the minds of those present. It is expected that this school will be able to show some very keen competition to every opposing team who cares to tackle us.

NO SPEED TEST MADE ON VERVILLE PACKARD

The statement has been made that tests of the VOP-Racer at McCook Field prior to shipment to France for the Gordon Bennett Race, showed that the airplane developed a speed of 190 miles an hour, and that this speed has been checked and verified by the Engineers at McCook Field. This statement is an error, as no speed tests were made on the airplane. The figure of 190 miles having been obtained solely by very approximate mathematical computations.

FLIGHT FROM BARRON FIELD TO KELLY FIELD

During this week, Lieut. Henry E. Wooldridge and Paul H. Prentiss, flying a DeHaviland 4 D, flew from Barron Field to Kelly Field, San Antonio in an hour and forty-five minutes; this is the fastest time ever reported between these two points.

FLYING TIME AT MARCH FIELD FOR ONE WEEK

Here's "atmospheric" proof of the assertion that California is the best place in the United States to fly. At March Field, Riverside, Calif., during the week of September 20th, 760 flights were made. Seventy-one ships were used and a total of 790 hrs, 55 min. consumed, approximate distance covered being 52,415 miles.

Preliminary instruction of flying cadets consumed 479 hrs, 50 min.; miscellaneous flights, 75 hrs, 25 min., and test flights 6 hrs, 50 min.

SIXTY GRADUATES AT MARCH FIELD

Flying cadets of March Field, California, who are nearing completion of their preliminary course are being called before an examining board for classification as to their specific qualifications for advanced training. About 60 men in the class will graduate within the month. Orders will then be requested of the Adjutant General for their transfer to pursuit, bombing and observation schools. It is proposed, however, to request that about 30 be retained at this field for a six weeks course as instructors.

U.S.Z.D. No. 1 Visits Washington

On Oct. 12, about the hour of 2 P.M., an unusual buzzing and humming was heard in the air, and presently spectators saw the largest airship in America, the great U.S.Z.D. No.1 sailing over Washington City. The ship had made the flight from Langley Field, Va., a distance of 159 miles in 2 hours, the occasion having been arranged by the Army Air Service for the purpose of having a series of moving pictures taken from the giant dirigible while in flight, the first attempt of its kind in America. In reality, there were three series of pictures being shot, one being made at Langley of the Z.D. No. 1 taken from another ship; another, a series of the terrain taken from the Z.D. No. 1 itself, and a third being a series of shadow pictures shot from the big ship and showing the shadows made by itself in flying. These pictures, which will appear in the weekly news, will be of unusual interest.

The ship was in command of Capt. Dale Mabry, with Lieuts. Wilfred M. Clare and Geo. W. McEntire, and a crew of five enlisted men.

The Z.D. No. 1 is a non-rigid airship with a gas capacity of 328,000 cubic feet and a cruising distance of 902 miles. Its maximum speed is 60 miles per hour. The two engines are of the Renault Vee type, of 220 horse power each. The big ship has a length of 260 feet, height 49 and six tenths, width 38½ feet, with a carrying capacity of 25 passengers.

From Langley Field comes the report that the big dirigible, under the command of Capt. Mabry made a trip to Richmond where they maneuvered over the State Fair Grounds. Moving pictures of the complete trip were made by the Langley Field Photo Detachment, over 4,000 feet of film being exposed. During the trip a very high wind arose, but the return to the field was made without accident and the big ship was successfully landed and stowed away in her hanger. During the whole trip the ship was in constant communication with Langley Field by radio.

STATUS OF TRANSCONTINENTAL RACE FOR PULITZER TROPHY

It is definitely stated by the Aero Club of America that plans for the 1920 transcontinental race for the Pulitzer Trophy have been cancelled.

It is a matter of interest, however, to note that, at the solicitation of the Aero Club, Mr. Ralph Pulitzer has readily consented to make the Pulitzer prize a perpetual trophy for closed circuit airplane races to be contested for.

annually, in North America. In order to perpetuate the trophy, Mr. Pulitzer will give annually gold, silver and bronze plaques or medals to the winners of first, second and third places, the cup itself to be held for the period of one year by the Club whose entrant wins it.

While detailed announcements will be made at the proper time, the Aero Club expects the contest for the Pulitzer Trophy will be run over a closed circuit on September 4, 1921, for a restricted class of planes, requirements to be determined by the Army, Navy, and the Clubs contest and technical committees, with the object in view of developing new types of sportsman-training planes, which would be suitable for both land and water flights, and which would, in the event of adoption and large production by the Government, bring the price of the machine within the reach of the sportsman.

The advantage to the Government to be derived from such a race and from such results is self-evident, since it should develop a reserve force of personnel and of machines that would be of immense service in emergency.

COMPETITION AT LAST AROUSED

Despairing of evidences of competition the Air Service news letter item covering the hours flown by the 8th Aero Squadron at McAllen, Texas brings forth the following from the 91st Aero Squadron, Rockwell Field, Coronado, California.

"Comparison was drawn in a recent news letter between the 91st Aero Squadron and the 8th Aero Squadron in the number of hours flown. Compared to the 38,000 hours flown by the 8th Aero Squadron in the year the 91st Aero Squadron has flown over 6500 hours in the ten months since it has been organized. This of course, does not cover the tremendous amount of time flown by the pilots in the forest patrol last summer before the squadron was organized and should the time in the air for the 91st Aero Squadron be computed from the time that the 8th Aero Squadron was organized the total would be swelled from 800 to 1000 hours.

THE AIRSHIP IN THE PUGET SOUND COUNTRY NECESSARY ✓

The forestry maps of the country around Puget Sound show the mountains to be heavily wooded. Flat plots of ground free from trees are rare and are held at high prices. The lumbering interests in this country are extensive indeed. The weather reports show long periods of low hanging fog. In the summer and fall extensive smoke clouds make aerial navigation difficult. It would appear, therefore, that the future of the airplane in this country is not bright. Airplane landings in the mountains and in thickly forested countries are rare and forced landings over such areas would probably prove dangerous. The airplane must allow 1000 feet altitude per mile for emergency landings. Therefore in the Puget Sound country the aviator must fly high and by so doing he is unable to scrutinize the terrain minutely. The seaplane will be able to operate at intervals only. Therefore this locality is essentially an airship country. The airship pilot likes densely forested country to sail over since the boiling of the air is almost nil. Around mountains he can generally tell what the air is doing. The wind currents flowing toward the mountains will always carry the airship upward. Small clouds, smoke, etc., tell nearly all that is needed about the local currents. Lumber, of course, is very cheap which means inexpensive hangars. Cheap hangars at proper intervals mean excellent airship service. Power is also cheap which means cheap hydrogen for inflation. The lumbering interests and fisheries undoubtedly, will need airships and need them badly, while mail and passenger service, light freight, mill, power line, telephone line repairs, river surveillance, fire patrol, geological survey are functions which are within the sphere of the airship which would go a long way toward opening up that part of the country. Road building is very expensive in that region but with the opening up of inaccessible areas the country would develop very fast. The average American seems to be content anywhere on United States territory provided he

can get the daily news and knows that he can get out of the country on short notice at any time he chooses. It would certainly be an asset to these isolated regions, if each had airship service and a municipal hangar. Hangars in these parts would probably cost not more than \$10,000 and a five passenger airship would cost about \$30,000 and the investment would be quite reasonable if a dependable service could be established. The mining and lumbering interests will probably be the greatest beneficiary of the airship service.

The question of promoting an airship service in territory such as the Puget Sound country rests largely with the state and municipalities. Of course, it means the expenditure of a considerable sum of money to establish such a service but on the other hand it is worth it. As conditions are now it will take many years before this section of the country is even reasonably developed. With the opening of airship service it will most likely develop very rapidly.

SLOW FLIGHT THE BIG PROBLEM ✓

With aeronautical interest stimulated by the contest held at Paris September 27th, for the Gordon Bennett International Airplane trophy, and with Leconte's rate of 2.77 miles a minute in mind, it must not be forgotten that the real problem of aviation, in so far as it applies to civil and commercial uses, is for slow flight and not for speed. Safety first is of supreme importance in every enterprise, and, in matters of aviation, the element of security is, to the average man, almost as illusive as it ever was.

This is to say that human flight is still looked upon, by a majority of people, as a sort of marvel in acrobacy to be performed by daring youths for military purposes mainly, or as a thrilling and spectacular exhibition of personal skill. The reason for this point of view is, largely, a psychological one. The fear of the unknown and untried seems to be if not inherent in the human mind then so systematically instilled into it by false teaching as to have become second nature. Being, according to our conception of ourselves, earthbound, we cling exultantly to the earth, feeling safe, secure, free only so long as we stand upright upon its surface. Happy are we when we have gained a fuller freedom of feeling safe, secure in trusting ourselves to the less resisting element, water, but our real emancipation will arrive when we can, with a feeling of safety, trust ourselves to the most impalpable of the three elements, the air.

This emancipation of thought will come the more readily when the most baffling of the aviator's problems, that of slow flight, shall have been solved. Though every passing month- almost every passing week- brings news from one source or another of a new speed record, every mile per hour that can be knocked off the landing speed of an airplane adds just so much to the safety of human flight.

On August 3, at Martlesham Heath, the competition organized by the British Air Ministry produced some quite notable results in the low-speed tests from the point of view of progress in aviation. A maximum of 45 miles an hour having been chosen as the standard, in making the awards, the judge added or deducted points to a competitor's score according to whether he flew at a rate lower or higher than the standard selected.

The low speed of the Avro triplane, 240 horse power Sidderley engine, piloted by Captain Hammersley, was 51.5 miles an hour; the Vickers Vimy, two 375 horse power Rolls-Royce engines, Captains Cockerell and Broome, was 49.63 miles per hour, while the Sopwith "Antelope", 180 horse power Hispano Suiza, piloted by Hawker, got down to 43 miles per hour.

This way safety lies, and tests and competitions of this kind will do more than anything else to inspire confidence in aviation in the minds of the public.

"Will the airplane ever come into general use for transportation of passengers or freight or even for mails"? Ask the average man this and he will answer, "No", unless he, by chance is not entirely a disinterested party, for, unless all signs fail, aerial transportation is shortly to be diverted from its legitimate staid and conservative course and turned into all sorts of get-rich-quick schemes by herds of promoters who are acute enough to see their opportunity in the novelty and romance of the flying game.

But, back of these will be, of course, many safe and sane projects based upon conservative and perfectly scientific lines, and one of the best means to help in the development of such enterprises will be the lowering of the speed limit for human flight.

We easily recall how we thought of the automobile mainly as a menace to life and property when it first made its appearance on our thoroughfares. With its pulsating, high-powered engine and its unwonted speed intruding themselves aggressively into traffic, it became one of the tremendous problems of existence, and dire calamities came about and drastic laws followed before low speed, safety and entire confidence in this enormous factor in modern progress permitted it to find its rightful place in the scheme of modern life.

The story of the airplane will run on exactly parallel lines as that of the motor car. Having passed its actual experimental stage, it has proved its efficiency for military purposes and established its unique place in eliminating space where speed is the one thing of all others to be desired. Just as the telegraph and the cable and the wireless have become indispensable adjuncts to modern commerce, so, also, has the airplane. Lacking as it does the lightning speed of the others, it carries, as upon the wings of the morning, something that the wire and the wireless cannot carry and that the very spark - the spirit and soul - of commercial life, a man's signature.

So now it remains but to extend the usefulness of the airplane by taking it to the quieter pace of every-day affairs. Having "harnessed the winds", we must steady their course, slacken their speed. Then, and not till then, will the airplane take its rightful place in our civil and commercial life.

ACROSS "54-40" IN FLIGHT ✓

WHEN OUR AVIATORS REACHED ALASKA

When, in 1846, President Polk signed with Great Britain a compromise treaty which extended the Canadian border line from the Rocky Mountains to the Pacific Ocean on parallel 49, he settled the long-drawn out controversy over the Oregon boundary, and hushed for all time the campaign slogan, "54-40 or fight", which had come to be a very insistent one during the middle forties.

There was a wait of twenty-one years before a more prophetic imagination, a wider vision, flung our coast-line to the farthest limit of the continent by the purchase from Russia of that vast store-house of mineral, agricultural and timber wealth, the wonder-world of Alaska.

A new era in the history of our far northland began on August 14, 1920, the date on which the four army airplanes, piloted by those daring aviators, Captain St. Clair Street and Lieutenants Clifford C. Nutt, C.H. Cruarine and Ross Kirkpatrick, with observers and mechanics, Sergeant Edmond Henriques, Lieut. Eric H. Nelson and Sergeants James Long and Joseph E. English, in the 9,000 miles trans-continental flight from New York to Nome and return, made the jump from Hazelton, Dominion of Canada, to Wrangell, territory of Alaska.

We can picture what the scene was like when the fliers first reached Alaskan soil. It was Saturday, and, when it became known that the fliers were expected that afternoon, the mayor of Wrangell declared a holiday. Flags were hoisted over the principal buildings of the town. Mill whistles blew and bells rang that all might know and might set out for the landing field at Sergief Island made ready for the arrival and in charge of Sgt. W. W. McLaughlin. All during the afternoon small boats were leaving, loaded with passengers. At noon the Barrington Transportation Company's "Hazel B No. 3" left the dock floating a big scow, both boat and scow loaded to the limit with sight-seers. Meanwhile, no news had come from Hazelton saying just when the fliers had left for Wrangell. There was no way of guessing the hour when they would arrive. All eyes scanned the sky. The hands of the clock turned relentlessly, cutting away the afternoon. One o'clock, two, three, four. Some discouraged spectators turned their faces homeward, making ready to take boat back to Wrangell.

Suddenly there was a shout: "There they come". And the four planes came humming overhead, circling the landing field. With a dip and whirr that thrilled the spectators, Lieut. Kirkpatrick came to earth at 60 miles an hour. The three other planes followed in quick succession, plane No. 1, with Captain Street, commander of the squadron, being the last to leave the air. In seven minutes from the time the first plane landed, all four had come to earth, and, in spite of recent rains that had caused a wet field, all were happy landings.

So the great deed was done. The work was accomplished. The 3,000 miles between New York and Alaska had been cut to less than fifty flying hours. The journey itself was to continue 1500 miles further, to Fairbanks, to Ruby, to Nome. But the reality of the accomplishment was established when they touched Alaskan soil at Wrangell.

Little wonder that the town made holiday; that Mayor Grant welcomed the fliers; that Governor Riggs and the Mayor of Juneau and others sent telegrams. Little wonder the fliers were feasted and feted. The occasion warranted it. Here were eight men who had travelled across the continent to Sergief Island in less than fifty flying hours - the same Sergief Island where, in the days of the Cassiar gold stampede, hundreds of argonauts had camped waiting for the ice to open and clear the way to Stikine River: where hundreds, too, had taken breath in that breathless and historic Klondike rush when many had perished.

The story of Alaska would have been another story had aviation been a working proposition in 1897: the history of Alaska will be a different history dating from August 14, 1920. The flight to Alaska has a much wider significance than a mere spectacular one. The War Department, through its Air Service, has not lent itself to the showman's game. Excessive speed or sensational performances have not been demanded. Longer distances have been covered, notably in the London-Australia flight. In the New York-Nome tour, at no time was there a jump of more than 320 miles nor an altitude higher than 10,000 feet. At the same time, it must be borne in mind that the flight was not without hazard. There are pleasanter places to be stranded with a wrecked airplane than the Canadian Rockies or the uncharted wilds of Alaska. A flight in almost any other direction on United States territory offers more friendly harbors and happier landing fields in case of mishap.

But, back of it all, the Alaskan flight had a deep significance. It was undertaken by the War Department for a three-fold purpose and with the cordial co-operation of the Canadian government and the aid of the weather bureaus of both countries. The first great purpose in view is the photographing and preliminary surveying for the opening of a route to Alaska. The second is the establishing of a relay mail and commercial air route which will cut the time from Alaska to the States from weeks to days. The third, is the mapping of some 3,500 square miles of unexplored country about the flats of the upper Yukon River - a three day's task for the four flying photographers, but a labor of three years and many men for a ground surveying party.

With these three purposes in view, therefore, it needs no prophetic vision to see what changes are to be wrought in Alaska's future by the coming of the four airplanes to Alaskan soil on August 14th last. Little wonder, as we have said, that their advent was hailed with rejoicing by the far distant and far-seeing Alaskans who had hazarded their lives and their fortunes upon the upbuilding of Alaska's future.

According to the "Wrangell Sentinel", which gave its whole front page of August 19th to a story of the arrival of the airmen, Captain Street, who had bought at Edmonton a water-proof coat with a fur collar and lined with unclipped lamb skin, and, at Wrangell, a pair of loggers' rubber packs and a pair of socks that would weigh as much as an ordinary pair of shoes, is reported to have said: "When I was flying over the continuous chain of glaciers and snow fields between here and Hazelton, I little dreamed that on reaching Wrangell, it would be my privilege to feast on home-grown berries and cream. The luxuriant growth of vegetation and the beautiful flowers here are a great surprise to me".

In its story of this dramatic moment in Alaska's history, the "Sentinel" notes the following interesting items. In the flight from Hazelton to Wrangell, the aviators flew over much virgin country, which, on account of its inaccessibility, had never before been beheld by human eye. Much of the time after leaving Saskatoon, the fliers had to rely for bearings upon their compasses, thus proving their ability as aerial navigators. The greater part of the flying since leaving New York was done at an altitude of 5,000 feet but, between Hazelton and Wrangell, an altitude of 9,000 to 10,000 feet was reached. The aviators are all young men, the oldest being twenty-seven and the youngest, twenty-two, four of the eight are southerners, and all but one have mothers living: two are foreign born, Lieut. Eric H. Nelson being a native of Sweden and Sgt. Edmond Henriques, a native of Australia.

The take-off from Wrangell for the flight up-country was spectacular. Swerving from their course, on invitation from Mayor Robertson of Juneau, the fliers circled over the capital city, Lieut. Kirkpatrick dipping low enough to drop a package sent by the "New York Times" to Governor Riggs.

With stops at Whitehorse, Dawson, Fairbanks, Ruby, the great flight reached its destination, Nome, at 5:30 P.M., August 15, having made 55 hours actual flying time from New York, 4,300 miles away.

SQUADRON NEWS

ARMY BALLOON SCHOOL, OMAHA, NEB.

Over two hundred Indians of the Omaha Tribe were camped at Fort Omaha for nearly one week to take part in the Pilgrims Parade of the Ak-Sar-Ben festival held in Omaha during the past week.

The original home of the Omaha tribe was at Bellevue, Nebraska, about ten miles south of Fort Omaha and the grounds of Fort Omaha were, at one time, their favorite hunting ground. They moved from Bellevue, Nebraska to their present home, the Winnebago Reservation, at Walthill, Nebraska in 1854.

The Indian camp at Fort Omaha was governed by chiefs "Two Crow" and "White Horn". Several war and scalp dances in full costume were given for the benefit of the soldiers and people of Omaha.

The two Chiefs above mentioned are graduates of Carlyle University, class 1882.

CHANUTE FIELD RANTOUL, ILL.

Captain Edward Laughlin and First Lieutenant Rex Field, landed Saturday at Rantoul in a DH4-B. These officers were ferrying the plane from Love Field, Dallas, Texas, to Ashburn Field, Chicago, Ill. The plane, which is a new Bluebird, is for the use of Major McChord, Air Service Officer for the Sixth Corps Area.

The south half of Chanute Field, containing 320 acres has been leased to Marion D. Webster, of Rantoul, Ill., who is to plant it with wheat mixed with timothy and clover hay seed. About 160 acres have been plowed during the past week. This is part of a plan for the improvement of the field, by eliminating the dead furrows, which were rather numerous in the south half of the field. The farmer is to cultivate the field without dead furrows, filling in all minor irregularities, thus securing a smooth surface for landing. He receives a percentage of the first year's crop of wheat in payment for his work. The improvement of this section of the field is thus accomplished, not only without expense to the Government, but at a considerable profit and it is believed that an excellent sod of clover and timothy will be provided by this method. The north half of the field, which remains available for landing is one mile in length, east and west, and a very little less than one-half mile in width, north and south, thus providing ample space for all probable activities at this station.

The Assistant Quartermaster, in charge of Utilities, is busy repairing the buildings, roads and grounds, and getting the post in good condition for the winter. All buildings on the post are being repainted as rapidly as possible and the roads are being re-surfaced with tarvia. It is expected that the post will be in excellent condition before winter sets in.

Pilot School, March Field, California

March Field will have an Army Air Service display at the Southern California Fair which opens in Riverside, October 13th. It is proposed to erect a tent hangar in which will be displayed a DH-4B fully equipped with machine guns, radio and photographic apparatus. The exhibit will serve to stimulate recruiting in this community.

Classes in educational and vocational training have been resumed at March Field. Lieut. Fred B. Wieners, E. & R. Officer has prepared the following courses:

Educational: Primary Section - arithmetic, geography, language, spelling, penmanship and elementary civics.

Intermediate section - arithmetic completed, U.S. history and geography, spelling, penmanship and civics.

Advanced Section - arithmetic, advanced, algebra, geometry, U.S. History and geography completed, language, commercial correspondence and civics.

Vocational: aero motors, magnetos and carburetors; automobile maintenance and repair and machine shop practice.

Mechanical drafting, radio and electricity, batteries and ignition; operation and construction.

Airplane rigging with nomenclature.

Instrument repairing.

Typewriting and stenography with complete commercial course.

Journalism - practical course, men being employed on camp newspaper thus affording opportunity to obtain working knowledge of the newspaper business.

In addition enlisted men who can qualify will be enrolled for class room instruction in machine shop practice and design, mechanical drawing, advanced physics, mathematics, English and economics in Junior College, Riverside, Polytechnic High School.

Instructors, commissioned, enlisted and civilian, all specialists in their particular lines have been secured and will be on the job to keep March Field's service school in first place in the Western Department.

Among commissioned officers reported during the past week for training are: Captain M. Arazarena and Lieut. E. Laborde. Both are from the Republic of Cuba.

First Lieut. Orlo Quinn and First Lieut. Francis M. Brady reported at March Field during the week from Ross Field, Balloon School, Arcadia, California.

Dances for the enlisted men of March Field, held every Saturday evening under the auspices of the War Camp Community Club of Riverside, were resumed on September 25th.

Aerial maneuvers between naval aircraft from North Island, San Diego and a part of the Pacific Fleet, off San Pedro were held during September.

Selfridge Field, Mt. Clemens, Mich.

Captain Charles Van Buren, I.G.D., is here at the present time making an inspection of the money and property accounts of the Quartermaster.

A most welcome addition to the flying equipment of this station in the shape of a re-modeled DH-4B was received during the week. Lieutenant Ray Brown, A.S., flew this plane here from the Aviation General Supply Depot, Middletown, Pa., during the week, and reported that outside of bucking a very strong head wind most of the way the trip was uneventful. Lieutenant Brown left for his home station immediately after making delivery.

Camp Stotsenburg, Pampanga, Philippine Islands

Orders have been issued by Headquarters Philippine Department, placing the 6th Photographic Section on permanent duty at this station. The section was originally sent to Corretidor and attached to the boat squadron, but remained there only a few weeks. A lack of equipment, for which requisition has been made, is handicapping the work of the section.

The 6th Photographic Section is composed of one Officer, Lieutenant John W. Frewer, Air Service, A., and thirteen men. Pictures are to be made in the near future of several proposed sites for a combination land and water station near Manila and several sites are now being inspected by a board of officers appointed for that purpose by Headquarters, Philippine Department.

Major Arthur E. Ahrends and Major Noble J. Wiley, General Staff, both assistants to the Chief of Staff, Philippine Department, visited this station last Friday and made an informal inspection of the personnel and equipment. Both officers expressed surprise at the number of planes in commission and in storage despite the incomplete status of the construction work.

Following their visit a formal inspection of the station was made by Colonel John W. Heard, Cavalry, the Post Commander. Thirteen De Havillands, equipped with machine guns, were on the line, and crews in place when the Post Commander rode up. Following the inspection of planes, Colonel Heard looked over the machine shop, radio hut, etc.

This was the first formal inspection in a number of weeks.

CAMP KNOX KENTUCKY, GODMAN FIELD

Heavier-than-air detachment

After many difficulties with the weather the mosaic of Camp Knox, can at last be reported as complete.

One artillery adjustment was made with the 81st Field Artillery while on maneuver with very good results.

The officers are once more attending schools, a radio and motor class being organized for one hour instructions each day respectively.

Now that the mosaic is complete and artillery adjustments are becoming more or less monotonous to the Artillery, 41 having been finished, the men are hoping for an order terminating their temporary duty at that station.

Thirty-First Balloon Company

During the months of July, August and September, the R.O.T.C. the Artillery Officers' Basic School, 81st Field Artillery, and 83rd Field Artillery fired on the range and conducted field maneuvers at Camp Knox, Kentucky.

The 31st Balloon Company conducted thirty-six adjustments with 75's, 155's also with German 77's, 105's and 210 howitzers.

Fifty R.O.T.C. students and twelve student officers, at the Basic School were given flights while their batteries were firing. The 31st Balloon Company put in eighty-four hours in the air during the months of July, August and September not including a night flight of nine hours and thirty minutes.

On August 31 the Balloon occupied the position of an enemy balloon and observed the northern sector of the range when one battalion of the 81st Field Artillery was conducting a field problem. The balloon located the batteries, their panel station (they were firing with planes), and their teams. The battery positions were 9000 meters from the balloon.

This company's strength is sixty-one men, only forty-five of whom are available for duty because of various reasons, detached service, camp guard, etc. Recruiting parties of three men each are being sent to Indianapolis, Indiana; Chicago, Illinois; Cleveland, Ohio; Detroit, Michigan; Columbus, Ohio and Cincinnati, Ohio in an effort to bring this company up to strength.

An experiment was carried on with the field artillery, with the balloon conducting adjustments without the use of maps. The problem presented was that the action was taking place in a country without maps or with very inaccurate ones.

The balloon gave the distance from the balloon to the target and the distance from the balloon to the battery, then estimated the enclosed angle in miles. The battery fired by volleys.

The balloon observer gives his observations on the B-T line in meters over, short, right or left, just as in map or aerial photo method.

During the last week of the firing, adjustments were conducted by this method in twelve or fifteen minutes. The artillery men were pleased with the results. Some method that will hold for open warfare must be developed by the balloons. The planes are working with a system in which they fly towards the target and the battery lays on the ship. The method was tried on the border and was tried at this camp with good results. To keep pace with the demands of the field artillery for a method of adjustment that will hold good during maneuvers in an unmapped country, the balloons must adopt some method that does not call for the accurate maps and precise methods of the present system.

SELFRIDGE FIELD, MT. CLEMENS, MICHIGAN

During the week Lieutenant Colonel Harrison S. Korrick, C.A.C., visited this station on duty in connection with the conservation of gasoline supplies.

The contract has been let and work will start immediately on the construction of a concrete wall to replace a washed out portion of the dike on the western end of this field. This wall is to be about three feet in height and starting at the main gate will run in a southerly direction for a distance of about two hundred yards. When constructed, this wall will eliminate all possibility of the field being inundated by the annual spring rise of the Clinton River.

AVIATION GENERAL SUPPLY DEPOT, AMERICUS, GEORGIA

During the past week the field at Americus, Georgia was favored by a visit from Congressman Charles R. Crisp and his son Charles R. Crisp, Jr., 2nd Classman at the Naval Academy. Young Crisp was given a ride in a Curtiss JN-4H, but Congressman Crisp refused on the grounds that his wife would not permit it.

The painting of the buildings at Souther Field and the Aviation General Supply Depot is nearly completed. Also the weeds and grass on the field have been cut, and it is expected that in the near future the post as a whole will be in fine shape.

Now that the weeds on the flying field have been cut and the officers and officers' wives of this command are suffering from an attack of golf fever, a real golf course is contemplated being built this fall. With this in view, competition will be offered to members of the country clubs at Albany and Columbus, Georgia.

The new quarters for married officers are rapidly nearing completion. It is rumored that their comfort, modern conveniences, etc., are causing unmarried officers of the post to seriously entertain thoughts of matrimony.

LANGLEY FIELD, HAMPTON, VIRGINIA

General Mitchell visits Field.

Langley Field was pleasantly surprised last week with a visit from General Mitchell who flew down from Washington, D.C. in an S.E.-5. The General treated the spectators on the field to a couple of loops and a spin before landing.

Just before the General arrived, Langley Field was advised of the visit and sent a formation of DH-4's out to meet him. One of the members of the formation, Captain Lawson, lost a tire in taking off and gave an exhibition of skillful piloting when he landed the plane without damage. Captain Lawson was complimented by General Mitchell for his clever work.

Balloon Center gets athletic field

The athletic and football field directly in front of the old Lamington farmhouse at the balloon center is rapidly nearing completion and the balloon companies anticipate a snappy season of football. The teams are already being organized in the 10th and 19th airship companies and will start practice in a few days.

Bagby - Robertson wedding

First Lieutenant Ralph E. Bagby and his bride, formerly Miss Anne Robertson of Kansas City, Kansas, have just arrived at Langley Field from an extended wedding trip through the east. Mrs. Bagby will be a delightful addition to the younger set on the field and several social functions have already been planned for her. Mrs. Bagby wields a clever pen under the name of "Virginia Lee" and was a regular contributor to one of Washington's largest newspapers. Lieut. Bagby saw service over the lines in France and was decorated with the distinguished Service Cross, the Croix de Guerre and the Belgian Order of the Crown.

Air Service Infantry Contact work highly Successful at Camp Lee, Va.

Captain Lawson and Lieut. Ward have returned from Camp Lee, Va., where they participated in the infantry maneuvers at that camp. Two planes equipped with radio telephone were used and while flying over the "lines" they were in constant communication with the radio telephone set at Brigade Headquarters, two way communication being carried on at all times. Their work was highly complimented by the Commanding General, and the Infantry Officers were amazed with the operation of the radio telephone. While the airplanes were in the air the Commanding General telephoned requests for positions of their front lines, etc., and almost immediately the reply came back giving the desired information.

FIRST DAY BOMBARDMENT GROUP

During the past week a course of instruction in Aerial Observation was conducted for officers of the 2nd Division, Camp Travis, Texas. The course consisted of two lectures and about five hours per man in the air. Five officers were put through the course. No effort was made to make finished observers of them; but what we did succeed in doing was to bring them up to a state of aerial efficiency where they knew where they were at all times and were able to make a fairly good reconnaissance and to report what they saw.

The first day was devoted to giving each student a plain ride to allow him to gain confidence in the ship and to become familiar with the air. The second day the pilot pointed out to the student various topographical features, such as streams, railroads, cultivated fields and pastures.

On the third day a cross country flight was made in which the pilot flew a given course.

On the fourth and last day another cross country reconnaissance flight was made in which the student officer was required to direct the pilot and to make a detailed written report of various activities of a military nature. This flight was as follows: Starting from the landing field at Camp Travis to Camp Stanley, Texas, where the Artillery was firing, to Kelly Field, to Brooks Field and return to Camp Travis.

Three DH4B ships were used daily and five officers were given the course. All of them made very creditable showings.

It is contemplated to put through another class, in the same way, in a few weeks. All of the line officers expressed great surprise and enthusiasm as to what great possibilities there are in Aerial observation. No attempt was made to "jazz" these officers. On the contrary everything was done to make them comfortable so that they would enjoy and appreciate their aerial experience.

Major Cousins, commanding the 1st Day Bombardment Group, left for Washington to take up permanent station there, last Saturday. The Field, and especially the Bombardment Group will feel keenly the loss of this very efficient and popular officer.

The expected departure of the Corps Air Service Officer, Colonel Fechet, the assumption of his duties by Major Pratt, and, in turn the taking over of this field by Major Chisum, will all take place at an early date.

Captain Arthur Raymond Brooks, D.S.C., and one of the very few premier flyers left in the Air Service, goes into bondage on Saturday afternoon at St. Mary's Church, San Antonio, Texas, where a very quiet wedding will be solemnized. Miss Ruth Marie Connery of Boston is the bride to be.

TWELFTH ARMY OBSERVATION SQUADRON, DOUGLAS, ARIZONA

During the annual encampment of the Arizona National Guard Cavalry, troop A, at Camp Harry J. Jones, a Liaison was carried on with the 13th Aero Squadron. Most of the soldiers of the National Guard are young men of little or no previous army experience and were greatly interested in the way the "Aviators" communicated with the ground troops during actual operations.

Eighth Aero Squadron, McAllen, Texas

The recent order from Headquarters, 8th Corps Area, permitting Camp Commanders to issue permits to allow officers to visit Mexico was heralded with joy by officers of the Squadron as heretofore it has been practically impossible to cross the river in this District. Four of our officers will be among the interested spectators at the bull fight in Matamoras, at an early date.

Every officer of the 8th Squadron was appointed in the Regular Army, but there will be two casualties thru declinations. 2nd Lieut. G.E. Grimes, Flight Commander and Adjutant declined a Regular Commission and will leave the service early in October. 1st Lieut. V. J. Meloy, Commanding Officer of the Squadron declined a commission as a Second Lieutenant in the Regular establishment and will be discharged on or about December 15th, 1920.

9th Aero Squadron, Sanderson, Texas.

This week has been uneventful from a flying standpoint, nothing but test flights being made outside of a trip to Del Rio made by Captain Stenseth and Lieut. Getchell and several special missions to Marfa in connection with 5th Cavalry liaison work. One hundred percent of daylight hours have been suitable for flying.

The resumption of patrols by the border flights next week will again see the squadron alert and ready for anything. Lieut. Gardner, Engineer Officer, has been keeping his department busy the last few weeks getting the planes repainted, varnished, and re-lined, until they look and act like new. Five motors have been changed in the last two weeks.

Construction work is going ahead on the second Barrack building despite our serious shortage of personnel. The exterior work has been completed and given a primary coat of paint, while the carpenters are busy with the interior finishing. Two new tennis courts have sprung suddenly from the Texas waste in the course of the last few days and are practically complete with the exception of a few more waterings and rollings. A tennis club is being given some thought, it being planned to require nominal dues for the purchase from time to time of little tennis "luxuries", while for such of the enlisted men that do not desire to pay dues, membership may be sustained by working on the courts for a specified time each week.

Captain Stenseth is in receipt of a letter from the Brewster County Chamber of Commerce stating that that body has put the landing field at Alpine, Texas, into first class condition by cutting the grass and repainting the field markers. This is one of many gratifying manifestations of the interest that people of the border towns are taking in the welfare of the Air Service since the establishment of the border patrol airdromes. This spirit of mutual understanding and cooperation between the Air Service and outlying districts will do more for the advancement of both military and civil aviation than any other one thing, in our estimation.

ROCKWELL FIELD, CORONADO, CALIFORNIA

The second trip ferrying planes to Mather Field started last Wednesday, 1st Lieut. Robert Kauch and 2nd Lieut. C. H. Ridenour acting as pilots. The trip was rather unfortunate both from a weather standpoint and because of motor trouble. A heavy wind and rain held them up at March Field until late in the afternoon. Lieut. Kauch had motor trouble just out of Bakersfield and was forced to land at Bakersfield. He developed motor trouble again between Bakersfield and Fresno and landed at Fresno, reaching Mather Field about noon Friday.

ROSS FIELD, ARCADIA, CALIFORNIA

Major Harold Geiger, A.S.A., Commanding Officer of Ross Field, and his wife and daughter left for a thirty day's visit at Coronado. Several years ago the Major was stationed at Rockwell Field and he and Mrs. Geiger have many friends in that vicinity. Captain R. S. Bamberger, A.S.A., retired, will assume command during the absence of Major Geiger.

MARCH FIELD, RIVERSIDE, CALIFORNIA

Excellent flying weather has prevailed at March Field during the past week. A total of 503 flights in which 615 hours and 45 minutes were consumed are recorded. Preliminary instructions required 393 hours and 50 minutes; advance instruction 152 hours, 50 minutes; forest fire patrol, 50 hours and 40 minutes; test flights, 10 hours and 15 minutes; and miscellaneous flights, 8 hours 55 minutes.

Seven army officers representative of South American Republics are scheduled to arrive at March Field for flying instruction by November 1st. An invitation from the Adjutant General of the Army to send such candidates for training has been accepted by Guatemala, Venezuela, Ecuador, Peru, Chili, Bolivia, Paraguay and Cuba. Seven others, it is understood have been assigned to the Pilots School at Carlstrom Field, Arcadia, Florida.

The enlisted men's school at March Field will re-open October 11th. In addition to the educational and vocational classes to be operated on the Post it has been arranged with the school officials of Riverside City, to allow a certain number of enlisted men to attend the Boys' Polytechnical High School of that city. Classes will be held five times each week. Prof. H. H. Bliss, recent arrival in Riverside from the University of Nevada will have charge of the instruction of March Field soldiers. Courses offered will be machine shop trades, physics, chemistry, advance mathematics, English and a number of other studies in which the soldier may be interested.

Among the vocational courses to be established at the field will be a journalistic school in which men who desire to learn something of the newspaper game will be given practical work on the Camp Newspaper from the cub reporter stage up.

All March Field was grieved Tuesday afternoon to learn of the death of Walter H. Stevens, air mail pilot, who crashed near Pemberville, Ohio. Early in the war he enlisted at Rockwell Field, North Island, San Diego. As sergeant 1st class he was transferred to March Field in May of 1918. Shortly after he was commissioned a second Lieutenant and from June 1918 to April 1919 was a flying instructor at March Field. "Steve" as he was best known, claimed to have 3,000 hours in the air to his credit and when in the army was considered one of the best in the game.

S. W. Allen, supervisor of the Angelus Forest Reserve, was taken for a trip over his mountain domain by Lieut. McHenry in a D.H. Wednesday afternoon. Allen claimed to have viewed more of his forest territory in one hour from the air than he had been able to cover all season.

Major William F. Pearson, administrative officer of the Army Air Service was a visitor at March Field Tuesday. Motoring over from Ross Field, Arcadia, the major made a tour of field following luncheon and returned to Los Angeles that evening. Major B.K. Yount, commanding officer, who is spending his vacation at Coronado came up from San Diego to greet Major Pearson.

Paul Jones, Long Beach farmer has brought suit against Earl Daugherty, ex-March Field pilot, for \$13,300. Jones declares Daugherty did a tail spin, nose dive, side slip and various acrobatics over a field in which he was plowing. His horses became frightened and dumped Jones in the road, the complaint states.

U.S. ARMY BALLOON SCHOOL FT. OMAHA, NEBRASKA

The flying time for observation balloons was 6 hours, 22 minutes and 10 flights.

During the week a Free Balloon flight was made with 2nd Lieutenant James B. Jordan, A.S.A., as pilot and 1st Lieut. R.G. Hunter, 2nd Lieut. T.N. House, A.S.A. Staff Sergeant George Hicks, A.S.A., Sergeant Paul Prom, A.S.A., and Mr. C.J. Yingling as passengers.

The Balloon left Fort Omaha at 11:47 A.M. going in a northerly direction and attaining a maximum altitude of 2,800 feet. The balloon was landed at 3:20 P.M. at Mapletown, Iowa, an air line distance of 70 miles.

All of the passengers except Lieut. House then got out of the basket, first putting in enough ballast to compensate for their loss in weight, and Lieutenant Jordan together with Lieutenant House, continued the flight, going in an easterly direction and attaining a maximum altitude of 13,000 feet. The balloon was landed at 5:25 P.M., 12 miles northwest of Odebolt, Iowa. The flight was made without any unusual occurrence, flying an air line distance of 40 miles.

AIR SERVICE OBSERVATION SCHOOL, POST FIELD, FORT SILL, OKLAHOMA

Ground and aerial gunnery and artillery adjustment constituted the work of the Air Service Observation School during the week, in which subjects excellent results were obtained, especially in aerial firing at fixed targets on the ground. Very good results were obtained in artillery adjustment.

Lieutenant Fred C. Nelson, A.S.A., made his first parachute jump from an airplane at Post Field from an altitude of about 5000 feet. The airplane, a DH4B was piloted by Lieutenant H. W. Sheridan. The first parachute opened nicely and an easy and perfect landing was accomplished without the use of the second chute.

90th AERO SQUADRON, SANDERSON, TEXAS

With the exception of liaison work in connection with the maneuvers of the 5th Cavalry at Marfa, carried on by Lieutenants McMullen, Woodruff, Fogarty and Getchell, little flying has been engaged in during the last week, in accordance with the gasoline conservation instructions lately received. One hundred per cent of daylight hours have been suitable for flying.

Tennis is now occupying the center of the sporting stage with a number of the officers and men playing a very consistent game. It is planned shortly to hold a tournament to decide the close race for supremacy, after which an effort will be made to secure matches for a selected team with the civilian players. At present it is necessary to use outside courts, but arrangements are now being made for construction of a court on the airdrome.

On Saturday evening the officers of the squadron entertained their guests at the Officers' Club with a dinner, followed by an informal dance. The only casualty is evidenced by a certain Lieutenant's pronounced limp, acquired during the production of jazz music in wholesale quantities. Nevertheless, all present voted the affair one of the pleasantest events of the season.

The morale of the flight is developing decidedly higher standards, with a tendency to make the airdrome the center of their activities. This spirit is fostered by the tri-weekly motion pictures, as well as by the limited personnel composing the squadron, a fact which makes for more intimate relations among the men. Basket ball is beginning to be seriously discussed and the course of a few weeks will see as good a team as our last year's winners take the floor.

A number of the officers are taking full advantage of the newly opened dove season, with the result that almost daily the officer's mess is inflicted with "squab a la Sanderson", on toast and otherwise. But with doves so plentiful, the rumors, that most of the "big bags" are picked up under the speeding wheels, are entirely credible.

Captain Walton and Lieut. Gaffney landed here on their return trip to El Paso, flying a DH4B, staying long enough for the Captain to make an inspection of the construction work and squadron administration.

KELLY FIELD, SAN ANTONIO, TEXAS

Cadet Training.

The seven cadets taking the Pursuit course at this field will be merged with the Pursuit Officers in the regular training schedule beginning October 1st, 1920 which consists to a considerable extent of other than pursuit subjects.

The field of purely Pursuit Training is necessarily very limited as compared with that of Bombardment and Observation.

Acrobatics, formation, gunnery, and tactics are really the only Pursuit studies no matter into how many sub-titles these studies may be divided. Instruction in any other subject is straying away from Pursuit work and if facilities exist for the proper exploitation of the four subjects laid down above, should not be considered advisable as a very full course can be carried out with these four.

With regards to all training in any of the arms of the services, it may be taken as axiomatic that the greater force it is possible to assemble to participate in training or maneuvers, the greater benefit will accrue to all participants, provided, adequate facilities exist.

This applies especially to the Air Service and with peculiar force to the Pursuit Branch and renders the problem of giving seven cadets an adequate idea and appreciation of their work extremely difficult.

HERE AND THERE WITH THE EDITORS

"THE NEXT WAR"

In discussing the possibility of aircraft in the "next war", a Belgian writer sees the possibility of moving 500,000 men a distance of 250 miles in three hours by means of 10,000 large airplanes.

A British air officer thought this proposition of sufficient importance to merit consideration. He thinks the transporting of so large a force improbable in the present state of aeronautical science; yet he admits that exaggerated figures of today may become facts of tomorrow. He himself outlined certain military maneuvers which are even now practicable. Planes that can carry eighteen-pounder guns with timber and shells are in his estimation capable of transporting motorcycles and motor cars. With the existence of such aerial vehicles it is possible that by the use of a great number of them a force of men equipped with guns and ammunition and motor transport sufficient to ravage the whole countryside might suddenly, as it were, drop out of the clouds upon an unsuspecting district.

The British writer emphasizes the importance of keeping abreast of all foremost improvements in air service to prevent being caught unawares in the "next war".
(Detroit News 10/5/20)

GERMANY'S NEGOTIATIONS

Evidence that Germany has hopes for an early return to world activities show up in articles which appear in the press from time to time. The New York Journal of Commerce 10/4/20 says that Germany, through the Zeppelin Airship Company, has requested permission of the Inter-Allied Commission on Air Control, to construct giant airships for international trade between the United States and Germany.

This request was temporarily refused. In this negotiation Germany wished to retain a certain proportion of her airplane, seaplane and airship stations for use in international and interstate traffic. A list of approximately 600 public and private stations were prepared by German air officials. They hoped to retain about 30 per cent of these.

The N. Y. Herald 10/5/20 publishes the proclamation of the German Chief of Staff in which he praises the services of the aviation and artillery branches of the army and expressed his hope of seeing them revived again.

TEST OF GIANT AIRPLANE

Trials are to take place this week of the world's largest airplane, with which an attempt will be made to fly from Germany to the United States.

It is a monoplane, constructed entirely from steel and aluminum, and is after the style of the Fokker. It has four engines, each developing, 250 horse power, and it is believed, will be able to make a new world's record so far as speed is concerned - 250 miles an hour.

There is room aboard for eighteen passengers, in addition to two pilots and two mechanics. The tests will include the continuous running of the engines for six days. The two airmen who will, if the tests are successful, attempt to fly the machine in America are Captain Hesse and Lieutenant Lehmann, two former army airmen.

(N. Y. Times 10/4/20)

SPEED OF AMERICAN PLANES COMPARES WITH FRENCH WINNER

Two miles a minute! That sounds speedy, but nevertheless it was almost accomplished by the flier who also has the distinction of flying the German Fokker plane in the army air race across the continent.

Col. Harold E. Hartney had sometime ago flown a D-H-4-B from Middletown to Washington, a distance of 100 miles in 56 minutes. Recently he learned that Lieut. Ray Brown had made the trip in a spad in 60 minutes. He took advantage of an opportunity to fly to Washington and taking Captain D. J. Newmuller as a passenger in a 14-A.P.-2 mounted with a Liberty 12-A motor, made the same trip against heavy side winds in 53 minutes. The return trip was made in 51 minutes.

It is remembered that La Cointe's record was 2.77 miles per minute.
(San Francisco Call 9/27/20)

FIRE PROTECTION METHOD

The invention of Parker H. Bradley for fireproofing airplanes was given a thorough test at Hazelhurst Field last week, and it is believed that with the adoption of this method, airplane pilots will be assured of safety from fire when flying.

The test consisted of a flight of a Curtiss airplane which had been built according to Mr. Bradley's methods.

During the flight the machine carried a display of fireworks, and on the axle of the landing gear were a number of magnesium sprays which illuminated the field. The machine seemingly fell into flames of much greater brightness and intensity than if the gasoline tank had exploded. It is said that the heat was so intense that it melted eight-inch aluminum and yet it did not even blister the cloth or wood of the airplane.

This demonstration took place 3000 feet in the air.

After landing, inspection was made by experts, who found no marks of a fire on the machine, with the exception of a two-inch hole burned in the aluminum turtle-back to which the fireworks had been attached. Red hot drippings from the torch dropped through the hole to the bottom of the fuselage and burned out on the cloth without even charring its surface.

Gasoline was poured on the wings and rudder and set afire. This burned with intense flame for a moment but did no damage to the fabric.

Mr. Glenn Curtiss and other aeronautical engineers witnessed the test and expressed great enthusiasm.

(N. Y. Times 9/29/20)

ACQUISITION OF NORTH ISLAND

A decision recently rendered by the Comptroller of the Treasury is to the effect that it will not be possible for the government to acquire title to North Island, near San Diego, Calif., for an aviation field.

In 1917 Congress authorized acquisition of this island, and sites, for permanent aviation stations for both the army and navy were selected. It is stated now that an act of July, 1919 forbids the use of money for carrying out the provisions of the act of 1917.

(Army & Navy News - Washington Post 9/26/20)

ZEPPELIN FACTORY IN UNITED STATES

Paris News in the New York Times states that a wireless sent out from Germany recently discloses the intentions of the German Zeppelin firm, that its works are to be transferred to the United States.

Under the terms of the treaty the manufacture of aircraft of all kinds in Germany has been so restricted that the Zeppelin factory has been at a stand still.

It is understood that financial interests in America are concerned in the undertaking. Airships capable of making regular journeys across the Atlantic are proposed. (N.Y. Times 10/1/20)

AIRSHIPS FOR INTERNATIONAL TRADE

According to advice received at Washington Germany's request of the Inter-Allied Commission on Air Control for permission to construct two giant airships for use in international trade between the United States and Germany, has been temporarily refused.

Germany wished to retain a certain proportion of her airplane, seaplane and airship stations for use in international and interstate traffic. There are said to be approximately 600 public and private stations of which the Germans hoped to retain about 20 per cent.

THE AERIAL CAMERA

General William Mitchell of the Air Service says: "With proper organization we could make accurate survey of the entire country from the air in three years." This is his statement in regard to the possibilities in the field of aerial photography, and from his treatise of this subject we extract the following:

"The European War developed this field of service to an extent never before dreamed of. Before the war we had no suitable aerial cameras or any good lenses. Now we have just as good lenses as there are anywhere and our cameras are second to none.

Our K-I Camera which has a 20 inch focal length lens is capable of taking photographs up to 25,000 feet, and has a film roll for 90 pictures. This is said to be the first successful film camera used anywhere in the world. A special instrument which gives uniform air pressure over it keeps it flat.

Mapping from the air can now be done for less than one-tenth the cost and about one hundredth of the time than if attempted with other methods.

Aerial photography can aid better than anything else in architectural studies of buildings or groups of buildings. Needs for improvement in the city system can be brought to light by this means; studies of rivers, harbors, breakwaters, channels, and everything connected with river improvement, and control, are all within the reach of the air camera.

By it forest situations can be found out, as also can coast lines, and other aids to navigation. Inaccessible portions of the country can be explored and their possibilities disclosed by this aerial agent.

In the region about the Panama Canal the eye of the camera has located routes which telegraph lines, power lines and trails should follow, No other instrument could have given this information so well.

The recent flight to Alaska has covered areas impossible to cover by other means, and we have obtained knowledge of great value therefrom.

The Air Service knows the different methods necessary to carry out the mapping of the country, and the other matters mentioned above. The need now is to coordinate all of these requirements and get a single organization which can carry the necessary measures into effect." (N.Y. Evening Post 9/25/20)

COMMERCIAL AVIATION IN ARGENTINA

"Aviation in Argentina is making slow but steady progress; gradually, the public is encouraged to take an active part in the new method of transport." French and American missions are both busy carrying out flights and propaganda for the promotion of this enterprise. One wealthy Argentine estate-owner has introduced a regular service of aeroplanes upon his own estates. The French announce that they will conduct a passenger service by aeroplane three times weekly between Buenos Aires and Montevideo, and between Buenos Aires and Mendoza.

The Argentine press is also beginning to lend its support to aeronautics, both from a commercial and a pleasure point of view. The advertising columns of the principal daily papers are being used for announcements popularizing aeroplane manufactures of the Curtiss and the Ansaldo works.

Considerable scope for the sale of aircraft and accessories will be found in Argentina and the British are hoping that their manufacturers will not be slow to avail themselves of the opportunities thus afforded.

The British plane which is receiving most mention in this field of activities is the Arco No. 6. This is a small machine and was imported to this country especially for private use. Recently Capt. Richardson, late of the Royal Flying Corps, piloted one of these machines from Buenos Aires to Cordoba. It is proposed to establish a regular service on this route for the use of commercial men.

Some of the latest types of the Handley-Page have also been brought out to this country. Mr. Handley-Page has made the statement that he believes the time is coming when machines small enough to be accommodated in an ordinary coal shed, and costing not more than 150 £ each will be in use. This has promoted great interest in Argentina where such a machine would sell readily.

The inhabitants of Buenos Aires were recently astonished to see over their city a miniature monoplane. Signor Vergillio made this flight in a small monoplane constructed by himself at Paloma. It was just large enough to carry himself and one passenger. It is fitted with a 50 h.p. Gnome engine, but experts are of the opinion that it is too frail to carry a passenger. (Modern Transport 9/21/20)

It might be of interest to Americans that according to a report in the New York Sun of September 23, the "United States has first place in Argentine trading."

PASSENGER CARRYING RECORD BROKEN

According to the N.Y. World, 9/27/20, "Nine men and women, the largest number ever carried by a single motor airplane, flew over New York City yesterday, following tests of a new Curtiss machine, which during the past week has broken all known world's records for useful load carrying. The new plane, a Curtiss Eagle powered with a load of 3,500 pounds, or 8.75 pounds per horse power.

The lifting power displayed by the new plane marks a distinct advance in airplane efficiency, and in the opinion of experts who witnessed the demonstrations, Gen. William Mitchell of the Army Air Service being among them, is highly significant. It brings appreciably closer the day of economical air transportation of freight at a speed of upward of 100 miles an hour.

Gen. Mitchell was interested especially in the possibilities of utilizing the plane for ambulance purposes. Yesterday's flight was started from Curtiss Field, Hempstead. Bert Acosta, the pilot who has handled the plane during its recent tests, expects to show that it can get away with a load of two tons, or 52 per cent of its own weight.

"SAFETY FIRST"

It is stated that one reason why California is leading practical aeronautics in the United States is because of its slogan "Safety First", another is its ideal weather.

It was only about a dozen years ago that the first flight in an airplane, carrying one passenger from Los Angeles to San Diego, was accomplished. Today an airplane over the same territory excites no more interest than a journey by automobile did ten years ago. During the past decade commercial aviation has been steadily gaining popularity. "Death-defying" exhibitions are being classed with dare-devil automobile racing and are no longer encouraged by the public.

Clippings on meteorology and aeronautics taken from newspapers for the past year furnish material from which Dr. Fred A. Carpenter has compiled a report which contains matter of general interest and of value in confirming public confidence in aerial passenger traffic. From September 1919 to September 1920, thirty seven aviation accidents in the United States and its possessions were reported. "Stunting" caused 22 per cent of these accidents, engine trouble 16 per cent, adverse weather conditions 13 per cent, 19 per cent were attributed to miscellaneous causes, and the remaining 30 per cent were from causes unknown.

In California itself during this period, there were fourteen accidents. The cause of these accidents show the following distribution:

Stunting or exhibition flying - - - - -	5
Engine trouble - - - - -	5
Weather conditions - - - - -	0
Other causes - - - - -	1
Unknown - - - - -	3
Total - - - - -	<u>14</u>

Records from other sections of the United States and its possessions show that weather conditions have caused nearly as many accidents in aeronautics as engine trouble. In California weather conditions have not been responsible for a single fatality.

Two commercial aviation companies at Los Angeles report having carried an aggregate of 20,000 passengers on as many flights during the last year and without accident. (Los Angeles Times 9/19/20)

Lt. Odenthal

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE OCTOBER 30, 1920.

RETURN OF THE ALASKAN EXPEDITION. ✓

The Alaskan flying expedition has made its contribution to the history of aviation. The 9,000 miles from New York to Nome and return has been cut to, approximately, 110 flying hours. The greatest pioneering feat attempted by the Army Air Service ended successfully when the four DH-4 planes, running their original motors, landed at Mitchel Field in the afternoon of Oct. 20, having been escorted from New York to Mineola by an aerial fleet.

After a night's rest, the officers and men comprising the expedition proceeded, on the morning of the 21, to Washington, D.C., where a reception was accorded them befitting an occasion so notable in the history of aviation. Flying a DH-4 plane, Gen. Charles T. Menoher, Chief of the Army Air Service, met the party in the air and escorted them to Bolling Field. Also in the receiving party, were General William Mitchell, Chief of Training and Operations, commanding the 99th and the 10th Observation Squadrons; Col. William H. Hensley, Jr., the foremost airship pilot in America, who crossed the Atlantic in the British R-34, commanding the U.S.ZD No. 1, flying up from Langley Field with a full crew of 24 officers and men. Each Squadron consisted of 18 planes flying in vee formation, making a total of 54 Army planes, in addition to which were a number of civilian aircraft which also took the air to honor the return of the daring and intrepid airnauts.

It is regretted that the Secretary of War was out of the city and so could not be present, but invitations were extended by the Chief of the Air Service to General Peyton C. March, Chief of Staff; to General John Pershing, Commander of Armies of the United States; to Secretary of the Navy Daniels and other officials to be of the party to greet the members of the expedition as it landed at Bolling Field.

Most touching was the meeting of Captain Street and his mother who was at Bolling Field to greet her son. Captain Street is the only one of the returning airmen so fortunate as to have his home in Washington.

Captain Street made it clear that regular air service to Alaska is practicable. He says the Alaskans are anxious to see such a service established, and that a movement is on foot to secure the co-operation of the Canadian Government in the undertaking.

The aviators told many interesting stories of their trip. At some landing places along the way game was plentiful and fresh meat was always available. The fliers sighted herds of reindeer and caribou, and often saw bear, mountain sheep and other game. A school of white whales and many seals were sighted in the Bering Sea.

Captain Street said that the Expedition failed to obtain as many pictures as they had hoped because of poor visibility. In bad weather it was necessary to fly high in order to avoid hitting mountain peaks, a good portion of the journey having been made at an altitude of 8,000 feet. Hundreds of miles of the territory covered had not been mapped, and the only information available was what could be learned from trappers. Pictures which were obtained will be turned over to the Geodetic Survey.

The reception to the Alaskan party ended with a dinner to officers and men at the Army and Navy Club. This courtesy was extended by Generals Menoher Mitchell and the Chiefs of all Groups and Divisions of the Air Service.

The personnel of the expedition are all picked men, men who have proved their fitness and ability for so hazardous and important a task.

Capt. St. Clair Street, piloting plane No. 1, in command of the expedition was stationed at the training camp at Issoudun, France, during the war, being one of the first aviation officers sent overseas. He was decorated by General Pershing. Sergt. Edmund Henriques, his mechanic, is one of the most experienced men in the service.

Plane No. 2, piloted in turn by First Lieut. Clifford C. Nutt, and Second Lieut. Eric C. Nelson, engineering officer. These two officers made a year ago without accident or mishap of any kind a successful recruiting flight from Houston, Tex. to San Diego, Calif., by way of Omaha, Neb. and Denver, Colo. and return, a journey of 7,000 miles.

Lieut. C. H. Crumrine, the photographic officer, piloted plane No. 3, with Sergt. Albert I. Vierra, one of the most experienced Liberty Motor experts as mechanic. Lieut. Crumrine is an experienced pilot, having been stationed at Carlstrom Field, Florida. He will be remembered through his connection with the finding of Lieut. Niergarth, the airman who was lost in the Everglades.

Lieut. Ross C. Kirkpatrick, A.S.A., who made a distinguished record in the trans-continental endurance and reliability flight, the information officer of the expedition, piloted plane No. 4, with Joseph E. English, M.E., as mechanic.

The Alaskan Flying Expedition, successfully completed one of the most hazardous and stupendous aerial events yet attempted in any country. When it is considered that these fliers had to proceed over at least 2000 lineal miles of virgin territory far remote from habitation, without a landmark to guide them nor a field upon which to alight, over jagged mountain peaks and endless snow-covered glaciers, and over 7000 miles of country encountering the greatest menace to airmen, fog, yet pushing dauntlessly on against all kinds of odds, one must conclude that this was one of the greatest efforts of pioneering work yet accomplished by the Army Air Service.

The British last spring attempted to fly from Egypt to the Cape, over the wilds of Africa. One pilot reached the destination, but only after he had replaced his machine and motors, and after much delay and inconvenience. In the Alaskan flight, on the other hand, thanks to the efforts of the Commander, Capt. St. Clair Street, and the personnel of his party, despite discouraging delays and the worst possible weather conditions, the expedition pushed on and on, flying successfully the same planes with the same motors a distance of 9000 miles, with scarcely a change of spare parts or equipment throughout. In the Trans-continental Reliability Test last autumn, Lieut. Belvin Maynard, the winner, broke his motor near Omaha, and had to change it entirely before proceeding. Only one Liberty motor succeeded in making the journey both ways, and this was piloted by Lieut. E. A. Manzelman, who took pride in his motor, and who felt that by nursing it along and caring for his machine, as such a fine piece of mechanism as an airplane should be cared for, he would gain a victory more pronounced than the saving of a few moments of time with the sacrifice of a valuable engine.

Compared to the non-stop flight made by the Englishman, John Alcock, which gained for him recognition from the British Government in the form of knighthood, most fliers will agree that the Alaskan flight is a greater feat. Alcock's undertaking, though marvelous and unprecedented, was, to a certain extent, a wager wherein the stakes and the odds were great, but the effort was only 16 hours continuous flying with the chance of a failing motor. The Alaskan flight was a steady grind of over three months duration. Only those who have flown on expeditions of this nature can appreciate the state of mind of the pilots as they awoke each morning to realize the hazardous undertaking they had attempted and the long day's flight over uncharted airways before them.

Compared to the flight of the N.C.-4 across the ocean, the Alaskan expedition ranks high. Commander Reid had only one landing to make, at the Azores. Commander Street and his men were compelled to land fifty times on strange fields and, in one instance, on wholly impossible ground. To successfully reach these fields was a big task in itself, but to land an airplane without crashing was a problem that did not appear in the N.C.-4 flight. It took skill, courage and determination to fly from New York to Erie. It took super-human qualities of this nature to fly to Nome and back.

The Alaskan flying expedition exemplifies more conclusively than any similar effort the energy, intelligence and initiative which the United States Army Air Service is exercising in demonstrating the definite and practical purposes to which aviation can be applied. In many instances it has been left to individual effort and private enterprise to test the practicality of an invention or an idea. In the matter of aviation the Government is, in most cases, going ahead of, and in every way possible, is encouraging and assisting, individual effort and private enterprise.

The Alaskan flight had a definite and practical purpose and was carefully and definitely planned.

In preparation for the flight Capt. Howard T. Douglas, A.S., made a preliminary tour over the proposed route arranging for landing fields and supply stations, receiving everywhere the cooperation and assistance of Chambers of Commerce and of influential citizens. In the entire arrangement and carrying out of the expedition, the Canadian Government, through its Air Board, lent its cooperation and support, an officer of the Air Forces traveling with Capt. Douglas after he reached the Dominion, and further arranging for oil and gasoline to be shipped free of duty to the various supply depots along the proposed route. The Weather Bureaus of both countries cooperated in furnishing necessary reports for the flight.

The purposes of the flight were far-reaching, though they may be stated quite simply. First to establish a route to the farthest northwest limit of United States territory. The benefits to be derived from such a route are self-evident; it will bring the people of Alaska nearer to the people of the United States; it will make a relay air mail service to the far northwest possible. Second, the expedition prepared photographs for use of the Geological Survey of 3,500 square miles of unsurveyed territory stretching from parallel of 66 to the Arctic circle. It is estimated that the cost of the air survey would be, approximately, \$1,500, allowing for the photographic work to be made from one plane in ten flying hours. In comparison with these figures, a ground survey would cost, at the minimum \$10,000, and would stretch over a period of three years by reason of the limited season during which such work could be undertaken in that far northern region.

Still another practical end which the expedition had in view, was the thorough testing of the new model De Haviland 4-B plane. In the new model, as is well known, the gasoline tank has been changed to a position immediately behind the engine, thus lessening the danger to the pilot, whose position in the old model was between the motor and the gasoline tank. The Alaskan flight has proven the new model's ability, and points to further development.

INTERNATIONAL BALLOON RACE FOR GORDON BENNETT TROPHY

Keen interest is felt in the International Balloon race for the Gordon Bennett trophy which is to be held at Birmingham, Alabama, on Oct. 23.

The American entries for the race will be Ralph H. Upson, of Akron, Ohio, the present defender of the trophy, who also won third place in the National Elimination contest at Birmingham on Sept. 25; Homer E. Honeywell, Clayton, Mo., winner of first in the Elimination race; and Lieut. Richard E. Thompson, of the Army Air Service, Omaha Balloon School, Omaha, Neb., who won second place in the Elimination race.

The other entries announced, are: France, represented by Capt. Hirschauer; Belgium, balloon "Belgica", pilot, Lieut. Ernest Denuyter; Italy, the "Audens", pilot, Major Chevalier Joseph Valle, and the "Triumphale VI", Major Hugo Madori. The name of Great Britain's entry has not, so far, been announced, nor has the representative from Switzerland.

The trophy to be contended for dates from the year 1906, when James Gordon Bennett presented a handsome silver cup to be competed for by the clubs of the various countries composing the Federation Aeronautique Internationale. The trophy is held by the club whose representative wins it three times in succession.

The first annual contest started from the Tuileries Gardens in Paris, Sept. 30, 1906, under the auspices of the Aero Club of France, Frank P. Lahm, representing the Aero Club of America making a record of 410 miles and winning the cup, thus putting the responsibility for the next race upon the United States.

The 1907 race was held in St. Louis, Oct. 2. As this was before the day of airplanes, the balloon race attracted world-wide interest. Oscar Erbsloh, piloting the German "Pommern", won with a distance of 872 miles. This, of course, carried the next event to Germany, where it was held at Berlin, Oct. 11, 1908, the winner, Colonel Schaek, representing the Swiss Aero Club, establishing a world's record for duration, remaining in the air 73 hours, and making a distance of 753 miles.

The fourth race, held in Zurich in Oct. 1909, under the auspices of the Swiss Aero Club, was won by Edgar W. Mix, representing the Aero Club of America, who landed in Warsaw, 696 miles from the point of starting.

The fifth race, held in St. Louis, Oct. 17, 1910, created great interest by reason of the large number of entries, and, not a little excitement, because a number of contestants were not heard of for days after making the start. The "America II", piloted by Alan R. Hawley, with Post as aid, was given up as lost; rewards were offered, searching parties scoured the country, and the newspapers published sensational stories. The start had been made on Monday. On Wednesday, the "America II" landed in a wilderness north of Lake Sotogama near the Peribonka river about fifty miles from St. Ambroise, Canada, the nearest habitation. After five days of tramping in the wilderness, the two balloonists met a trapper who guided them to St. Ambroise, where they received the good news that the "America II" had won the race. The balloon had been in the air 46 hours, and traveled 1,172 miles in a direct line, thus establishing a new American record.

Lieut. Hans Gericke, a German entrant was winner of the sixth race, which started from Kansas City, Oct. 5, 1911, landing at Ladysmith, Wis., a distance of 468 miles.

The winner of the seventh race, which was held in Stuttgart, Germany, Oct. 27, 1912, was the French balloon, "Picardie", Maurice Biernaime, pilot and M. Rumpelmeyer, aid, winning, landing near Moscow, Oct. 29, making a distance of 1364 miles.

By far the most spectacular of the events was that of 1913 - the last to be held, by reason of the intervention of the war - which took place in Paris, Oct. 12. The start was made from the Tuileries Gardens, in the very heart of the city, bands playing the national air of each country as its representative balloon took off. Ballooning is popular in France - so was Mr. James Gordon Bennett - and the contest attracted more than a half million spectators, including political and military dignitaries and leading sporting leaders. On every high spot in Paris, from the Rue de Rivoli to Montmartre, thousands of people stood watching the balloons ascend into the air, shouting and cheering as they drifted slowly over the Seine.

There were 18 entries, representing eight countries, the United States, France, Great Britain, Italy, Belgium, Austria, Germany, Switzerland. The United States made two entries, both being winners, "Goodyear", Ralph H. Upson, pilot, R.A.D. Preston, aid, taking first, landing near Bridlington, England, on the Yorkshire coast, a distance of 400 miles and a duration of 43 hours, 20 minutes in the air; the "Uncle Sam", H. E. Honeywell, pilot, J. H. Wade, aid, took second, landing at Pont du Buis, Finistere, approximately, 325 miles, with a duration of 42 hours, 50 minutes. Though Upson and Preston had only just been granted pilot certificates, veteran balloonists in Europe expressed admiration of their scientific handling of the balloon, particularly of the way in which the young aeronauts took advantage of atmospheric conditions.

REPORT OF CANADIAN AIR BOARD

Progress Report No. 2, covering activities of the Canadian Air Board for period, Aug. 1 to 31, is one of unusual interest. Of the matters considered, especially noteworthy are the following: reports of recent flight operations; of the Associate Air Research Committee; on air navigation instructions for commercial fliers, and the application of air regulations to civilians; on forest survey; and on Aviation insurance.

The research committee, while considering various proposals for conducting specific researches, is concentrating for the present on the following:

- (1) Wind tunnel investigations on the aero-dynamic effect in plan form of various types of wing tips,
- (2) Investigations with regard to the improvement in design of barographs with special reference to the question of diaphragm.
- (3) Investigations on the operations of Aero engines at extreme low temperature with special reference to carburation, oiling and cooling.

Finding the facilities sadly lacking for giving adequate instructions to such applicants as may present themselves to obtain certificates as commercial air navigators, plans are being considered to have the universities make special provision for night classes in aviation navigation, and, also to provide a suitable curriculum at the training center, Camp Borden, which would take into consideration the training of air personnel.

In this connection, in order to enable the superintendent of the certificates branch to deal more effectively with cases of non-compliance or breach of air regulations, this officer has been empowered by the Board to take action when necessary to suspend license, temporarily, pending confirmation at the next meeting of the Board.

Of the applications received for certificates, the following figures are interesting: from private air pilots, 57; from commercial air pilots, 88; air engineers, 54; air navigators, 2; air harbor licenses, 42; and registration of aircraft, 92.

In the matter of forest survey, the Board has been requested to cooperate with the Conservation Commission of Ontario. It was also suggested that much benefit would result from such co-operation with the Department of Agriculture, whose entomologists are in need of quick transportation to inaccessible regions in connection with outbreaks of spruce bud-worms and like pests.

Of paramount interest is the action of the Board in the important matter of aviation insurance, which is further reported in a special bulletin. In an effort to interest the various insurance companies operating in Canada, to accept aviation insurance, both as regards personnel and machines, some 100 firms were circularized with a letter over the signature of the secretary of the Board, pointing out the importance of this class of insurance in the development of commercial aviation. Appended to the letter was an extract from the last report of the Controller General of civil aviation in Great Britain, for a period covering six months, showing the relatively small number of accidents which have occurred in proportion to the number of hours flown by civil aircraft.

The flying operations branch reports a number of interesting activities. Plans were presented for a trans-Canadian flight to take place sometime in October, the approximate cost of which would be \$7,000, the objects summarized as follows: to demonstrate the feasibility of such a flight from a commercial point of view; to prove the possibility of a fast trip from coast to coast without undue strain on pilots or machines; to serve as recruiting propaganda for the Air Force and to stimulate interest in aviation generally.

An attractive feature of this flight will be its amphibious character, it being planned to take the start at Halifax with a Fairy trans-Atlantic type 3 C seaplane, to make the water route across New Brunswick to the River St. Lawrence in the vicinity of Fraserville. From that point, D.H. 9 airplanes will pick up the journey in relays to Quebec, Montreal, Ottawa, Nipissing, Sault Ste. Marie, and Kenora to Winnipeg.

Extracts from the log of the flight from Halifax to Ottawa in flying-boat G-C Y A G, carried out Aug. 26-28 by Capt. H. Allen Wilson, pilot, and S. Macaulay, engineer, follow:

Thursday, Aug. 26 - At 1:38 p.m., we left Halifax and after a flight of 3 hrs. and 42 min., landed at Fredericton.

Friday, Aug. 27 - Owing to heavy fog which covered land and water, we were unable to make an early start. The fog lifted shortly after 9 a.m., and we left at 9:45. After 4 hours and 5 min. flying we landed at Riviere Du Loup, having encountered a very heavy head wind for the last 30 miles of the lap, between Lake Temisconnata and Riviere Du Loup. After great difficulties in gaining the pier, owing to condition of wind and tide, we commenced refilling the machine, which was a very slow process since, by reason of lack of facilities, all the gasoline had to be lowered in a 5 gallon can over the edge of the pier. No aeroplane gasoline being available, necessitated re-filling with 35 gallons of Queen quality and 40 gallons of Premier quality.

We left Riviere Du Loup at 5:10 p.m. and, running against a very strong head wind, after 2 hours and 20 minutes to cover distance of 110 hours, landed at Quebec at 7:30 p.m. After ascending into the air at Riviere Du Loup, the tank containing Premier gasoline was used. The engine gave perfect satisfaction with this grade of gasoline, but it would appear that more gasoline of this quality than of Queen quality is consumed in the same length of time. For instance: one tank containing 40 U. S. gallons of Premier lasted 1 hr. and 15 min., in comparison to 40 gallons of aeroplane gasoline which lasts 1 hr. 30 min.

Saturday, Aug. 28 - We left Quebec at 8:40 a.m., and after 2 hrs. 10 min. flying, with excellent flying conditions, landed at the Canadian Vickers in Montreal, east, at 10:50 a.m.

Leaving Montreal at 5:30 p.m. and after 1 hr. and 40 min. flying, landed at Ottawa air station at 7:15 p.m.

Total flying time for the journey was 14 hrs. 7 min., covering a distance of approximately 792 miles.

NO TRACE OF AVIATORS LOST IN HAWAII

No trace has yet been found of Lieut. Robert R. Fox and Corporal Herman J. Cornet, who disappeared while flying over the island of Molokai on Saturday, August 28. At noon on that date these two aviators, wearing non-sinkable suits and provided with two pigeons, left Honolulu in a De Haviland plane fully equipped for a cruise. They were last seen in the afternoon of the same day, driving through a cloud over the island of Molokai.

Persistent search was begun as soon as the fliers were reported missing, every means possible being put into operation that might disclose their whereabouts. Not only airplanes were employed in the search, but patrol boats and small water craft of various kinds, without result.

It being known that Lieut. Fox had had considerable experience with pigeons while pursuit pilot at Rockwell Field, California, where the large part of the aerial forest patrol for an extensive district was centered, and further, that he had taken two birds along with him when he set out on the flight, a thorough pigeon hunt was made over the entire region, but without avail.

All radio stations on the islands were kept in touch with the searching parties, but no information was received from this or any other service.

A rumor which reached Honolulu to the effect that the missing aviators had been located in the crater of Haleakala, an extinct volcano on the island of Maui, was found, upon investigation to be absolutely without foundation.

Search was made for the missing aviators persistently up to Sept. 4, when they were declared officially dead.

Officers at Honolulu advance only two theories to account for the disappearance of the fliers: either that the clouds were so dense that they crashed suddenly upon a mountain peak; or that they had lost their bearings and gone far out to sea and fallen when their gasoline supply gave out. Neither crashed plane nor floating bits of wreckage gave any trace of such catastrophe, however.

ORDNANCE METHOD OF DESTROYING INCENDIARY AMMUNITION

In connection with the policy to destroy, and salvage the material contained in incendiary ammunition, caliber 30, Model 1917 - 1918, now in storage at Air Service activities, the following method, which has been found effective by the Ordnance Department, is suggested for those who may be interested:

A pit about 7 feet deep and 4 feet in diameter should be provided. There should be placed in the bottom of the pit a quantity of scrap lumber or other combustible material to a depth of about 2 feet, after which from 20,000 to 25,000 cartridges should be dumped on top and the lumber then ignited. The pit should be at least 100 feet from any building or other stores which might be injured by the fire. Experience has shown that burning bullets are blown out of the pit, and also occasionally bullets blown out which have not been ignited. None of these, however, have been blown over 100 feet. Care should be taken not to approach the pit within one-half hour after the ammunition has stopped popping. After the pit has cooled off the burnt out cartridge cases and bullets can be raked out of the pit, and should be sold as scrap brass. Care should be taken that all of the primers and bullets have been burned out.

FIRST AIRPLANE PILOT KILLED IN THE PHILIPPINE ISLANDS

William Calvin Maxwell, 2nd Lieutenant A.S.A. was killed in an airplane accident on August 12th of this year.

Lieut. Maxwell was born in Altmore, Alabama, and was 27 years old. As a pilot he was unexcelled, and was one of the most popular officers in the Islands. For a few months prior to his being ordered to the 3rd Aero Squadron, Camp Stotsenberg, he was a member of the 2nd Aero of this garrison.

The accident was caused by a defective motor, which caused him to attempt a landing in a small field of the Pampanga Sugar Co. In doing so he hit a flag-staff with his right wing which so diminished his flying speed as to cause his machine to fall before a landing could be safely made. It is also thought that some children who happened to be in his line of flight on the landing field were the cause of his maintaining too high a glide, as it was definitely established that he regained control of his plane after hitting the flag-staff. His passenger, a mechanic and member of his squadron, suffered a broken leg. The machine was a D-H-4.

FIRST PURSUIT GROUP

TRAINING

The course in Pursuit Low Bombing prescribed by the Chief of Air Service, has now been completed by the practice with Cooper fragmentation bombs. This course, which has been attended by so much unavoidable delay, was divided into three parts; class room work, dummy bomb dropping, and service bomb dropping. The first part of the course was finished by June 30, 1920, so that there was ample time to complete the entire course by July 31st as required, had facilities for bomb dropping been available at the time.

Many obstacles had first to be overcome, however, before a single dummy bomb could be launched. The first of these was the fact that the only dummies available were not fitted with the proper means to attach them to the Cooper bomb racks provided. This obstacle was overcome by manufacturing bands to encircle the dummy bomb which was turned up into a flange, riveted at the base, and pierced for the bomb rack at the top.

After this bit had been accomplished, permission had to be obtained to drop some of the unloaded dummies somewhere on the Field which occasioned another, though shorter, delay.

Testing of the bombing equipment thus developed revealed two more serious obstacles. There were no bomb sights available and the target could not be seen through the wing in any event; also, no accuracy could be obtained by guessing at the proper time to launch the bomb after the target had disappeared under the leading edge. Then the bombs often struck the axle-fairing upon being launched, a mishap which would be very disastrous with Cooper bombs and not without its danger when using loaded dummies.

The first of these difficulties was overcome by cutting away the fabric of the fuselage section of the lower wing, making a large enough aperture to see the axle and a portion of the ground. The pilot could then sight on the leading or trailing edge of the axle-fairing, according to the position of his head, the height, wind velocity, etc.

The second and more dangerous obstacle was overcome by setting the bomb rack back about five inches. This was accomplished in the following manner:

The S. E. 5 Airplanes are fitted for Cooper Bomb Racks by means of four fittings attached to the bottom longerons. Since attaching the bomb rack to the holes resulted in having the bombs strike the undercarriage, and since it was not feasible to move the fittings back, two pieces of one-inch steel stock were drilled with four holes each, of the same size as those in the fittings, and were attached to the fittings by means of the foremost holes. The rearmost holes were bored five inches from the foremost holes, so that the bomb rack, when attached to the steel strip, would be five inches farther back than formerly.

After this new device was thoroughly tested, the practice in dummy bomb dropping was carried out. All pilots available for duty with the Squadrons and the Group Staff completed the course, dropping eight instead of six, bombs each. During this practice, a total of 120 bombs were dropped and only a very few of these fell outside of the dispersion area of a Cooper bomb from the target.

This part of the course was completed by September 11, 1920, and it was proposed to run the Cooper bomb practice at Camp Stanley, about thirty miles north of Kelly Field. Inasmuch as there was a field of practice trenches adjacent to the Camp Travis airdrome, which would be available as a bombing range when not used by the Second Division Infantry, permission was requested and obtained from the Air Service Officer, Eighth Corps Area, and the Chief of Operations, Second Division to use this range, instead of the Camp Stanley range, which is in constant use by the 12th Field Artillery.

It was then found that live Cooper bombs could not be issued and expended without permission of the Chief of Ordnance. This occasioned another delay while this permission was obtained. The date was then set for bombing and the bombs were drawn from the Ordnance Depot at Camp Stanley and transported under guard, with an officer in charge, to Kelly Field. The date was again set for the practice and tentative orders drawn up, but it was found that this schedule conflicted with that of the Chief of Operations, Second Division, so that the practice was again postponed until Tuesday, September 28, 1920, when it was finally carried out.

In that it would have involved considerable hazard to the innocent bystander, the bombs were not loaded on the planes at Kelly Field, but were transported under guard to the Camp Travis airdrome. The pilots then flew their ships over to the Camp Travis airdrome where their bomb racks were loaded. Since the course calls for three Cooper bombs per pilot, one dummy bomb was also placed in the bomb racks so that it could be launched first for a sighting shot.

Every possible precaution against accident was observed. Only one pilot was permitted to bomb at a time. Guards were stationed at all approaches to the range, and the bombs were charged with detonator and loaded on the racks under the supervision of an experienced officer.

It was planned to complete the work in one morning and no repetition of it is contemplated until the subject again comes up in the new tactical training course scheduled to commence on the first Monday in October. All available pilots participated, with the exception of two officers who were Post Officer of the Day, and Officer of the Guard, respectively. Only nine pilots were available with the squadrons and two on the Pursuit Group Staff, making eleven officers who completed this course. Thirty-three Cooper bombs and eleven loaded dummy bombs were dropped from an altitude of 500 feet. All of the sighting shots with dummy bombs were either over or short. All but seven of the Cooper bombs landed well within their effective dispersion area, with respect to the target, thus scoring 26 hits - about 79% accuracy.

According to our present schedule, this completes the Pursuit Low Bombing Course until the subject again comes up in future Tactical Training Courses.

During the past week, a new formation maneuver has been worked out and adopted by the First Pursuit Group. It is a variation of well known 180 degrees turn in which the leader executes a "half barrel", or "renversement", while the other members execute outside wing over turns. This turn, of course, loses altitude. The leader executes an "Immelman", or corkscrew loop, while the other members of the formation execute steep climbing turns sometimes referred to as "chandels". This turn makes a very pretty maneuver as well as a most useful one. It enables a patrol to quickly reverse direction in pursuit of an enemy without suffering a loss of altitude.

MEXICAN OFFICIALS GIVEN FLIGHTS

Last week an official visit was made to Fort Bliss by several Custom and Consular officials of Juarez. At the Post Commanders request, four of the visitors were taken up for flights lasting about forty-five minutes. General Fox, commanding the Juarez garrison, was proud to hold the altitude record for the visitors, reaching an altitude of 5,000 feet, and all expressed themselves as having had a most enjoyable flight.

NEWS FROM THE PILOT'S SCHOOL,
MARCH FIELD, CALIF.

Cadet training having been practically completed, flying instructors are taking advantage of the month of October to rest up and get in good condition for the new course which begins November 1. The new class will number about 150. Commissioned officers from other arms of the service will comprise the greater number, many of whom have already reported from various camps throughout the United States and her insular possessions.

Many of these officers reporting from the line were prominent during the World War both in France and this country holding temporary grades as Colonels, Lieuts, Colonels and Majors. Upon completion of their flying instruction at this school they will return to their respective stations prepared to teach others the value of the Air Service as co-operative unit with other arms of the military establishment.

Cadets of the graduating class are awaiting assignment. Names and classification, as to pursuit, bombing or observation qualifications, have been forwarded to the Chief of Air Service. It was recommended that 30 out of the possible 60 or more be retained at this field for a six weeks course as instructors. Others will proceed to advance schools upon receipt of orders from the proper authorities.

John V. Hart of Redlands, Calif., returned from civilian life to the Air Service on Thursday, reporting to this field for assignment to duty. He was recommissioned a second Lieutenant in the regular army and was ordered to this school upon telegraphic instructions from the Adjutant General.

Seventy-five ships at this school made a total of 867 flights during the past week, covering approximately 30,428 miles in 442 hours 10 minutes. Preliminary instruction consumed 251 hours 20 min.; advance instruction, 111 hrs. 10 min.; forest patrol, 57 hrs. 10 min.; test flights 1 hr. 52 min., and miscellaneous flights 20 hrs. and 35 min.

Ex-Sergt.-Major Day Jewell has been commissioned a second lieutenant in the regular army, Quartermaster Corps. He has been ordered to report to the Q.M. at this field for assignment to duty. Jewell held a commission during the war, was discharged and returned to the Air Service as an enlisted man. He was examined for a commission at the Presidio.

Geo. J. Brands, meteorologist of the Signal Corps, has been at March Field during the past week installing apparatus and instructing enlisted men in the care and operation of meteorological instruments. The station installed at this field will be one of the most complete on the Pacific Coast, making it possible to obtain advance information concerning climatic conditions in all parts of Southern California. Brands, upon completion of his work here will proceed to Camp Lewis, Wash.

Master Sergt. Taylor Bowen having completed 30 years of service was retired during the past week upon orders from the Adjutant General. Bowen was given a farewell party by the non-commissioned officers of the Post.

At least fifty commissioned officers and enlisted men, ex-service, ex-high school and ex-college football players, reported during the week to Captain A. W. Smith, who will coach the Post eleven this season. There is an abundance of good material and indications are that March Field will develop a football team that can give a good account of itself against any team in the army.

Passadena American Legion is planning to stage a championship Army-Navy game on Armistice Day, November 11. Captain Smith is out after this game and has announced that if turned down he will challenge the winner to convince Southern California that March Field aviators know the game.

Major B. K. Yount, commanding officer, resumed personal charge of the school on Friday after 30 days leave of absence. Captain H. Peabody was in temporary command.

WEATHER BUREAU SENDS WARNING TO AVIATORS

The office of the Chief of the Army Air Service has been requested by the Chief of the Weather Bureau to issue a general warning to all aviators notifying them to keep away from certain stations by reason of the fact that investigations now being carried out in these localities would make them dangerous to fliers.

The names and geographic locations of these stations are as follows:

<u>Name</u>	<u>Latitude</u>	<u>Longitude</u>
Broken Arrow, Okla.	36° 02'	95° 49'
Drexel (near Elkhorn, Nebraska)	41° 20'	96° 16'
Due West S.C.	34° 20'	82° 45'
Ellendale, N. Dak.	45° 59'	98° 34'
Groesbeck, Tex.	31° 20'	96° 28'
Royal Center, Ind.	40° 23'	86° 29'

In these localities the U.S. Weather Bureau is conducting upper air investigations by means of kites. During clear weather in the day time the kites can readily be seen, but at night and in cloudy weather they are not visible, and even during clear weather in the day time, the wire by means of which the kites are flown cannot be seen at any appreciable distance, and are therefore, a menace to aviators.

Captain B. Q. Jones and 1st Lieut. A. J. Clayton have been transferred from Field Artillery to the Air Service and 1st Lieut. H. V. Hopkins was transferred from the Infantry, to Air Service.

THE DEPARTMENT OF COMMERCIAL AVIATION

Under this heading news items of interest will be published each week concerning the activities of aircraft manufacturers, transportation companies, aerial photographic and mapping concerns - in fact, everything that pertains to civil and commercial aviation.

It is believed that a great deal of interest and enthusiasm in aeronautics generally, and in commercial aviation especially, can be created in this way, and that a means will be furnished to bring friends and former associates in the Air Service closer together.

All who are interested in the commercial end of the aviation game are invited to contribute to this department. Tell what you are doing that others may be benefitted, and that aviation may be boosted. Tell of your operations, of your sales, of new lines established, of passengers and freight carried, of films and photographs made. What we want are facts and figures. We would like particularly to know what co-operation you are receiving from the various chambers of commerce in the way of establishing landing fields, etc. Write briefly, but tell us what you know, and help to make this department what it is designed to be - a success. Ed.

Key West to Havana Daily Air Line Starts Operation Nov. 1st

A fleet of six huge flying boats of the naval cruiser type, each carrying eleven passengers, will be launched from New York in the next few days, bound for Key West, where they will, on Nov. 1, begin a daily schedule of service for both passengers and mail, between the Florida city and Havana, Cuba.

This interesting event in commercial aviation, as announced by the Manufacturers Aircraft Association, has been brought about by the consolidation of the Aeromarine Sightseeing and Navigation Co., with the Florida-West Indies Airways, Inc. The new organization will be known as the Aeromarine West Indies Airways, Inc.

The contract with the Post Office Department calls for a daily service each way. Approximately 500 pounds of mail, an equivalent of 20,000 letters, will be transported back and forth daily. It is estimated that mail deliveries will be advanced 24 hours, the service having contracted to depart for Cuba within 30 minutes after the arrival of the northern mails, which usually is at 5 P.M. By the present system there is a five hours wait after the mail train arrives before the boat starts for Cuba, then an all night, or - to be exact - a ten hour's flight, making the delivery in Cuba not until the next day. It is estimated that the Aeromarine flying boats can put the mail in Havana within an hour after receiving it.

The boats are luxuriously equipped with ventilations, open port holes, buffet, electricity, smoking compartments, with everything complete down to an electric cigar lighter.

There are two cabins, one fore, the other aft, connected by a passageway. The furnishings are in mahogany and silver, the trimmings in silk and hand-buffed leather. There are accommodations for eleven passengers besides the crew, and arrangements can be made for buffet lunches to be served en route.

The establishment of this aerial link between this country and Cuba was prompted by the success of the Aeromarine Navy Cruisers in carrying more than a thousand passengers between New York and Atlantic City, Southampton, Newport, and other points along the coast during the past summer. It was proved that the boats were safe and reliable, and that commercial flying could be operated at a profit.

The Aeromarine flying boats are equipped with two 400 horse power Liberty motors. They have a wing spread of 104 feet and make an average speed of 80 miles an hour. A radio apparatus will keep them in constant communication with the land.

It was one of this type of boats that, early in 1919, in the hands of Navy pilots, established a duration record of 20 hours and 19 minutes in the air without landing. The machines were used by the American and British navies during the war, and were flown hundreds of thousands of miles without a single serious accident.

The operating staff of the Aeromarine service is under the direct supervision of Geoffrey Bonnell, former Major in the Royal Air Force. The pilots include John W. Iseman, formerly of the U.S. Navy, Capt. T. L. Tibbs, and W. Mc Kaig.

Hangars and repair shops have been completed at Key West, and those at Havana are nearing completion.

WHAT THE AEROPLANE MEANT TO

INDIANS AT MOOSE FACTORY, CANADA

"Tapwo Mamuskataletatwun!" This is what an old Canadian Indian exclaimed when he beheld the first flying machine to wing its way to far-off Moose Factory, a station of the Hudson Bay Company situated on James Bay. We, too, have made the same exclamation on similar occasions, for the words quoted above mean "Truly marvelous!" It may be noted, however, that before the old Indian was startled out of his imperturbable calm sufficiently to exclaim at the new species of flying creature, he had taken a long range rifle shot at it to be on the side of safety, and several women of the tribe who were trading at the moment in the store of the Hudson Bay Company, fainted at sight of the hydro-plane. Strange as it may seem, these people have seen a plane before they have seen a railroad train, for few of them have ever been "out to the line". Even when the big flying boat became almost a scheduled occurrence, it is reported, they persisted in raising their hats to show admiration for the strange men who flew on wings.

What the coming of the plane meant to the Red Men it is difficult for the white man to conceive. What it meant to the little group of men and the three lonely women that constitute the white population in this far-away trading post, it needs no imagination to conjecture. Cut off from the world by nearly 200 miles of bush and many days of slow and difficult travel, here was suddenly projected into their daily scheme of things a strangely romantic link with the life they had left behind. In summer the canoe trip "to the line", takes from six to ten days; the winter trail overland is twelve to fourteen. Mail comes and goes only by special messenger.

An interesting report of this pioneer flight into this isolated region of Northern Ontario, made by Captain W. Roy Maxwell of Hamilton, in a seaplane of the American naval type, built by Curtiss, and with a 400 horse-power motor, appears in the Toronto "Star", copies of which have been sent to the office of the Chief of the Air Service by the courtesy of the Canadian Air Board.

The flying venture, according to the "Star" was undertaken by the Canadian Aero Film Company of Toronto under contract with the Government of Ontario, to take motion pictures of the life of the natives of the country generally, and to carry a surveyor who would make a report on the territory traversed.

The plane flew from Toronto to Lillabelle Lake near Cochrane, thence to Remi Lake, 45 miles west. Remi Lake is a beautiful stretch of water with an area of almost 25 miles, studded with islands and fringed with thick undergrowth. It is unspoiled by tourists and summer visitors. There is practically only one clearing, that made by a farmer at the south end of the Lake, which abounds in pickerel, whitefish and herring. Black duck haunt its reeds and marshes; partridge, its bush. Its creeks swarm with muskrat. Moose come down to drink its waters.

Establishing a camp at its southern base on this lake, the party shipped in supplies, a difficult task, since most of the trail is soft, yielding marsh and swaying muskeg. Only four 45 gallon drums of gasoline or oil could be carried in at a time, and only two trips a day could be made.

Three futile attempts were made before the north country was accomplished. The first failure came as a result of the intense August sun, the super-heated air being so rarified that it was without sufficient "body" to effect a rise. On the day following, fog and consequent poor visibility made cross-country flying impossible. The take-off was at length made at 1 P.M., the course of the first leg being two points off north, which was due to bring up to the Devil's Rapids on the Matagami River.

By 1:25 an altitude of 1,500 feet was reached. "The view", says the Star correspondent, "was superb. The country on all sides stretched as far as the eye could reach, like the prairies or the sea, only with a vastly different richness of coloring. At 1:35 we struck the Matagami River, its banks masses of sand, yellow as ripening corn. At 1:45 we passed the Devil's Rapids, a maelstrom of rocks and yellow, seething foam down which the shadow of the plane glided smoothly as down a well-oiled groove. Not thus are the Rapids passed by the Indian and the trapper: for them it means a carried canoe and a long, long portage".

"It was 3:15 when James Bay was sighted, stretching along the northern skyline a slice of silvery gray cutting in between the blue, blue sky and the dark green bush. The houses of Moose Factory sprang up on Moose Island, a speck of glistening white. Soon a little toy church could be picked out, and then, on the mainland, the long line of houses that mark Moose Post, the settlement of the Revillon Freres Trading Company, which must not be confused with Moose Factory on the island of that name, the Hudson Bay Company's settlement."

The sending of this flying boat to a remote and isolated region by the Canadian Aero Film Company serves as a practical demonstration of the adaptability of aviation to commercial purposes. The aerial survey thus made, the motion-films of the surrounding country, of the daily life of the fast-disappearing Indians, and of the day by day activities of the men and women who conduct the business of their respective companies at these two trading posts, will make a valuable contribution to the educational records of the Dominion.

REGULAR AIR SERVICE TO BIG BEAR LAKE

The "Fly Leaf", Oct. 9, is authority for the following report of a commercial enterprise soon to be put into operation in Southern California.

Preparations for a regular aerial service to Bear Valley, to be operated both in summer and in winter, are being made by the Bluebird Aviation Company, under the direction of D. D. France, according to George B. Harrison, Secretary of the Aero Club of Southern California.

The tentative plans call for the use of standard planes equipped with Hall-Scott L-6 motors. A landing field will be used at Ontario as a fueling point between Los Angeles and the valley.

For winter service, when Big Bear Lake is covered with ice and snow, it is said that planes are to be equipped with snow skids, similar to those commonly used on sleds.

SQUADRON NEWS

2nd Observation Group, Hawaii.

All activities on the field have been confined to preparations for the war game activities which began early in October. Actual war conditions will be simulated, with the Second Observation Group performing the duties of aerial patrols, reconnaissance missions and artillery reglise.

The Group Radio Department ran a successful test on a two way radio set, installed in a De Haviland 4 B plane. This was the first test made at this field where radio was used to transmit and receive messages in communication between the air and the ground. Although the Standard SCR-73 transmitting and SCR-59 receiving sets were used in the plane, a number of departures from the plans for two way radio communication as given out in technical instructions, were necessary. This was because of the difference between the De Haviland 4-A and B types of plane.

Heretofore, only one way radio was used, the observer receiving messages from the ground panels. With the accomplishment of the practicable use of both sending and receiving sets, the observers work should be greatly facilitated, and the range of operation of the observing plane will be increased.

The personnel of the officers received one increase and one decrease during the past week. Lieutenant Ralph Wooten who has been on the mainland for three months, returned on the Army Transport, Sheridan. Congratulations and best wishes were extended to Lieutenant Wooten and his bride of two months.

Lieutenant Ralph Gray whose request for discharge has been pending for several months, received his severance from the service a few days ago. He expects to return to the states to complete his college course at Cornell where he has one more year before graduation.

Scott Field, Belleville, Ill.

First Lieutenant Torrence T. Shannon, who has been stationed at this post for more than two years, has been commissioned First Lieut. Infantry and transferred to Camp Grant, Rockford, Illinois.

Second Lieut. Austin W. Martenstein, who has also been at this station for more than two years, has been commissioned 2nd Lieut. Air Service, and has been transferred to Aviation General Supply Depot, Richmond, Virginia.

Chanute Field, Rantoul, Ill.

Preparations are being made for the visit of the Aero Club of Illinois to this field next week, which is expected to be an event of considerable importance in the development of aeronautics in this section of Illinois. Arrangements are being made to entertain between thirty and forty members of the Club over the week end. The feature of the entertainment provided will be an airplane ride for each club member who holds a commission in the Officer's Reserve Corps. Every effort is being made to see that the members of the Aero Club have a pleasant visit and to insure their carrying home with them a favorable impression of the field and a renewed interest in aviation.

Kelly Field, San Antonio, Texas.

During the week the Headquarters Fort Sam Houston Polo Team, champions of the Eighth Corps Area played an unusually fast and interesting game with the Kelly Field Team at the Kelly Field Polo Grounds, the score being 18 to 15 in favor of the Fort Sam Houston team, which was an excess of only three points over the handicap. In view of the fact that the Kelly Field players were at a serious disadvantage with respect to mounts, and considering their limited experience in the way of team work as compared with other teams in the vicinity, the result was very gratifying to all interested in the larger development of this sport in this section. Lieutenant Bogel was injured, sustaining a badly sprained right ankle. Line up: Fort Sam Houston Team: No. 1, Major Garrison; No. 2, Captain Howell; No. 3, Major Mills; No. 4, Lieutenant Colonel Morris. Kelly Field Team: Captain Adler, Lieutenant Brophy, Lieutenant Hoppin and Lieutenant Bogel.

A farewell dance in honor of Colonel and Mrs. J. E. Fatchet was held at the Aviation Club, Kelly Field, on Thursday evening. Major H. C. Pratt, Air

Service Officer, Eighth Corps Area, Colonel Sedwick Rice and officers of the 12th U.S. Cavalry, Officers and friends of neighboring camps, were in attendance.

The club rooms were beautifully decorated with a canopy of red and green lights. Among these lights was suspended a formation of seven miniature De Haviland Planes, led by a miniature "Bluebird", a reproduction of Colonel Fetched's plane which he flew while stationed here. The outdoor pavilion was decorated very extensively in green foliage, and at one end was displayed the American flag with the words "Au revoir" electrically portrayed beneath. At the other end was an electrical display in the form of the Air Service collar ornament, "the propeller and wings", lighting the path of the merry-makers. In each corner a model plane was suspended by an invisible wire, significant of planes attacking a formation from the four directions. The procedure of the dance was stopped long enough for Major H.C. Pratt to present Colonel and Mrs. Fetched with a beautiful "Dango" silver cup as a remembrance from the officers of Kelly Field.

Lieutenant Colonel James E. Fetched, former Air Service Officer, Eighth Corps Area, now under orders to proceed to Washington to report to the Chief of Air Service for duty, made his first parachute jump from the upper wing of a De Haviland-4 plane, on Monday. Colonel Fetched jumped from an altitude of about 2500 feet. He opened his second parachute about 300 feet from the ground and made a perfect landing.

Air Service Mechanics School, Kelly Field.

The capacity of the Air Service Mechanics School is nine hundred and sixty students. There are less than half that number of students in school at the present time. The student personnel is distributed as follows:

	Maximum capacity	Present attendance October 1, 1920.
Course for Engine Mechanics.....	300	161
Course for Airplane Mechanics.....	300	122
Course for Auto repairmen.....	100	54
Course for Aircraft Armament.....	40	35
Course for Electricians.....	20	14
Course in Army Paper work and Stenography.	100	23
Course for Blacksmiths.....	20	2
Course for Machinists.....	20	0
Course for Instrument Repairmen.....	20	0
Course for Parachute Repairmen.....	40	0
Course for Engineer Officers (Special)...	10	5
Course for Aircraft Armament (Officers)..	10	4 (Special)

The course for machinists cannot handle students for the next ninety days due to the shortage of material for instruction which has to come from all parts of the United States.

The course for Instrument Repairmen is not functioning because it lacks a competent instructor, but every effort is being put forth to secure one.

At the present time there is a shortage of trained personnel throughout the Air Service. The school is only working half its capacity when it could be turning out twice as many men as early as it can handle the present number. The business of the School is to turn out competent men and it invites students. The courses each average four and one half months duration. Students are graduated progressively each week. In connection with students to be sent to this school, attention is invited to the fact that any average man can graduate from any course in this school provided he has a knowledge of a trade akin to the trades that are taught in this school. A high school graduate or a student having completed three years of high school work, whether he has a knowledge of his trade or not, is good material. It is impossible to turn out specialists from men who have had no previous knowledge of their trade or who do not have sufficient basic education.

The following named officers graduated from the course for Engineer Officers, September 23, 1920: 2nd Lieut. Levi L. Beiry, 2nd Lieut. James H. Doolittle, 2nd Lieut. Edwin H. McReynolds, 2nd Lieut. William J. White.

Eight officers also completed the Course in Aircraft Armament: 2nd Lieut. Hjalmer F. Carlson, 2nd Lieut. Harold L. Clark, 2nd Lieut. Sigmund F. Landers, 2nd Lieut. Milo B. McCune, 2nd Lieut. John M. Pennewill, 2nd Lieut. Jacob M. Woodward, 2nd Lieut. Wesley A. Zellner, 2nd Lieut. Stanley Smith.

The following officers took a special course in Parachute work including live jumps: 2nd Lieut. Harold L. Clark, 2nd Lieut. Milo B. McCune, 2nd Lieut. Jacob M. Woodward, 2nd Lieut. Sigmund F. Landers, and 2nd Lieut. Wesley A. Zellner.

First Lieut. Edward D. Jones and 2nd Lieut. Ray C. Milyard will complete the Engineering Course October 8th, due to the fact that they were not ordered to this school until two weeks after the course was started. The graduation of these two officers will complete the fourth successful class graduating from the Engineer Officers Course within the past eight months. With five exceptions, all of these officers made successful live jumps. The class was augmented by Lieut. H.E. Sturcken and Lieut. F.H. Lundell of this field who also made successful jumps.

Langley Field

Captain Dale Mabry and Lieut. McIntyre have returned to Langley Field after participating in the National Balloon races at Birmingham, Alabama. These officers flew a racing balloon of 80,000 cubic feet capacity. The race included a race between the Army and Navy was won by the Army, Lieut. Thompson and Lieut. Weeks being the winners. Captain Mabry and Lieut. McIntyre finished 6th place in the National race landing at Louisport, Kentucky. They flew at all altitudes up to 10,000 feet seeking favorable winds. The flight was made without accident, a safe landing being made, the balloon and all instruments being saved intact. It is expected that a large racing balloon similar to the one in which Captain Mabry flew will be obtained, for use at this field.

Five De Havilland airplanes flew recently in formation from Langley Field to Richmond, Virginia, where they maneuvered over the State Fair for the amusement of the large crowds which had gathered there. Upon completion of the maneuvers four planes returned to Langley Field while the fifth piloted by Lieut. Lawson landed at the fair grounds and was inspected by the large crowds. Captain Lawson gave a short talk on the Air Service for the interests of the Recruiting Detachment stationed at the fair grounds.

March Field, California.

Educational and vocational classes at March Field will be resumed Monday. Enlisted men of the command in addition to attending classes at the Post School, will attend class room instruction in physics, mathematics and machine shop practice, at the Riverside Junior College. Instruction has been assigned and indications are that fully 90 per cent of the enlisted personnel will be enrolled in some one or more of the educational and vocational courses.

Fort Mills, Philippine Islands.

The typhoon season has been on for about three months, but in spite of it some interesting flights have been made. These flights, however, have been with the Burgess N9H Seaplanes since the weather has been too bad to launch an HS2L Boat. The location of the old hangars is better than that of the new, where we have assembled the HS2L's. A strong southwest wind keeps a constant surf pounding the beach in such a way that to launch a plane is difficult.

Despite all of this, the Balloon Companies have been able to make many ascents and Captains W. A. Gray, H. T. Lewis, Lieutenants W. E. Huffman and E. J. Bowling made their first flights. There was a forty-five mile wind blowing, and great difficulty was experienced at from one to three hundred meters; but upon reaching eight hundred, the balloon rode quite steadily. Five batonets and one fin were ripped and torn off during the flight.

Due to the extreme narrowness of the island at this point it is essential that extra precaution for the protection and safety of the balloon observers and pilots be made, as a fall or jump on water would place the unfortunate balloonist at the mercy of sharks, the bay being literally alive with them. These preparations consist of the testing of all parachute paraphernalia, and protection by the boats assigned to this garrison. It is thought that the basket 'chute' will prove the most effective as it offers fewer hazards.

The Second Aero Squadron gave its second annual dance in the new ballroom of the equally new Y.M.C.A. Building on the night of the 7th. It was a huge success as was demonstrated by the attendance and the number of people on the floor when "Home-Sweet-Home" was played. The hall was beautifully decorated with flags, tropical plants, and lights. A miniature airplane made by the E & R Department was raffled off during the intermission.

Lieut. Wendel Brookley was transferred to the Office of the Department Air Service Officer, Manila, P.I., in the capacity of Engineer Officer.

Sergeant First Class W. S. Sankey has been appointed business manager of the 2nd Aero Squadron base ball team.

During the week many parachute tests were made, chief among which was the trial of the "Basket Chute". This trial was made to determine the force with which this type of chute strikes the water. Two attempts were made, the basket landing on the ground on each occasion.

1st Lieut. John W. Frewer who has been on temporary duty with the 3rd Aero Squadron, Camp Stotsenberg, has been transferred with his 6th Aero Section to permanent station at this post.

France Field, Canal Zone.

Artillery reglage with 4.7 howitzer batteries at Fort Randolph and Fort Sherman were attempted on Monday, Tuesday, Wednesday, Thursday and Friday. Success in these missions was varied, depending upon the efficiency of the radio telephone sets installed in the planes.

Radio test flights were frequent during the week in order to test newly installed apparatus for liaison work with the Coast Artillery. Most of the radio apparatus at this Post is in very poor condition because of age and deterioration from climatic effects. Thus far it has been impossible to use radio telegraph sets as the generators burn out after very few minutes' work. It was this trouble prevented success at Fort Randolph on Wednesday morning, it being impossible to establish communication with either telegraph or telephone sets. First Lieut. Alfred C. George, observer, with 2nd Lieut. J. D. Barker as pilot, tried out three different sets without success, and finally conducted their observations by means of drop messages and ground panels.

On Wednesday afternoon at Fort Randolph, 2nd Lieut. Dayton D. Watson, observer, with 1st Lieut. R.C.W. Blessley as pilot, conducted a fairly successful shoot despite considerable trouble with the radio phone. The same pilot and observer reported the sensing of forty shots by dropped message at Fort Randolph on Tuesday morning. As this was a calibration shoot these sensings served their purpose as well as if they had been sent by some quicker message. On this flight attempts were made to operate radio phone sets but only a few messages were received at the ground station.

The first real success occurred on Thursday afternoon at Fort Sherman when 1st Lieut. J. W. Gastreich, observer, and 2nd Lieut. H. B. Chandler, pilot, maintained fair liaison with radio phone set. In the morning this team secured very good results with drop messages, spotting twenty-one shots. Only five shots were fired in the afternoon, and because of heavy interference from Colon Wireless Station and poor receiving facilities at the battery, work was slowed up somewhat. The third shot fired in the afternoon was reported by the observer and the O.K. received from the battery before the spray caused by the shot had dropped back on the water.

First Lieuts. H.W. Holden, observer, and R.C.W. Blessley, pilot attempted to conduct a problem at Fort Sherman on Thursday afternoon. The generator of the radio telegraph set burned out soon after leaving the ground, and the shoot had to be conducted by stop messages. Sensing was dropped for twelve salvos, and then the firing was interrupted because the tug towing the target became temporarily disabled.

The same problem was continued on Friday morning by the same team. Excellent liaison was established both ways with wireless phones until the antenna became grounded on the tail skid. Ten shots were reported by telephone

and five by drop messages. The problem was quickly completed in the afternoon, the radio phone set giving fine results despite heavy interference. After a wait of a few minutes another problem was started and carried thru successfully, all forty-six shots being sensed and the sensings quickly received at the battery. This made a total of seventy-five shots fired during the afternoon without any shots or messages being lost. This firing will be continued next week.

Two photographic flights in a J-N-4 plane were made on Monday by 2nd Lieut. D. D. Watson, A.S., and Corporal Carson, 7th Aero Squadron for the purpose of taking aerial photographs of the "H.M.S. Renown" with the Prince of Wales on board - seven photographs having been successful.

On Tuesday morning two De Haviland 4 planes escorted the "Renown" from Cristobal to a point opposite Nombre de Dios, a distance of about thirty-five miles. When the planes left the "Renown" the personnel of the battleship were standing inspection.

Two successful flights were made on Tuesday with the new gunnery plane, during which the machine guns were tested out by 1st Lieut. Chas B. Austin, A.S.

On Wednesday France Field had its monthly field day which this time consisted of an aquatic meet. The entire morning was spent in swimming races and diving, both fancy and novice. The affair was an enjoyable one and consisted of some very novel events. Sergeant Karl R. Johnson, 7th Aero Squadron dived from the top spring board, which is about thirty feet above the water, with his hands and feet tightly bound.

On Thursday, Friday and Saturday there were numerous flights in planes equipped with radio phones, for the purpose of testing out the aerial and ground sets for artillery firing next week. Several liaisons have been carried out with the Coast Artillery in connection with this firing, and all details have been arranged. Considerable difficulty has been encountered in maintaining communication between planes and the Coast Artillery ground stations.

Two pigeons which had been released at Porvenir, Gulf of San Blas, on September 4th by the exploration party from this post, reached the home loft on September 14th. These pigeons had previously been carried farther down the coast on the launch "Putnam", and when released flew in the wrong direction. The birds had landed at a San Blas village on the Island of Nargana, and a distance of about twenty-five miles from Porvenir, for the message had been taken from them and additions made to the effect that the pigeons had been retained at Nargana until September 12th when they were released and made the homeward trip in two days, a distance of about 110 miles. Neither of the birds had ever been tossed before more than thirty five miles away from the home loft.

Luke Field, Ford's Island, Hawaii.

Maneuvers for all organizations in the Hawaiian Department extended over a period of ten days. All troops were prepared for field service. The Second Observation Group was charged with the duties of protecting all friendly positions from hostile air patrols, of preventing the landing of landing parties of aircraft of the White Forces (enemy), and the proper patrol and reconnaissance, visual and photographic, of all sectors, in addition to close liaison with all ground troops and the observation of artillery fire.

On the first day nothing other than the regular patrols and reconnaissance flights were conducted; but on the second day movements of troops and conditions of the situation changed rapidly. On Wednesday landing of troops was simulated by the White Forces on the north shore of Oahu, which required a hasty defense and concentration of our troops. Planes from Luke Field were dispatched at an early hour to make an aerial attack with machine guns. This attempted landing by the enemy was successfully repelled and the theater of activity was then changed to the west coast. Troop movements continued for two days through the passes and around the mountains to points on the west shore of Oahu. Visual and photographic reconnaissance was carried on by the Air Service, and contact with all movements of forces was maintained.

On Saturday the enemy was reported landing troops on the west coast. A bombing formation of De Havillands was rushed to the scene of activity, dropping an assortment of explosive and dummy bombs, with telling effect on the target representing the enemy. The bombers were followed by a formation of attack planes with mounted Twin Lewis guns and hand grenades, whose vigorous assault completely annihilated the enemy. The week ended at this point in the conflict.

Two night flights were made on reconnaissance missions during the week. Messages were dropped at the command posts over which the flights were made. The planes were equipped with landing flares and other night flying equipment.

On the last four days of the week artillery observation with batteries of the Coast Defenses was conducted. HS-2L flying boats were used on all artillery shoots. They were equipped with two-way radio sets, which greatly facilitated the work of the observing plane.

A total of 103 hours and 11 minutes were flown in conjunction with the war game activities, which breaks all previous records made by this organization. Flights were made on the following missions: Special patrols, seventeen; general patrols, eighteen; inter-island reconnaissance, eleven; artillery observation, ten; photographic reconnaissance, thirteen; visual reconnaissance, five; night reconnaissance, two; attack, eleven; bombing, one formation.

Post Field, Fort Sill, Oklahoma.

Artillery Liaison, Photographic Reconnaissance and Aerial gunnery constituted the week's work at the Observation School. A mosaic of a portion of the Fort Sill Reservation, which has been worked on by the students during the last two weeks, is now nearing completion. The week's work with the Lewis gun showed excellent progress by the students who are exhibiting great rapidity in the remedying of stoppages and jams and showing excellent marksmanship.

During the week advantage was taken of the Oklahoma State Fair at Oklahoma City, to secure recruits for the Air Service. A flight left each evening, returning the following morning, for the purpose of cooperating with the Army Recruiting Officer at Oklahoma City and it is believed a number of recruits were obtained, although the exact number will not be known until later.

BORDER NEWS

FIRST DAY BOMBARDMENT GROUP

During the week 100% of the daylight time was suitable for flying. The Group made 242 flights for a total time 127 hours and 45 minutes. These flights were of the following types: 136 Reconnaissance, 4 Artillery Adjustment, 43 Formation, 51 Camera Gun, 8 Radio Tests.

On Sunday, Lieutenant A. C. Burkhardt while on his way to Fort Sill, Oklahoma had a forced landing and crashed at Avinger, Texas. Neither he nor his passenger, were injured.

On the same day, Lieutenant Ray A. Barnes, with Lieutenant H. E. Hillery, passenger, crashed a De Haviland 4 B, while ferrying same to Dallas, Texas. There were no personal injuries but the ship was a wash out.

Artillery Adjustment

The following teams participated in the Artillery practice carried on at the Camp Stanley, Leon Springs Range:

Observers: Albert M. Guidera, 1st Lieut. A.S., M. R. Maynard, 2nd Lieut. A.S.; Harry L. Speck, 2nd Lieut. A.S.

Pilots: Sigmund F. Landers, 2nd Lieut. A.S.; M. S. Lawton, 2nd Lieut. A.S.; and Harold L. Clark, 2nd Lieut. A.S.

During the week the three planes left Kelly Field in time to arrive at Camp Stanley where a conference was held with the officers from the 12th and 15th Field Artillery.

The targets were designated and the method of firing was decided upon and then it was up to the Air Service to locate the targets on the ground and carry on the shoot.

Lieutenant Maynard was first up but had some difficulty with his radio and returned to the field. Lieutenant Guidera then went up and conducted two problems with the 15th Field Artillery in a very creditable manner. Lieutenant Speck, observing for the 12th Field Artillery also carried on two successful problems.

The Commanding General of the 2nd Division was out at the Range on a tour of inspection and was very interested and well pleased with the speedy manner in which the Observers were able to direct the fire from the air. Lieutenant Guidera observed the fire on two separate problems with the 15th Field Artillery and Lieutenant Speck carried on one short problem with the 12th Field Artillery. The three problems were fired beginning at 10:30 A.M. and at 12 noon the planes were well on their way home to Kelly Field.

The success of the entire shoot as far as the Air Service was concerned, was in a great measure due to the very efficient radio equipment carried on the three planes which were used in missions. Each plane was equipped with two separate generators, either one of which could be used by simply throwing a set of knife switches.

Flyers Leave Service

The Group has just lost two of its Squadron Commanders through discharge, viz., Captain Marcus H. Rice and Captain Roy N. Francis. Both will be distinctly missed.

Captain Francis is one of the few pioneers in the flying game who is still active as a pilot. He made his first flight in 1909. From then till the declaration of war he was engaged in exhibition work. As soon as war started he was engaged as a civilian instructor and was later commissioned a First Lieutenant and then promoted to the grade of Captain. There are few, if any, better big plane pilots in this country. He was in command of the 20th Squadron at the time of his discharge.

Captain Rice entered the Air Service from the New York National Guard. He has, at different times, commanded the First Day Bombardment Group and the 166th Squadron. He was in command of the former at the time of his discharge.

The officer personnel of the Group has recently been augmented by the addition of six officers who were commissioned from civil life.

Nineteenth Aero Squadron, Sanderson, Texas

Border patrols were flown this week as scheduled. The patrol of this flight now covers the river from directly south of Sanderson to Presidio, thence to Marfa. This is conceded to be the worst sector of border to be encountered anywhere from Brownsville to California and the fact that pilots are reporting each plane as running like clock work reflects great credit upon the Flight Engineering Department, besides being a source of well placed confidence on the part of the flying personnel. One hundred percent of daylight hours have been considered suitable for flying.

One of the new portable buildings is in the last stages of erection and the next week will see the demise of the last tent hangars. One of the three portables will be used as an Engineering Office and Engineering Supply Building, while the other two will serve as Mess Hall and Squadron Supply respectively. Doors and windows are being installed in the new barracks building.

Two of our most popular officers and capable pilots, Second Lieutenants Fogarty and Robertson, were discharged September 30th upon their own request. Both were experienced Air Service Officers with enviable records as instructors during the late unpleasantness, to say nothing of their inestimable services as patrol pilots during the rigors of the last fall and winter. Lieut. Fogarty has better than 370 hours border patrol time, a record that is surpassed by few. They leave this squadron with the right to call each and every man of us "buddy", whatever befalls. We are proud to have had such names as these upon the squadron rosters.

A number of the enlisted men attended a dance at Dryden, Texas, Friday night, reporting a most enjoyable evening on their return. Border life is not without its silver lining.

The officers gave another of their famous weekly "doings" last Saturday night in the form of a dinner and card party. A number of prominent Terrill County ranchers and their wives accepted invitations, as did a party of Sanderson young ladies. Lieut. and Mrs. Gardner ably chaperoned the affair. These little weekly events are so gaining in popularity that they threaten to become a regular establishment.

Interest in tennis is on the increase, new fans taking to the courts at every opportunity to learn the rudiments. Legitimate athletics have sounded the death knell of African golf and similar pastimes, in this flight. A punching bag installed in the embryo recreation hall has attracted numerous satellites with the result that quite a few would-be's are performing in a very creditable manner.

12th Observation Squadron, Nogales, Ariz.

Two liaison exercises have been held the past week with the 2nd and 3rd Battalions of the 25th Infantry. Both maneuvers were highly successful. The communication from the ground to the plane was largely by means of the D.R. Flag Signals, and although this system has not been used extensively, it has proven very satisfactory.

Lieut. Wolfe had a forced landing near Ajo on Monday while making the Western Patrol to Monument #175. A ditch on the field caused a total wreck of the plane but luckily both pilot and observer escaped injury.

FIRST SURVEILLANCE GROUP

El Paso, Texas

Considerable time and effort has been devoted by all troops at Fort Bliss to prepare for the Military Carnival and Horse Show scheduled for October. The 104th Aero Squadron has prepared a still exhibit of plane with full equipment, radio, photography, etc., and in addition will fly a seven plane formation during the exhibition drills by ground troops.

Border patrol has been resumed and entire sector of 1st Surveillance Group is now being covered twice each week from McAllen, Texas to Nogales, Arizona.

Airdrome, Fort Bliss has as visitors this week two civilian planes, one is a Canadian Curtiss owned by a former pilot now living at Fort Stockton, and the other a Standard with Hispano Suiza engine operated by Mr. Puflea formerly a civilian flying instructor. Mr. Puflea has done some passenger carrying in this vicinity and is also negotiating the sale of planes to several tentative customers.

In connection with the review and inspection of ground troops at Fort Bliss, General Dickman, Corps Area Commander, is scheduled to inspect Flight "A" 104th Aero Squadron. This will be the second inspection of Flight "A" by the Corps Area Commander.

By the transfer of 1st Lieutenant John M. Clark, to the Aviation General Supply Depot, San Antonio, Headquarters again loses its Adjutant and one of its most efficient officers.

This Airdrome has so far benefitted by the results of the recent examinations in having again two newly appointed Air Service Officers: 2nd Lieut. A. B. Ballard, and 2nd Lieut. Max Schneider. Both ex-pilots with considerable flying experience.

METEOROLOGICAL REPORTS REVEAL CURIOUS FACTS

Pilots at March Field, Riverside, Calif., are taking considerable interest in the meteorological reports compiled and posted twice daily in the school building, says "The Fly Leaf". The meteorology station installed and operated by Signal Corps personnel is revealing many interesting facts that heretofore have somewhat mystified close observers of climatic and atmospheric conditions about March Field.

Often-times pilots have reported that it required more actual flying time to reach Rockwell Field, San Diego than it did to return from that base to this school. They could not understand this when the popular opinion prevailed that when flying south they always had a wind on their trail. Ground observations would bear out this belief but reports posted by the meteorological experts indicate that at various altitudes the wind direction is changed.

Readings are taken twice daily from a small captive balloon and instruments which record altitude, direction, velocity, temperature and relative humidity. Corporal James H. Kearns prepared the following wind-loft report Thursday, Oct. 7. The first readings were taken at 8 A.M., and those following at 1:30 P.M. Observe closely the variations at various altitudes:

A.M. Report			P.M. Report		
Altitude (feet)	Direction (from)	Velocity (mi. pr. hr.)	Altitude (feet)	Direction (from)	Velocity (mi. pr. hr.)
Surface	East	0	Surface	N.W.	7
100	East	0	100	N.W.	7
250	S.E.	0	250	N.	5
500	S.E.	1	500	W.S.W.	4
1000	S.S.E.	2	1000	S.W.	
1500	S.	2	1500	S.W.	3
2000	S.	2	2000	S.W.	2
2500	S.	2	2500	S.S.W.	4
3000	S.W.	7	3000	S.	8
4000	W.S.W.		4000	S.W.	12
5000	W.S.W.	23	5000	S.W.	21
6000	S.W.	36	6000	S.W.	26
7000	S.W.	36	7000	S.W.	37
8000	S.W.	38	8000	S.W.	36
10000	S.W.	38	10000	S.W.	29
12000	S.W.	36	12000	W.S.W.	28
Temperature 49 F.			Temperature 82 F.		
Relative humidity, 93 per cent.			Relative humidity, 62 per cent.		

NEW DISTINCTION FOR AMERICAN AVIATOR

"It is reported that Lieut. Carl Clark of New York City, a member of the Kosciusko Squadron, proposes to fly across the Atlantic alone in an airplane. He plans to use French Brequet constructed with two engines, so that they may be controlled by the solitary flier, and he will use them alternately in order to keep them tuned up and available at any moment.

He declares that he will be able to sustain the nerve strain necessary for more than the continuous 16-hour flight. He has two motives in attempting this flight. He desires to be the first aviator to cross the ocean alone, and to demonstrate to the public that flying is one of the safest means of transportation.

Lieut. Clark would not go into details, but gave the impression that he had some original ideas and devices, which are the outcome of his flying in Europe, and more lately as an officer in the Polish Army. He is now in excellent health, and it is thought that his recent experiences during the Polish Russian war have given his nerves a real test, as the Russians have become adepts at an anti-aircraft firing, and the low-flying aviator is subject to a fusillade at close range.

HERE AND THERE WITH THE EDITORS (CONT'D)

He expressed himself as looking forward to having his mother greet him when he arrives at Mineola Field, after having crossed to Newfoundland and flown thence to Long Island." (Dayton Herald 10/12/20)

"AN AERIAL SANITORIUM" ✓

Possibilities for airship service are wide and extensive. Some have already become actualities and others are now only in the minds of the student of this line of the world's progressive activities. A scientist who takes for his special thought aiding health conditions suggests an "aerial sanitorium" for tuberculosis patients.

He suggests using giant airships, structurally similar to the great Zeppelins. These he would have moored over centers of large population like Chicago and New York, where this disease is most prevalent. The patient's cabin would be located on the top of the ship where the sunshine would be unrestricted. The lower forward cabin would be for the crew of the ship, while in the rear cabin would be housed the hospital corps.

Since from one end of the ship to the other would constitute a distance of about 800 feet, and from top to bottom about 100 feet, elevators operated by electricity would be arranged for travel from one section of the ship to another.

Everything possible to cause patients to forget their ills would be provided - dining room, gallery, library, dispensary, a piano, and a moving picture outfit, are some things suggested, and outside around the cabin will be arranged a promenade where patients may sit or walk.

This airship will be held at an altitude of between 5,000 and 10,000 feet, far above all noise, a very quiet and restful realm, where even clouds and rain are not known, as clouds usually form at an altitude of 5,000 feet.

AIRPLANES TO AID POWER COMPANIES

Last week's Literary Digest copies, from the San Francisco Journal of Electricity, an editorial which tells of how the airplane is coming into use in connection with power development and other work in remote and mountainous regions into which roads have not yet penetrated.

The airplane, for some time, has been serving successfully in forest patrol work. It has been the means of preventing much damage by the menace of fires. In California alone, it is reported that during the month of August over two hundred fires were discovered which were immediately reported and checked before damage was done.

Power companies are concerned in preventing fires doing damage to their mountain property. Transmission trouble on the lines can be ascertained from airplane. Record shows that such trouble has already been discovered and reported by airplane.

The airplane can be used to transport lighter pieces of machinery and building material, and in this way it can aid construction in remote and unopened regions.

The above mentioned uses of the airplane show the way to a real field of development in which it can become the "serious servant of industry as well as a medium of sport and a weapon of war". (Literary Digest 10/16/20)

AERIAL ACROBATICS FOR MAIL SERVICE ✓

Stunts such as were performed by Locklear and others, which heretofore have been looked upon as reckless, and merely for entertainment and thrill, promise now to come in as valuable aids in commercial aviation. Changing from one plane to another several thousand feet in the air will be copied in the Air Mail Service in changing sacks of mail, packages or pilots from one ship to another thus enabling our air liners to make long journeys without landing. It is even believed by some that airplanes will be taking their gasoline and other supplies in the air.

HERE AND THERE WITH THE EDITORS (CONT'D)

It has already been suggested that mammoth airplanes will soon be very common, and as these fly over control stations, smaller planes will come out and will receive mail and packages destined for that station; and by the means of a long hook, baggage will be lifted from the smaller plane to the larger one, after which it will speed on its way. When it becomes possible to transfer fuel from one plane to another it will make a non-stop coast to coast trip possible. One commercial aviation company is already planning to put the scheme into effect within a few months in transferring mail.

(Washington Star 10/16/20)

MERCURY AVIATION COMPANY'S PLANS

"The Mercury Aviation Company has plans which may put out of service entirely the old style surveyor.

By means of a delicately adjusted camera, controlled entirely by the speed of the plane and the wind, and operated by an air-propelled motor, it is possible to photograph any sized area and the print will show every feature in its exact scale size instead of its perspective relation to every other feature.

The camera is mounted on a frame similar to the compass of a steamship. It is so designed that it always remains in a perfect level position. One operator sits back of the camera and the pilot flies over the objectives at a predetermined height to get all the desired area into view."

(Los Angeles Times 10/3/20)

ELECTRIC LIGHTS GUIDE MAIL PLANES

"Every means and device for safety is and should be brought into play by the Government while aerial service is being established throughout the United States.

According to a report from the Western department, small electric lights operated by wireless will guide planes at night on the transcontinental air mail route between Cheyenne, Wyo., Salt Lake and San Francisco. The wireless instruments in the three cities will control the lights so that they shine only when the airplanes are within a certain radio path about 200 feet in width. When a pilot strays from this path the lights will go out, and he will have to determine by the wind on which side of the path he is travelling. Flashing on and off of lights will indicate approach to destination. Col. Jordan declares that this process has already proved a success and is owned exclusively by the government."

(Los Angeles Times 10/3/20)

WAR INVENTIONS.

The naval consulting board has published a history which gives a little jolt to the reputation of American people for inventive genius.

There were 110,000 suggestions received which had to do with the extirpation of the submarine; out of this number only about one in a thousand proved to have any practical value.

The criticism is that the inventor's ideas were so bright that it was necessary to employ five technical examiners, three junior examiners, one personal assistant to the secretary, one head file clerk, with three assistants, a chief stenographer, with three assistant stenographers, a switchboard operator, and four yeomen performing miscellaneous services.

It was the duty of this staff to take care of and examine all suggestions made - at one time they came in at the rate of 600 a day.

After all their labors, only 110 had any practical value, and out of the 110, only one was thought well enough of to be put into operation. Several others were developed and may be used later.

HERE AND THERE WITH THE EDITORS (CONT'D)

One worth-while idea out of a thousand is not encouraging but one out of 110,000 is worse. We may thank the system which has protected us against the amateur strategists. If they had had their plans carried out the war, probably, wouldn't be over yet. (Detroit News 10/3/20)

AERIAL DEVELOPMENT HOPE OF FRANCE

According to M. Flandin, under secretary of the state for aeronautics "the future defense of France will be in the air."

He said: "Though the interallied commission destroyed 25,000 German motors and 14,000 planes, there is still a great merfice in the existence of Germany with all its technical facilities for the construction of aerodynamic laboratories and a host of engineers who are working and experimenting in silence.

"France is held back for three reasons: First, lack of laboratories; second, the essential materials for the construction are too widely distributed; third, our engineers are not sufficiently encouraged.

"The people who first master aerial transport will master the world. Thus the aerial policy of France ought to be the development of technical facilities and then the organization of a complete system of aerial navigation." (Philadelphia Public Ledger 10/11/20)

ALUMINUM ALLOYS

Aeronautical scientists are bringing their wits to bear with greatest intensity upon the alloy of metals that may be used in the construction of air machines. Pure aluminum is a favored metal for this purpose mainly because of its durability and its lightness, but it is thought that its alloy with some other metal may prove a more perfect substance for the same purpose than the pure aluminum itself.

Zay Jeffries, M.S.A.E. Research Director, Aluminum Manufacturers, Inc., furnishes for publication an excellent lesson entitled "Aluminum Alloys". He first gives the relative values of one metal over another, then he describes fully the value of alloys of aluminum with the other metals.

The article carries too much detail to make possible an intelligent reproduction in our small space, but those who are interested in the subject will be benefitted by reading it as given in "Aviation" 10/1/20.

BRITISH WISH TO ESTABLISH TRANSATLANTIC AIRSHIP LINE

The British are stirred by the report that negotiations are taking place with an American syndicate for the establishment of a trans-Atlantic airship service by the Zeppelin construction firm in Germany.

Sir Trevor Dawson, Managing Director of Vickers, Limited, told a newspaper reporter that it was a great pity that a British syndicate had not got into operation for starting such a service, and it is his intention to bring up this matter before Air Conference this week. (N.Y. Times 10/11/20)

ROHLFS PRAISES THE FRENCH

Roland Rohlf's has returned from France and has nothing but praise and kind words to say for the French.

He declares emphatically that there was no truth in the report that the French had purposely selected a poor field for the race in order to handicap the Americans. He said Etampes Field was the best one available. Before going there he had been led to believe that France abounded in good flying fields but now he is convinced that their best fields are not as good as our Long Island fields.

HERE AND THERE WITH THE EDITORS (CONT'D)

He further stated that the Frenchmen were not really ready for the race, and little public interest in it was shown. The Frenchmen, he said, had no idea of the speed of the American plane, and it was because they had not had this information sufficiently impressed upon them that they had not leveled their fields to accommodate our fast machines.

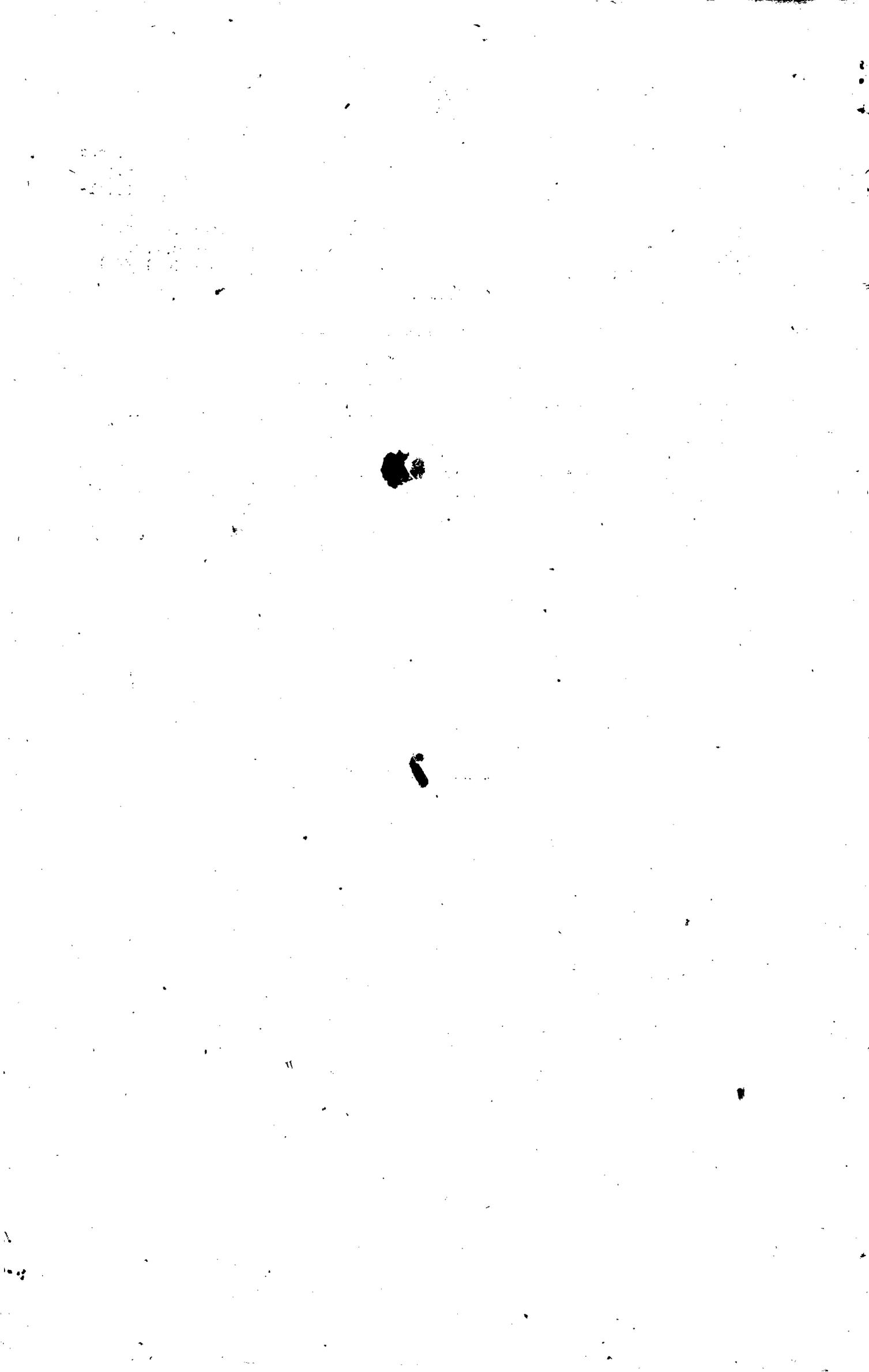
Sadi Leconte made a wonderful flight at low altitude and averaged about 150 m.p.h. The Texas "Wildcat" he said would have easily made 190 m.p.h. under the same conditions. (Brooklyn Daily Eagle 10/10/20)

ZEPPELIN FACTORY IN UNITED STATES

Paris News in the New York Times states that a wireless sent out from Germany recently discloses the intentions of the German Zeppelin firm, that its works are to be transferred to the United States.

Under the terms of the treaty the manufacture of aircraft of all kinds in Germany has been so restricted that the Zeppelin factory has been at a stand still.

It is understood that financial interests in America are concerned in the undertaking. Airships capable of making regular journeys across the Atlantic are proposed. (N.Y. Times 10/1/20)



November 9, 1920.

Building B,
Washington, D. C.

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE NOVEMBER 10, 1920.

"CLOSE UP" PEN PICTURES OF THE ALASKAN FLIGHT

The Alaskan "birdmen", like their kinsmen of the feathered tribe, seemed to take fright, once the great reception and enthusiastic welcome accorded them at Washington was actually over, and scattered like a covey in flight. But two members of the expedition were caught, almost literally "on the wing", namely, Captain Howard T. Douglas, A.S., who went ahead of the fliers making preliminary arrangements and "blazing the trail" over which the flight was to proceed, and Lieut. Clifford C. Nutt, one of the officers in plane No. 2 from whom these little "close up" pen pictures of the wonderful air journey were made.

"The day we left Mineola, July 15, was one of the very worst of the whole flight from the standpoint of visibility" said Lieut. Nutt. "We couldn't see the ground from a height of 1000 feet, so three of the planes dropped to 500. Captain Street, however, lifted to 8000 feet to get out of the fog, and so got lost from the squadron which proceeded to Erie, where Captain Street joined us next day. Meanwhile, it had rained, the field was wet and muddy; we couldn't get hold of a roller, so we tried to make use of a truck to put the field in shape. But the mud and water stuck by us, and when Crumrine took off he made a nose dive right into the marsh itself. Luckily, however, no one was hurt and no damage was done. Leaving Erie, we cut directly across the lake for 85 miles bucking a strong head wind. For an hour and a quarter we were out of sight of land, and, owing to the haze, we hadn't even a horizon line to guide us. The mist met the water in indistinguishable gray haze into which we ourselves seemed to melt without anything to guide us. Lieut. Nelson was driving at that time and I watched him from the cockpit tipping first one wing and then the other or going nose down under the impression that he was really driving a straight course."

"Grand Rapids, Mich; gave us a royal reception. The whole town seemed to be enthusiastic over aviation. They have a good airdrome inside the race track. At Winona, Minn. we received a request from the Twin Cities Aero Club to land at St. Paul and Minneapolis. This stop at the Twin Cities was the only one made not on our regular route. The hop to Fargo took us out of the forest and lake region into the flat, grain country. The prairies were so level it seemed as if we might have taxied over them. The landing field at Portal was really across the international line, in Canada, or North Portal which is merely a railroad junction. From Portal to Saskatoon was the only leg of the journey in which we had the wind with us. We made the 310 miles in 3 hours, and at Saskatoon got our first taste of that Canadian hospitality which added so tremendously to the enjoyment of the long journey. Almost one-third of the population, though American born are now Canadians in spirit."

"About 100 miles from Saskatoon we left the prairie country, and got into a region of forests and lakes, with low rolling hills, some of them 6200 feet high. At Edmonton Capt. Street's machine had a leak in the gas tank, and we were held up there for three days getting that patched up. The people at Edmonton are intensely interested in aviation as a means of developing the country. They talked of getting planes to survey the Peace River country to the north of them, a big stretch of arable land now wholly undeveloped, pack mules being the only means of transportation. The transportation to mines of the region, also offered another opportunity for aviation to exemplify its usefulness."

"Our first attempt to leave Edmonton was unsuccessful because of low hanging clouds. Taking off at 1000 feet we had to drop to 300, and when about 100 miles out, Street motioned us to return. The next day, in spite of a stiff wind, we made the jump to Jasper Park. This is the Canadian National Park, one of the largest national reserves, by the way, on the Continent, being 400 miles long by 100 wide, abounding with game and its waters, with fish. Here we found one of the best landing fields on the whole route, though it is located about ten miles from Jasper. It is about 600 yds. by 300 and in good condition. Col. Rogers, the warden of the park, met us and extended courtesies and hospitality. Tents were provided for our accommodation with a Chinese cook in the mess tent. Gas and oil were on the field, and after cleaning up our "busses" and getting everything in shape for the next day, we felt decidedly as if we needed a bath. We set out expecting to take a dip in the Athabasca River, but were warned that we should find the water too cold; so with a guide, we set out for a little lake about a half mile away, which, we were told was a good bathing place. When we were ready for the dip somebody stuck his foot in the water to try the temperature. Well, all I can say is, if the Athabasca River is colder than that little lake was, then it's a record-breaker for temperature. But it was a choice of two evils. We were ready for a bath: we either had to get in the water and take it, cold as it was, or be literally eaten up by mosquitoes. We chose the water. It is impossible to conceive of the multiplicity and ferocity of the mosquitoes in this region; and, indeed, to the very northernmost limit of our flight. They almost 'block traffic', they are so numerous, and they certainly block progress, preventing work at some seasons of the year. By building smudges around our tents and sitting up around a bonfire for a part of the night, we managed to get a little rest in spite of the mosquitoes, and by getting an early start next morning made two hops that day."

"Soon after the hop-off at Jasper, Capt. Street's machine caught on fire, caused by the oil tanks being too full and overflowing down the exhaust pipe; but Henriques, who was driving, put the plane into a side slip and was going to land in the river, but as they descended, the change of balance had stopped the flow of oil and the fire extinguished itself. We got into Prince George just ahead of a rain-storm and without Street; but a wire from him explained his mishap. We lighted flares to aid him in finding the landing field. The outline of the field was, however, of course indefinite; so when Street alighted he came in with great speed and overshot, rolling out of the dimensions of the field itself into a cut-over stretch beyond where he struck a stump that took off about 4 feet of the end of his left wing, breaking both main spars and tearing all the ribs out, also the left half of his horizontal stabilizer and the aileron. To get a wing sent to us in the quickest possible space of time would take 8 days from Mather Field, Sacramento, Calif., the nearest point available. So we got busy on the job ourselves, with the help of a big Swede carpenter who was a wonder and who had some wonderful spruce timber. He framed up the wing for us, built ribs and spars for the stabilizer and the aileron. Of course, each one of us had a piece of linen for patching: we pooled our supply and covered the wing, but the dope Lieut. Kirkpatrick, the only chemist we had in the party, was able to concoct from cellulose nitrate, unrefined banana oil, and several quarts of anil acetate, proved not very efficacious, as the linen was about as flabby when it dried as it had been before wetting. But, we took a chance on the new wing anyhow. Still another delay held us at Prince George, however, for almost 10 days in all, and we got our first acquaintance of a real frontier town. We got acquainted with hard-boiled miners of the old type, with lumber jacks - great, tall Scotchmen and little French Canadians - who came in about twice a week just for the fun of spending their money. One old fellow, "Scotty" by name, was about 7 feet tall and weighed 300 pounds, they said, when he was sober. He looked as if he weighed a good deal more drunk, which was all the time, apparently."

"Our next stop was to be at Hazelton, at the head of navigation on the Skina River, and, at one time, the main point of distribution for the region beyond. This was prior to the Klondike rush. The trip up was made by boat when the river was open, and beyond on foot and by pack-train. Hazelton is right in the mountains, and these are covered with high timber. Due to the frost, even when the timber is removed and the land plowed level and cultivated during the summer, when it thaws out again next spring, it is as rolling and rough as the waves of the sea. Knowing of these conditions, we went on by train to inspect the landing field before making the jump in our planes. Finding its dimensions inadequate, Capt. Street arranged to have the grain cut from a field adjoining to make room for us to alight with safety."

"Our next jump was to land us in United States territory again, but, to reach Wrangell, we had to jump over the Coast Range mountains, at least, that is what we thought we had to do from our maps, which showed the trend of a river or of a mountain system, and depicted everything else as perfectly smooth, level country. In point of fact, the region has never been explored or surveyed. Fortunately, we had a clear day for our take-off. When we began to ascend for our hop over the mountains, we found that the mountains rose too, and higher than we had. Instead of being 5,000 and 7,000 feet as showed on our map, when we reached a height of 7,000 we found we needed 3,000 more to get over the top, and when we tried to skirt the range, we found it wasn't really a range at all with a valley on the other side, but just close packed mountain peaks filled with snow and ice between. These glaciers looked like level seas of dark green water. At Wrangoll, the only landing field available was on a little island in the Stickine River, which, at high tide, wasn't an island at all. We landed in about 6 inches of water which had grown to a foot before we took off. From Wrangell we went by way of Chilkoot Pass and Skagway to Whitehorse. This is the region made so famous in the early days of the gold discovery. Formerly it took about three months to make the trip; in winter, travel was by dog-sleds; in summer, on foot or by pack-train. The once famous mines of this region are now inactive. Their surface veins have been stripped, and high-grade mining in this country is too expensive because of inadequate transportation facilities."

"From Whitehorse to Dawson we flew over the route patrolled by the Canadian Mounted Police. The trail runs in almost an air line that shows up practically all of the way, with the neat little road houses dotted at intervals of 40 to 50 miles apart. The police, in full regalia - bright red jackets and blue trousers - are snappy looking fellows, well disciplined and giving wonderful service to the country. They were of tremendous assistance to us wherever we encountered them. We crossed Lake La Barge, so well known to readers of Service's poems which breathe the very soul and spirit of this far northern region. This lake is at once the basin of the White River and the source of the Yukon, unless, indeed, it be one and the same river with different names in different localities."

"Crumrine had blown out a tire at Whitehorse, but, filling his casing with rope packed tightly, he wrapped the outside with rope, taking off with us to Dawson, and landing safely despite the hard jolt from his mended tire. We arrived at Dawson, by chance, on August 17, the gala day of the country. "Discovery Day" it is called, for just 22 years before, the first Alaskan gold was discovered on Bonanza Creek. The people made us welcome to their festivities - gave us the town, in fact."

"The principal meat supply of this region is its wild game, chiefly the moose and the caribou. We were there at the season of the caribou 'runs' as they are called. It seems that, as autumn approaches, the caribou begin their annual migration or run. The herds bunch together under a leader, apparently, and, to the number of 200,000 to 300,000 begin their run that stops at nothing, that never turns aside, and that leads nobody knows where. The method of hunting is quite simple. The huntsman selects a spot as near to the trail as he dares to get, takes his stand, and picks off his game as it passes on the run. As it is purely pot-hunting - the game being killed for food - the biggest and fattest bucks are usually the ones killed by the gunner. Nature has provided ample cold storage, so the meat is easily kept."

"The flight to Fairbanks, the northernmost point reached, was over the most desolate region of the entire course. For miles there was no sign of a trail, not even an Indian trail. Then, suddenly we picked up a trail that appeared here and there along the route, quite clear and well-defined. We afterwards learned that General William Mitchell of the Air Service, had led an expedition into this country, and cut this trail 20 years ago in making a survey for the purpose of establishing a telegraph line to connect with a cable to Siberia, which project was later abandoned."

"Fairbanks, with a population of 2000, is the largest town west of Alberta, and the whole town, reinforced by the mining camps of the vicinity, was out to meet us. The route to Ruby was over low hills and swamps. There are no maps of the country, because there has been no survey. It has been impossible to make one. In winter the country is covered with snow and ice, and the only means of travel is on skis. In summer it is covered with tundra, and travel is impossible."

"At Ruby we landed on a sand-bar which conveniently appeared in the river at the right time, and proved better for our purposes than the landing field first selected by Capt. Douglas."

"We made the hop to Nome skirting the Bering Sea, with weather conditions changing every hour; keeping in touch by wire with the wireless at Nome, as soon as we got a flash reporting the weather clear, we jumped in our 'boats' and hopped off. We flew at an altitude of 1000 feet, zigzagging our way to avoid rainstorms. When we saw a fairly clear spot ahead we steered for it, but for the most part it was just steady pushing through black clouds."

"At Golovin Bay, we saw a herd of reindeer, and in Bering Sea we spotted a number of white whales and long-haired seals."

"Our only actual hunting on the trip was to bag a hundred or more ducks, and to kill a black bear. We might have killed caribou, moose, mountain goats and sheep, but there was no reason for it, as we had no means of carrying the game."

"At Fairbanks and Nome we were given many souvenirs, in the way of gold nuggets, and so on. Each one of us was presented with a reindeer hide parka, such as the Eskimo wear. Most interesting, however, of the gifts are our Alaskan dogs. My two were given me by Ben Derrick of Ruby, who has carried the mail in that part of the world for years. The dogs are a cross between the gray wolf and the Alaskan husky."

"Capt. Street's dogs were presented to him by Sepalla, one of the Laplanders who came to Alaska with the reindeer which the Government imported from Siberia about 25 years ago, and which have multiplied and become so numerous in Alaska."

"Up to a very few years ago, racing dog teams used to be a famous sport in that region. On the day set the start was made in spite of wind or weather. Sometimes there were as many as 25 dogs to a team and the course would extend 400 miles. It is from this breed of racing huskies that Capt. Street's dogs come."

Capt. Douglas, to whom is due the credit of making all preliminary arrangements for the flight, confined his remarks to expressions of appreciation for the co-operation and courtesy extended throughout his journey, and that of the expedition, by the Canadian Government, by the Signal Corps and Weather Bureaus of both countries, by municipalities and individual citizens from one end of the route to the other.

"Wherever I went," Capt. Douglas said, "I got acquainted with everybody. I know them - they are my friends, and if I ever go back that way again I'll be mighty glad to shake hands with the men who showed us all so much kindness and hospitality."

"At Dawson the entire party were made honorary members of both the Yukon Pioneers and the Alaskan Pioneers, and at Whitehorse the same distinction was conferred upon us by the 'Squaw Man's Union'."

"The success of the expedition is due in large measure to the hearty co-operation we received everywhere and from everybody."

INTERNATIONAL PALLOON RACE ENDS.

The lighter-than-air branch of aviation was decidedly in the ascendancy this week by reason of the interest aroused in connection with the International Balloon Race for the Gordon Bennett trophy, which started from Birmingham, Alabama, October 23, under the auspices of the Aero Club of America with the hearty cooperation of the Birmingham Chamber of Commerce.

The winning of the race by the Belgian balloon "Belgica" which landed at North Hero Island, Vermont, at 9:30 A.M. Oct. 26, will carry the International Contest to Belgium in 1921.

The distance covered by "Belgica", in charge of Lieutenants De Muyter and Labrousse was estimated at 1,100 miles. The American record is 1,173 miles made by Alan Hawley and Augustus Post in the International event of 1910.

A distance of a little more than 1,000 miles covered by the American balloon "Kansas City II", piloted by H.E. Honeywell with Jerome Kingsbury as aide, places this entry second in the contest just held.

The Army balloon, piloted by Lieut. Richard E. Thompson, landed a few miles south of Charlotte, Mich. at 11:45 P.M. Sunday, an approximate distance of 622 miles.

Lieut. Thompson stated that, after encountering three storms, one of which he attempted to escape by ascending to an altitude of 13,000 feet, he discovered that his balloon was being carried back instead of going forward, and so had descended.

Ralph Upson, defender of the trophy since the last race held in Paris, 1913, piloting the "Goodyear II", made a landing at Amhurstburg, Ontario, Monday afternoon, forced down by a severe snowstorm which he encountered at 20,000 feet.

The start was under the most auspicious circumstances and ideal weather conditions. C.G. Andrus, aerological expert from the Weather Bureau, was present throughout the day making a study of reports and advising as to the wind conditions.

The forenoon was spent in filling the balloons with by-product coke gas from the Sloss Sheffield Steel and Iron Company.

The seven entries from the four nations represented took off in the following order, being preceded by Roy Donaldson and representatives of the local papers and the Chamber of Commerce in the balloon "Pilot".

First, French balloon, piloted by Capt. Louis Hirschauer, with Leo C. Nathan, aide.

Second, U.S. Army balloon, piloted by Lieut. R.E. Thompson, with Capt. H.E. Weeks, aide.

Third, Belgian Balloon, "Belgica", piloted by Lieut. Ernest De Muyter, with Lieut. Mathieu Labrousse, aide.

Fourth, Italian entry, "Audens," piloted by Major J. Valle, with Major D. Leon, aide.

Fifth, American entry "Kansas City II", piloted by H.E. Honeywell of St. Louis, winner of the American ^{National} Race of Sept. 25, with Dr. Jerome Kingsbury, aide.

Sixth, Italian entry, piloted by Major H. Madori, with Lieut. A. Pirazzoli, aide.

Seventh, American entry, "Goodyear II", piloted by Ralph Upson, present defender of the cup, with W.T. Van Orman, aide.

The bright orange color of the French and Belgian balloons, added a unique feature to the take-off, the pilots explaining that this special color resists the rays of the sun better than any other and so prevents stiffening and breaking of the rubber.

Most beautiful of the balloons, however, were the great silver soap bubbles of the Italians, which glistened as they caught the sun. The almost total absence of netting in the equipment of these balloons reduced their weight by approximately 60 pounds.

SIGHT SEEING IN CHINA

It has been the policy of the Philippine Department to permit a limited number of men to take a trip through China and Japan. On August 18, 1920, thirty-two men of this command were given an opportunity to join the excursion. The trip was made a reward for good conduct and service, only the best men being selected.

Thirty-two men of the organization, 1st Lieutenant Ira C. Baker, Infantry, in charge, sailed from Manila on the U.S.A.T. "Warren" August 18, 1920. After an uneventful voyage of five days the party arrived at Chefoo, China, the first port reached. Shore leave was permitted here for about eight hours which gave sufficient time to cover points of interest in this city. Silks and laces are manufactured here and may be bought very cheaply. The ship sailed at 4:00 P.M. August 23, for Chimangtao, China. This port was reached on August 25th. Heavy rain prevented the party from going out to Shanhaikuan and seeing the great wall. At 10:30 of the same day the entire excursion party took train for Peking which was reached at 10:30 A.M. the following day. Three days were spent in reviewing the many interesting places in and around the Chinese Capitol.

The party was quartered in the barracks of the Marine Legation Guard while in Peking. Many Marines voluntarily served as guides for the detachment. Some of the historic places were, the Temple of Heaven, Lama Temple, the Bell Tower, Drum Tower, Winter Palace, Summer Palace, College of Agriculture, and many silk, ring, copper and curio shops and manufactories. Some of the party witnessed an execution of some of the late revolutionists. While the city was crowded with soldiers and the gates of the city were locked to keep out looters, all seemed quiet and busy.

The party returned to Chinwangtao, boarded the transport and immediately sailed for Taingtao, China. This city was found to be of particular interest as being a Chinese city in the hands of the Japanese, and, being on the Shantung Peninsula, is still in contention as to rightful ownership. The party visited the old German fortifications, which the Japanese stormed in 1914. From observing these ruins one would easily believe the Japanese were accurate with their artillery, as all the underground forts and fortified hills received many direct hits.

September 1, 1920, the ship sailed for Nagasaki, Japan, arriving there September 3, 1920. Two days were spent investigating this Japanese port and making purchases from the many silks, embroideries, etc. offered for sale to the tourists.

The transport sailed for Manila September 5th, arriving September 10, 1920. It is believed that the whole party returned well satisfied with the excursion, and all pronounced it a very interesting and instructive trip.

Of the thirty-two men of the Air Service on this trip of twenty-two days duration not a man was sick, nor was one reported for absence without leave, or any other infraction of discipline.

RADIO PHONE GIVES SPEECH AND HEARING TO AVIATION

The growing usefulness of the radio phone in its application to aviation exemplifies itself every day. By enabling the flier to keep in constant communication with the earth, it gives him speech and hearing and, by so doing, keeps him apprised of weather and other conditions ahead. The psychological effect upon the flier of this invisible link with the earth, this intangible evidence of "human touch," is incalculable. To a very decided degree it reduces the sense of hazard as it actually minimizes the danger by affording him indubitable evidence of physical conditions to be encountered throughout his route.

In recognition of its importance to aviation, the Belgian, French and British governments have established a line of phone stations following the Paris-London and Brussels-London air routes. Stations now operating are located at Croydan, just outside of London, at Lympne, on the English side of the Channel, at a point off the French coast, and at Paris. Preparations are also in progress to establish other stations at convenient intervals in England and France.

"The wireless telephone service," says the "Flyleaf," "is to be used primarily to give information as to the whereabouts of aircraft traveling along a route, and also for reporting weather conditions along the route to planes in the air."

"By general utilization of the radio telephony system it is believed by aviation authorities that practically all of the difficulties which were formerly encountered by fliers running into unfavorable or dangerous weather conditions can be eliminated. The use of the radio phone to direct passenger planes is but one of a number of important uses to which it may be put, and is the result of extensive experiments in which the value of wireless telephony in connection with flying has been definitely established."

TRANSFORMATION FLYING, FIRST PURSUIT GROUP

The pilots of the First Pursuit Group are still engaged in transformation flying, and the following types, Spad XIII, Fokker and D.H.-4-B, are seen daily about the airdrome.

Due to the shortage of gas, several cross country flights had to be abandoned, but we hope to be able to have better luck next time.

Several practice acrobatic formations led by Lieutenant Tourtellot have flown about the vicinity of the airdrome with marked success while the Cadet Detachment put on several good battle formations between Kelly Field and Brooks Field.

The usual exercises in aerial acrobacy have been carried out and, in addition, several interesting combats have been engaged in by the cadets who are close to the time set for their graduation.

The work and accomplishments of the Cadets assigned to the First Pursuit Group have been noteworthy. These seven cadets not only have led the Group in flying time but have, in addition, to maintaining their own ships, policed their grounds, ships and hangar while engaged in the sports of the Field on the side. Cadets Laas, Brown and Taylor have also gone in for athletics.

The Group has been in constant daily liaison with the 12th Cavalry on their practice march from Del Rio, Texas, to San Antonio and return. Manuevers have been practiced with them. The communication has been by Panel and message dropping. They camped two days at Kelly Field. During their stay here, Lieuts. Plumb and Woodward and Cadet McDaniel gave all of the officers of the regiment a sight-seeing ride. The landing field at Camp Travis was used for this work.

Lieutenant Plumb has been doing excellent work carrying and delivering the Cavalry mail on the march.

Preparations are going forward to send a flight to Fort Crockett, Galveston, Texas, to observe for them in their annual fall firing.

SERGEANT ALLEN VICTIM OF FATAL CRASH

Sergeant C.D. Allen of the 147th Squadron was instantly killed when the J.N.6-H. plane which he was piloting crashed into the Busto Brewery of New Braunfels, Tex., last Tuesday. The crash was caused through the inability of the ship to climb fast enough to clear the buildings in its path and when the pilot endeavored to turn out of the wind, one wing dropped and the ship became unmanageable, falling on the brewery.

Staff Sergeant Walter French, who was a passenger with Sergeant Allen, had a thrilling experience and a miraculous escape. He was in the rear cockpit and as the plane first struck the upper portion of the building he unfastened his belt and during the time of its rebound and fall to the roof of a lower portion of the structure, he jumped clear of the wreck. Undoubtedly, had he not thought and acted instantly, he too would have shared Sergeant Allen's fate.

The ship, after falling through the roof, caught fire and was completely destroyed, and considerable damage was done to the Brewery Building despite the quick work of the New Braunfels Fire Department.

Sergeant Allen enjoyed the friendship of both the officers and enlisted men with whom he was thrown in the pursuit of his duties and in the practice of athletics. He was a runner of no mean ability, being a member of the crack relay team of the 147th. His superiors speak well of him as an efficient and conscientious worker, and will feel his loss as an assistant as well as a man.

AIRPLANES FURNISH THRILLS AT RICHMOND STATE FAIR.

Three DeHaviland airplanes from Langley Field have been daily visitors at the Richmond State Fair during the past ten days where they maneuvered for the amusement of the large crowds and assisted the recruiting officer there in securing recruits for the Air Service. During the week two parachute jumps were made in standard Army Parachutes, enlisted men from Langley Field making both jumps.

The first parachute jump was marked by an amusing incident when private first class White, who made the jump, landed in a tree beside the Grand Stand. The branches of the tree broke his drop and he slid gracefully into the seat of a motorcycle standing under the tree without a single scratch.

DIRIGIBLE ZODIAC MAKES TWO TRIPS TO WASHINGTON AND RETURN.

The Army's largest dirigible, the Zodiac, made two trips during the past week to Washington, D.C., and return, where it maneuvered over the city and gave the large crowds their first opportunity of seeing a big dirigible in flight. During the trip motion pictures were made of the scenes below which will be incorporated in a very interesting picture showing the entire details of a trip in a dirigible.

During the entire trip the big dirigible was in constant Radio communication with Radio stations at Langley Field and Washington. The Radio Telephone was used.

66 GRADUATES FROM MARCH FIELD

Temporary discontinuance of preliminary flying training, transfer of 66 graduate cadets to advance schools and preparation for the next class of student officers has somewhat retarded flying activities in March Field during the past week. One hundred and nineteen flights were made by 25 different ships covering an approximate mileage of 9,125. One hundred and eleven hours and 35 min. flying time were consumed.

Advance instruction required 31 hrs. 35 min.; forest fire patrol, 45 hrs. 40 min.; test flights, 2 hrs., and miscellaneous flights 32 hrs. and 20 min. Preliminary instruction will be resumed again November 1.

FLYING TIME MARCH FIELD

Twenty-three ships from this school made a total of 136 flights during the past week covering approximately 9,910 miles. Completion of the preliminary cadet course somewhat diminished the total flying time. In all 133 hrs. 10 min. were consumed in flight; 31 hrs. 10 min. for preliminary instruction; 44 hrs. 50 min. for advance instruction; 50 hrs. 05 min. consumed in miscellaneous flights.

67 GRADUATES FROM PILOT SCHOOL, MARCH FIELD.

Sixty-seven cadets successfully completed their flying instruction at this school and await assignment to advance schools. Thirty-seven are classified for bombing schools; 11 for observation and 19 for pursuit work. Twenty-one others await approval of recommendations made by the local cadet board; six are held over for the next class and five were discharged, their terms of enlistment having expired.

SQUADRON NEWS

Kelly Field, San Antonio, Texas.

The following official commendation of the work performed by officers of this station is published verbatim. This letter coming from so well known an officer as General Moseley and bearing the indorsement of General Harbord is one which any officer might be proud to have on his record.

Headquarters, 2nd F.A. Brigade,
Camp Travis, Texas.

October 9, 1920.

From: Commanding Officer, 2nd F.A. Brigade.
To: Commanding General, 2nd Division.
Subject: Commendation of Air Service Personnel.

1. During the target practice of this brigade we were greatly assisted by details from the Air Service which were on duty with the brigade from time to time. These officers facilitated our practice in every way and after training with them we were able to fire problems successfully depending upon the air for our adjustment.

2. We are under particular obligation to First Lieutenant Benton A. Doyle who is especially qualified for this work on account of his being a trained artillery-man besides being an expert in the Air Service.

The officers who assisted us so successfully are:

Observers: Benton A. Doyle, 1st Lt. A.S., Albert M. Guidera, 1st Lt. A.S., Harry L. Speck, 2nd Lt. A.S.; Pilots; Malcolm S. Lawton, 2nd Lt. A.S., Clarence R. MacIver, 2nd Lt. A.S., Marl J. Plumb, 2nd Lt. A.S., Harold L. Clark, 2nd Lt. A.S., Sigmund F. Landers, 2nd Lt. A.S.

Each one of these officers showed himself to be an expert in his particular line.

3. Second Lieutenant George N. Burgess deserves great credit for his assistance in instructing our communication details and in maintaining his own communication with the air during all the problems.

4. It is requested that this letter be transmitted to the Air Service and that the officers concerned be furnished with a copy of the same with our high appreciation of all they did for us.

Geo. Van Horn Moseley,

Lieut. Colonel, Field Artillery.

1st Ind.

HEADQUARTERS SECOND DIVISION, Camp Travis, Texas, October 12, 1920.

To the Commanding Officer, Kelly Field, San Antonio, Texas.

1. The above letter is transmitted for your information. I desire to add my thanks to those of General Moseley, for the hearty co-operation which your command gave during the recent service practice of the Second Field Artillery Brigade.

J. G. HARBOARD,

Major General, U.S. Army,
Commanding.

The A.S.M.S. played and won the first football game of the season against the Knights of Columbus of San Antonio, Texas, Sunday afternoon. The K. of C. team has the reputation of being one of the strongest in this locality and the winning of this game places the School already among the first three strong teams here. The line-up in the game was as follows: L.E., Lieut. Minter; L.T., Mackey; L.G., McGinley; Center, Chalk; R.G., Ginzel; R.T., Van Fossen; R.E., Potter; Q, Burns; L.H.B., Nolan; (C), F.B., Lieut. Eller; R.H.B., Davis.

Van Fossen and Chalk were in every play and easily were the stars of the game. Davis played a star game at Half until he was put out with a broken shoulder. The losing of Davis and also of Gundlick, who recently fractured a knee in practice, is a severe handicap to the Team, but with good material to draw from, the Coach has hopes of keeping the Team up to championship strength. From the time the whistle blew at 3:30 P.M., until the close of the game, there

was not a slow minute to the spectators. The teams were evenly matched, but the A.S.M.S. led in the first half. In the first ten minutes of play they scored a touchdown and a safety. The K.C. Team made a touchdown in the second half but failed to kick the goal. The spirit of the A.S.M.S. players as shown in this game is worthy of comment. They played fast, clean football. The game was played at Garrett Field in San Antonio. Much credit is due the Athletic Officer and Coach, Lieut. C. W. Sullivan, for whipping the Team into its present condition. Lieut. Sullivan has worked steadily for the Team since the opening of the season and from all present indications will turn out a team which will come very near the top.

Captain G. E. Stratemeyer, Commandant of this School, left last week on an inspection trip of the Great Lakes Naval Training Station. The purpose of this trip is to gain additional information on the training of enlisted men along Air Service lines.

The Educational and Recreational Department at Kelly Field, Texas, began the Vocational and Educational Schools on schedule, October 1st, 1920, with an attendance of about 300 enlisted men.

Under Vocational Training, courses are given in Business, Automotive, and Radio. Under the Educational courses are given elementary English and Arithmetic, General Literary work, including Citizenship, Advanced English, Arithmetic, Algebra and Geometry.

This educational work is what most of the soldiers enlisted for in the first place and they are all showing more interest and contentment now that the army schools have become an actuality.

The Educational and Recreational Officer is now being furnished with high class motion pictures which are shown at the Service Clubs nightly.

The usual Garrison School has been started with practically all officers in attendance. It is interesting to note the real interest shown by the newly commissioned regular officers. In addition to the regular course, lectures on professional subjects pertaining exclusively to the Air Service or to the duties of the Air Service when working with other combatant arms are scheduled for three mornings a week. At the present time, on account of shortage of both officer and enlisted personnel, flying activities at the field are practically confined to the forenoon.

During the week a flight of 4 D.H.-4B's equipped with complete radio, dual generators, and armament took off in formation enroute to Ellington Field to establish a liaison with the Coast Artillery at Fort Crockett, Texas. Ellington Field is about 35 miles air line from Fort Crockett but will be used as a base for the Air Service Unit. Ten enlisted men proceeded by rail to service the planes, act as panel men and ground radio men.

The officer personnel is as follows: 1st Lieut. A.M. Guidera, Flight Commander, 2nd Lieut. H. L. Spock, 2nd Lieut. M. J. Plumb, 2nd Lieut. J. M. Woodward, 2nd Lieut. C. R. MacIver, 2nd Lieut. G.H. Burgess, Cadet Joe Mountain.

1st Lieutenant A. E. Easterbrook, Assistant Air Officer of the Eighth Corps Area, accompanied the flight. The duration of the shoot is 15 days. The large Coast Defense Guns at Fort Crockett will be used at a range of 15,000 yards, shooting at a floating target. Several interesting problems will be worked out before the conclusion of the shoot.

Lieut. Adams has finally received his orders to report for duty to the Commanding General at Coblenz, Germany. He will go by the way of Florida to New York where he will be assigned to a transport sailing to Amsterdam; further than this we know not.

In anticipation of gay old times at Paris, Jack has been spending the last few days shining up his French brevet, borrowing boots, spurs, etc.

From all appearances it looks as if Jack will take a furious plunge into the stormy sea of matrimony. With the prospect of a trip to Europe in view no girl would hesitate.

The 147th has been throwing out its collective chest for several days with a pride and abandon that denotes unusual jubilation over the acquisition of some new arrivals which, we are forced to assume, must be labeled "celebrity". At least they advise us in high sounding English that the "squadron's enlisted strength has been augmented by the assignment of two master sergeants; Arthur B. Neiswander and Albert Y. Linard, and Staff Sergeant Thomas F. Roach". Master Sergeant Neiswander is from the 2nd Aero Squadron, Province of Luzon, Philippine Islands. He has been on a three month's furlough, visiting among other places, San Francisco and Washington, D.C. He has sojourned with the service for fourteen years and says that if he finds the army as good as it has seemed to him during this short experience, he'll settle down and stay a while. He's a fine top kick, altho he confesses that our ultra modern commands at drill, viz: "to-the-rear-front-into-line-column-left, march" is new to him, but he hopes to assimilate the innovation. He was in France two years.

Master Sergeant Linard has finished seven years in the service, and hails from the 2nd Squadron, Corregidor, Fort Mills, Philippine Islands. He seems to have been afflicted with Field-trotting, having been in pretty nearly all of them. He will dignify and accelerate the Motor Repair as Sergeant Wadsworth's successor, who will return to the hangars.

Those officers who are active members of the Polo Association are jubilant over the arrival of three new ponies. They are starting immediately to train them for the hard schedule which goes into effect as soon as the present tournament is finished. Two games a week will be played all during the winter. The most likely applicants for the team are Major Wm. H. Garrison, Jr., Captain E. E. Adler, Lieut. Norman Brophy and Lieut. John P. Clark. The team will be greatly handicapped unless more officers take up the sport so that a second team can be formed and team work developed.

Football has again visited the First Pursuit Group and any afternoon one may find the athletes of the First Pursuit Group chasing the pig skin hither and yon. The squad at present is under the instruction of Lieutenant Tourtellot, who has been a member of several college and army teams. The usual minor accidents have occurred to date, but Cadet Leass broke one of his ribs in the first real spinning of the season. He is now resting comfortably at the Base Hospital.

A. S. and R. Depot, Rockwell Field, Calif.

Captain Lowell H. Smith, A.S., arrived Sunday from San Francisco, where Flight A, of which he is in command, is co-operating with the Coast Artillery in an Artillery shoot. His arrival is the first contact the Squadron has had with Flight A since it left Rockwell Field in June on its way to Oregon for Forest Patrol work.

Lieut. Frank D. Hackett returned from a week's hunting trip in Senora County, California. He was very successful and brought back two deer for distribution among the officers of the squadron.

The 91st Aero Squadron took a further step toward becoming a "Squadron of Benedicts" when Lieut. C. H. Ridenour announced his engagement.

In the past a great deal of trouble has been experienced by the pilots in having inexperienced observers, who handle the radio antenna and variometer inaccurately. The Radio Officer of the 91st Squadron, 1st Lieut. Robert Kauch, has been working on the problem of putting all the controls, antenna reel and variometer in the pilot's cockpit. The result has proven very satisfactory as the pilot can do his own adjusting and can be sure that the radio antenna is properly adjusted.

Work is also being done on a device whereby the radio generator can be stopped during the flight and used only as occasion demands. The idea is to have a brake on the generator controlled from the pilot's cockpit. Another improvement has been the use of a small battery in the generator field, a condition which has given a great deal of trouble in the past. With the battery in the field circuit, it is only necessary to throw the switch for an instant or so and the field is immediately built up again.

Cadet Andert and Sergeant Sullivan returned Monday from their trip to Fresno where they spent the week-end watching the automobile races at the new Speedway erected there. Strong winds were encountered over the Mohave Desert and Cadet Andert was forced to land forty miles short of Fresno in order to secure oil. The return trip was made without incident.

Lieut. Warren Maxwell enjoys the unique distinction of having ferried a complete motorcycle by plane from the Yuma sub-base to Rockwell Field for repairs, and contemplates returning it in the same way.

The last few months have witnessed a number of minor crashes caused by axle failure of the D.H.-4B in the 91st Aero Squadron. Steps are being taken to correct this fault by inserting an axle rod inside the hollow axle. This method, however, is only temporary as it is contemplated reinforcing all axles by welding additional metal where needed.

France Field, C.Z.

Two photographic flights were made in an attempt to photograph 4.7 howitzers firing at Fort Randolph. Photographs were attempted of the gun flashes as well as the shells hitting the water, but only two of the twenty-four plates were successful, most of the failures being due to poor plates.

Spotting fire for the Coast Artillery at Fort Randolph and Fort Sherman in connection with target practice was continued during the week.

On Monday 1st Lieut. A. C. George, observer, and 2nd Lieut. S. N. Connell, pilot, attempted to work with Fort Sherman but, because of rain, low clouds and poor liaison from the battery, results were not very successful. Lieut. George observed twenty-one shots and then weather conditions became so bad that firing was discontinued.

The radio telephone messages to the battery were only partly successful because of the poor weather conditions, while the ground stations could not get any messages through to the plane. This might have been remedied by efficiently working panels but was not done, and the observer worked all the time without knowing what the battery was going to do next.

First Lieut. J. W. Gastreich, observer, with 2nd Lieut. J. D. Barker and 1st Lieut. R. C. W. Blessley, pilots, conducted the shooting at Fort Randolph on Wednesday with good results. In this shoot aerial observations were used only as a check on the ground station observations, and therefore the battery commander paid practically no attention to the airplane, and many times fired when the plane was not ready to observe.

Good liaison was maintained both ways by radio phone between the plane and the battery. Sensings were made on ten salvos in the morning. In the afternoon rain made it impractical to spot from the air, and the plane was sent home after checking in at the battery.

The final problem at Fort Randolph was attempted Friday by 1st Lieut. H. W. Holden, observer, and 2nd Lieut. J. D. Barker, pilot. In this problem the moving target was towed by an Eagle boat at a speed of about twenty knots per hour, which speed caused the battery commander considerable trouble and firing was very slow. After two hours and forty-five minutes of observation in the morning, only twenty-eight shots had been fired, and the shooting was postponed until afternoon. Sensings were sent to the battery on all except two shots, these being lost when the battery fired without notifying the observer. The radio telephone communication worked fairly well but with a very limited range. This was partly due to severe interference from the Colon Wireless Station. Firing was prevented in the afternoon because of a heavy storm.

At Fort Sherman the firing was suspended after Monday and will be resumed next week.

Pilots' School, March Field, Riverside, Calif.

In compliance with instructions from the Chief of Air Service 25 enlisted men of this command have been directed to appear before an examining board to determine their fitness for cadet status. Those who meet qualifications will be enrolled with the next class which starts its training November 1

Admiral Hugh N. Rodman, Commander of the Pacific fleet, recently returned from Hawaii, was the guest of Major Yount, Commanding Officer, on Tuesday. A brief aerial review of the various types of planes used at this field was arranged for the admiral and his party. Cadet pilots carried out the program under the direction of Lieut. McHenry, assistant officer in charge of flying.

John G. Montijo and Frank Tomich, ex-army pilots and formerly, flying instructors at this field have established a passenger carrying service from San Bernardino to any and all parts of Southern California. Montijo recently returned from South America.

Earl Ailer and "Ole" Olsen, ex-Sergeants 1st Class, on this field have arrived in Riverside with a Curtiss JN-4D which they will use in carrying passengers at the Southern California fair next week.

First Lieutenants Norman H. Langley and Cedric E. Pyle have been honorably discharged from the service.

Major John H. Howard and Captain William H. Crom were among commissioned officers reporting for duty at this field during the past week. They will be assigned to the next cadet class for flying training.

Educational and vocational classes will open at this school Monday. Additional classes for enlisted men will be opened at the Riverside Polytechnic High School. Fully 85 per cent of the command will have been enrolled in one or more classes by the end of the month.

Friday was March Field day at the Southern California Fair. All men in uniform were admitted free. In addition to the aerial exhibition during the afternoon this school has a recruiting display on the ground as well as an exhibit in the educational building from the E. & R. Department.

Lieutenants Quinn, Ott and Schramm performed acrobatics over the race course.

In the recruiting tent is displayed a Thomas-Morse Scout and the fuselage of a German Fokker. There is also an exhibit of machine guns and aerial motors with experienced men in charge. Lieut. F. B. Wieners is in charge of the display.

Lieut. Carl B. Fry, gunnery officer at March Field, in addition to his other duties, has been appointed commandant of the cadet detachment vice Captain George H. Peabody.

Earl S. Messer, adjutant of Pasadena Post American Legion, was at March Field last Tuesday evening to look over the school's football squad. The ex-service men of the Crown City plan to stage a championship football game in their city on Armistice Day between the army and navy. March Field is one of two army posts on the Pacific Coast which has a team of sufficient strength to meet a combination from the entire Pacific Fleet.

Coach Smith has over fifty men, enlisted and commissioned, out for the team, and every indication is that this school will be the army representative in the big game. The first real game of the season will be played on the Post next Wednesday afternoon when the aviators will meet an Indian aggregation from the Sherman Institute, government school near Arlington, California.

Among commissioned officers reporting for duty at this school during the past week are: Captain Harry B. Flounders and Frederick R. Lafferty; Lieutenants Leland C. McAuley, George S. Warren and Charles E. Rust.

John R. Case, Jr., supervisor of camp activities for the Ninth Corps Area was a visitor at March Field on Tuesday. With Mr. Neal, post camp activities director, Mr. Case is making a survey of all army posts in the southland visiting San Diego and vicinity and stations in Arizona. They will return the latter part of next week.

"Kid" Springer, March Field bantam-weight boxer has been matched to meet Johny Adams in the Gate City Athletic Club arena at San Bernardino next Thursday evening. Adams has a decision over Springer but the soldier lad is out this time to regain his laurels.

Ellington Field, Houston, Texas

During the week a detachment of eight officers, one cadet and ten enlisted men arrived, for the purpose of carrying on auxiliary work with the artillery at Fort Crockett, Galveston, Texas during their target practice. The officers who are Lieut. Arthur E. Easterbrook, officer in charge of the detachment, and Lieuts. A. M. Guidera, H. L. Speck, E. J. Plumb, J. M. Woodward, C. R. MacIver and G. H. Burgess, made the trip from Kelly Field in four De Haviland planes and were followed by the enlisted men who brought with them the radio apparatus for the auxiliary work. It is understood that the planes will fly over the target which is some distance out at sea from Fort Crockett, and, as each shot is registered on the target, will send a report back to the fort. This work will last for about two weeks.

Post Field, Fort Sill, Okla.

The last week of the Air Service Observation School just closed showed very satisfactory results in all subjects. In aerial gunnery, Lieut. Wilson put 70 shots out of a possible 194 into the tow-target, establishing a new record at this field.

9th Aero Squadron, Mather Field, Sacramento

The past week has seen the reunion of the entire personnel of the 9th Aero Squadron after five months of active duty in connection with forest fire patrol. Flight "A" under command of Lieut. John R. Morgan arrived from Fresno on Friday, preceded on Thursday by Lieut. Pardy and "B" Flight from Red Bluff. Immediately upon arrival of the flights at Mather Field, plans for the winter were outlined and put in effect. Flights were reorganized, officers assigned to new organization duties, and conferences held to determine ways and means of utilizing the experiences of the season in making plans for next year. Planes are being equipped with guns and bomb racks preparatory to giving our cadet pilots advanced training.

On Friday, the Commanding Officer, Major Atkinson, made a flight to San Francisco and return with Lieut. I. J. Williams for the purpose of taking up with Corps Area Air Service Officer important matters of administration.

During the period of closing up sub-bases and outlying stations, daily airplane courier service was maintained. Lieut. Snyder of the Motor Transport Corps was on hand to assist in checking up details and was enabled to cover much territory in the two days of his stay because of the efficiency of this service.

Cadet Larsen, enroute recently from Red Bluff to Sacramento encountered the most severe storm of the season and, after an hour and a half of forced grass cutting through a blinding rain storm, arrived safely at Mather Field.

Balloon School, Brooks Field, San Antonio, Texas.

The 4th Balloon Company, 1st Lieut. Harry C. Oatman, Commanding, 2nd Lieut. William C. Farnum and 2nd Lieut. Edward P. Byrne arrived after an absence of six months, during which time they have given demonstrations of the work of balloons at the General Service School at Fort Leavenworth and at Camp Funston.

Observation balloons were flown thirty-seven hours during the week. No free balloon flights were made.

FORT MILLS, P. I.

The Philippine Department is now practically at a stand-still in Air Service Activities because of its shortage of officers. The 2nd. Aero Squadron has fourteen officers, eight pilots, three pilot-observers, and one observer. The Balloon Companies have only two officers each; these facts together with our lack of Master Electricians make it doubly hard to make any sort of a showing to our credit. The Second Aero has only one active M.E.. Of course at present there is very little work that can be done due to the inclement weather, but now that the good weather is in sight and expected about the end of next month, the situation seems critical from an operations standpoint. The present situation of the new hangars is such that it will be impossible to launch a plane during the Typhoon Season because of the heavy swell. Plans have been drawn and an appropriation requested to erect a hangar on the North Side of the Island that will house planes for use during this season.

The above facts coupled with the present insecurity felt by every one waiting for some definite word as to the results of the late examinations, are not conducive to the best of spirits, and morale seems to have taken a slump; but inasmuch as the Air Service has been steeled to disappointments in the past, it is not thought that it will go any lower especially when we have everything to gain now, and nothing more to lose.

The most severe typhoon in the history of the Philippines for fifteen years passed over our station last Tuesday afternoon. From all indications and lack of all warnings it must have formed quickly within our vicinity, and the damage to several organizations was enormous. Tile roofs of the buildings in the Artillery Garrison which have withstood typhoons for many seasons were blown away like chaff; trees were uprooted and stripped of branches and leaves; trucks and other motor vehicles were picked up and removed from roads to embankments and ditches in the vicinity; a scout soldier on outpost duty was blown off of a one-hundred foot cliff into the bay where he was given up as lost, but at roll call the next morning he was present and none the worse for his experience; barges and lighters loaded with Quartermaster and Air Service Supplies were blown a distance of fifteen miles and piled up on the shores of the bay.

The worst damage of all was incurred by the Air Service on the "Tail-of-the-Island" where the new site is being established and under construction. It was here that the 17th. and 27th Balloon Companies were quartered in tents that happened to be directly in the path of the storm. Within half an hour after the storm broke, there was no camp, the tents being ripped to shreds. The Air Service Post Exchange was shattered, and pieces of it scattered over an area of five hundred yards. One man who happened to be in this building at the time suffered a broken leg and minor injuries. The storm had its humorous side as well as its destructive, as is shown by the fact that when the Balloon Camps were demolished, the cook-shack and subsistence store room went along with it, thus the chances for chow until the storm subsided were nil. When the Post Exchange went down there was a wild scramble among the boys to save for themselves some of the stock, and instead of getting all the canned meats, fish, cakes, etc. that would have stood them in good stead until a field kitchen could be acquired, nothing but pop, chewing-gum, candy, playing-cards, fountain-pens and the cash register were saved.

Luckily no damage to sea-planes or air-plane equipment was sustained that would impair our operations. This was due mostly to the efficient way in which the meteorological reports are compiled; which, with cooperation between departments, made it possible to secure everything before the storm broke.

Lieut. J. L. Bennett was relieved as squadron mess and supply officer by Lieut. B. R. Dallas, and will assume the duties as assistant to the Operations Officer.

Vernon H. Jones was promoted from Private 1st Class to Sergeant.

Due to the severe weather of the past week our operations were confined to regular routine department work and general repair and policing.

STORAGE DEPOT, SELFRIDGE FIELD, MT. CLEMENS, MICHIGAN.

Major William E. Gillmore, Chief of Supply, spent two days here during the past week. Major Gillmore's visit was in connection with the purchase negotiations of the Field.

Second Lieutenant Morris L. Tucker, Air Service, has been ordered for duty at this Field from Camp Funston, Kansas. Lieutenant Tucker, it is expected, will arrive within the next few days.

Captain Charles Van Buren, I. G. D., who has been making an audit of the property loan records of this station for the past ten days, left yesterday for Chicago, Illinois. While here Captain Van Buren received his permanent appointment as Captain in the Quartermaster Corps.

CHANUTE FIELD, ILLINOIS

On Saturday and Sunday, there was great activity at this field as a result of the visit of the Aviation Club of Chicago. Practically all the members of this organization are Reserve Military Aviators and are greatly interested in flying. The members of the Club began to arrive on Friday morning, the first arriving being Mr. P. G. Kemp, Secretary. Mr. Kemp has been very active in affairs of the Club and a great deal of credit is due him because of the time and energy which he has devoted to maintaining the interest of former officers of the army in regard to flying and in endeavoring to disseminate aeronautical information to the public in general. About twenty-five of the members of the Aviation Club arrived Friday evening and were furnished quarters in one of the barracks, which had been prepared for their use by the Camp Quartermaster. The scene immediately after their arrival brought back to the minds of all present the old days of army life as Cadets during the war and everyone agreed that in spite of any minor discomforts those were the "good old days". Games and indoor flying were freely indulged in during the evening and in the morning the guests were divided into five groups, each assigned to one of the pilots of the field. Major John N. Reynolds, Commanding Officer, addressed the party before flying commenced and gave instructions for the day's flying. These instructions gave each former pilot an opportunity to do a little flying, accompanied by one of the field pilots, but prohibited acrobacy and cross country landings. The flying continued all day Saturday and Sunday, the pilots at this field being assisted by Major W. C. McChord and First Lieutenant Edward M. Haight, from Headquarters, Sixth Corps Area, at Chicago. Major and Mrs. Reynolds held an informal tea at their quarters Saturday afternoon to which all the guests of the field were invited. Saturday evening the whole party gathered around a large bonfire at the east end of the field where lunch was served. The whole crowd joining in singing the old camp songs and in exchanging reminiscences of the front and of the various flying fields. The members of the Aviation Club left for Chicago Sunday evening, apparently having enjoyed their stay at the field immensely. The visit was an occasion which will long be remembered with pleasure by the officers of the field and their families. It is estimated that each of the thirty officers had an opportunity to participate in at least three flights averaging about thirty minutes each. Many of these officers expressed their desire to keep in flying condition and stated that they would be very glad, indeed, to come to Chanute Field frequently at their own expense, if ships could be provided for practice flights. Everyone at the field was greatly pleased with the interest displayed by former officers and was glad to be able to do something to keep this interest alive. It is only regretted that the present limited personnel does not permit an extensive program for flying training for the numerous reservists in this vicinity.

DETACHMENT FLIGHT A, 91ST AERO SQUADRON, CRISSY FIELD,
PRESIDIO, SAN FRANCISCO, CALIFORNIA.

Monday, Tuesday and Wednesday of this week were given to the assembling of a new D H 4 B. and to the equipping of four other ships with double radio transmitting sets. This will raise the radio communication percentage to a very high average.

Thursday, five ships arrived at Crissy Field, San Francisco. They will co-operate with the Coast Artillery in directing the artillery fire of the coast defense guns.

Flights have been made over the targets while the practice is going on, to get an idea of the correctness of the shots, also to acquaint the pilots and observers with what is expected of them, and to impress upon them the necessity of accurate spotting of shots.

Lewis machine guns are mounted on each ship and at the completion of each observation flight some time is given to machine gun practice. Two ships at a time have been making such flights and each ship using the shadow of the other on the water for targets. Plans have already been made for some bombing practice, dummy bombs being obtained from Rockwell Field. This will keep the pilots and observers in training and ready for any emergency.

A set of panels have been given the radio receiving station for the Coast Defense for this practice, and an Air Service 59 receiving set is being used.

All information possible that may be of any benefit in this work is being obtained.

A schedule of the time of each battery's practice, the size of the gun being used, and the distance they wish to shoot each day are or hand and will be carefully followed by this organization.

U. S. ARMY BALLOON SCHOOL, FORT OMAHA, NEB.

Second Lieutenant H. R. Wells, an Airplane Pilot stationed at this Post, has been very fortunate in getting an airplane from the Ashmussen Airplane Company to fly whenever he wants it. Lieutenant Wells came to Fort Omaha from Carlstrom Field, Florida as a Chemist to take charge of the Hydrogen Plant and this being a Lighter-than-Air School he has not, until recently, had an opportunity to keep fit for heavier-than-air flying. Lieutenant Wells has been transferred to Scott Field, Belleville, Illinois.

Lieutenant Wells took Miss Gladys Peters, queen of Ak-Sar-Ben, recently crowned, up to view her newly acquired Kingdom of Quivera. The King, Charles Saunders, has not yet decided to view his Kingdom in the same manner. The Queen was delighted with the ride.

OBSERVATION SCHOOL, FORT SILL, OKLAHOMA

The week's work was taken up almost entirely with Aerial Gunnery, in which tow target work constituted the principal feature.

FIRST SURVEILLANCE GROUP, EL PASO, TEXAS.

The early part of the week was devoted to work in connection with the Fort Bliss Military Carnival and Horse Show.

Monday morning, ships, crews and pilots were lined up for the inspection of General Dickman.

Monday afternoon most of the Air Service Officers attended the Military Carnival as spectators while the rest were engaged in flying a seven plane formation over the Fort. The new Dirigible of the 8th Balloon Company also took a dignified but aloof part in the performance.

Kelly Field, however, stole all the thunder by dispatching an airplane courier from San Antonio in the morning. The crowd in the stands held its breath when Lieut. H. L. Speck, covered with oil, dust and glory staggered up to the General's Box, tripped over his spurs and handed over the papers. Lieut. Speck was thereupon interviewed by six reporters while the local Air Service Officers stood around trying to look pleasant.

The Military exhibits on the Fort Bliss parade grounds were very complete and interesting, particularly the Ordnance exhibits. The plane, with gunnery, radio, bombing and photographic exhibits, attracted the usual crowd.

Lieut. Gaffney, Engineering Officer of the 104th Aero Squadron, is now busy trying to devise a plane made entirely of rubber and steel as the only suitable type for exhibition purposes. He swears that there were even teeth mark on the struts of the ship used, and has computed the exact time required by 5,000 school children to pick all the varnish off the wings of any given plane.

HERE AND THERE WITH THE EDITORS.

GOOD PLACE FOR HIM

"Slipstream", Dayton, O., perpetrates the following good one:
City of Everywhere,
State of World.

Mr. Satan,

999 Warm Ave., Hades,

Sir: The bearer is the soul of Mr. Careless Mann, who met death while engaged in his regular occupation. While his death was sudden it had been predicted by many careful workers as he has always "taken a chance".

A number of such souls have been forwarded you in the past, and until such time that these careless men cease to exist you may expect others.
Yours for safety,

Hugh Manity.

QUARANTINE RULES FOR AIRPLANES

It has been announced by the Public Health Service that after November 1, airplanes entering the United States from foreign countries will be subject to the same quarantine regulations as apply to steamers coming from foreign ports.

The first airplane health inspector will be at Key West, Fla., where many planes arrive from Cuba. Before leaving Cuba airships will be required to obtain bills of health from the American Consul at Havana.

(N. Y. Tribune 10/23/20)

TO THE ANTARCTIC BY AIRPLANE

A five-year expedition by airplanes to the Antarctic regions is being planned by a group of London scientists. As a preliminary to this undertaking a party, headed by John L. Cope, F.R.G.S., has left London on a two-year survey of the west coast of the Waddell Sea and Graham Land. Alaskan dogs will be used in this preliminary work and are now on their way, twenty-two in number, in charge of Capt. G. H. Wilkins, M.C., to draw the sledges of the expedition over the ice. Interviewed in Liverpool before leaving England, Mr. Cope said that he would be tramping or sledding over Graham Land for the next eighteen months or two years, making geographical and scientific investigations. "On my return", he said, "I shall immediately prepare for the big expedition, the plans of which include a flight to the South Pole in an aeroplane, and the circumnavigating of the Antarctic. During my absence a ship is being specially constructed and she will be completed upon my return."
(Boston Transcript 10/21/20)

"FLEETS OF AIRPLANES"

"In welcoming a squadron of airplanes back from a round trip to Alaska, the sky above Washington was dotted far up in the blue with swift-moving machines, and the air throbbed with the drum and drones of motors. Only seventeen years have passed since Prof. Langley and his buzzard equipped with a steam engine glided and dropped into the Potomac at Widewater. There came a lull in popular interest in human flight. Balloons could sail but a machine could not be built to fly. It was heavier than air. Such a thing challenged the law of gravitation, and a man who challenged that law ought to be looked after by an alienist. But still a few men hugged the notion that a machine might be built that could be driven and guided through the air.

HERE AND THERE WITH THE EDITORS (CONT'D)

Now in 1920 Washingtonians scarcely look up to note the passing of a plane, and although intensely interested when the sky was peopled with aviators in their machines to give an aerial welcome to men who had flown 9,000 miles to Alaska and back, they took the thrilling spectacle very much as a matter of course." (Washington Star, 10/22/20).

BATWING PLANE

The Batwing monoplane is a Detroit product and was designed and built by W.B. Stout, president of the Stout Engineering Laboratories. It is a practical demonstration of a theory in heavier-than-air craft which Mr. Stout has been working on for several years. The wings and fuselage are covered with thin ply wood braced without exterior wires or struts. Its thick cantilever wings give speed and lightness, but with sufficient strength to carry the loads for which the machine is designed. It is equipped with a speed of 100 miles per hour with engine throttled down.

Lieut. H. S. Alden of the U. S. Navy Reserve, who witnessed the test flight said: "Mr. Stout is to be congratulated in his achievement, and it is pleasing to know that he is building six more of his monoplanes as torpedo carriers for the navy." And he further stated that it is the first time that a wireless strutless monoplane built entirely of ply-wood has been designed, built and flown in this country, and it represents an advance in the art of aeronautics of which Detroit may well be proud. (Detroit News 10/19/20)

USING THE AIRPLANE

An editorial in the Dayton Herald 10/20/20 mentions a few important uses to which an airplane has been put: "A Canadian mining town is now using four airships to transport silver ore from the mine to tidewater points for shipment. The distance is only twelve miles but the planes are more cheaply operated than a railroad because of the topography of the land. Each machine carries a full load of one thousand pounds."

Mention is also made of the fact that but for the airplane it would not be known that there is a fresh water lake in Panama. It was found eight miles inland and has never before been indicated on a map.

We have on record as many as one hundred uses for the airplanes where purposes have been carried out and results obtained far ahead of the possibility by any other means of service.

From time to time announcements of these uses have appeared in the press, that we may get the proper impression of the place it is filling we will review a number of them:

Numerous aids in the military line, both in warfare and training; bombing, and target practice; carrying supplies to allies on alien territory; photographing, mapping and surveying; blazing trails, exploring polar regions; courier service; aerial hospital service; rescue work at mine disasters; news-gathering; sight-seeing; political campaigning; various emergency calls; searching for lost; locating pulp forests, and farm lands in remote and inaccessible regions, and many other uses of equal importance.

In the words of the editor "Every day the world finds itself more indebted to the airplane and its inventors - the Wright Brothers of Dayton, O."

"Berlin, Oct. 22.-Delivery by the Germans of aircraft to the entente in accordance with the Versailles peace treaty has been completed.

Delivery of arms and munitions and other war booty in France and Belgium, remains to be carried out." (Dayton Herald)

HERE AND THERE WITH THE EDITORS. (CONT'D)

"Fort Worth, Tex., Oct. 19.-For the first time in Tarrant County judicial history an airplane was used this morning to bring in missing testimony. Otherwise the trial of an oil suit in the Forty-eighth District Court would have been stopped. The plane, occupied by a pilot and an attorney, flew from Fort Worth to Breckenridge and back, and the case proceeded."

"NEW STEERING DEVICE"

"That America's peaceful trading craft, following the example of the nation's warship, will soon turn to electricity for driving power is evidenced by the fact that the first electrically propelled cargo vessel in the United States, the steamship Eclipse, will be placed in operation shortly by the United States Shipping Board. The "Eclipse" which is a vessel of 11,868 tons, is being made ready for service at the yards of the Tebo Yacht Basin company in Brooklyn. The "Eclipse" will be operated with a steam turbine driving an alternate current generator which feeds a 3,000 horse-power motor turning the single propeller shaft at 100 revolutions per minute.

One man can control the movements of an electrically driven vessel almost as easily as a motorman can drive a trolley car. Eleven other freighters of the Shipping Board's fleet are also being equipped with electric power."
(Dayton Eve. Herald 10/20/20).

STORY WRITING ENCOURAGED

"Stories which have as their motive some adventure in the air have been appearing recently in fiction magazines, and as they have shown a close regard for actual facts in commercial aeronautics, they are considered as useful propaganda for this service.

The short story based upon actual facts and spiced with romance that aids in showing the future possibilities of air lines with the many interesting features, is capable of impressing the reader so that he can more readily accept what he is told by aviation business men.

The writing of this type of story should be encouraged, as it is believed they will produce an impression of practical soundness in commercial aviation."
(Aircraft Journal 10/11/20).

FOKKER II ✓

In "Flight" 10/7/20, there is an article entitled "A Fokker Raid on London" which gives the description of a new type of the Fokker plane. This type is known as the "F II". It is a monoplane of the cantilever type with a wing that is very thick in the center and tapers towards the tips. The covering of three ply wood is expected to prove serviceable for a commercial machine. The large wing is held to the top of the cabin by means of four bolts only, therefore it can be dismantled in a very few minutes. The cabin of this machine can carry six passengers, and a seventh can go in the pilot's cockpit in front of the cabin. It is fitted with a 185 h.p. B.M.W., which gives a speed of 90 miles per hour, and has a tank capacity that will allow of a cruising endurance of 10 hours.

Although slow, this machine seems to have distinct commercial possibilities.

BRITISH AIR CONFERENCE

"Owing to the rapidly increasing importance of aviation the variety and complexity of the problems facing those interested in its development and the desirability of an examination of the present situation, and mutual exchange of opinions on the subject," the British Air Council arranged for an Air Conference at Guildhall, Oct. 12, 13, and 14.

HERE AND THERE WITH THE EDITORS (CONT'D).

Papers on subjects for consideration were prepared and read as follows:

Major-Gen. Sykes on "Civil Aviation and Air Services," treating thoroughly the present situation of Civil Air Services, both British and Foreign, organizations for success, and the future prospects for same; "The Operation of Civil Aircraft in Relation to the Constructor," by Mr. W.H. White-Smith; "The Present Position of Aircraft Research and Contemplated Developments," by Air Vice-Marshal Sir E.L. Ellington: this paper dealt more particularly with the technical questions affecting both the civil and service sides of the art; "Broader Aspects of Service Aviation," by Air Marshal Sir H.M. Tranchard, and "The Commercial Airship: Its Operation and Construction," by Commander Sir Trevor Dawson.

Dealing thus with subjects affecting the development of aviation may prove of great value in disseminating a fuller knowledge of the advantages and possibilities of transport by air and may aid toward hastening the more general employment. (Flight 10/7/20 - Aerial Age 10/18/20)

AIR SERVICE NEWS LETTER

Information Group
Air Service

November 3, 1920

Building B
Washington, D.C.

INFORMATION OBTAINED FROM OPERATIONS REPORTS
OF TACTICAL UNITS FOR WEEK ENDING SEPTEMBER 25, 1920

STATIONS, FLYING TIME AND AVAILABILITY OF PLANES

Name of Stations	Location	Flying Planes		Planes Avail.
		Time	On Hand	
1st Aero - Obs.	Mitchel Field, Mineola, L.I.	34:10	17	14
2nd Aero - "	Fort Mills, P.I.		No Report	
3rd " - "	Camp Stotsenburg, Pampanga, P.I.	1:46	13	13(8/21)
5th " - "	Mitchel Field, Mineola, L.I.	25:00	17	11
2nd Obs. Group (4th & 6th Sqdns.)	Luke Field, Ford's Is., H.T.		No Report	
7th Aero - Obs.	France Field, Panama, C.Z.	23:50	161	16(9/18)
8th-A " - Sur.	McAllen, Texas	23:20	13	8
9th Aero - Obs.	Mather Field, Sacramento, Calif.	15:00	27	21
10th & 99th - Obs.	Bolling Field, Anacostia, D.C.	35:23	20	12
11th Aero - Bomb.	Kelly Field, San Antonio, Tex.	7:15	5	3
12th-A Aero - "	Douglas, Arizona	5:45		1
12th-B " - "	Nogales, Arizona	14:40	9	3
20th Aero - Bomb.	Kelly Field, San Antonio, Tex.	8:05	5	3
27th Aero - Pur.	Kelly Field, San Antonio, Tex.	12:40	23	9
50th Aero - Obs.	Langley Field, Hampton, Va.	7:37	19	8
88th Aero - Obs.	Langley Field, Hampton, Va.	3:12	15	7
90th-A " - Sur.	Del Rio, Texas	17:25	8	8
90th-B " - "	Sanderson, Texas	24:15		
91st-A " - "	Camp Lewis, Washington	4:40		4
91st-B " - "	Rockwell Field, Calif.	32:05	8	8
94th Aero - Pur.	Kelly Field, San Antonio, Tex.	9:25	24	7
95th " - "	Kelly Field, San Antonio, Tex.	14:00	24	13
96th " - Bomb.	Kelly Field, San Antonio, Tex.	7:36	8	4
104th-A Aero - Sur.	Fort Bliss, Texas	40:10	16	8
104th-B " - "	Attached to 135th B, Post Field, Fort Sill, Okla.			
135th-A Aero - Obs.	Fort Leavenworth Kansas	22:15	8	5
135th-B " - "	Post Field, Fort Sill, Okla.	63:15	14	5
147th Aero - Pur.	Kelly Field, San Antonio, Tex.	11:05	25	5
166th Aero - Bomb.	Kelly Field, San Antonio, Tex.	14:05	4	4
258th Aero - Bomb.	Aberdeen Prv. Grd., Aberdeen, Md.	5:13	34	24
Air Service Troops	Camp Benning, Ga.	3:35	10	10
" " "	Godman Field, Ky.	13:25	21	5
" " "	Camp Bragg, N.C.	8:40	22	3
1st Bomb. Group				
Hdqtrs. Dept.	Kelly Field, San Antonio, Tex.	47:15	12	12

TRAINING AND OPERATIONS

Langley Field

Amateur stations at Goshon, Indiana and Pittsburgh, Pa. state that they receive signals from this field very strong. The undamped circuit of the type 109 radiophone was used. Lt. Ward in telephone ship flew over the anti-aircraft battery at Ft. Monroe, his movements being directed by the battery Commander, with very satisfactory results. Telephone calls were exchanged with S.S. Ulysses in Hampton Roads. S.S. Lake Traverse asked this field to assist him in handling traffic with the fishing fleet in Chesapeake Bay as he was unable to work them

through the heavy static. The exceptional heavy static also prevented this station from communicating with the vessels.

Mitchel Field

A Cohen receiving set has been installed in addition to the 67 set for long wave reception. This set is primarily used to receive Arlington. It is contemplated working with Sandy Hook next week in connection with their Artillery firing.

Southern Department

Nothing to report

Western Department

A special radio test was made on Border Patrol between Rockwell Field, Yuma and return. Good radiation was observed during the entire trip and signals were heard at creditable distances from the plane.

Communications on Forest Fire Patrol at March Field have been working very good and five fires were reported by radio. Communications now overlap on all patrols practically every day. A few of the officers who have had experience in radio are being used on patrol as observers.

School

Nothing to report

Special Maneuvers

There were two artillery adjustments with the 81st F.A. at Camp Knox. A total of three problems were fired and all were successful.

Aberdeen Proving Ground

Eight flights were made during the week with one failure. All communications were in connection with smoke bomb testing.

Philippine Department

2d Aero Squadron, Ft. Mills, P.I. A 2 KW Radio Set is being installed on the launch "Geary". Due to inclement weather it has been impossible to make radio flights to test out radio equipment installed on flying boats.

3rd Aero Squadron, Camp Stotsenburg, P.I. Work has been started on a 4-wire aerial, length 472 Ft., to be placed between hangars 3 and 4. The antenna will have a width of 10 ft. and a height of 48 ft.

Pliatrons have been received for the Naval set, type SE 1100 and work begun on it. This set is capable of sending and receiving both wireless telegraph and telephone. With the present aerial, this station is receiving India and Siberia.

Development

Flame Proof Switch Experiments were conducted on the spark gap break-in circuit of connecting an SCR-75 transmitting set and SCR-59 receiving set. This system was found to be impracticable for this work. An electrically operated switch is now being worked on, to operate in connection with the key.

Direction Finder for Multi-Engined Planes. A Martin Bomber has been secured at McCook Field for the purpose of conducting experiments on the radio navigation set as it has been developed to date.

"TACTICAL

STATIONS	SQUADRONS	PERCENTAGE DAYLIGHT	TOTAL NO. FLIGHTS	PRACTICE FLIGHTS	SPECIAL MISSION	CROSS COUNTRY	PA-TROL	TEST F
Ft. Bliss, Tex.	104 - Flight A	100%	29	19	5			2
Del Rio, "	90 " A	"	48	47	1			
Douglas, Ariz.	12 " A	"	12	7				4
Eugene, Oregon								
McAllen, Tex.	8 " A	100%	9		4			
Mather, Calif.	9	"	62					
Nogales, Ariz.	12 Flight B	"	32	30		2		
Sanderson	90 " B	"	21		5			0
Rockwell	91 Aero Squadron	"	0		1	5		10
Aberdeen	258 " "	"	13	8				
Bolling	99 & 10 "	100	8			7		
Camp Benning	A. S. D.	79%	9					
France Field	2 & 7 Obs.	96	38	2	2			
Ft. Leavenworth	135 Aero Flight A	95	25					
Godman	A. S. D.	30	30	9				7
Kelly Field	1st Bombardment							
"	Headquarters	100	205					
"	11 Aero	100	40					
"	20 "	"	63					
"	96 "	"	12					
"	106 "	"	29					
1st Pursuit Group		100						
	27 Aero	"	35					
	94 "	"	43					
	95	"	39					
	147	"	38					
Langley	50 Aero	85	18	10				3
"	88 "	85	27	8				19
Luke Field	2 - 4 - 6 Obs.	N O	R E P O R T					
Mitchel	1st Aero	96	44	27	6			6
"	5 "	"	41					
Post Field	135 Aero Flight B	100	195					
Pope Field	A. S. D.	75	6					
"	8 Aero Flight B	75	52					
Philippines	2 Aero	N O	R E P O R T					
"	3 "	90	15					
Camp Lewis, Wash.	91 Aero Squadron		2					

"FOR OFFICIAL USE ONLY"

Library

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE NOVEMBER 22, 1920.

AVIATION AND YOUR FUTURE

The following article, written by Staff Sergeant C. W. Manning, in charge of the Carburetor Instruction Division, Air Service Mechanics' School, Kelly Field, San Antonio, Texas, is indicative of the attitude of every non-commissioned officer in the Air Service. Sergeant Manning served with the English Army throughout the war, part of the time in the Air Service. He has had a great deal of experience along Air Service lines and is just one of many who are helping to strengthen the foundation of the present Air Service.

The age of Specialists has arrived, and it behooves the young man of today to begin looking about him at an early age if he is not to be left far behind by the time he reaches middle age.

Today, we specialize - no one man can be expected to possess sufficient knowledge to fill any and all positions in our complex industrial life, so we learn some special branch of that life, others take up other branches, and, working together, we make up the harmonious whole.

A few years ago, when the automobile industry was in its infancy, a man had to be able to fill nearly any place in the factory in order to get a job, but today every man has his own little place and specializes in that one particular thing. Since this system was put into operation, the automobile industry has made wonderful strides, due to the fact that a man can do one job better than he can do a half dozen.

Aviation is today where automobiles were 15 years ago, but we are not making the same mistake as we made in the automobile industry, for every man is being trained as a specialist now, in consequence of which we may expect to see Aviation make a great deal more progress within the next five or ten years than the automobile industry has made in twice that length of time. Aviation today offers the ambitious young man an opportunity to better his position in life which he can get in no other walk of life, for if he begins now, he can grow up with the industry and in ten years time be where men are at present in the automobile game who started twenty-five years ago.

Aviation has a greater future before it than any new industry on earth and working on the theory that progress in the next twelve years will be as rapid as it has been in the past, it is not too much to predict that airplanes will be nearly as plentiful in the sky as automobiles on the road.

During the War, the airplane was developed as purely and simply a fighting machine; speed, maneuverability, and the capability of "downing" the other fellow, being the points most sought after. These planes are of no use for commercial purposes--they are war machines, purely and simply--but the lessons learned by the manufacturer in building them are now being utilized in designing planes for commercial purposes which are fully as safe to travel in as the automobile under modern traffic conditions. The number of fatalities due to flying is actually the lowest of any other form of transportation when one figures the percentage based upon the number of machines in use, passengers carried, and hours in the air.

Recently, over in France, an airplane made a continuous flight of over twenty-four hours. Think of it! When no longer ago than 1908 the longest flight was not over twenty-five minutes.

At the present time, the aviation industry in this country is a comparatively small one. A man who wishes to get into that line of work will, no doubt, experience a lot of difficulty unless he is an expert at some phase of the

game. However, if a young man really wishes to take up the study of aviation, seriously, there is one way open to him through which he can learn this subject thoroughly in all its branches and specialize in any branch he desires under some of the ablest experts in this country. Not only can he do this, but he will, at the same time, be paid, given clothing, food, heat, light, lodging and medical attention.

Down in Texas, just in the outskirts of San Antonio, the Government maintains Kelly Field, the largest flying field in this country--one of the largest in the world. One-half of this enormous field is occupied by the Air Service Mechanics School, where a man enlisting into the Air Service is sent to be taught some special branch of aviation, according to his former experience, to the line of work which appeals to him, and to his fitness for special positions. Each man entering the Air Service is sent to the Air Service Mechanics School first, where he is taught the principles of discipline--without which an army becomes a mob--and then assigned to one of the many courses open to him in which he can specialize. The period of instruction covers 4½ months, after which students are sent out to the various organizations wherever needed--including the Philippine Islands, Panama, Hawaii and Germany.

The instruction is carried on in large airy hangars with plenty of light. The barracks are clean, light and airy. The roads are all macadamized. Service Clubs exist where one can play pool, cards, etc., see moving pictures every night, read, write letters and, last but not least, dance every Tuesday night. These dances, a feature of the Post, are chaperoned by a lady well known to the whole community and they are attended by many young ladies from the city of San Antonio and vicinity. Transportation is furnished from and to the city for the ladies and any man can invite as many ladies as he likes.

Football, baseball, volleyball and basketball teams are formed which are open to all who can qualify, and numerous games are played in season.

In the School, there are courses for: Engine Mechanics, Airplane Mechanics, Auto Repairmen, Machinists, Electricians, Instrument Repairmen, Blacksmiths, Aircraft Armament, Parachute Repairmen and Army Paper Work and Stenography. The average course is 576 hours. Each course is complete in every detail and within the periods allotted to each student, he can learn enough to make him proficient in any line which he may select.

In the course for Engine Mechanics, which is fairly representative of the whole, the time is divided into six periods. Applied Mechanics, where a man is given 128 hours instruction, during which time he learns the theory of Internal Combustion Engines, purpose, care and use of tools. In the Battery and Magneto Ignition Division, with a period of 64 hours, he is taught to overhaul and repair all types of magnetos and ignition systems as used in aviation motors. The overhaul, Adjusting and Repair Division covers 192 hours and includes complete disassembly and reassembly of the Hispano-Suiza and Liberty Engines. 64 hours are devoted to the Testing, Cranking and Trouble Shooting Division, where a man is taught, first of all, the theory of carburetion, oil and gasoline testing and practical experience in the care and maintenance of all types of carburetors used in the Air Service; then the cranking of aviation engines by swinging the propeller; various troubles which may arise are put into the engine and students are relied upon to detect and repair them. In the Installation and Testing Division, also a period of 64 hours, men are taught to install various motors in all types of airplanes; to run them and care for them as they would in the flying ships. The last period is devoted to Advanced Field Training where men are sent to the Flying Stage where they actually care for ships being flown each day.

Each student, before completing his Advanced Training, is given an opportunity to make a flight, usually in the ship for which he has been caring. Upon completion of the whole course, each man is examined and, according to grades made on final examination, designated as: Expert Mechanic, Mechanic or Mechanic's Helper. He is given a diploma showing his efficiency and any especial aptitude in any line of work for which he is best fitted. This certificate will be a valuable possession to any man leaving the service at the end of his enlistment period if he decides to follow the mechanical side of aviation for a livelihood.

BALLOONS FROM ROSS FIELD TAKE PART IN ANNUAL TARGET PRACTICE
OF COAST DEFENSE BUNS AT FORT MACARTHUR.

On Thursday the Cadet Class and all available men from the Post, were formed into two provisional companies and sent to Fort MacArthur for work in connection with the annual shoot of the coast defense batteries there. The Companies were commanded by 1st Lieutenants George F. Parris, A.S., and Dacie M. Reeves, A.S. with 2d Lieutenants Joseph I. Sullivan, A.S., and Clarence H. Welch, A.S., attached, one to each company, for the trip.

The Detachment travelled by truck train, arriving at Fort MacArthur in the afternoon. One balloon was inflated that evening and one the next morning, telephone lines laid and everything made ready for the shoot which was scheduled to start Monday. The balloons were to fly along the coast line three miles apart and were to report the shots simultaneously to the Artillery plotting rooms. The target was a small red marker on a raft towed by the Naval Tug Pocomoke.

Bad weather Monday allowed the firing of only two shots from one of the 14" disappearing rifles but the balloons were up and ready to observe thruout the day. A small detachment from the Meteorological Section of the Signal Corps accompanied the balloon detachment and the wind aloft data furnished by their sounding balloons proved helpful each day.

Tuesday intermittent rain and a high wind of increasing violence interfered with the work, but the 14" rifles finished their firing and the 12" mortar batteries fired a few test shots. The balloons were kept in operation until a surface wind of 50 miles an hour was recorded by the anemometer, and after that it was impossible to work with any accuracy.

The next day was just the opposite as regards weather. A light surface wind changed to a calm at 300 feet which extended well above the working range of the balloons. All the firing was finished by 2 o'clock in the afternoon and at that time the visibility was better than at any time during the shoot. A person standing on the shore could determine the fall of the shots with the naked eye as accurately as could the land observation stations. The ranges at which the guns worked were from 12000 to 17000 yards.

Major Tidball, Post Commander, expressed himself as being very well pleased with the work of the balloons and much impressed by the fact that they were able to work with good results in the extremely unfavorable weather prevailing during the first two days of the shoot.

Thursday the two Caquot balloons were deflated and the gas transferred to two free balloons, a 24000 and a 19000. These balloons piloted by Lieutenants Parris and Reeves and carrying two cadets each, made a series of flights in the afternoon. At the time of ascending, the surface wind was blowing toward the ocean but tests with sounding balloons by the Signal Corps men showed that the upper winds were in the opposite direction. With this assurance the balloon crews started up and were carried inland by the favorable winds after reaching a fair altitude. The balloon piloted by Lieutenant Reeves remained over the water nearly an hour and was carried about two miles out to sea before finding a wind blowing shoreward.

The 24000 cubic feet balloon, piloted by Lieutenant Parris, made five flights travelling in a general north-easterly direction. Two cadets were carried on the first four trips, the last one being a solo by Cadet R. J. Martin. He landed north of Fullerton, California at dusk. About 30 miles was covered in the five flights.

The other balloon, piloted by Lieutenant Reeves, made three flights. After coming back from over the ocean it landed near the place of starting. Another flight was made with three passengers and then Cadet A. E. Miller made a solo, landing near his place of starting. The air line distance from the original place of starting and the place of final landing was about four miles although several times this distance was actually travelled by the balloon.

The detachment returned to Ross Field Friday.

AVIATOR'S CERTIFICATES

The following excerpts from the Rules and Regulations of the International Aeronautic Federation governing the issuing of pilot's certificates will be interesting:

1. Candidates must accomplish the three following tests, each being a separate flight:

A and B. - Two distance flights consisting of at least 16,404 feet each in a closed circuit, without touching the ground or the water, the distance to be measured as described in article 4 below.

C. - One altitude flight, during which a height of at least 328 feet above the point of departure must be attained; the descent to be made from that height with the motor cut off. A barograph must be carried on the airplane in the altitude flight. The landing must be made in sight of the observers, and without restarting the motor.

2. The candidate must be alone in the aircraft during the three tests.

3. Starting from and landing on the water is permitted in only one of tests A and B.

4. The course on which the aviator accomplishes tests A and B must be marked out by two posts or two buoys situated not more than 547 yards apart.

5. The turns around the posts or the buoys must be alternately to the right and to the left, so that the flight will consist of an uninterrupted series of figures of 8.

6. The distance flown shall be reckoned as if in a straight line between the posts or the buoys.

7. The landing after the two distance flights in tests A and B shall be made as follows:

(a) By stopping the motor at or before the moment of touching the ground or the water.

(b) By bringing the aircraft to rest not more than 164 feet from a point which has previously been indicated by the Candidate.

8. All landings must be made in a normal manner, and the observers must report any irregularities.

Official observers must be chosen from a list drawn up by the governing organization of each country.

The issuance of the certificate is always optional.

END OF ANNUAL MANEUVERS, LUKE FIELD, PEARL HARBOR, H. I.

The period of annual maneuvers ended Wednesday night, completing ten days of simulated warfare in which the Second Observation Group participated to the extent of over 150 hours of airplane flying time, irrespective of the time flown on engineering and radio test flights and practice flights. This time was divided among the following missions; special patrols 28, general patrols 32, artillery reglage 13, inter-island reconnaissance 4, special (visual) reconnaissance 5, photographic reconnaissance 18, bombing (in formations) 2, attack 8, night reconnaissance 4.

The last three days of hostilities were practically a duplicate of the activities of the first three days, in which all available front line troops were concentrated at improved positions on the north shore of Oahu. Photographic and visual reconnaissance flights were made over the sector and contact maintained by our planes with all ground movements. Attack and bombing formations were flown on the concluding day when the White Forces (enemy) were reported landing troops from transports off Waialua Bay. Patrols operated in all sectors until the evening of the 29th. Two night reconnaissance flights were flown on the 27th and 28th.

The Coast Artillery was also active during the week. Regulation of fire with the Battery at Ahua Point, Fort Kamehameha, was conducted on the 27th. As the target was at sea an HS2L boat was used as the observing plane. On the following day Battery Harlow, Fort Ruger, fired on a land target. A DeH4 plane equipped with a two way radio set was used successfully in spotting and regulating the shots.

During the ten days of maneuvers the Second Observation Group worked with only one object in view, that of establishing a good record. With the limited personnel it was necessary for everyone to extend his efforts to the limit. This was done with an enthusiasm that exceeded all expectations, and a high standard of efficiency was maintained throughout all departments of the field.

A critique was held at Schofield Barracks by the Commanding General of the Department, on Thursday morning. A summary of all situations and movements, which were developed in the maneuvers, was made and criticisms and commendations were

expressed. Some excellent points were disclosed relative to the geography of Oahu, its natural defenses, possibilities for defense and accommodations for troops. The general expression of opinion was one of satisfaction with the work of all organizations.

ANTI-AIRCRAFT WORK CONTINUES

Langley Field airplanes continue to co-operate with Anti-aircraft batteries at Fort Monroe during the past week where some very spectacular work is being done in spouting Anti-aircraft fire. The airplanes are equipped with the Radio telephone and by means of a Radio telephone truck located near the battery the battery commander is able to direct the movements of the plane, commanding it at will to fly at different altitudes.

The observer reports his exact altitude by Radiophone and the battery fires Anti-aircraft shrapnel near the immediate vicinity of the plane, so that the observer can report as to whether the bursts occur above or below the level of the plane. In this way very accurate data is obtained in the timing of shrapnel fuses. The information obtained proves of immense value for all future Anti-aircraft work.

Needless to say, the work is somewhat hazardous for the pilot, as a misplaced burst might do considerable damage, but the pilots and observers who are participating in the work seem thoroughly enjoying the added thrill they get out of this kind of practice.

ARMY D-2 COMPLETED ITS TEST.

The U. S. Army airship, D-2, having completed the test at Akron, Ohio successfully made the flight from that point to Langley Field via Pittsburgh on Oct. 31. The ship, which was constructed for the Government by the Goodyear Tire and Rubber Company, has a gas capacity of 190,000 cu. ft. The dimensions are: length, 198 ft., height, 58 ft., width 51 ft. 3 in. . It has a cruising radius of 550 miles which may be extended to 790 when running at half-speed, and an altitude distance of 8500 ft. The ship is fitted with two engines of the Union vee type of 120 H.P. each and making 1400 revolutions per minute.

The D-2 left Akron at 11 P.M. Saturday, flying by way of Pittsburgh, arriving over Washington at 8:10 Sunday morning, a distance of 285 miles, and reaching Langley Field at 12 M., a distance of 159 miles, making a total of 444 miles flown. The ship, which was in command of Capt. George W. McEntire, carried two pilots, a bombing pilot, a radio operator and two mechanics.

The D-2 will be used for training purposes while at Langley, and later, will go to Aberdeen Proving Grounds for bombing work.

EDUCATIONAL AND RECREATIONAL WORK, KELLY FIELD

The Educational and Recreational School at this station is having an attendance of approximately 500. Over 100 of this number are taking the Automotive Course, and the remainder the Literary and Business Courses.

In the Automotive courses the men are tearing down and re-assembling automobiles and trucks and learning to repair the same.

In the Literary and Business Courses the men are learning the basic principles of the English language, of Mathematics and of Elementary Business. Many of the men are studying Shorthand and Typewriting in order to become good Army Clerks.

THIRTY-FOUR AT RIVERSIDE POLYTECHNIC

Thirty-four enlisted men of the command are attending school daily at Riverside Polytechnic high school. In addition over a hundred men are enrolled in the various educational and vocational classes conducted on the island under expert instructors. The E & R School, which is under the direction of Lieut. F. B. Wieners, bids fair to maintain the last record of last year, when over 85 per cent of the entire command was under instruction, the highest average for any service school in the Ninth Corps Area;

FLYING TIME PILOTS SCHOOL, MARCH FIELD

Thirty ships participated in 100 flights covering an approximate mileage of 11,905, during the past week. One hundred and seventy hours, five minutes were consumed in flights, engaged in, for the most part, by new arrivals who desired to "refresh" themselves upon returning to the Air Service.

Advance instruction required 62 hours, 25 minutes; forest fire patrol, 37 hours, 25 minutes; test flights, 5 hours, 05 minutes; and miscellaneous flights 65 hours, 10 minutes.

TO SELECT AIRDROME SITES IN LUZON, P. I.

A board of officers, of which Captain E. L. Canady and Roy S. Brown are members, has been appointed for the purpose of selecting possible airdrome sites in Northern Luzon.

One base on the Lingayen Gulf, suitable for both land and sea planes, and another in Ilocus Norte will probably be selected.

Captain Brown, with representatives of the civil government, which owns most of the land on the Gulf, and a greater portion of the province of Ilocus Norte will make a final trip to the proposed sites this week.

With landing fields established on the northern points, a trip that now takes from three to four days can be accomplished by air in less than an hour.

The inspection trip of Captain Brown will probably take from 10 days to two weeks.

Should a site on the Lingayen Gulf be secured, a gunnery range will be established there, and during the last month of their course, the officers taking observers' training, will be sent there for final practice.

The only sites in the vicinity of this station which are at all suitable for aerial targets are in a very mountainous region, and it is desirable to avoid work over them if possible.

FIRST CONTEST FOR PULITZER TROPHY.

The first contest for the Pulitzer Trophy - a heavier-than-air race over a closed circuit - will be held at Mitchel Field, Mineola, Long Island, at eleven o'clock on Thanksgiving Day, Nov. 26, weather conditions permitting.

This race, in which Valentine Liberty Bond prizes totalling \$3900, will also be competed for, is being held under the auspices of the Aero Corporation, Ltd.

Entrants agree to abide by the rules and regulations of the International Aeronautical Federation and such special rulings as may be made by the contest committee of the Aero Club of America.

The entry fee for the contest is \$100 - Government entries being accepted without fee. Entries close Nov. 15, and application blanks may be secured from the aviation committee of the Aero Corporation, Ltd., care of Aero Club of America, 11 East 38th St., New York City.

TO INSTALL REVERSIBLE PROPELLER OF AIRPLANE AND DIRIGIBLE

Aeronautical designer, Seth Hart, has been ordered to proceed from Dayton, O. to New York on temporary duty in connection with the installation of reversible propellers on Navy Ve-7 airplane and dirigible balloon C-10.

TO WEDDING BY AIRPLANE.

To attend the wedding of Lieut. Harold McGinnis to Miss Katharine Clifford Durham which happy event took place last week, army pilots flew to Philadelphia from Bolling Field, Washington, D.C.; Langley Field, Hampton, Va.; and Mitchel Field, Long Island, N.Y.

Maj. Martin F. Scanlon, commanding officer at Bolling Field, acted as best man, and among the visiting airmen was Lieut. Ross C. Kirkpatrick, recently returned from the Alaskan Flying Expedition.

Lieut. McGinnis, who is stationed at Bolling Field, enlisted in the Air Service in 1917. A graduate of the Chicago University Law School, he was engaged in the practice of his profession in that city up to the time of his enlistment.

GERMANY PROTESTS

A protest from the German Government against the interpretation placed by the Aeronautical Inter-Allied Commission of Control upon that article of the Treaty of Versailles which applies to the disposition of all aeronautical material in Germany has reached that body. The particular point protested is the inclusion of private aeronautical material under the interpretation as outlined by the Commission.

TRAINING AT KELLY FIELD

The flying time of the whole field has been curtailed on account of the Officers' Schools. Garrison school is held every afternoon and lectures for two hours are given three or four mornings a week. The lectures cover various subjects not included in the regular Garrison school course such as Photography, Reconnaissance, Infantry Contact Patrols, Artillery Fire Control, Combat Tactics, etc. Of course this theoretical work is necessary to equip an officer who is to do air work, but somehow a lot of work in the air looks better from the operations officer's viewpoint.

On Friday the Pursuit Group sent all pilots out over a delineated battle sector between two small towns near the field and each pilot upon his return submitted a complete reconnaissance report.

The six cadets assigned to the Pursuit Group and the sixteen cadets of the First Day Bombardment Group have completed their flying training and have been assigned to squadrons for further instructions. They have been assigned to duty as assistants to the various squadron officers.

Fifty-six cadets sent here this week for advanced training have been assigned to the two groups and will begin work next Monday.

The work of the officers who left last week to co-operate with the Coast Artillery at Fort Crockett has been delayed on account of the rain and fog.

FOREST FIRE PATROL PROJECT FOR 1921

In connection with the work for aerial patrol of the National Forests in 1921, for the prevention of fires, the Air Service has requested that five reserve squadrons be authorized for this work. This project, submitted by Operations Division, has been approved by the Advisory Board, but to date no authority has been granted to put it into effect.

The 91st Aero Squadron with headquarters at March Field, Riverside, California, was engaged in forest fire patrol during the past season, and, it is contemplated, will continue the work for the coming year.

The location of squadrons for fire patrol in the Western Department is under the jurisdiction of the Commanding General of that Department.

UNIQUE CRACK

Lieutenant William J. White, Engineer and Transportation Officer of the First Pursuit Group had an experience of a unique character in setting No. 14 Hat-in-the-ring ship on terra firma this A.M. Gliding into the field at a normal glide he came down for what ^{was} expected to be a "three pointer" and much to his surprise he had achieved a "four pointer" before he was hardly aware he was on the ground. His landing gear gave way on touching the earth allowing the ship to settle down on the axle, both wheels remaining intact, the ship bounded along merrily across the field, the only other damage being a broken propeller.

The ship was pushed back and into the hangar on its own chassis despite the fact that the wings cleared the ground only about ten inches. Even the aileron horns were undamaged. The ship was an SE5A.

ARMY'S LARGEST DIRIGIBLE CARRIES RECORD COMPLIMENT

The dirigible Zodiac stationed at Langley Field, Virginia, is engaged in work of carrying officers and enlisted men for training purposes, several flights being made daily. During recent flights, a total of 17 passengers have been lifted each flight in the big airship besides many hundreds of pounds of ballast. This is the largest number of passengers carried by a dirigible in the United States.

CITIZENSHIP TAUGHT BY THE ARMY

One of the most striking examples of worthy citizenship developed by the Army has come to the attention of the Kelly Field Morale Officer in the story of Sergeant Clarence Stroble. Sergeant Stroble, well known mechanic, who accompanied the Pathfinder Transcontinental Flight in 1919, was discharged at Kelly Field in June, 1920. He immediately went to the wheat fields of Kansas to work.

Alighting from the train at Grainfield, Kansas, he approached a farmer and asked for a job. The farmer told him that he could use a man who could run a barge, and asked Stroble point blank if he could operate one.

"Sure I can", replied Stroble, "what is a barge?"

He got the job.

A barge, by the way, in the grain belt is merely a wagon that goes along by the side of a header in a wheat field to catch the heads of grain as it is cut. Stroble proved as good as his word, and managed to operate the barge without the slightest difficulty.

Incidentally, he managed something else as well. A group of the men at work in the field with Stroble struck for higher wages. Calling a meeting one night, the strikers announced that, unless their demands were met, they would set fire to the machinery and stop the harvesting of the crop.

Just here Stroble took charge of the meeting. Mounting on a chair he denounced the strikers in good, round American terms, expostulating with them in a sensible way that soon brought them to a different way of thinking.

Stroble, having developed in the army a latent talent for boxing, clinched his hold over the strikers by challenging any one of them to a bout, but there were no comers; the victory was won without resort to force.

On account of ex-Sergeant Stroble's attitude for fairness and justice, the strike was averted, and the harvest gathered without further disturbance.

DEPARTMENT OF COMMERCIAL AVIATION

AIRCRAFT DEPRECIATION AND INSURANCE

One of the most important matters to be considered in connection with the development of aviation, is that of aircraft insurance. Since it offers large opportunities as a feature of an already extensive industry, it correspondingly presents a rather wide range of difficulties. In estimating insurance of whatever nature, the prime difficulty is in determining first, the basis of cost upon which the rate is to be computed. It is a fact so well known as to be an axiom, that the all-important question of cost is the most unknown quantity that the average business firm has to deal with. More failures result from this more or less vagueness with regard to this essential to financial success than from any other one cause. This fact, substantially true of every ordinary business, becomes tremendously emphasized when applied to commercial aviation.

Of the numerous concerns now engaged in the manufacture of commercial aircraft, it is safe to say not one of them knows, to a workable degree of surety, just how to establish the basis of cost. Ordinarily, three factors compose the item of cost, namely: cost of operation, interest on investment, and depreciation.

While it is a fairly easy matter to arrive at an exact total for the first two, the third is extremely difficult to determine.

It will, of course, be borne in mind that the operation of aircraft on anything approaching a large scale dates from the beginning of the war. Prior to 1914, so little had been done in the way of commercial aviation, that the experience gained is of little value. So, also, is the knowledge contributed by the war experience, since it cannot be applied to the uses of commercial aviation.

In this connection an interesting and instructive bulletin has just been prepared by the "Air Board of Canada, which takes up this matter quite exhaustively. As a basis of computation, the writer of the bulletin states that he called upon the managing director of one of England's greatest aircraft concerns for the purpose of ascertaining how this company estimated depreciation. The statement given was: "We have very little idea what our depreciation is, but we are accepting, as an arbitrary figure, 100 per cent per annum per machine."

Further inquiry among the various commercial concerns in England elicited the information that each one was as much in the dark as the one quoted. The fact being that the very large concerns are simply going ahead, hoping they are making a profit, but totally unable to say definitely that they are.

The report then, to quote from the bulletin, "is compiled after a close study of the question, combined with details gleaned from records kept during four years of aerial warfare, such information as has been gained by conversation with those interested in commercial aviation in England, and the study of figures compiled in the United States, has resulted in the following estimate of that major portion of the cost of aerial operation, depreciation."

Excerpts from the bulletin follow:

"For the purpose of reducing depreciation to a percentage basis the report divides this factor into two portions, designated A and B.

A - Constant depreciation.

B - Depreciation due to flight.

(1) Crash risk.

(2) Deterioration.

A - Constant depreciation.

Under this head is considered the steady depreciation that must be taken into account whether the machine is flown or not, it being a well established fact that, despite all reasonable care that can be taken of it, if an air machine of whatever character is placed in a hangar and left there for any length of time, it loses a great portion of its former value. In the first place, the fabric will have become soggy, and certain parts of the woodwork will, in all probability, have warped. This would necessitate, sooner or later, a very complete and thorough overhauling. A still more serious factor, however, that must be considered is the fact that due to obsolescence, within the period of a few years the machine will have lost, practically, all of its original value. It is reasonably safe to say that the machine of today will not be flown in general use four years hence. The airplane is in a state of constant evolution, both as to type and construction, and this fact must not be lost sight of. This is particularly true of the present time when most of the machines on the market have been built for war purposes with the lowest possible factor of safety and the greatest possible speed and climb.

B - Depreciation due to flight.

(1) Crash risk.

Investigation on this subject seems to indicate that among high class pilots one must look for a complete write off in aeroplanes every 600 hours, and in seaplanes, every 500 hours. This record will probably improve very considerably as war-time machines give place to commercial types, but until such time arrives, it is not considered safe to figure on less than one-sixth of one per cent per flying hour crashes against aeroplanes, and one-fifth of one per cent per flying hour against seaplanes. It may be explained that the loss in seaplanes is usually greater than in aeroplanes, as slight accidents often result in the sinking of the seaplane, thus converting a partial into a total loss.

(2) Deterioration.

Every type of aircraft has a flying life, that is to say, after a machine is built and flown, a time will come when, apart from crashes, it will become unfit for further service. The period of life will, of course, differ in different types of machines, the life of some being greater as the factor of safety of the machine is higher and landing speed lower, etc. For other types, the life will be shorter, the type of machine that has the worst record of all being the flying boat. In one of the largest seaplane stations in England it has been found from careful records kept during the war, that the life of the hull of large flying boats was just over 70 hours. This figure excluded all war risk and simply took care of wear and tear. In another squadron of the same type of machine, the average was 103. On the other hand we find examples of aeroplanes whose life averaged between 700 and 800 hours, and in one or two instances, the known life of an airplane has been as great as 1000 hours with only minor repairs. A careful study of all figures available seems to indicate that the average flying life of an aeroplane may be stated to be 700 hours, and of a seaplane 400 hours; or, in other words, that the allowance for deterioration should be at the rate of one-seventh of one per cent per flying hour for aeroplanes, and one-fourth of one per cent per flying hour for seaplanes.

It now becomes apparent that items A and B must be considered separately. In the event of an aeroplane's being bought and not flown, the only factor that need be considered is constant depreciation, since the machine is not subject to either crash risk or deterioration due to wear and tear. In the event of a machine's being used during the summer months only, and stored during the winter months, it will be necessary to charge depreciation under different headings. In other words, during the winter months when machine is stored, depreciation should be charged as shown in A.

A - Constant depreciation - 3 per cent per month.

The two remaining factors to be considered are B (1), Crash risk, and B (2), Deterioration.

B (1) - Crash risk. It is obvious that since under B (2) the aeroplane is to be written off in 700 hours, it will be unnecessary to insure it against crash risk beyond that period. It is also obvious that it is unnecessary to insure a machine against crashes right up to its full value, if the machine has done say 600 hours flying. B (1) should, therefore, be estimated in a sliding scale or for the purpose of averaging the figure of one-half of one-sixth, or one-twelfth per cent, per flying hour may be taken as an equitable basis.

B (2) - Deterioration. This factor may be considered as stated, one-seventh of one per cent per flying hour. In adding the above figures together we find that on an aeroplane detailed to carry out certain operations lasting six months and entailing 300 hours flying, the cost of the machine being \$10,000 depreciation should be figured as under:

B (1) - Crash risk - one-twelfth of one per cent per flying hour for 300 hours.....	\$2,500
B (2) - Deterioration - one-seventh of one per cent per hour for 300 hours.....	<u>4,286</u>
Total depreciation.....	\$6,786

If the machine is stored in a hangar for the balance of the year we will get the additional cost of:

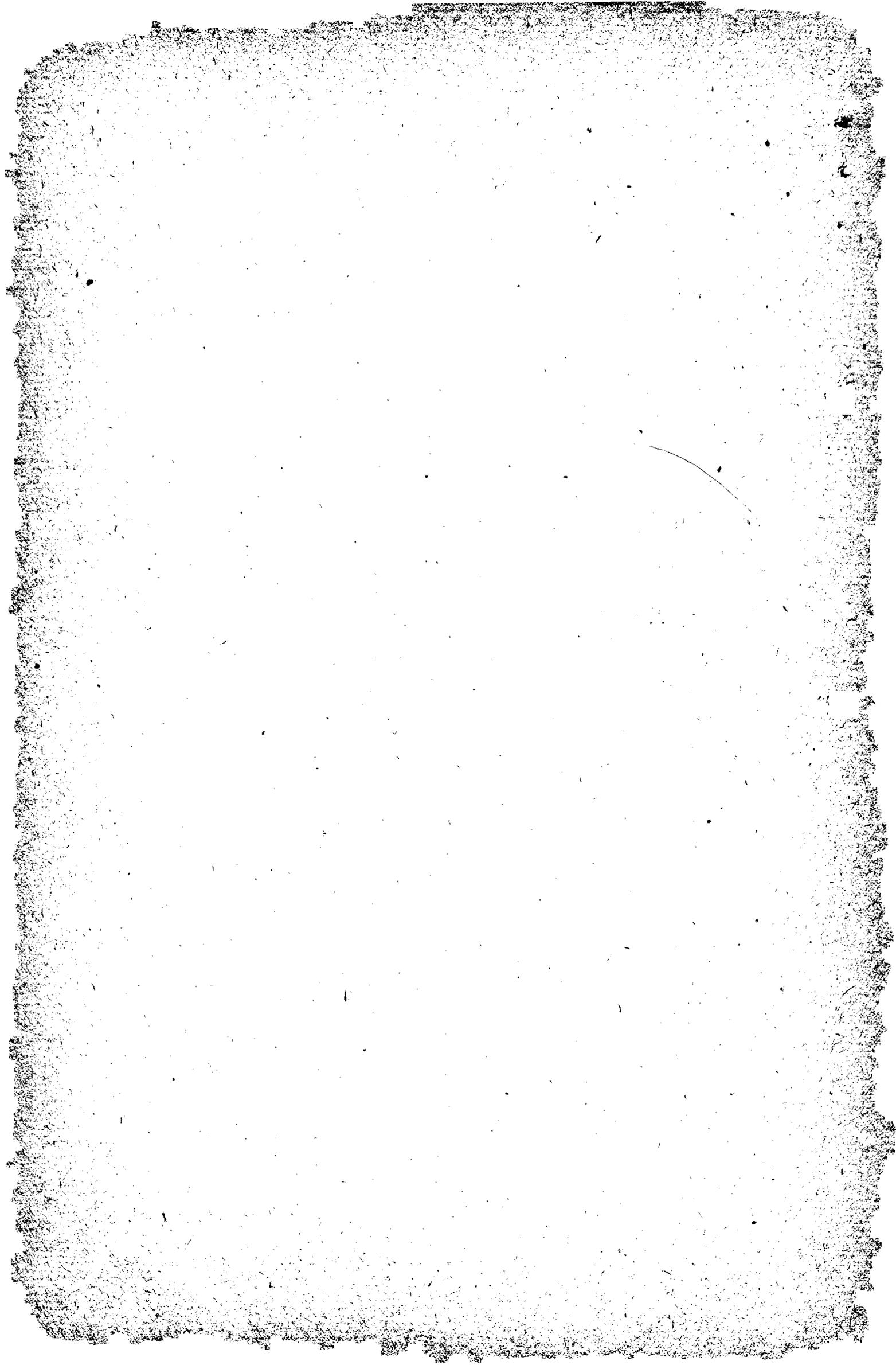
A - Constant depreciation - 3 per cent per month on \$10,000 for six months..... \$1,800

In other words, the total allowance which should be made in calculating cost of operations or insurance and depreciation upon a new machine valued at \$10,000 and used for operations for a period of six months during which it was flown 300 hours would be \$6,786, or sixty-seven and four fifths per cent of the value of the machine.

✓✓✓

It is particularly emphasized that the above calculations are based on war type machines and with war time experience. These figures will unquestionably be greatly modified as the present types of machines give place to those designed for commercial use and as the attitude of mind created by war experience is altered under peace time conditions.

Now that the war is over, however, and aircraft manufacturers are turning their attention to the commercial use of aircraft, serious efforts are being made to design and build machines that will last upwards of 1000 hours. Prominent in this direction is the all metal machine. In England today the largest machine ever constructed is being built of metal, and it is hoped that in this and subsequent types the life will be very much lengthened.



From	To	Arrived	Distance in Miles	Cumula- tive.	Between Stops.	Time low mul
Mitchel Field	Erie, Pa.	July 17, 1920.	352		5:00	
Erie, Pa.	Grand Rapids	July 21, 1920.	300	652	4:25	
Grand Rapids, Mich.	Winona	July 22, 1920.	310	962	3:50	
Winona, Minn.	Minneapolis	July 22, 1920.	100	1062	1:15	
Minneapolis, Minn.	Fargo	July 24, 1920.	225	1287	2:40	
Fargo, N.D.	Portal	July 25, 1920.	290	1577	3:20	
Portal, N.D.	Saskatoon	July 26, 1920.	280	1857	4:05	
Saskatoon	Edmonton	July 27, 1920.	300	2157	4:25	
Edmonton - Returned	Clouds & Fog	July 31, 1920.	120	2277	1:25	
Edmonton	Jasper	Aug. 1, 1920.	200	2477	2:30	
Jasper	Prince George	Aug. 2, 1920.	215	2692	3:10	
Prince George	Hazelton	Aug. 13, 1920.	220	2912	3:31	
Hazelton	Wrangel	Aug. 14, 1920.	210	3122	3:00	
Wrangel	Whitehorse	Aug. 16, 1920.	315	3437	4:10	
Whitehorse	Dawson	Aug. 18, 1920.	250	3687	2:57	
Dawson	Fairbanks	Aug. 19, 1920.	275	3962	3:05	
Fairbanks	Ruby	Aug. 20, 1920.	240	4202	3:00	
Ruby	None	Aug. 23, 1920.	305	4507	3:35	

None	Ruby	Aug. 31, 1920.	305	4812	4:00	6
Ruby	Fairbanks	Aug. 31, 1920.	240	5052	3:00	6
Fairbanks	Dawson	Sept. 1, 1920.	275	5327	3:15	6
Dawson	Whitehorse	Sept. 5, 1920.	250	5577	3:15	7
Whitehorse - Returned	snow & fog	Sept. 9, 1920.	275	5852	3:15	7
Whitehorse	Telegraph Creek	Sept. 10, 1920.	235	6087	3:20	7
Telegraph Creek - Returned	snow & fog	Sept. 19, 1920.	220	6307	2:30	8
Telegraph Creek	Hazelton, B.C.	Sept. 29, 1920.	230	6537	4:45	8
Hazelton	Prince George	Oct. 4, 1920.	220	6757	3:35	8
Prince George	Jasper	Oct. 8, 1920.	215	6972	2:20	9
Jasper	Edmonton	Oct. 8, 1920.	200	7172	2:30	9
Edmonton	Saskatoon	Oct. 10, 1920.	300	7472	3:45	9
Saskatoon	Portal	Oct. 11, 1920.	280	7752	3:15	10
Portal	Fargo	Oct. 11, 1920.	290	8042	4:40	10
Fargo	Winona	Oct. 14, 1920.	325	8367	3:25	10
Winona	Grand Rapids	Oct. 16, 1920.	310	8677	3:25	11
Grand Rapids	Erie	Oct. 18, 1920.	300	8977	3:35	11
Erie	Mitchel Field	Oct. 20, 1920.	352	9329	4:00	11

LOG OF ALASKA FLYING EXPEDITION

NEW YORK, N.Y., TO NOME, ALASKA & RETURN

Equipment: DH-4B Airplanes.

Alteration: None except stripping of all armament and installation of tanks to increase gasoline and oil capacity.

Cumulative.	Between Steps.	Time in hours. Cumulative.	Miles per hour. Average.	Engine time on ground.	Cumulative motor time.	Gasoline average per 4 machines.	Cumulative Total.	Cumulative oil average per 4 ships.	Total	Average Revolutions
	5:00		71.	25	5:25	440		44		1400
552	4:25	9:25	66.66	10	10:00	350	740	44	88	1400
962	3:50	13:15	81.	15	14:05	300	1040	40	128	1400
062	1:15	14:30	80.	10	15:30	280	1320	40	168	1400
287	2:40	17:10	84.58	15	18:25	280	1600	48	216	1400
577	3:20	20:20	87.08	15	22:00	240	1840	44	260	1360
857	4:05	24:25	71.50	15	26:20	300	2140	44	304	1380
157	4:25	28:50	66.00	20	31:05	260	2420	40	344	1360
277	1:25	30:15	80.00	15	32:15	200	2620	40	384	1400
477	2:30	32:45	80.00	15	35:30	220	2840	40	424	1450
692	3:15	35:50	79.50	15	38:55	280	3120	40	464	1450
912	3:15	39:23	62.84	22	42:50	220	3340	40	504	1580
122	3:00	42:23	70.00	15	46:05	280	3620	44	548	1380
437	4:10	46:33	76.30	40	50:55	280	3900	40	588	1380
687	2:55	49:30	85.00	17	54:09	200	4100	40	628	1560
962	3:05	52:38	88.10	17	57:34	200	4300	40	668	1380
1202	3:00	55:38	80.00	20	60:54	280	4580	40	708	1380
1502	3:15	59:13	85.70	20	64:49	240	4820	40	748	1580
Average -77.51										

RETURN

4812	4:00	63:13	76.22	15	69:04	230	5050	40	788	1380
5052	3:30	66:43	80.00	30	72:34	200	5250	40	828	1380
5327	3:15	69:26	85.93	27	76:14	200	5450	40	868	1360
5577	3:15	72:41	78.12	25	79:54	300	5750	40	908	1360
5852	3:15	75:56	85.00	25	83:34	275	6025	40	948	1400
6087	3:20	79:16	70.57	25	87:19	200	6225	40	988	1400
6307	2:30	81:46	88:00	40	90:29	240	6465	40	1028	1400
6537	4:45	86:31	48.63	20	95:34	240	6705	40	1068	1400
6757	2:35	89:06	84.61	15	98:24	240	6945	40	1108	1400
6972	2:30	91:26	92.25	15	100:59	150	7095	40	1148	1420
7172	2:30	93:36	93.41	15	103:24	220	7315	40	1188	1420
7472	3:45	97:21	80.00	25	107:34	200	7515	40	1228	1400
7752	3:15	100:36	86.15	20	111:09	240	7755	40	1268	1400
8042	4:40	105:16	61.70	15	115:54	320	8075	40	1308	1400
8367	3:25	108:41	91.30	15	119:34	240	8315	40	1348	1450
8677	3:25	112:06	89.56	15	123:14	240	8555	40	1388	1360
8977	3:25	115:41	83.61	25	127:04	240	8795	40	1428	1360
9329	4:05	119:41	88.00	15	131:19	300	9095	40	1468	1360
Average -81.83										

- MISSION ACCOMPLISHED WITH ORIGINAL EQUIPMENT -

TURN

all ar-
of tanks
oil ca-

Cumulative oil aver- age per 4 ships.	Total	Average Revolu- tions P.M.	Metereological Conditions Daily.
44		1400	Clouds 200' to 8000', Thin, Visibility poor. W. 20MPH NW
44	88	1400	Fog over Lake Erie, Smoky, Visibility poor, W. 15MPH W
40	128	1400	Clear, Smoky over Lake Mich. Visibility fair at 5000 W. 10MPH NW
40	168	1400	Clear, Warm, Cooling difficult, Visibility good W. 5MPH NW
48	216	1400	Fair, Light clouds, high, Visibility good. W. 7MPH W
44	260	1360	Clear, Visibility excellent. W. 10MPH SW.
44	304	1380	Clear, Visibility good, Smoky area Regina. W. 15MPH NW.
40	344	1360	Clear, Visibility excellent. W. 15MPH NW.
40	384	1400	Fair, Becoming foggy, Low clouds, west. W. 20MPH SE
40	424	1450	Fair, Low clouds, thin. No fog. W. 10MPH NW
40	464	1450	Clear, Smoky at 5000'. Forest fires. W. 5MPH SW.
40	504	1580	Clear, Visibility excellent. W. 25MPH NW
44	548	1380	Clear, Visibility excellent until reaching coast. Clouds. W. 5MPH N
40	588	1380	Clouds low, breaking. White Pass, clear. W. 5MPH N
40	628	1360	Clear, Visibility excellent. W. 15MPH S
40	668	1380	Clear, Visibility fair, westward, Smoky. W. 5MPH E.
40	708	1380	Cloudy, threatening rain. Visibility fair. W. 10MPH W.
40	748	1380	Clearing, visibility fair, to Nulato. Coast storms. W. 15MPH SE
40	788	1380	Clouds low, Visibility poor, Intermittent rain. W. 15MPH SE
40	828	1380	Visibility fair. Clouds lifting. W. 12MPH SE
40	868	1360	Clear, Threatening from east. Visibility fair. Noticeably colder. W. 20MPH
40	908	1360	Clearing, Fog in valleys. Visibility excellent. W. 3MPH S
40	948	1400	Clear. Storm threatening to south. W. 5MPH NW
40	988	1400	Clear. High clouds to south. Visibility excellent. W. 15MPH S
40	1028	1400	Clearing. Clouds banking to south. Snow encountered 12000' W. 5MPH S
40	1068	1400	Clearing. Foggy in valleys. Storm approaching from west. W. 5MPH S
40	1108	1400	Clearing. Visibility excellent. W. 10MPH W
40	1148	1420	Clearing. Fog in valleys. Visibility poor. W. 10MPH SW
40	1188	1420	Clear. Visibility excellent. W. 20MPH SW
40	1228	1400	Fair. Smoky. Visibility fair. W. 15MPH S
40	1268	1400	Clear. Cloudy to south. Visibility good. W. 10MPH NW
40	1308	1400	Clear. Smoky. Visibility poor. W. 20MPH S
40	1348	1450	Clearing. Clouds 1500'. W. 15MPH SW
40	1388	1360	Clearing to clear. Visibility excellent. W. 10MPH NW
40	1428	1360	Clearing. Smoky. Visibility poor. W. 5MPH NW
40	1468	1360	Clear. Smoky. Visibility poor. W. 10MPH NW

SQUADRON NEWS

Second Observation Group, Luke Field, H. T.

Only a limited amount of flying was conducted on the field during the past week. This was necessary because of the absence of the Fourth Squadron from regular duty, to attend the annual firing on the range. Preliminary pistol practice was given to all men of the organization. Those men who qualified shot the record course. Seven men out of this number received the rating of first classmen and two made the high mark of pistol expert.

Extensive plans are being made for a thorough course in bombing for all officers of this organization. Lieut. R. O. Searle, formerly of Ellington Field, is in charge of this course which is to resemble as nearly as possible the course which was given in the States during the war. A camera obscura was received on a recent shipment and is being set up in a hut on the edge of the flying field. DeH4 planes will be used in the work and are being equipped with the necessary bomb gears and release devices. Plans are being made to have an area of ground near Schofield Barracks obtained and marked as a bombing range.

Nine men from the Second Observation Group recently qualified to attend the school which is being held at Fort Kamehameha, to furnish instruction to all enlisted men of this department who are going to take the competitive examinations for West Point in the spring. The courses are in the subject of mathematics, history, grammar and composition, and English literature. Men attending this school are excused from all other duties and are granted privileges and accommodations to assist them in their studies, as the most intensive application will be necessary to cover the subjects in the short time of two months before the competitive examinations.

The Luke Field Service Club gave an elaborate entertainment on Saturday. Guests were brought out from Honolulu during the afternoon on a sub-chaser. A program of acrobatic flying was given and swimming parties were arranged for the afternoon. A sumptuous dinner at the Consolidated Mess was followed by dancing during the evening.

9th Aero Squadron, Mather Field, Sacramento, Calif.

With the return of detachments from all sub-bases and outlying stations to Mather Field, the Squadron is reunited for the first time in five months. Certain details of reorganization together with the advanced flying training being given the Cadets before their discharge, is claiming the attention of the personnel.

A special report, giving an outline of the seasons' activities on Forest patrol, a description of the route flown and a comparison of the Aerial Forest patrol with other methods of military training, has been rendered.

Approximately 1500 forest fires are found yearly in the California National Forests. Although exact statistics are not, as yet available for the past season it is estimated that the Aerial Patrol has made the original report on at least one third of these fires. It is therefore evident that from an observation standpoint, the patrol may be considered a marked success, while as a means of training the military flyer it has no equal.

Langley Field.

Langley Field was well represented at Washington when the Alaskan Expedition commanded by Captain Street was welcomed home after a 9000 mile trip to Alaska and return. The flyers from this field consisted of a formation of five De Havilland planes headed by the Wing Commander, Major W. N. Hensley, Jr. and the dirigible Zodiac commanded by Captain Dale Mabry. These flyers proceeded from Langley Field to Bolling Field where they joined in with other squadrons from different fields in making a spectacular exhibition in honor of Captain Street, and officers and enlisted men of his expedition. Over 75 planes were in the air over Washington and the Langley Field officers assisted in giving Captain Street and officers and enlisted men a welcoming they will not soon forget.

Temporary Storage Depot, Selfridge Field, Mt. Clemens, Mich.

Captain John H. Jones, A.S., Aviation General Supply Depot, San Antonio, Texas, has been ordered to this station to assume command, vice Captain Norman J. Boots, A.S., who has been ordered to McCook Field, Dayton, Ohio, for the purpose of attending the Engineering School at that station. Captain Jones is expected to arrive here within the next few days.

The transfer of property from 2nd Lieut. J. B. Machle, A.S., to 2nd Lieut. Morris L. Tucker, A.S., is about completed, Lieutenant Machle having been discharged.

Flying School, Ellington Field, Houston, Texas

Owing to the disagreeable weather conditions that have prevailed during the past week, the work of the Coast Artillery at Fort Crockett, aided by the flight which arrived here from Kelly Field, has been delayed. The first shoot took place yesterday, and proved very successful and instructive. A battery of ten disappearing rifles is used to fire at the target which is a canvas ten feet square on a wooden frame moving about 1,200 yards out to sea. This is towed out by a tug, keeping about 500 yards distant, and on one of the days when the wind was very high, the target was completely wrecked on the sea wall as it was being towed out the channel. Fourteen shots were fired yesterday, five trial shots and nine improvement shots, and of the last, two perfect hits were registered, one of which completely demolished the target.

All data used during this fire was furnished exclusively by the observer from the airplane, who flies over the moving target and sends reports back by radio.

Observation School, Fort Sill, Oklahoma

A mosaic map of a good portion of Fort Sill and Lawton which has been worked on by students of the Air Service Observation School during the past month, has been completed. It is indeed a masterpiece in photography and a great credit to the photographic section and their most able instructor, Captain John Howry.

Eleven new cadets arrived from March Field, California, on the 17th. They are scheduled for training in the Air Service Observation School, which opens about November 1st. In the meantime they are taking preparatory work in Liberty motors, Marlin machine guns, and practice in the Aero Repair.

12th Army Observation Squadron, Nogales, Arizona

Walter H. Reed, former Air Service Officer has been recommissioned as a 1st Lieutenant, and assigned to this Airdrome for temporary duty.

After much perseverance and patience, authority has been received at this Airdrome to ferry three of our old airplanes to Kelly Field and exchange them for new ones. Lts. Knapp, Wolfe, McKimmon and Zettel expect to make the trip the first of the week, returning with four new D.H.4B's. A very impressive ceremony will undoubtedly be held preparatory to the "take-off", as these planes have just recently been reassembled after being stored for many months.

Kelly Field, San Antonio, Texas

It is rumored that Lieutenant Erierson, now sojourning in the Base Hospital at Fort Sam Houston, will return to Kelly tomorrow.

The 27th reports that Lieutenant Aldworth, who has also been a boarder at Fort Sam due to an auto accident, will return to duty next Monday. Doubtless the Squadron regrets the Lieutenant's misfortune but as a matter of fact their real grievance is summed up in this fashion: "Doesn't seem right for a flyer to get 'cracked up' in an automobile, does it?"

Lieutenants Adams and Tyndall, both of whom have been in the 147th Squadron for several months, have been transferred. Lieutenant Adams has been with the 147th about a year and was particularly active in athletics and will be seriously missed. He goes to Germany, presumably to tinker with the "watch on the Rhine". Lieutenant Tyndall, formerly the commanding officer of the 147th, goes to McCook Field, Dayton, Ohio for training as Engineer Officer.

Captain L. B. Jacobs has been relieved from command of the First Day Bombardment Group and assigned to duty as Commanding Officer of the Air Park Group. He was relieved by 1st Lieutenant G. M. Palmer, the former adjutant.

Captain John G. Colgan has reported from Douglas, Arizona and been assigned to duty as Commanding Officer of the 5th Air Park.

Pilots School, March Field, Riverside, California.

Fully 20 new officers have reported at March Field for duty during the past week. Some are coming from other Air Service stations, others from various branches of the army and still others returned from civil life. An additional quota of commissioned officers is scheduled to arrive the first week in November, thus completing a class of about 100 student officers who receive flying training at this school beginning the first of November.

"Kid" Springer, March Field's bantam weight, again lost the decision to Johnny Adams of San Bernardino in a four round event at the Gate City arena Thursday evening. Springer, however, is not satisfied and requested a return bout. The two lads will meet again in about two weeks.

All March Field will journey to Pasadena on Armistice Day, November 11. The occasion will be a football game for the service championship of the Pacific Coast between a picked team from the entire Pacific fleet and the team representing this school. It will unquestionably be the football classic of Southern California for the season of 1920 and is being staged under the auspices of the American Legion Post of the Crown City.

Among the personnel of each team will be found men who have played service and college football in all parts of the country. March Field boasts of two all-American players and at least a score of college men who have starred in days of yore with some of the best college teams in the country.

Ex-Lieut. N. H. Langley is now piloting a plane for a movie firm in Los Angeles in which ex-Lieut. Francis Love is starred as an exponent of Omar Locklear in "Aerial Insanity". Love recently jumped from the tip of a mast on a sailing vessel at Long Beach to the wing of an airplane and is planning to change from a flag pole on one of the high buildings in Los Angeles to an airplane in the near future.

Among officers reporting for duty at this field during the past week are the following:-

Captain Roy L. Noggle and Lieutenants William W. Welsh, John A. Laird, Ennis C. Whitehead, Thomas C. Gilbert, Oscar L. Rogers, Max F. Schneider, Walter E. Price, William A. Morris, Henry H. Riely and John W. Benton.

March Field's football team played its first game of the season last Wednesday evening defeating the Sherman Indian School team 6 to 0. Coach Smith directed his squad to try out every play known and confine the work of the afternoon to more actual gridiron experience than a desire to pile up a big score.

Cadets Clinton C. Chalk, Geo. D. Roberts, Elmore I. Shoudy and Albert Jett left Thursday for Kelly Field, Texas, there to receive bombing instruction in the advance school for student pilots.

First Lieut. William E. Farthing has been appointed Surveying Officer for the field vice Lieut. A. L. Foster.

Lieut. Walter F. Kraus has been appointed Police Officer, vice Lieut. E. H. Tonkin.

Corp. James H. Kearns, signal corps man in charge of the meteorological station on this field, was operated upon Tuesday evening for appendicitis. He is reported rapidly improving.

2nd Observation Squadrons, Fort Mills, P. I.

An event toward which the squadron has been looking for a long time was finally consummated. An HS 2 L. was launched and flown to an altitude of 1000 feet. On landing, however, a heavy ground swell caught the boat's right wing and a perfect water loop was executed followed by the first crash we have had in many months. There were no casualties, although it is reported that the safety pilot has developed a few gray hairs overnight.

Considerable difficulty was encountered in getting off the water and for several days the mechanical force was stuck. Later it was found that, although the blue prints were followed to the very letter, the gasoline feed was connected up so as to practically cut off the supply to the carburetor when the plane got up to full speed. It is felt sure that as soon as the bay is more quiet, the whole squadron will be able to get in a little formation work.

Clay pigeons are having another open season since the armament officer has arranged the trap for practice, there being considerable action around it every afternoon that is clear. One gets good practice for hunting ducks, which are numerous, because of the wet weather.

The speed boat is made use of frequently for fishing trips. Lieutenant Ellicott caught a couple of talakito weighing 30 and 35 pounds apiece, also the party caught a good mess of small fish which were enjoyed by all.

Owing to the fact that at one time the Coast Defense base ball team was composed of seven 2nd Aero Squadron players and two C.A.C. men the squadron has been offered a chance to enter a team in the Army League which is to open in the near future. It is considered quite an honor in view of the fact that with only 130 men we can get out a team that will make any of the regimental and department teams step. It must be remembered that these teams play real ball, too.

The Air Service Garrison Headquarters moved in to its new edifice at the tail of the island this week, giving the squadron a little more room in their offices.

It is thought that it would be of interest to the officers of the service to know what the other officers of different Squadrons and Departments are doing. The roster of the 2nd Observation Squadron is as follows: Captain Ervin, Air Service Garrison Commanding Officer; Lieut. Hine, Air Service Garrison Adjutant; Lieut. Patrick, Commanding Officer 2nd Aero Squadron; Lieut. Dallas, Squadron Adjutant; Lieut. Richter, Operations Officer; Lieut. Cole, Air Service Supply Officer; Lieut. Bennett, Transportation Officer; Lieut. Lea, Asst. Engineer, Lieut. Greer, Air Service Garrison Personnel Adjutant, and Lieut. Ellicott, Radio Officer.

HERE AND THERE WITH THE EDITORS

AIR SERVICE MAKES SKILLED MECHANICS

Under this caption, U. S. Army Recruiting News for Oct. 16 publishes an article by Major General Charles T. Menoher, Chief of Air Service.

General Menoher says in part: "With the Reorganization Act of June 4, 1920 the Air Service became definitely a part of the Line of the Army. As such it was authorized a total of 16,000 enlisted men. This increase in authorized strength creates a number of vacancies in the Air Service. Once before a general announcement was made that enlistments would be received for the Air Service, and thousands of men availing themselves of the splendid opportunities this branch of the service affords enlisted."

"The 'Air Service' being a corps of specialists, its efficiency must necessarily depend, to a considerable extent, on the skill and accuracy of its enlisted men. More than that, human life often depends upon this skill and accuracy. It is not to be wondered at then, if such painstaking efforts are put forth to guarantee the best of training for Air Service enlisted men. Every recruit enlisted for 3 years, who is not already a specialist, so classified by dependable records or by an Air Service Trade Test Board, is sent to a school for specialists. The recruit may select any of the schools without regard to distance from place of enlistment, provided he has the potential qualifications to absorb the course."

"Mechanics in the Air Service receive good pay and are never laid off. For specialists it is possible to receive the highest enlisted pay offered by the Army. Fifty per cent of base pay over and above all other pay may be paid for flying status. Most mechanics working on airplanes are on flying status, and receive this increase in pay. But the most important feature for a mechanic in the Air Service is the fact that day by day he is becoming more proficient in 'The Vocation of the Future'. It is the mechanics dream realized"

THE SMALL AIRPLANES OF THE BRITISH COMPETITION

Excerpts from first report of the British Air Ministry competition for commercial aviation made by Edward P. Warner, acting technical assistant in Europe of the National Advisory Committee for Aeronautics, describe some of the salient features of the six airplanes entered for the small machine contest held at Martlesham Heath in August, 1920.

The six machines entered were the Avro, Austin, Beardmore, Bristol, Sopwith and Westland. All are biplanes except the Avro, which is the same triplane exhibited at the Olympia show. All are single-engined tractors with fuselages of the conventional form.

The specifications require that airplanes in this class carry not less than one passenger nor more than six, exclusive of the crew in both instances.

The report is quite comprehensive and contains minute details.

(Aviation 10/15/20)

WATERMAN TYPE 3-L 400 AIRPLANE

"Aviation" of Oct. 15 contains a detailed description of the latest product of the airplane manufacturers of Southern California, the 'Waterman three place De Lux' recently completed and tested at Venice by the Waterman Aircraft Manufacturing Company.

Throughout the design the machine is said closely to resemble the well known Army type Lepere, but in detail, general arrangement and wing area, there is considerable variation to meet civil requirements. This machine has been designed particularly to meet the requirements of high speed, long range, high rate of climb, low landing speed, all combined with a high factor of safety and luxurious appointments.

GIFT OF 100 AEROPLANES FOR INDIA

The British Government has made a gift of 100 aeroplanes to the government of India. Some have been given to local governments, others have been offered to ruling princes, while 20 have been made over to the Royal Air Force.

(London Times 10/8/20)

MEDICAL TESTS PROVE SPORTSMEN MAKE BEST FLIERS

Want to fly? Yes, well, what is your favorite sport? Do you play ball? Can you hit fast pitching? Are you a good shot? Can you sail a boat?

Medical observers discovered during the war that a man who rode a horse well, who played a good game of ball, who liked to sail a boat, usually made a good aviator. The British Medical Research Council has recently published a series of accounts of medical observations of aviators during the war. It is a book of interest even to the laymen, and is important to a host of young men who are interested in aviation.

The conclusions reached are that ability in the air is an acquired art, like ability to play base ball or golf, to shoot well or to play the piano. The normal person ought to be able to learn to fly.

Like every acquired art, flying is a matter of practice, and the tests made disclose the fact that persons who are able to play good games, who have learned to think quickly, to act promptly, to use initiative, acquire the art more easily than persons unused to the alertness of mind and the agility of body that comes with sportmanship.

(Detroit News 10/24/20)

PLANS FOR EXTENSIVE AERIAL PORT AT BREMEN

Since May last a project has been on foot to establish at Bremen an air-port on a huge scale with extensive aerodrome, custom house, hangars, re-

HERE AND THERE WITH THE EDITORS (CONT'D)

pairing shops, signaling apparatus and every improvement that German ingenuity can devise to facilitate aerial navigation. It is reported that 11,000,000 marks have been invested for this ambitious scheme, which will place Bremen in a position of vast superiority over Hamburg, which has evinced little interest in the commercial side of aviation.

The Bremen citizens have exhibited business-like foresight in erecting air-drome buildings at a cost of 120,000 marks which they leased to Lloyd-Luft-Dienst and Sablatting Gesellschaft and are earning 10 per cent on their investment. This, naturally, has prompted them to go further and look to more extensive investments in commercial aviation. (Detroit News 10/24/20)

A NEW THING IN FLYING

The "London Times" of Oct. 8 states that the French airman Frouval has just carried out an interesting experiment at Villa-Coublay. In the presence of officials of the Aero Club and others he made a flight in a McRane-Saulnier monoplane of 80 h.p., with the "joy stick" tied with cords to prevent it from being used. Frouval rose into the air, flew several times round the air-drome, and then made a perfect landing, all without any assistance from the contrivance which had, hitherto, been regarded as indispensable to the operation of an airplane.

AIR MAILS AND NIGHT FLYING

Under this caption the "London Times" of Oct. 8 reports a lecture delivered recently by Major-General Sir F. H. Sykes, controller general of civil aviation, by arrangement of the Royal Aeronautical Association.

Sir Frederick Sykes said, in part, that commercial aviation could not be fostered merely as a reserve for the country's air forces. Its test must be that of commercial success.

Outlining the growth and present position of air mail, passenger and good services throughout the world, Sir Frederick said so far as they were in the experimental stage, and their ability to produce adequate returns for capital invested could only be realized by continued improvements. A problem of considerable difficulty was the ground organization work necessary before night flying could be made practicable. Speed must be paid for and, for some time to come, the charges for air transport must be higher than those for other modes of carriage.

Lord Montagu of Beaulieu expressed the hope that the Postmaster General would do what he could to encourage civil aviation.

Mr. Illingworth, the Postmaster General, who presided at the meeting, said that the future of civil aviation would not depend upon the mails. He did not believe that it would be to the interest of civil aviation to be looked after by the Government. From his experience of government control, he thought it was the quickest and surest road to bankruptcy.

TRANS-ATLANTIC AIRSHIP SERVICE

In his book "Commercial Airships" Chief Engineer Pratt, of the airship department of Messrs. Vickers, London, presents the following scheme for a trans-Atlantic airship service:

"Three airships, two in use at a time, and a third standing by so that each ship could lay up periodically for overhauling."

He estimates that the journey would occupy from fifty to sixty hours, which would make it possible for each ship to make two crossings a week. On each trip 24 tons of passengers, mail and light freight could be taken.

He says that £2,500,000 would be sufficient capital to provide three ships of 14,000,000 cu. ft. capacity, two airship sheds, two mooring towers, land for air-dromes, officers workshops, wireless accessories, and a reserve working fund. According to his estimate the cost for each trip would be £2,250.

The fare for each passenger from London to New York would be £77; for freight £575 a ton, and for mail matter 5s.4d a pound.

The London Times Berlin correspondent has visited the Staaken factory in Germany and says that he was informed by the officials there that they have no intention of attempting an Atlantic flight in their new giant monoplane.

(N.Y. Times 10/28/20)

ALUMINUM ALLOY TEST IN DETROIT

Considerable attention is being given to the possibilities of aluminum alloys which developed during the war, and are now being used in building all-metal airplanes, and promise to come into use in the production of automobiles. Laboratories in Detroit are doing considerable research work in this connection. "Duraluminum" is a product of German manufacturers, and they also have an alloy called "bergastell". The elements which make up this alloy, according to Lieut. H. S. Alden of the U.S. Naval Reserve, are as follows: "Aluminum 95.5 to 93.2; magnesium -.5 per cent; copper 3.5 to 5.5 per cent; manganese 0.5 to 0.8 per cent". An American manufacturer adds some chromium to their composition.

In speaking of the qualities of this alloy, Lt. Alden said, "It can be tempered like steel by heating and sudden cooling; all types and sections of material can be made of it, and it has the quality of lending itself to excellent press and stamp work".

(Detroit News 10/20/20)

FLIGHT OVER CARIBBEAN SEA

It is the opinion of Brig. General William Mitchell that the 1000-mile non-stop flight recently accomplished by Lieut. Charles B. Austin is one of the most remarkable ever made by a United States Aviator. Lieutenant Austin was accompanied by two planes only 75 miles out from Cristobal and then he proceeded alone. When only 500 miles out he encountered a severe tropical hurricane which tossed his plane about like a chip in the air, and threatened every moment to dash him into the sea. He says that at one time he found himself within 25 feet of high mountain waves. The propeller of his plane became slightly deranged which caused him to turn back to France Field, which he reached after ten and one-half hours in the air.

General Mitchell says that Austin will try this flight again.

(Washington Post 10/26/20)

AMERICAN AVIATOR AWARDED POLISH CITATION

The Polish War Department has announced that the "virtuti militari" which will carry with it the rank of captain will be awarded to Lieutenant Edwin Noble, a native of Boston, now a member of the Kosciuszko Squadron. This citation is made in recognition of the services rendered by Lieut. Noble in the drive on Kiel in April, where he was wounded to such an extent that it may be months before he is able to take up flying again. He was treated in an American Red Cross hospital in Warsaw for several months, and is now in Paris for further treatment.

It is said that the above mentioned decoration is the first of its kind to be given in the Polish air service.

(Washington Star 10/25/20)

AIR TRAMP FOR FREIGHT

Some time ago we wrote about a proposed low-speed cargo-carrying airplane. It is now stated that a test has been made in England which enables the technical expert of the London Times Trade Supplement to predict that by next spring such ships will be in actual operation.

It is believed that freight carrying in bulk by this means can be accomplished at rates cheap enough to make it commercially feasible.

The success of the machine depends upon its wing, which has a spread of 150 feet, and resembles in every essential the shape of the wings of the most powerful fliers among the birds, when spread for soaring or gliding flight.

Speed will not be sought in this machine. Instead of an average of 100 miles an hour like the London-Paris "expresses" this freight carrier will proceed at not more than 72 miles an hour. It will be equipped with two 470 h.p. Napier "lion" engines, both of which will be run at only about half throttle; thus, if one should break down, the other will have ample power to keep up the flight.

An interesting feature of the design is that the whole front of the fuselage, which contains compartment for the pilot, will swing around on a hinge revealing a freight compartment which enables carrying four tons of cargo in a special container. The use of these containers will lessen time in loading and unloading. Such containers will be distributed at different airports so as to be filled ready for shipment when the freight plane makes the rounds. With a load of four tons and fuel sufficient for a 400-non-stop flight, it is estimated that the machine will weigh about eleven tons.

The "air tramp" with its ability to lift and transport big loads with safety it is believed will find for itself a field of utility in serving not only the isolated consignor but also the business world in general.

(N.Y. Times 10/24/20)

AIR RULES

The following editorial tells us what the people of Los Angeles County, Calif., propose to do in regard to air regulations:

"We are to have a county inspector of aeronautics whose business it shall be to see that our peerless ozone is not all cluttered up with airplanes, blimps and Zeppelins. The county ordinance will regulate the flight of aircraft and mayhap designate routes over which they must pass. The Supervisors will prescribe the tail lights that shall be carried and regulate the distances between the flyers. They may also determine the amount of damages if a stunt performer makes a miscue and plows up the garden of some citizen with his beak. There must be a law of the air lines just as there must be traffic regulations for our boulevards, and Los Angeles County, as the future center of the world's aviation, must pioneer in this matter. Aerial traffic must be made as safe and sane as possible and regulations should be devised to stimulate practical commercial aviation."

(L. A. Times 10/22/20)

BELGIAN PILOT TO RECEIVE PRIZE NOV. 11

"New York, Oct. 27.- Presentation of the Gordon Bennett trophy to Lieut. Ernest de Muyter, the Belgian who piloted the victorious Belgica in the recent international contest from Birmingham, will be made armistice night, Nov. 11 at the reunion of war-time air pilots.

General invitation to the reunion has been extended to all pilots who served in the aviation corps of any of the allied armies and navies, many having already arranged to fly here for the event. Special trains will bring former airmen from Philadelphia, Boston and Baltimore."

(Phila. Public Ledger 10/28/20)

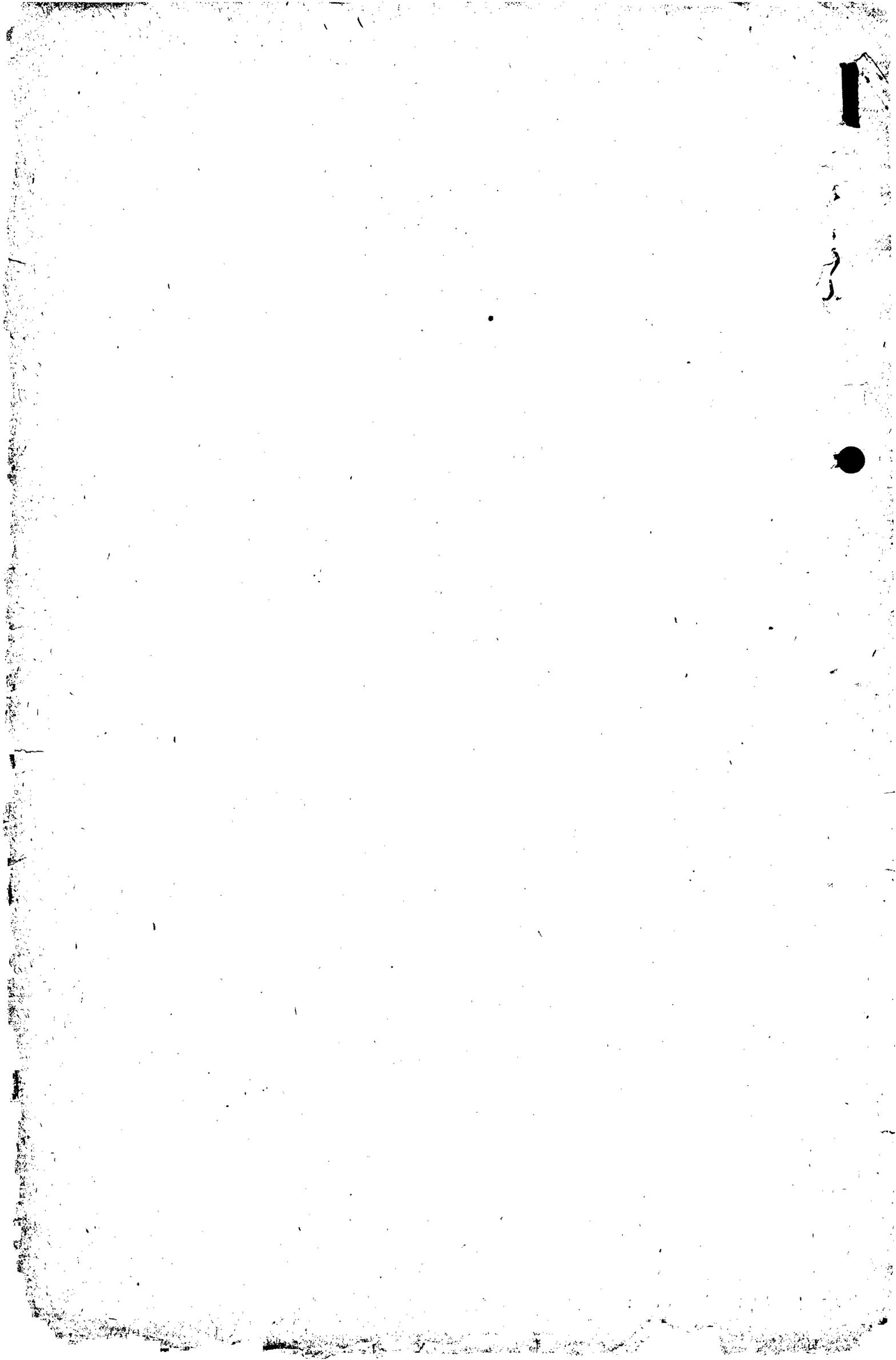
A I R S E R V I C E N E W S L E T T E R

Information Group
Air Service

November 20, 1920.

Building B
Washington, D. C.INFORMATION OBTAINED FROM OPERATIONS
REPORTS OF TACTICAL UNITS FOR WEEK ENDING OCTOBER 23, 1920STATIONS, FLYING TIME AND AVAILABILITY OF PLANES:

<u>Name of Stations</u>	<u>Location</u>	<u>Flying Time</u>	<u>Planes on hand</u>	<u>Planes Avail.</u>
1st Aero - Obs.	Mitchel Field, Mineola, L.I.	52:	18	16
1st Obs. Group.				
2nd Aero - Obs.	Fort Mills, P.I.	:25	4	3 (9-25)
3rd Aero - Obs.	Camp Stotsenburg, Pampanga, P.I.	5:22	13	13 (9-25)
5th Aero - Obs.	Mitchel Field, Mineola, L.I.	48:	17	10
2nd Obs. Group				
(4th & 6th Sqdns.)	Luke Field, Ford's Is., H.T.		25	13 (10-9)
3rd Obs. Group				
7th Aero - Obs	France Field, Panama, C.Z.	13:21	161	16 (10-16)
8th-A Aero - Sur	McAllen, Texas	19:30	13	7
8th-B Aero - Sur	Pope Field, Camp Bragg, N.C.	9:	2	2
9th Aero - Obs	Mather Field, Sacramento, Calif.	45:28	29	27
10th & 99th - Obs	Bolling Field, Anacostia, D.C.	45:	17	10
11th Aero - Bomb	Kelly Field, San Antonio, Texas	17:20	4	3
12th-A Aero - Sur.	Douglas, Arizona	7:45	6	2
12th-B Aero - Sur.	Nogales, Arizona	20:15	6	4
20th Aero - Bomb.	Kelly Field, San Antonio, Texas	1:24	7	4
27th Aero - Pur.	Kelly Field, San Antonio, Texas	14:25	21	7
50th Aero - Obs.	Langley Field, Hampton, Va.	11:25	13	11
88th Aero - Obs.	Langley Field, Hampton, Va.	10:30	12	7
90th-A Aero - Sur.	Del Rio, Texas	14:15	8	4
90th-B Aero - Sur.	Sanderson, Texas	28:05	8	8
91st A Aero - Sur.	Mather Field, Mills, Calif.	No report		
91st Aero - Sur.	Rockwell Field, Coronado, Calif.	51:20	9	9
94th Aero - Pur.	Kelly Field, San Antonio, Texas	13:15	23	7
95th Aero - Pur	Kelly Field, San Antonio, Texas	17:30	24	13
96th Aero - Bomb.	Kelly Field, San Antonio, Texas	13:28	9	5
104th-A Aero - Sur.	Fort Bliss, Texas.	10:25	15	8
104th-B Aero - Sur.	Attached to 135th-B, Post Field. Fort Sill, Okla.			
135th-A Aero - Obs.	Fort Leavenworth, Kansas	20:40	8	6
135th-B Aero - Obs.	Post Field, Fort Sill, Okla.	41:30	14	6
147th Aero - Pur.	Kelly Field, San Antonio, Texas	5:15	23	6
166th Aero - Bomb.	Kelly Field, San Antonio, Texas	7:35	4	4
258th Aero - Bomb.	Aberdeen Proving Ground, Aberdeen, Md.	13:45	31	23
Air Service Troops	Camp Benning, Ga.	13:35	9	9
Air Service Troops	Godman Field, Ky.	13:10	17	6
Air Service Troops	Pope Field, Camp Bragg, N.C.	5:45	16	6
1st Bomb. Group.				
Hdqtrs. Det.	Kelly Field, San Antonio, Texas	48:40	12	10
		639:23	598	285



"TACTICAL OPERATION

STATIONS	SQUADRONS	PERCENTAGE DAYLIGHT	TOTAL NO. FLIGHTS	PRACTICE FLIGHTS	SPECIAL MISSION	CROSS COUNTRY
Ft. Bliss, Tex.	104th - Flight A	100%	18	17		1
Del Rio, "	90th " "	60%	13	5		
Douglas, Ariz.	12th " "	91%	16	9		
Eugene, Oregon	8th " "	100%	12		6	
McAllen, Tex.	9th " "	90%	47			
Mather, Calif.	91st " "	-	-	-		
Nogales, Ariz.	12th Aero Flt. B	100%	17	4	1	2
Sanderson	90th - Flight B	100%	43	25	14	
Rockwell	91 Aero	90%	34			
Aberdeen	258th Bombardment		22			5
Bolling	10th & 99th Obs.	100%	85			10
Camp Benning	A.S. Detachment	100%	37	18		6
France Field	3d Obs. & 7th Aero Sqdn.	87%	82	74		
Ft. Leavenworth	135th Flight A	95%	34			
Godman	A.S. Detachment	100%	31	17		
Kelly Field	1st Bombardment Grp.	100%				
"	Hdqs. Detachment		258			
"	11th Aero Sqdn.		36			
"	96th " "		44			
"	166th " "		52			
"	20th " "		84			
1st Pursuit Group		99%				
	27th Aero Sqdn.		29			
	94th " "		25			
	95th " "		30			
	147th " "		21			
Langley	50th " "	100%	12	1		
"	88th " "		9		1	
Luke Field	2d, 4th & 6th Obs.	100%	17	12		
Mitchel	1st Aero Sqdn.	79%	62			
"	5th " "		70			
Post Field	135th Flight B	100%	163			
Pope Field	A.S. Detachment	90%	5			
"	8th Aero Flight B	90%	12			
Philippines	2nd Aero " B	80%	1			
"	3rd " " B	80%	17			

"FOR OFFICIAL USE ONLY"

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE NOVEMBER 24, 1920.

LIEUT. AUSTIN'S OWN ACCOUNT OF HIS ATTEMPTED FLIGHT
FROM FRANCE FIELD TO WASHINGTON, D. C.

Preparations for this flight, ultimate destination being Washington, had covered a period of several months. Actual authority was received at 10 A.M., October 5th, and it was decided to attempt to make the first leg of the trip the following day, taking advantage of the fact that the Navy had a string of Eagle Boats, 60 (Sixty) knots apart, on the 23rd degree line Colon to Jamaica. These boats were so stationed as to enable two F.-5.L. boats from the Naval Air Station at Coco Solo to make the trans-Caribbean flight.

Authority to alter a plane for the flight was received in July, 1920, and early in August the work had been completed and the plane tested. Airplane #23644 (Fisher Body Corporation) was stripped down to bare fuselage. Pilot's seat and instruments were moved to rear of original gas tank. One full sized and one two-third sized D.H. Tank were installed in the space this made available. Two additional oil tanks were hung under the motor, and a surplus supply of oil was carried in the center section gas tank. This gave a fuel capacity of 220-230 gallons of gasoline and 20 gallons of oil, and brought the gross weight of plane, pilot, etc., to about 4100 lbs., or a little over 9 lbs. per square foot. On the full load test it was found that a motor, - a Lincoln-Liberty-12-A - took the plane off quickly and gave an air speed of 100 m.p.h. at 1500 r.p.m. In other words the load was not excessive. Fuel consumption promised a ten hour radius, which was better than necessary.

During August and September weather conditions were variable, but in general favorable. Definite authority to make the flight not having been received however these opportunities had to be passed up. Weather conditions during the first five days of October were not encouraging, but not withstanding this fact it was thought best to make the attempt while the Eagle boats were strung out along the route. The morning of the sixth dawned clear on the Isthmus. The strong light coming over the horizon before sun-up indicated clear weather in that direction, but to the north and north-west, low down, there was a dark cloudbank. The following is the log of the flight; - on the left appear the entries actually made during the flight; on the right a detailed story of what happened.

6:25
France Field.

The whole Post was out at 6 A.M. to see the take off. Motor started at 6:15 on 1 and 3 tanks - (the front and rear tanks are coupled together; the middle tank being on a separate line.) It was running beautifully. At 6:35 I took off. R.P.M. 1500, climb almost a zoom. Throttled to 1470 at 800 feet and headed to sea. Two other planes, piloted by Lieutenants Blessley and Chandler left with me to go as far as the first Eagle boat. My oil pressure started at 40 lbs. but should drop to 15 lbs. within an hour. I held the motor temperature at 180 degrees Fahrenheit throughout the flight - with one exception. Air speed at 1450 - 1470 r.p.m. - 95 m.p.h. touching 100 m.p.h. at 1500 r.p.m. The Navy's F.-5-L's were going out to take off as I crossed the breakwater. The sea was calm with a long swell from the North-east. There was a light South-west wind. I set a course 15 degrees which headed me well into the cloud bank to the North. It was clear to the East.

er.

7:10
Eagle #6,
O.K. Alt. 300

At 6:40 we passed a tanker north bound on course to Jamaica. At 7:10 we struck Eagle #6, first station, supposedly 60 (Sixty) knots from Colon breakwater. Plessley and Chandler pulled up alongside, waved good-bye and put back to the South, where land could still be seen. I continued on the same course. Altitude 300 feet, Temp. 130; Oil pressure 25. About half a mile to the West of Eagle #6 there was a Sub-chaser under way, North bound. The swell was pitching her considerably, but there seemed to be little wind.

7:25
N.W. looks bad.
Sky overcast
except East.

At 7:25, one hour out, the oil pressure had fallen to normal and I was making 100 m.p.h. on a course of 15 degrees, light South-west wind. The cloud bank in the North and North-west was coming startlingly close. There was a dim horizon below it, hidden here and there by a squall.

8:02
Yellow-stacked
Tanker.

Shortly before eight o'clock I passed through the first of these squalls getting only a few drops of rain. The slant of the falling rain indicated a light North-east wind, and I swung slightly to the East. At 8:02 I passed a yellow stacked freighter, north bound, evidently on way to Kingston. For several miles to the East there was a large freighter in tow by two tugs which I judged to be in the track through the Windward Passage. I was surprised at the way she was burying her bow in the swells, which evidently were getting worse.

8:10
Bad clouds ahead;
Looks like heavy
rain.

The clouds in the North-west had gotten blacker and large squalls appeared ahead. About 8:15 I struck light rain falling from clouds which seemed to be at about 4000 feet. Immediately afterward I encountered the squalls which I passed thru easily enough.

8:25
In midst showers
and light rain.
N.E. wind
course 25.

At 8:25, two hours out, I was shut in by showers, and flying through light rain at an altitude of 500 feet. I throttled to 1400, air speed remaining above 90. The oil pressure at this speed was 12-13 pounds. The wind had freshened, and was blowing about 15 miles from the North-east; I had gradually altered my course to 25 degrees. At 9:00 I got out of the rain. The storm thru which I had just passed, as viewed from the North looked impassable. Ahead there was still a dim horizon. To the right and left ahead were squalls 50 or 60 miles across. I had evidently failed to see the Eagle boats at stations two and three, but that did not surprise me any in as much as the visibility had been so very low. After my return I found that both these boats had reported me past, so that I must have been flying very close to my proper course.

9:00
Just out of rain.
If I could only
find an "Eagle" !
C. 25. East wind.

At about this time I began to entertain the idea of turning back. My best judgment told me that there would be no better weather ahead, for everything indicated a general storm, probably not violent, but extending all the way to the West Indies. I knew that I would not sight another Eagle boat, and would have to depend entirely upon my dead reckoning to get me to Jamaica. But on the other hand I was perfectly aware of the fact that I would not be allowed to repeat the attempt should I fail this time. It was "now or never" and I knew it. So I kept on.

9:25
Changed to tank
#2. More rain. No
signs of boats.

At 9:25, three hours out, I changed to tank #2. It was raining again, after a ten minute respite. My altitude had varied from 300 to 600 feet. Air speed had averaged close to 95, which allowing for the error in the instrument, meant that I was averaging 100 miles thru the air. R.P.M. 1380 to 1450, depending on the amount of rain. Wind had increased to about 25 m.p.h. from 30 degrees. My course was 25 degrees Compass. The sea was very rough with white caps on every wave crest.

My first thought on entering the rain had, of course, been regarding my propeller. Sooner or later I knew I would lose the cloth covering on the tips, but I felt that this would not happen for a long time if I kept out of the heavy rain, and flew fairly well throttled. I kept a close watch on the leading edge of the horizontal stabilizer, believing that the condition of the paint there would be indicative of wear on the prop. Anyway, I had lost these cloth tips before, without any serious results.

10:00 Ten o'clock found bad squalls directly ahead. There was Bad squall ahead, no chance to go around, so I went thru. The rain was the Have to go thru, heaviest I had thus far encountered; but I passed thru it and into the light rain again in about fifteen minutes.

10:25 As the fourth hour drew to a close I was striving to make 4 hours a final decision on whether I should go ahead, or turn back. There was no promise of clear weather ahead. I was close to 400 miles out of Colon. The wind was increasing and was now blowing about 30 m.p.h. from the East. Unless the visibility increased I should have to run square into land before I would see it. Notwithstanding these facts, I had just decided to go on when, with a sound which I shall never forget, my propeller cover let go.

Lost prop cover,
Back to South.

As stated above, I had had these tips come off before, and I was expecting to lose them at any time. But I was not prepared for the results in this case.

Instantly a terrific vibration started. Fuselage and wings, wires, struts, instruments shook and danced. One compass started to spin like a top. The struts were vibrating about three inches. It did not seem possible for the motor to stay in the plane. I turned and headed South.

I was scared.

I'm not proud of it but I might as well admit it. It was the fear of a slow certain death after hours of fighting in the open sea. There didn't seem any chance of escaping.

The next ten minutes seemed as Eternity. I throttled the motor until I hardly held my altitude - 300 feet; - and my air speed dropped to 65 m.p.h. The air was very rough. One compass was still spinning, but the other held steady. I steered 120 degrees, but my track was about 170 degrees, due to the strong East wind. The minutes passed slowly. At eleven o'clock the vibration was slightly less and I increased the motor speed to 1250 r.p.m. It began to look as if I had a ghost of a show to get out.

11:00 Vibration less,
1250 R.P.M.

At 11:25 - Five hours from France Field - my morale began to rise. I knew I would strike clear weather eventually to the Southeast, and estimated that at the reduced speed I should reach land in about five hours.

11:25 Back on #1.
Maybe I can
make it.

In order to keep out of squalls I was forced to bear more and more to the East. At about 11:30 I came up against a very bad storm which was working up against the East wind. The general line of the storm ran from North-west to South-east. It seemed to be a solid sheet of water, and there was no way to estimate its depth. For thirty minutes I ran to the East just ahead of it. The wind shifted from 90 to about 240 in less time than it takes to tell of it. It carried me over the water at a tremendous speed.

I cut back to #1 and #3 tanks at the end of five hours. I knew that after these tanks were exhausted I would still have better than two hours fuel in #2.

12 Noon.
Get in heavy
rain. Nearly
crashed.

At 12 o'clock I thought I could break through the storm and get back on a South course. I went into the rain at an altitude of about 50 feet, and then came the only time when I felt there was any danger of a crash - other than a forced landing. The plane rolled and pitched violently. The rain was so heavy that I could barely make out the white caps below. Within a few seconds these had been beaten down by the rain and I could see

nothing. I had never had a crash, and it ran through my mind that this was no place to have my first one. I raised my goggles and found that by leaning forward and looking backward along my tail I could see enough to keep level. I dropped still lower, to within 25 feet of the water, and swerved to the left. Within five minutes I was out. Glancing at my instruments I found that during those five minutes the motor temperature had dropped from 180 to 135. I closed the shuttle (it had been open two notches), and speeded up the motor to 1400. As I did so the other propeller tip ripped off.

It was immediately evident that this was a good thing, for the vibration was decreased by half. The temperature rose rapidly to normal. I headed a little North of East. The vibration decreased slowly from this time on. There was no more danger of either losing the motor or breaking a crankshaft. But I was still worried for fear some of the numerous gas and air line connections would come loose. The vibration had by no means stopped.

12:45
Looks better
ahead. Motor
still O.K.
Vibration less.

At about 12:30 I got around the storm, or rather I passed between two parts of it and set a course of 200 degrees. At 12:45 it began to look a bit light ahead and at 1:10 I ran out of the rain, after having been in it almost constantly for five hours. A half hour later the sun broke through and I saw shadow of the plane for the first time that day. I began to think that I had an even chance to make it.

1:10
Rain stopped. Steering 200 deg. Cloud banks on horizon should indicate land.

I turned my reserve oil into my service tanks and crowded the motor all I dared. With the throttle set where normally I should get better than 1400 R.P.M. I was getting less than 1300. I was losing about 20 miles an hour in air speed.

1:35. No land yet. Beginning to think I can make it tho.
2:25. No land; no boats. Wonder if I'll get home. Pray that I may.

During the next hour and a half I alternated between hope and despair. I could not tell how far I had been carried to the East. I knew I should have gas enough - But would I? Time after time I thought I saw land, only to find I was mistaken. But at 3:00 I had actually sighted it.

3:25. Islands off shore. San Blas?
3:40. Flying West above San Blas Archipelago.

At 3:25 - nine hours after the start - I picked up low islands which proved to be the San Blas Islands. I had struck the coastline 120 miles East of France Field.

3:55. Porvenir Island.

At 4:12 the motor spluttered. But it couldn't give me a thrill. I had land below me, even if it was jungle covered. Anyway, it was only tanks #1 and #3 running dry after 7 hrs., 52 minutes.

4:12. #1 and #3 tanks dry.

At 4:15 I ate and drank for the first time, in preparation for landing. At 4:30 I sighted Colon.

4:15. First drink of water.

At 4:45 I arrived over France Field. It was really funny to see everybody pouring out.

4:20. Nombre de Dios.

At 4:50 I landed: - 10 hours and 25 minutes in the air. - And that motor was ticking then off on all twelve on either distributor - just as it had done in the morning.

4:30. Porto Bello. I can see the smoke from the incinerator, taut.

But the propeller!
The engine anchor bolts were all loose; drift wires loose; half a dozen small leaks in the radiator.

Very little paint had been lost off the fabric which was

Wires and rigging O.K.

Tank #2 had 45 gallons of gas and there were 10 gallons of oil in the service tanks.

I'm going to get home.

The total distance covered cannot be accurately determined but it could not have been much if any less than 1000 miles.

SUMMARY.

Time:- 10 hours, 25 minutes.
Distance:- 1000 miles.
Gas: total, - 180 gallons.
Gas: per Hr. - 17.5 gallons.
Oil: total, - 10 gallons.
Oil: per Hr. - 1 gallon.

Remarks.

The two F. 45-E. Boats turned back when about 180 knots out and landed at Colon after seven hours in the air.

The performance of plane 23,644 somewhat exceeded expectations. The propeller efficiency was greatly reduced after the first 4 hours of the flight, but it is my belief that the fuel consumption remained about normal. Logical conclusion is that the plane is good for 12 hours in the air at 1425-1450 r.p.m.; and that it has a radius of 1000 miles, allowing fair margin of safety.

The flight from Panama to the United States can easily be made. The plans as originally outlined are good. However, clear weather with reasonable visibility is essential. I stand ready to make the attempt again at any time.

CONDITIONS OF CONTEST FOR PULITZER TROPHY

Col. Harold E. Hartney and Major W. C. Sherman, of the Training & Operations Division of the Air Service, have cooperated with the Aero Club of America in arranging the following conditions of the contest for the Pulitzer Trophy to be held at Mitchel Field on Thanksgiving Day.

The first and only National Airplane Contest to be held this year in the United States will take place on Thanksgiving Day, at 11 o'clock, at Mitchel Field, Mineola, L.I., N.Y. The Army and Navy Air Services will each be well represented this year and participate in much the same manner as they did in the New York-Toronto Race in the Summer of 1919.

The Pulitzer Trophy, donated by Mr. Ralph Pulitzer, is being competed for for the first time this year. This will be an annual event and the trophy will be awarded for one year to the club whose entry wins the contest.

Gold, silver and bronze plaques will be given each year to the winner as first, second and third prizes, and in addition, this year, a total of \$3,300.00 in Liberty Bonds will be given to the first, second and third places in the open event, and a total of \$600.00 to the first, and second places in each class. (These prizes cannot be accepted by Army contestants).

The Army has decided to enter the Verville Packard Gordon Bennett airplane, and approximately 18 other machines. Not more than six (6) airplanes will be special entries, such as the new Thomas-Morse 300, and the Ordnance Pursuit airplane. The remainder will constitute two (2) classes, one the PH-4-B class and the other the SE-5-A class. It is understood that the Navy will enter a Vought class, thus furnishing a very interesting line-up for the race.

CONDITIONS OF CONTEST

FREE-FOR-ALL for airplanes having:

- (a) Factor of safety (monoplanes: six)
- (b) Air speed greater than 100 miles per hour, as loaded for start of race.
- (c) Visibility and maneuverability (land and air) which in opinion of Contest Committee of Aero Club of America is not a menace to the other contestants or spectators.

DISTANCE, APPROXIMATELY 160 MILES, four times around a closed course of 40 miles, viz., Mitchel Field, L.I., thence to Wantage, L.I., thence to Babylon, L.I., then return to Mitchel Field.

START

- (a) The starting signal will be given at 11 A.M. Airplanes to be on their allotted places on the field at 10 A.M. Pilots' meeting for first instructions on the field at 10:15 A.M.

(b) position at start. Planes competing for class prizes in addition to Pulitzer Trophy will be sent away together in a class, the faster classes starting before the slower. Competitors for Pulitzer Trophy only will be sent away together after the classes. However, any entrant will be permitted to start alone after all classes, if this request is made to the Aviation Committee of the Aero Corporation, Ltd., in writing before November 15th, 1920.

(c) Method of start. The starter will assign an assistant starter to each plane, who shall raise the signal flags to and for its pilot, as follows: The starting signal (for motors only), a red flag will be raised by the Chief starter at 11 A.M. When the motor of each plane starts, the assistant starter assigned to that plane will raise the red starting flag. When all assistants have raised the red starting flags, but not later than 11:05 A.M., the starter will raise, in addition to the red starting flag, the white warning flag, which signifies that the getaway signal will be given in ten seconds, giving the mechanics time to draw the blocks from under the wheels. Each second will be counted by lowering the red flag, the getaway signal being the lowering of both red and white flags. If any contestant has difficulty in starting his motor, his assistant starter will not raise the red flag, but, when the chief starter raises the white warning flag, will raise a blue flag, which is a request for a deferred start. Deferred starts shall be granted without penalty, except that no plane will be allowed to start after any one plane has completed the full course, 160 miles.

THE FINISH

The finishing time will be taken when each plane crosses the finish between the marks defining this line, after having completed the full course, 160 miles.

THE WINNER of each first prize shall be the plane which has completed the full course in the shortest elapsed time, and of each second prize, the second best time, etc., provided the pilot is not disqualified.

RULES OF THE COURSE

(a) Pilots must hold a straight course after starting, until they have gone a distance to be specified and marked.

(b) A plane overtaken must hold its altitude and a true course, in order that it may not in any way impede or interfere with the faster overtaking plane.

(c) A plane overtaking a slower plane shall never pass or attempt to pass between that plane and any pylon or captive balloon marking a turning point.

(d) After crossing the finishing line, all planes shall continue on the course until they have attained the altitude of 2,000 feet, then they may turn and return to the field, and land in that part of the field assigned for landing and in so doing shall not cross the course or finish line.

(e) No contestant shall start before he receives the getaway signal.

(f) Pilots shall pass all turning points in plain view of officials stationed at each point.

Any contestant breaking the above rules of the course, or subsequent ones which may be sent out in writing, shall, upon recommendation of the judges, be disqualified.

PROTESTS

No protest shall be considered unless presented in writing to the Aviation Committee of the Aero Corporation, Ltd., within twenty-four (24) hours after the finish of the race.

NUMBERS

Each airplane shall have the number assigned to it by the Aviation Committee, painted on the bottom surface of lower wing and on each side of the fuselage, clear of the wing, in characters as large as possible. It shall have no other numbering or lettering over six inches in height.

As heretofore, Army entrants will not be permitted to accept prizes other than a small token, of no intrinsic value.

STRAIGHT STUFF

Does vocational training in the Army pay? Here's one man who thinks it does. Charles F. DeVoe, former Sergeant, 258th Aero Squadron, Army Air Service, was discharged August 6th, 1920, and was immediately "found" by the Aero Mail Service. Here's the answer he gives in a letter addressed to his former Commanding Officer:

"I consider the Air Service to be one of the best training schools for all practical trades that a man with mechanical inclinations can get into. When I enlisted in the Air Service in August 1919 I knew a little about automobile motors and mechanical work generally, but nothing about aeroplanes. At the end of my year in the Army after getting the practical experience on the "line" and in the shops and after the schooling I received under very competent instructors, I now consider myself capable of handling some of the toughest propositions which mechanics in the automobile or aeroplane game have to face.

"As a direct result of the experience I gained in the Air Service, I secured the job I now hold with the Aero Mail Service. I am making good pay now - got my first boost of \$300. within less than a month after I started and will get another raise of \$200. within a few weeks. The experience I gained in the Air Service is invaluable to me in my present job.

"Besides that, I made many friendships while I was in the service and now can feel that I know someone in practically every part of the United States.

"I have wanted to write and tell you about my work for some time, but have neglected to do so because I have been very busy out here, and also I am not much of a letter-writer.

Respectfully yours,

(Signed) Charles F. DeVoe."

DeVoe hails from Jarrettsville, Md., and apparently has been making a success of each of his ventures. He graduated from high school in 1917 and during the War served in the Student Army Training Corps and for six months with the Marines. He enlisted in the Army Air Service with the definite purpose of qualifying himself for what he considered to be the coming business for a young man of mechanical inclinations. During the year that he was in the Air Service he passed through the grades of Private, Private First Class, Corporal, Chauffeur, Chauffeur First Class, Sergeant and Sergeant First Class in which latter grade he was discharged.

While still with the Army Air Service, in the spring of 1920 he was detailed to assist in repairing an Aero Mail Plane which had been wrecked near his station. His efficiency at this task was observed by the chief mechanic of the Aero Mail Station, Mr. Edward D. Havens, who kept in touch with him and was quick to secure his services for the Aero Mail Service upon his separation from the service.

Mr. Havens says that DeVoe is one of his best mechanics and that he has recommended him very highly to the Superintendent of the Aero Mail Service. One of DeVoe's first jobs according to Mr. Havens was putting into commission six motor cars in six days - a feat which he states is nothing little short of phenomenal.

AIR SQUADRON IN ARMISTICE DAY EXERCISES AT CAMP DIX

Participating in the maneuvers of the First Division in the Armistice Day Celebration at Camp Dix, an air squadron from Mitchel Field gave a picturesque and convincing demonstration of the part which air forces perform in modern warfare.

The flashing of signals to the ground forces while searchlight batteries were seeking to spot the position of the planes, and the firing of aerial bombs were a part of the contribution of the squadron to what is described as one of the most interesting and spectacular maneuvers yet produced by the War Department.

Four regiments of infantry, three of artillery, three machine gun battalions, a fleet of tanks, all of the First Division and Chemical Warfare units from Lakehurst proving grounds and Englewood, Md., participated in the spectacle which was staged in the great natural amphitheatre on the night of the 11th, made as light as day by batteries of searchlights and the dazzling brilliance of chemical contrivances.

In the historical pageant which preceded the maneuvers, 10,000 veterans of the First Division, with Gen. John J. Pershing marching at their head, memorialized the battles of the Great War in which they had participated.

The honor of firing the Armistice Day tribute went to Battery C of the Sixth Field Artillery, which bears the distinction of having fired the first shot for the United States in the War, and which, later, was almost wiped out in the conflict.

In his address after the exercises Gen. Pershing said: "This day will come to represent to the civilized world what Independence Day means to Americans. The Armistice marks a new epoch in history and establishes a dividing line between the old order and the new."

QUICK WORK, AND RECORD FLIGHT

Lieut. George W. Goddard made a record flight from Dayton, Ohio to Washington, D.C. last week, covering the 400 miles in 3 hours and 20 minutes.

Lieut. Goddard first flew to Dayton from Washington in a DH-4B bucking the wind all the way and taking 5½ hours to make the distance. The purpose of the trip to Dayton was to have the DH-4B remodeled and converted into a photographic plane which will be used for mapping purposes around Washington.

Less than a week's time was consumed between the start from Washington, the remodeling of the plane at Dayton, and the return to Washington. On the return flight Lt. Goddard had the wind with him, and made the distance from Dayton to Moundsville, West Virginia in 1 hour and 20 minutes, thence to Washington in 2 hours.

SECRETARY OF WAR BAKER SPEAKS AT DEPARTMENTAL EXERCISES ON ARMISTICE DAY

At the Armistice Day celebration held on the third floor of the Munitions Building, Washington, D.C., immediately after office hours on Nov. 11, Secretary of War Baker was the principal speaker, and in his tribute to those who had helped to win in the Great War he expressed an appreciation of the men and women who by their work at home had enabled the fighters at the front to perform the great deeds that led to victory for the allied forces.

Gen. Lord introduced Secretary Baker, and the singing of patriotic songs completed the exercises.

SAVED BY A GROUND LOOP ✓

In an accident which occurred the other day on the Airdrome at McAllen, Texas, a machine was wrecked but no lives were lost. Lieut. P.E. Skanse, Engineering Officer, with his mechanic, Sgt. J. S. Woods, returning from Pt. Isabel, where he had been supervising the installation of a new motor in a stranded Kelly Field plane, ran into a blinding rain and windstorm about five miles from the local Airdrome. He skillfully piloted his plane through the changing wind currents, landing safely, but in order to avoid being blown into a newly constructed ditch across one corner of the flying field, he ground looped the plane, resulting in turning over and totally wrecking the plane. Lieut. Skanse was unhurt but Sergeant Woods sustained a number of painful bruises and a black eye.

FLOATING TEST OF DeH4 PROVES IT WOULD NOT SINK RAPIDLY

A novel experiment was conducted by the engineering department at Luke Field, Hawaii, during the past week, which resulted in the partial settlement of a long dispute. With the ever-present possibility of landing in water with the land planes that are flown among these islands, and with the several instances where forced landings have been made in water, it was deemed advisable to run a test on a DeH4 plane to determine just how long it would remain afloat. A salvaged plane was patched up and filled with water and gas, and weighted with two sand bags, one in each cockpit, and all conditions were met to simulate a plane having had an actual forced landing. The plane was then taken out in the bay and set afloat. There were many and varied opinions as to how long it would stay above the surface, and wagers were made accordingly. In the first forty-five minutes the plane sunk so rapidly as to leave but half the fuselage, part of the upper wing and the tail surfaces exposed above the water. This point, however, seemed to be the floating level and from then on it sank very slowly until at the end of two and one-half hours over half of the stabilizer and all of the rudder were still exposed. At the end of four hours the plane had drifted in shore and was grounded with the stabilizer submerged, but ^{with} the rudder still above the surface. Just how much longer it would have floated is still debatable, but the experiment was successful in showing that one could depend upon several hours afloat if a reasonably good landing were made in a comparatively smooth sea.

UNIQUE CLAIM FOR DAMAGES

The communication below reached the office of the Chief of Air Service in the regular routine of business. It is not, as might be supposed, a specimen of "free verse", but merely a plain, every-day, domestic claim for damages. The style is unique, and is recommended to all claimants for damages who will find its brevity and "direct action" worthy of emulation.

"Sirs one of the U.S. Flying
ship No. 4217 landed in my
cotton patch the day of 2 of 0
and it nock and blew out about
400 lbs of cotton and thrash
out about a bushel of peas
the man that was oprating the
ship said I must send my damage
in to the Governor he said
something got the matter with
it and He had to land in a
large field where he could get
back up
So I would like for you to
pay damage for same. We had
envestigated it to be about
\$25.00 dollars damage at least.

Yours ever

LIEUT. EDGAR L. SMITH SUCCEUMS TO MENINGITIS

First Lieutenant Edgar L. Smith, Air Service, died of Meningitis on October 25, 1920 at the Base Hospital at Fort Sam Houston.

He was a valuable officer from every viewpoint. He was one of the best pilots on the field but was very modest and unassuming about his ability. At the time of his death he was assigned to the 95th Aero Squadron but was on special duty as Morale Officer. Lieutenant Smith's military history is as follows:

He enlisted on May 29, 1917, in the Air Service Signal Officers Reserve Corps and was assigned to the University of Texas Ground School. He was graduated on July 21, 1917 and sent overseas. He took his first flying training at the Eighth Aviation Instruction Center at Foggia, Italy, on Maurice Farman planes. He was then transferred to the Second Aviation Instruction Center at Tours. He completed his flying training at Issoudon and then went to St. Jean de Monte for aerial gunnery which course he completed in September. He was sent to the front, but on account of his ability as an instructor he was sent back to the flying school at Tours. After the Armistice he went into Germany and served with the 50th, 88th and the 1st Aero Squadrons until July, 1919. He returned to the States and served at Park Field and at Mitchel Field until January, 1920, when he joined the First Pursuit Group at Kelly Field.

Funeral services were conducted at Kelly Field by Chaplain Monohan. The whole command was formed into an honorary escort. During the services a formation of four SE 5's flew up and down the field. It has become the custom at this field on such occasions to have four ships take up a five ship V formation leaving the place of the deputy flight leader vacant. Lieutenant B. Hoppin accompanied the body to Memphis for burial.

FIRST DAY BOMBARDMENT GROUP CO-OPERATION WITH COAST ARTILLERY

A special flight of the First Day Bombardment Group, which has really become a surveillance group, worked with the Coast Artillery at Fort Crockett for two weeks. The flight consisted of Lieutenant Arthur Easterbrook, representing the Air Officer of the Fifth Corps Area; Lieutenant A. M. Guidera, Flight Commander; Lieutenant J. M. Woodward, Supply Officer; Lieutenant C. R. McIver, Engineer Officer; Lieutenant G. H. Burgess, Communications Officer; Lieutenant M. J. Plumb, Officer in Charge of Flying; and Lieutenant H. L. Speck, Operations Officer. The flight had its base on Ellington Field and flew each morning to Ft. Crockett, landing on the parade ground. The pilot and observer were thus able, just prior to the shoot, to talk over the work with the officer who was to conduct the fire. The fire was done with 10 inch, 50 caliber disappearing rifles at a range of about 12,000 yards, the target being towed behind a tug. Since there is no way to make an estimate of comparative distances over the water and the officers were not equipped with spotters, it is greatly to their credit that they were, in every case, able to get the shots on the target without wasting ammunition. In each case, from ten to fifteen rounds of sub-calibre were fired prior to using the full service charge. Then followed five to seven rounds of full service trial fire and then salvos of three rounds for fire for improvement. The firing with the full service charge was especially accurate and there was practically no correction necessary for deflection. A great deal of credit is due to Lieutenant Burgess for the fact that there was not a single instance of radio failure. Each ship was fitted with dual generators and a knife switch so that if one generator burned out the other could be cut in immediately. Twelve enlisted mechanics and one truck with radio equipment were stationed at Ellington Field during this work.

During the shoot the firing personnel was as follows: Lieut. Col. Covington, Commanding Officer, Fort Crockett and Coast Artillery District; Major McCammon, Executive Officer; Major Washington, Commanding Officer, 1st Co. C.A.C.; Major Ellis, Commanding Officer 2nd Co. C.A.C.; Lieut. Guidera as observer and Lieut. Plumb as pilot worked with Major Ellis; Lieut. Speck as observer and Lieut. McIver as pilot worked with Major Washington. The work was delayed on account of fog and rain, the actual firing being done in four days.

Lieut. Col. Covington expressed himself as being greatly pleased with the work of the Air Service Officers.

AN APPRECIATION

HEADQUARTERS
COAST DEFENSES OF LONG ISLAND SOUND
FORT H. G. WRIGHT, NEW YORK

October 16, 1920.

353.17

From: Commanding Officer

To: Commanding Officer, Mitchell Field, L.I., N.Y., Thru Commanding
General, 2nd CORPS AREA, Governors Island, N.Y.

Subject: Use of Airplanes at Target practice at Fort H.S. Wright, N.Y.

1. I wish to express to you my thanks and appreciation for the excellent work and cooperation of the two airplanes sent by you to this post and which were used in the service practice of Battery Butterfield (12" Rifles) October 15th.

2. These planes equipped with radio telephones, observed, spotted and reported all shots fired by the battery in a most satisfactory manner and from their work I was greatly impressed with the important part that the airplane, equipped with radio telephone, might play in direction and correcting Coast Artillery fire, especially at the extremely long ranges where shore observation stations approach their visual limits.

3. I take this occasion to commend to you the interest, energy and spirit of cooperation displayed in this work by your officers, Lieut. Taylor, Hornborg, Richards and Canfield, the pilots and observers of the two planes. To them is due much credit for the perfect success attained in this our first attempt to spot and correct long range fire from Coast Artillery guns by the use of airplanes equipped with the radio telephone as the means of communication between plane and ground station.

4. I will be glad to furnish you a copy of my report on this work when made.

JOHN P. HAINS,
Colonel, Coast Artillery Corps.

DONALDSON LANDING FIELD, GREENVILLE, S. C.

Greenville, South Carolina, the textile center of the South, has further evinced its progressive spirit by the very active interest it is showing in aviation matters. Through the efforts of the Young Men's Business League, of which W. H. Workman is president, and Moss E. Penn, secretary, Donaldson Landing Field has just been put into service at Greenville. All flyers are most cordially invited to make use of the landing field, and the Young Men's Business League announces that it will be glad at all times, to entertain any pilots, whether military or commercial.

Greenville is located in the Piedmont section of upper South Carolina, at the foot of the Blue Ridge mountains, the famous "Land of the Sky". Having five railroads, the city is accessible from every direction. Climatic conditions are excellent for flying, the annual mean temperature for the past thirty-six years being 58.8 degrees, and the annual precipitation 54.55 inches. The elevation is 1040 feet.

The following questionnaire, to which the attention of all aviators is invited, gives the details in regard to Donaldson Landing Field:

QUESTIONNAIRE

1. Name _____ License No. _____
2. Town and State - Greenville, South Carolina
3. Local Name of Field - Donaldson Field
4. Shape and Dimensions in Feet - - "L" shape field 1000 ft. runways
5. Direction of long axis - - - - East and West
6. Direction of prevailing wind - Changeable
7. Markers, if any - - - - - White Cross X
8. Condition of surface and drainage - - Top soil, excellent condition of surface and drainage
State if wet weather landing possible - - Yes
9. Contour of field - - - - - Practically level
10. Obstructions in & around field, including fences, telegraph wires, trees, ditches, etc., suitability for small airdrome - No obstructions- open from every direction.
11. Availability and quality of supplies, with name of firm supplying - Information will be posted on field as to supplies and names of firms.
12. Location of field in respect to town with reference to features that can be found on post-office or Rand-McNally maps; that is, railroads and rivers. Population of city.

Located East of town, on edge of city limits, one mile from center of town. Population 30,000.
13. Altitude above sea level in feet - - Between 1000 and 1100 feet.
14. Organization operating field - - Greater Greenville Association
15. Names of officials interested - - Secretary Young Men's Business League
" Chamber of Commerce
16. Is this field open to all pilots - - Yes
17. Names and addresses of firms engaged in commercial aeronautics using this Field - -
(None at present)

RECENT ITALIAN AERONAUTICAL RECORDS

A seaplane Macchi No.18, type De Luxe, with three passengers has crossed the Alps, flying over Mount Blanc at an altitude of 15,000 feet.

An Italian aviator, Lt. Umberto Maddalena, has completed a flight from Seat Calende to Stockholm in a seaplane S.16. He crossed the Alps in his journey, and in the Baltic Sea, he made the flight from Riga-Reva Helsingford Aland Islands, to the Swedish coast a distance of more than 2500 miles.

The Federation Aeronautic Internationale has announced the recent victory of Lt. Bologna, winner of the Schneider Cup at Venice. In this contest the seaplane made a circuit of 200 marine miles with a commercial load of 550 lbs. This being Italy's second winning of the Schneider trophy, the cup will remain the property of the Aero Club of Italy, and the next race will be held in that country.

graphs, and what would be the, approximate, price of same?

A few days ago we had an inquiry for photographs made from the air showing the industrial section of any city in the United States, so that we may be able, intelligently, to answer our clients, any information that you may give us will be greatly appreciated.

Very truly,

American Photo Service,
Per A. D. Lindauer.

SQUADRON NEWS

Fort Mills, P. I.

On the fifteenth of the month two test flights were attempted in HS2-L flying boats. Lieuts. Greer and Dallas were the pilots of the first flight, and succeeded in getting the boat up to an altitude of 400 feet when motor trouble forced them to descend and beach their boat. The next flight was made by Captain Erwin and Lieut. Franklin. After many attempts they rose to ten feet above the water, but because of motor trouble, were forced to return to the hangars.

If fine weather continues, the Department expects to be able to make a number of reconnaissance trips to various points in the Islands before the monsoon season begins.

A few official flights have been made in N-9's within the past two weeks, but the Department is trying to conserve these boats because of their condition. About five months ago, six more of this type of sea-plane were ordered, and it is hoped that they will not be long in arriving.

Captain David R. Scott, M.C., late flight surgeon, having been relieved by Major J. R. Morano, M.C., is ordered to report to the Commanding General, Western Department, for further orders. Captain Scott was the first flight surgeon in the Philippine Islands, and will leave a host of friends among the flyers behind him.

Private Joseph Simpkins has been ordered to the 3d. Aero Squadron, Camp Stotsenburg, for duty with that organization.

The Department is in receipt of two brand new 35 ft. Navy Motor Boats, one of which will be sent this station after test. This will materially help sea-plane activities by giving more protection. Lieut. Ellicott has been in Manila on special duty, fitting up these boats.

Kelly Field, San Antonio, Texas.

Major Napier, Medical Corps, reported to the field, and has been assigned to the First Pursuit Group for flying training. All officers are glad to note the fact that there is a growing tendency on the part of Flight Surgeons to become qualified to fly alone.

Lieutenant Perry M. Powers, one of the ablest engineers in the Air Service, was discharged this week. He is entering the export business and will live in San Antonio. The Pursuit Group will feel the loss of this officer very much. His knowledge of strength of materials and shop practice made him peculiarly capable and every officer was always willing to accept his decisions on safety factors.

Lieutenant B. Hoppin accompanied the body of Lieutenant Edgar L. Smith to Memphis. He expects to spend a few days in Washington before returning to the field.

Lieutenant John Drumm made a flight to Houston to take the pay rolls of the enlisted men who were there on detached service. He was forced to land about fifty miles west of Houston on account of a fog. After finding his location he was able to proceed.

Most officers are finding it hard to get away for an afternoon each week to get in the two hours of athletics required by regulations. An increasing number of officers are taking up golf, and conversation worthy of the "19th Hole" has to some extent replaced the gentle art of bunk flying. The San Antonio Country Club has a very attractive membership for officers. The public course at Brackenridge Park is one of the sportiest courses in the country and is always kept in fine condition the year round.

France Field, Panama, C.Z.

Three photograph missions were flown on Friday which were unsuccessful. On two of these flights it was because of magazine jams and on the other the plates did not turn out well because of deterioration due to climate. These flights were made to get photographs of 4.7 howitzer batteries at Forts Sherman and Randolph.

Three Naval Officers from the Eagle Boats, which patrolled between the Canal Zone and Jamaica during the attempt to reach the latter place by airplane, were given demonstration rides over the Canal Zone.

graphs, and what would be the, approximate, price of same?

A few days ago we had an inquiry for photographs made from the air showing the industrial section of any city in the United States, so that we may be able, intelligently, to answer our clients, any information that you may give us will be greatly appreciated.

Very truly,

American Photo Service,
Per A. D. Lindauer.

Because of the shortage of gasoline, short flights were authorized in order that the officers and enlisted men on flying status might get the required number before the gasoline was entirely exhausted.

During the present wet season swimming has become the popular sport and about fifteen minutes after recall a good size swimming party is in progress. Everybody is now looking forward to the big aquatic meet that is scheduled for the end of the month.

Scott Field, Belleville, Ill.

A JL-6 all-metal monoplane landed at Scott Field Saturday, on the way from New York to Los Angeles. H. S. Mybras, pilot, carrying as passengers Harry Larson and mechanic. The plane was held up for three or four days due to inclement weather, and left Wednesday for Tulsa, Okla.

Captain Fleet and Lieut. Macready landed at this station Saturday afternoon in a DeHaviland 4-B from McCook Field. They spent the week in St. Louis and returned Sunday afternoon.

8th Aero Squadron, McAllen, Texas.

A banquet was given by the officers of the Eighth Aero Squadron on Wednesday evening at the Hotel Casa De Palmas in honor of Lieut. Col. Ralph C. Caldwell, Commanding Officer 4th Cavalry, Camp McAllen, Texas. Toasts were proposed and several after dinner speeches were made. In response the Colonel paid a high tribute to the officers of the Eighth. Colonel Caldwell has been more than a Commanding Officer, he has been a personal friend to the members of the 8th Squadron. This is an example of the desired friendship and cooperation between Air Service troops and the other arms. Colonel Caldwell was formerly assigned to the Air Service and at one time commanded Brooks Field, San Antonio, Texas.

The Squadron regrets the loss of former Squadron Commander, Lieutenant V. J. Meloy, by demotion when he accepted a Second Lieutenancy in the Regular Army. Lieut. Meloy is loved and respected by both officers and men of the Eighth. He is one of the oldest officers of the Squadron, having brought Flight A to the border over a year ago. He fought and won over many difficulties of their first days on the border when the field was covered with cactus and the hangars and tents whipped to pieces by sandstorms. His pilots had never flown DH's, and it was up to him to give them the necessary instruction in a small narrow field with the prospects of landing on one's back in a nest of cactus thorns, which was no pleasant task. Miracles were worked, it seemed, and today the Airdrome at McAllen, which he turned over to his successor, Lieut. Charles A. Pursley, is among the best on the border.

Aberdeen Proving Ground, Md.

The Ordnance School of Application recently went out on a tractor trip and a plane was sent out to deliver their mail to them. The plane picked them up on the road and dropped the mail about ten feet in front of the landing tractor. The School Officers were overjoyed to receive their mail, and several said they got the best letters they had ever received.

A crew from this station went out to Dayton to bring in a Martin Bomber. They left Dayton shortly before noon and arrived here that evening, having made a non-stop flight of 430 miles in five hours and five minutes.

On Friday and Saturday the Ordnance Convention met on the Post. The Air Service entertained them for two hours Friday afternoon by explaining various types of planes, firing synchronized Marlin guns through the propeller of a DH4-B plane, and twin Lewis guns from the rear cockpit. Saturday morning the Martin Bomber dropped two Mark V Demolition Bombs on the main front. It was on this flight that Pvt. Earl W. Moon made a parachute jump from the end of the wing of the Martin Bomber, landing in the water and before assistance could reach him was drowned, the chute going down with him.

Major John C. McDonnell, Air Service, won two blue ribbons, a red ribbon and second place in the steeple-chase at the Bel Air Horse show, Bel Air, Md.

Camp Stotsenburg, Pampanga, P. I.

Despite the fact that this station is handicapped by a lack of sufficient personnel, both commissioned and enlisted, it is proceeding with a three months' course for observers, six officers having been assigned for the course by order of the Commanding General, Philippine Department.

A course in photography is being given under the direction of First Lieutenant John W. Frewer, Air Service, Commanding Officer of the Sixth Photographic Section. Lieutenant Charles L. Webber, a graduate of the Aerial Gunnery School at Selfridge Field, Mich., is handling the gunnery course. Lieutenant John Elaney, graduate of the Fort Sill School, is handling the general observation work. Lieutenant LeRoy E. Russell, Engineering Officer, is giving the six officers an intensive course in motors.

The six officers detailed for duty at this station for the course are: Captain Robert C. Candee, 9th Cavalry; Captain William B. Duty, Philippine Scouts; First Lieutenant Walter A. Ball, 31st Infantry; First Lieut. Richard H. Ballard, 9th Cavalry; First Lieut. Raymond S. Jett, 9th Cavalry; First Lieut. Fidel V. Segundo, Philippine Scouts.

Fort Omaha, Nebraska.

Lieut. Colonel Theo. A. Baldwin Jr., Majors Wm. F. Pearson, Oscar Westover, R. M. Jones and First Lieut. Clarence F. Kane, all Air Service officers, arrived here for Free Balloon Training. All are very enthusiastic and are marking time until they can make their solo flights. As soon as they complete their Free Balloon Training they are to report at Ross Field, Arcadia, California, for training as Balloon Observers.

During the past week, approximately 500,000 cubic feet of hydrogen gas was manufactured here. Most of this gas was manufactured by the model of the Silicol Generator, although this machine was built for no other purpose than to illustrate the principles of this new type of machine.

The bowling alleys are now open and the officers and men are taking a real live interest in bowling. At present the high score is 230.

HERE AND THERE WITH THE EDITORS

THE STANDARD J-1 WITH ENCLOSED CABIN

The Standard J-1 has been fitted with a four-door detachable cabin designed to give complete protection from all elements and reduce the inconvenience of flying to a minimum.

Thomas F. Hamilton, of the Hamilton Aero Mfg. Co., is responsible for the reconstruction of this plane as an enclosed cruiser. He is favorably known as a manufacturer of high performance propellers.

The cabin is divided into two main parts, the front section covering only the two seats and the rear section extending back to the stabilizer. The front section consists of a frame work entirely covered with pyralin, and is so designed that it can be entered through four doors. This section is a complete unit in itself and can be detached in thirty minutes. The rear section is for baggage and luggage. It also provides sufficient space for watchman or mechanic to sleep in.

On a recent business trip to Chicago with pilot and passenger, two propellers for the aerial mail service were easily carried in this section without disturbing the balance or stability of the plane. The absolute freedom of the plane from dirt, flying oil, and other disturbances associated with flying is unusual as are the greater visibility and ease in handling the plane.

It has been pronounced a complete success, and it is also declared that no reduction in speed has been observed. (Aviation, November 1, 1920)

HOPES OF ZEPPELIN COMPANY REVIVED

An interview with Dr. Hugh Eckener, a Director of the Zeppelin Company reveals the following facts in regard to the Airship situation:

HERE AND THERE WITH THE EDITORS (CONT'D)

He said that what the Zeppelin Company had set aside for America was now allotted to Italy, because the United States had failed to join the reparations commission. He also stated that the U.S. Army and Navy had not met their negotiations for aircraft. But his hope is that they will now have an opportunity to build for the United States. He made mention of the fact that American firms did send representatives to Germany last year but that no deal was consummated. He is hopeful that the rumored Spain-New York-Chicago airline will soon become a reality.

He said: "Work on the first Zeppelin intended for the American trip was suspended in January, by orders of the Allied Mission". But it is possible to complete it within eight months if we receive permission to go ahead with construction. This ship will have a gas capacity of 100,000 cubic meters, will be the largest air ship in the world, and will be capable of making three Atlantic crossings without stopping. Furthermore, we are not idle, but are planning larger, better craft, inasmuch as wartime experiences have proved that Zeppelins are the fastest, safest and best means of transportation.

We have suspicions that it was the hope of certain of the Allies to prevent Germany building until they had established commercial air lines and made competition impossible.

Today all the Zeppelins, except Japan's, have been delivered. Zeppelin 113, which was intended for America, was given to Italy. We have two civilian ships left, one named the North Star and the other the Bodensee, which the ententes have prevented us from flying. Today we received word from General Masterman, the Briton heading the Reparations Commission, saying that we could fly these ships. We asked two guarantees, that the ships would not be confiscated and that the sheds and wharfs would be left intact.

We also have reason to believe that the Entente's order for the destruction of the sheds and wharfs will be rescinded. I am hopeful that when America declares peace and has members on the Reparation Commission she will confirm the order, for unless we have such wharfage we cannot operate. When Americans are on the Reparations Committee we are sure that the United States interests will take up the plan for formation of an international syndicate establishing a line between Europe and America."

FLEW OVER EUROPE ON BUSINESS TRIP

A flight of 3,250 miles for business is a new record made by an English business man. He is R. Wright, a Manchester engineer, who returned here from a tour of Central Europe in a Handley-Page flying machine. The return trip was made from Jassy, 250 miles from Bucharest, by way of Strassburg. From Strassburg a record non-stop flight was made to London, a distance of 420 miles in 3 hours and 50 minutes. From Jassy to the hangar at Cricklewood the distance is 1,635 miles.

"It was a very successful and enjoyable trip", Mr. Wright said. "I was away a little more than a month and covered 3,250 miles in all."

(N.Y. Herald 11/7/20)

PREDICTIONS AT AIR CONFERENCE GUILD HALL

At the recent Air Conference at Guildhall, London, some bold predictions were made in regard to the "air liner" of the future. According to opinion there the "air liner" is on the way, and is coming as a result of tireless and patient research and experimenting: it is going to embody a detail here and a suggestion there, and when it is turned out will provide a mode of travel as safe and infinitely more swift than any land transport.

What are the requirements for a craft capable of carrying out a sustained flight say from England to Australia? was a question considered.

According to experts assembled at this conference each craft would be about 800 feet long with gas capacity of at least 4,000,000 cubic feet. The "R" dirigible already constructed in England has a gas capacity of more than 3,000,000 cubic feet; so to increase the capacity to 4,000,000 does not seem impossible.

HERE AND THERE WITH THE EDITORS, (CONT'D.)

An average speed of 60 miles an hour would be required, and this has already been achieved. It is estimated that a ship constructed on this basis would carry 100 passengers with all Pullman comforts provided.

(Washington Star 11/7/20 and)
(N. Y. Tribune 11/7/20).

NEW AEROPLANE WING

The new Handley-page aeroplane wing which was successfully demonstrated recently at Cricklewood, England, is described in "Aviation" 10/15/20. The wing made up of slats gives it the appearance of a Venetian blind. The one used on this particular occasion was fixed on a De Haviland machine, and it had only one slat, but successful experiments have been made with wings containing as many as seven slats. Two points mentioned in favor of this new type of wing are that it will reduce speed in landing and that it will give a much greater lift per square foot than the ordinary wing. The slats, it is said, convert a single wing into a number of wings. To prevent retarding speed while in full flight a contrivance has been invented which enables the slats to be closed. The question of how the wing will operate when the machine is flying upside down has not been taken into account, as it has been brought in essentially for commercial flying.

LIGHTHOUSES - NIGHT FLYING

The U.S. Air Service Magazine, October, publishes an excellent story entitled "The Lighthouse for Aerial Navigation". This story with its accompanying illustrations enables the reader to grasp the niche of usefulness for the lighthouse as an aid to aerial navigation.

In the same number of this magazine is another story entitled "Commercial Aeronautics", which while it does not treat directly upon the night flying and the use of the lighthouse, it does in paragraph three show where night flying will have to come in.

Again in London Times 10/22/20 there is an excerpt of a lecture on night flying given by Major Cecil Baker, D.F.C. - A.F.C. He says that night flying developed on account of the use to which it was put during war time. In his opinion no good would come out of any immediate effort to develop commercial or civilian night flying. He says that it would involve an elaborate system of ground lighting.

DE ROMANET MAKES A NEW WORLD AIR RECORD.

"Paris, Nov. 4.- A new world speed record was made this morning at the Buc Aerodrome, near Paris, by Bernard de Romanet, with a Spad Hispano machine. The official speed, controlled by chronometers and officials of the Aero Club over a measured kilometer, was 309 kilometers, 12 meters per hour (about 193 miles), distance being covered in 11 65-100 seconds.

This record beats the one made by Sadi Lecointe on Oct. 20, when he passed the 300 kilometer per hour mark for the first time.

When the record was made there was considerable mist, which De Romanet declared afterward somewhat bothered him.

Since he flew in the Gordon Bennett race he has modified his machine, and now sits entirely hidden in the fuselage, with only lateral vision."

(N. Y. Times 11/5/20)

SIXTEEN MACHINES CIRCLE OVER D.C. IN BATTLE FORMATION

The sixteen visiting Liberty planes from Langley Field, Va., soared to the clouds above Washington in battle formation at 11:30 o'clock today, circled over the city for fifteen minutes and pointed for the home hangars, disappearing over the southern skyline.

The planes flew in arrow head or "wild duck" formation and veered to a battle phalanx in the air, demonstrating the most efficient means of defending and bombarding a city from the sky.

HERE AND THERE WITH THE EDITORS (CONT'D)

Officers of the staff at Bolling Field inspected the manner in which each turn and twist was made, making the maneuvers a basis for improving air tactics.

Photographers also were aloft with aviators and views of the flying were taken on several thousand feet of films."

(Washington Star 11/5/20)

NEW GERMAN SECRET MONOPLANE

It is reported that the Zeppelin Company is about to begin trials in Germany with an aeroplane for which it is claimed that in design and performance it will far out-distance any machine in the world.

In spite of the fact that effort has been made to keep in secret all particulars about the machine, the following details have leaked out: it is a tractor monoplane, built throughout of duraluminum, with a span of 90 to 100 feet, and a chord of 10 to 12 feet.

The wings are hollow and in them are the four 260 h.p. Mercedes or Maybach engines. The wing construction is such that a mechanic may crawl through them and attend to the engines.

The only two struts extend laterally from the under-carriage to the under side of the wings.

It is expected that the efficiency of the propellers will be reduced because they are placed so close to the leading edge of the wings. Following the trials in Germany, an early attempt will be made to fly this machine across the Atlantic. This revelation of German activity is of utmost interest because of the fact that at the British Air Conference reference was made to machines of British design with their engines mounted in the wings.

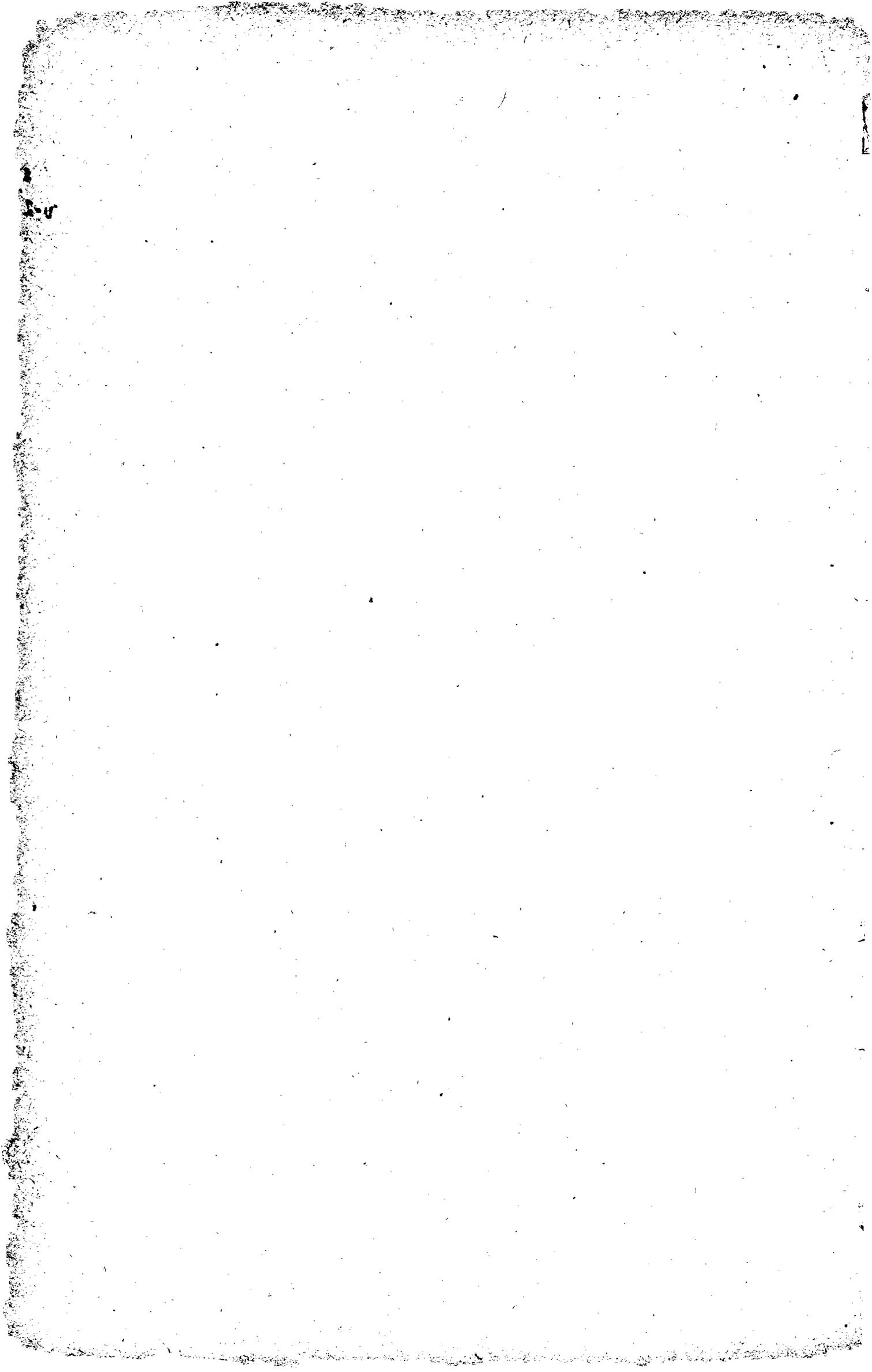
It is said that machines are produced in German factories, and exported to Holland in parts where they are assembled. What then is their real nationality?

(London Times 10/16/20)

AIR TAXI

An article appearing in the London Times, 10/2/20, entitled, "The Return of the Monoplane", contains some interesting suggestions for future air travel, among which is the "air taxi" proposed by Captain De Haviland, whose experience makes him peculiarly qualified to speak on commercial air design. Capt. De Haviland says that aeroplanes at present available for private use are mostly converted war craft with powerful engines. They are expensive to fly and therefore make rates of travel higher than they should be. He proposes a specially built monoplane with a 240 h.p. motor, a cruising speed of 100 miles an hour, and with a cabin capacity for six passengers besides the pilot. He says that the monoplane as we first knew it was really a two-winged craft, but the new commercial craft of today is truly "monoplane" as it has simply one big wing with the body or hull below instead of dividing it.

He suggests that the next stage in evolution and simplification will be to eliminate the exterior hull and to carry everything - motive power, fuel crew, and passengers or goods actually inside the wing. This would require a very large wing of considerable thickness. A plane of 100 feet span and about 7 ft. thickness has already been contemplated. These machines will make a queer appearance along our airway; but they will be more than a scientific wonder, as they will give to air transport not only a luxury for the few but a time saving mode of travel so cheap that it will be practically within the reach of all.



The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE NOVEMBER 30, 1920.

THANKSGIVING DAY RACE FOR PULITZER
 TROPHY AROUSING GREAT INTEREST

The race for the Pulitzer trophy to be held at Mineola, Long Island on Thanksgiving Day is arousing great interest, and the officers of the Air Service who are fortunate enough to be entered for the contest are working night and day in preparation for the event.

Probably interest is centered on the Verville Packard plane used by Major Rudolph Schroeder in the International race for the Gordon Bennett trophy held in France in September, and which will be piloted by 1st Lieut. Corliss C. Moseley in the Pulitzer race. Lieut. Moseley, who it will be remembered, was Major Schroeder's second pilot in the Gordon Bennett race, hopes to make a world record for time.

The Verville Packard, which was slightly damaged, has now been repaired and will be flown daily for the week preceding the race. Slight alterations may also be made, as it may be necessary to add more radiator surface, or possibly, Lieut. Moseley may install a motor of lower compression.

Everyone is looking forward with great interest to seeing this plane which represents the greatest power ever introduced into a single seater in any country, 600 horse power in such a light aircraft with only the wind to stop it, should bring about resultant speed that has never been produced by any craft in America. Those who may take the special trains from New York City on Thanksgiving morning will be repaid for so doing by seeing this one machine if no other.

While interest centers in the Verville Packard, the consensus of opinion is that should it be forced to withdraw, the race for speed will be won by one of the following planes: Thomas-Morse 300 Hispano, Ordnance 300 H.P., Thomas-Morse 300 H.P., or Sopwith-Dolphin 300 H.P., with the chances slightly in favor of the Thomas-Morse.

Besides the special race, class races for machines of similar type will also be held. Each of these will provide a thrill as wonderful if not more exciting than the race for the trophy itself.

The following are the official entries of the
Air Service for the Pulitzer trophy.

<u>Pilot</u>	<u>Type of Plane</u>	<u>Home Field</u>
1. 1st Lt. C.C. Moseley	Verville Packard	O. C. A. S., Washington, D. C.
2. Maj. C.H. Wash	Fokker - 300 H.P.	McCook Field, Dayton, O.
3. 2nd Lt. Leigh Wade	Thomas-Morse 300 Hispano	McCook Field, Dayton, O.
4. 2nd Lt. C.G. Kelly	Ordnance 300 H.P.	McCook Field, Dayton, O.
5. Capt. H.E. Hartney	Thomas-Morse 300 H.P.	O. C. A. S., Washington, D. C.
6. 2nd Lt. C.E. Haynes	Sopwith-Dolphin 300 H.P.	Bolling Field, Anacostia, D.C.
7. 1st Lt. St. Clair Street	Ordnance 300 H.P.	O. C. A. S., Washington, D. C.
8. Capt. Maxwell Kirby	Spad 220 H.P.	O. C. A. S., Washington, D. C.
9. 2nd Lt. S.M. Aines	SE-5-A	Bolling Field, Anacostia, D.C.
10. Capt. Felix Steinle	SE-5-A	Bolling Field, " "
11. 2nd Lt. F.A. Johnson	SE-5-A	Carlstrom Field, Arcadia, Fla.
12. 1st Lt. Lotha A. Smith	SE-5-A	Bolling Field, Anacostia, D.C.
13. Maj. Davenport Johnson	DH-4-B	Langley Field, Hampton, Va.
14. 1st Lt. Walter A. Lawson	DH-4-B	Langley Field " "
15. 2nd Lt. Chas. H. Cummings	DH-4-B	Langley Field " "
16. Capt. Horace B. Nelson	DH-4-B	Bolling Field, Anacostia, D.C.
17. 2nd Lt. Ray W. Brown	DH-4-B	A. G. S. D., Middletown, Pa.
18. 2nd Lt. R.C. Moffatt	DH-4-B	1st Corps Area, Boston, Mass.

Air Service for the Pulitzer trophy. (Cont'd)

<u>Pilot</u>	<u>Type of Plane</u>	<u>Home Field</u>
19. Capt. Norbert Carolin	DH-4-B	Aberdeen Proving Ground, Md.
20. 2nd Lt. Merrill D. Mann	DH-4-B	A. G. S. D., Fairfield, O.
21. 2nd Lt. Carl Ellison	DH-4-B	Aberdeen Proving Ground, Md.
22. 2nd Lt. Laurens Claude	DH-4-B	" " " "
23. 1st Lt. John P. Roullet	DH-4-B	Mitchel Field, Long Island
24. 2nd Lt. J. B. Wright	DH-4-B	" " " "
25. 2nd Lt. Lucas B. Beau	DH-4-B	" " " "

PRACTICAL RULES ON BALLOON RACING

Colonel Henry B. Hersey, formerly of the Balloon Division of the Army Air Service, and a one time winner of the International Balloon Race, now in charge of the Los Angeles branch of the U.S. Weather Bureau, has summed up the rules for balloon racing in the notes quoted below, which were forwarded thru Commanding Officer from Ross Field, Arcadia, California.

"Watch your statoscope all the time to catch any drop before you get under headway. A few ounces of sand thrown out when statoscope first indicates descent will do more good than as many pounds after descent is well under way. This is especially important if over large body of water in daytime for the nearer you get to water the greater cooling effect on gas and descent becomes more rapid.

"Find the level that gives you a desirable direction and then stick to it as closely as possible but do not let out gas to do this. Valve should not be opened until you have decided to make a landing. If sun expansion takes you up then you have to go, but if you wish to get a lower level again to secure better direction wait for cooling of gas and "ease down" by dropping just a little less sand than would be necessary to maintain altitude.

"In general if you go to higher altitudes your course will turn to right and if descending will turn to left. This is not so in every case but probably four times out of five. If there is a large field of high pressure over the southeastern portion of the country it will be true in practically all cases. Take advantage of this to get a level that will give greatest distance to eastward without going out over the sea. The St. Lawrence Valley or Maine are good points to try for to get good distance to eastward. You, of course, understand about throwing out paper and watching it change direction as it descends. From this you can see if you would get more favorable direction by "easing down" to a lower level.

"The most important point of the game is to keep balloon from changing altitude and, to avoid this, watch statoscope and drop just enough sand to check an unintentional descent and no more. All waste matter should be saved in bottles or sand bags and thrown out a little at a time as ballast when needed.

"At night it will be possible and sometimes advisable to keep low, say between 500 and 1000 feet from the ground but in daytime higher levels must always be taken. From 4,000 to 10,000 feet are usually found to be the best working levels for the daytime.

"You will, of course, carry life preservers of some type. You should have a good hatchet, strong walking shoes, good supply of matches in waterproof carrier, little package of salt in case you should drift up into the Canadian forests and be compelled to tramp out. A light single barreled shot gun and 25 buckshot and 25 bird shot cartridges for killing game would be good to have along. All these things can be thrown out as ballast if necessary in an emergency.

"Very little advice can be given from a purely meteorological standpoint because all plans in this line depend on distribution of atmospheric pressure and other meteorological conditions actually existing at the time of flight and these conditions are constantly changing. You have all taken courses in meteorology and understand the fundamentals of it. Arrange to get the daily weather map from the U.S. Weather Bureau and study the maps very carefully for the few days preceding the race and get the issue for day of race and you will then know just what the weather conditions are and can be guided accordingly."

EXPERIMENTS IN APPARATUS FOR HANDLING AND MANUFACTURE OF HYDROGEN GAS.

The Experimental Station at Fort Omaha is conducting experiments in apparatus for the handling and manufacture of hydrogen gas for balloons. This work is of importance because, with the coming of large dirigibles and the general expansion of the lighter-than-air branch of the service great quantities of this gas at a reasonable price are necessary. Proper equipment for handling the gas insures safety and economy in its use.

The gas used in balloons is frequently stored in cylinders under the high pressure of two thousand pounds per square inch. Under this high pressure it is difficult to get valves to work smoothly and easily and still be tight in service preventing gas losses from leakage. At this experimental station, such valves have recently been designed. Like other good pieces of mechanism, they are comparatively simple in design, and they can be made much more cheaply than the more complicated valves previously in use. In addition they have been especially designed to meet Air Service demands which require a valve that will vent a cylinder rapidly without freezing up. The standard valve now in use requires seven minutes to completely vent a cylinder, while the present valve developed at Fort Omaha will accomplish this in from twenty-five to fifty seconds.

Fort Omaha is being equipped with a machine shop which will be suitable for the manufacture on the working scale of much of the machinery being designed there. One of the first pieces of apparatus which will be manufactured in this shop is a hydrogen gas generator known as a silicol generator because of the fact that, in its operation, the hydrogen is produced by mixing ferro-silicon and caustic soda. In this generator are embodied the results of wide experience gained in operation of this type of equipment during the war. Such improvements have been made that the new generator will produce almost twice as much hydrogen from a given quantity of materials as did the older types. At the same time, a generator of a given size will have almost double the capacity of former machines. These improvements will result in great economies and in the production of a machine highly specialized and designed to meet the exacting demands of military field service.

Furthermore, there is ready for test at this station an improved type of electrolytic cell for the production of hydrogen gas. The design of apparatus of this kind requires highly developed technical skill. This particular apparatus, like the silicol generators already developed, is expected to produce many times more gas for a unit of given size than does apparatus of the same type now in use. In present apparatus, a good deal of trouble is experienced with insulation; in the newer design, this will probably be avoided altogether, or at least greatly reduced. The decomposition of water by the electric current is a long established process but, like most similar processes, is susceptible of a good deal of development in the hands of trained engineers. It is an indication of the general progressiveness of the Omaha Station, and the Air Service in general, that technical problems of this kind are being undertaken and that the highest development and the greatest efficiency are the things constantly sought after.

FLYING TIME, FORT OMAHA

The flying time for both Free and Observation Balloons was 29 hours and 3 minutes. Free Balloon flying time was 9 hours and 3 minutes, and Observation Balloon flying was 20 hours and 1 minute.

NAMING OF AVIATION FIELDS IN PHILIPPINE ISLANDS

The aviation field at Camp Stotzenberg, Pampango, P. I., has been named Clark Field in honor of Major Harold M. Clark, Air Service, who was killed in line of duty in an airplane accident in the Panama Canal Zone, May 21, 1919.

The aviation field of Fort Mills, Corregidor Island, P. I., has been named Kindley Field, in honor of Captain Field Kindley, Air Service who was killed in line of duty in an airplane accident at Kelly Field, San Antonio, Texas, February 1, 1920.

SUB-CALIBER FIRING OF 12 INCH MOTORS AT FRANCE FIELD

Next week sub-caliber firing of 12" motors will be conducted at Forts Sherman and Randolph. In connection with this, three Coast Artillery Officers from these forts were detailed to attend a three day conference and class of instruction in communication between the ground and airplane. This class was conducted by 1st Lieut. H. W. Holden, Group Operations Officer. Many difficulties on both sides were smoothed out and in the coming shoots better liaison is expected than has been obtained heretofore.

NOVEL WAY OF GETTING BASEBALL SCORE

Corporal Beagle in charge of the pigeon loft at Luke Field and several others of this organization that were unable to get away from the island to attend the final and deciding game between the Army and Navy in the service Baseball series Saturday, adopted a novel arrangement to keep up with the score. Carrier pigeons were sent by the special pigeon motorcycle to Heilili Field the scene of the hotly contested game. At the end of each inning Corporal Carleton wrote out the score, placed the message in the container and let the bird go. Thus all those who had been unable to get away from the post and who were about the pigeon department, got returns inning by inning.

AIR SERVICE OBSERVATION SCHOOL OPENS

The Air Service Observation School at Post Field, Fort Sill, Okla., in charge of Captain John Howry, opened Monday. Two separate courses are given - a refresher course for newly arrived officers and a course to train cadets as Observation Pilots. The refresher course is merely a review of the fundamentals of observation. Due to the fact that most of the officers have recently been commissioned from civil life, they are somewhat rusty on observation work, and this course will indeed be a great help to bring them back in form. They are scheduled to go to the School of Fire at Fort Sill, Oklahoma, beginning about January 1, 1931, after which they will be used in the Observation School as instructors.

TEST FLIGHT OF SMALLEST AIRPLANE IN THE SERVICE

The Messenger Airplane was flown in its initial flight November 1, by Lieutenant John A. Macready of the Flight Test Branch, Dayton, O. This airplane is the smallest now in the service, and is equipped with a three-cylinder air-cooled radial engine of sixty horse power. The airplane responded very well to the controls, and was reported by the pilot to be very pleasant and easy to fly. The high speed was ninety-six miles per hour, which is considered very remarkable for such a small airplane with an engine of such low horse power.

RAISE FUNDS BY AIRPLANE FOR MEMORIAL HOSPITAL IN TEXAS

A new and effective service to be performed by airplanes was demonstrated recently when eleven DeHavillands and a Caproni took off from various towns in Texas in an endeavor to stimulate interest in the effort of the American Legion of Texas to raise funds for the hospital for ex-service men who are victims of tuberculosis. This hospital is to be located at Kerrville and it was necessary to raise \$350,000 by November 11th. By proclamation of the Governor of the State, November 6th was designated as American Legion Memorial Tubercular Hospital Tag Day, and 300,000 copies of the Governor's Proclamation were dropped from planes over Texas towns to the number of one hundred and twenty. These towns range in size from the cities such as Dallas, Houston, San Antonio, and Austin to smaller villages of a few hundred population. The city of San Antonio was covered by a formation of five SE-5's. In addition to the Governor's Proclamation, thousands of copies of Air Service Recruiting literature were dropped.

4. Please convey to Captain Hanley and to the officers and men of Flight "A", 135th Aero Squadron, my thanks for the splendid service rendered the School.

5. A copy of this letter is being sent to the Chief of Air Service, Washington, D.C.

H. A. Drum,
Brigadier General, U. S. Army.

DEPARTMENT OF COMMERCIAL AVIATION

Civilian aircraft concerns, including manufacturers, transportation and sales companies, are invited to contribute reports of their activities to this department regularly. It is desired to stimulate interest in civil aviation by letting the public know through this column, just what is being done. State facts and figures relating to sales, to the promotion of aerial photography, to transportation, to contemplated routes or new lines undertaken.

Address your letter, "Chief of Air Service, Washington, D.C.," and write plainly across the top "For publication in the News Letter."

It is, indeed, interesting to note the very solid progress that has been made by foreign countries in the promotion of civil aviation. Undoubtedly, the future will see air lines for passengers, mail and express matter running from Scandinavia to the very tip of South Africa and extending from all parts of Europe to the Orient. Such routes, once established, will save many weeks of time and of wearisome travel over present-day modes of land and water locomotion.

The fundamental principal behind the success of this infant industry, air transportation, must, of course be government support. In other words, if it is helped to walk on its own legs - or, more correctly, to fly on its own wings - its future is assured.

Once established, people throughout the world will accept aerial transportation much after the same fashion as they accepted the railroad train despite the pious warnings that it would prove "an instrument of the devil" since only heretics would venture to ride on a wicked contraption making the ungodly speed of 15 miles per hour! Today we are beginning to forget the 100 miles per hour that was attained long ago in the air, and are interested in the facts that 200 M.P.H. has been passed, and that the speed of 500 is not an impossibility.

Major Schroeder proved, in his record-breaking altitude flight that, at about 30,000 feet Trade Winds blow from west to east at the rate of 300 miles per hour, which means, at the proper altitude, we could be blown from San Francisco to New York in 10 hours time. Who would venture to say that at 50,000 feet we might not find a wind blowing from east to west that would carry aircraft in its current at even a greater rate of speed?

The future is bright for civil aviation. All that it needs is proper support.

JAPAN MAIL SERVICE IN JAPAN A GOVERNMENT ENTERPRISE

From the "Chugai" of 28/19/20, comes the following evidence that the Orient is to the front in the ever-forward march of progress.

"Since the end of the past year the question has been pending whether the mail service by air in our country should not be conducted by the Department of Communications. Very recently the department has arrived at the conclusion that the work must certainly be undertaken by it in the future. It has started close inquiries at its Mail Section about the condition of our aviation world: The number and training of civil airmen, airplane and aero-motor factories and their efficiency, landing stations, routes by air and the like. Mr. Odabe, the commissioner sent to Europe and America, is diligently investigating actual conditions in those countries. His return being expected by the end of the year, it is intended that all domestic inquiries be finished before that time. After his

return, the department will hold a conference of representatives of the Army and Navy, the Imperial Aviation Society and all other bodies concerned in the matter, for the purpose of discussing all matters connected with the carrying out of the air mail service and so bringing the matter to concrete form. As to routes, the trunk line between Tokyo and Osaka was pioneered by the Imperial Aviation Society in the race held last autumn. Explorations in the north and north-east of the mainland are also to be intrusted to the I. A. S. In case the department undertakes the service, the routes thus surveyed will be established."

GERMANY.

NEW GERMAN MONOPLANE TO ATTEMPT ATLANTIC FLIGHT.

Under this caption there recently appeared in the London Times the statement that "the Zeppelin Company is about to begin tests in Germany with a new type tractor monoplane of which only the most meagre details have reached the outer world. It is built throughout of duraluminum, fitted with four engines, and has a capacity for 20 passengers. The new plane has a wing span of 90 to 100 feet, and a chord of 10 or 12 feet. In the wings, which are hollow, are located four Mayback 260 H.P. engines. The wings are so constructed that, while the plane is in flight, a mechanic may crawl through them and attend to the engine. There are only two struts in the plane, and these extend laterally from the undercarriage to the under-side of the wings."

If this plane is half as efficient as some of the former models seen by our officers in Germany, it may be said confidently that little doubt exists, among aviators that the new plane would be able successfully to fly across the Atlantic with its load of 20 passengers.

The monoplane type is fast coming into its own and the future may prove what many have long contended that the monoplane passenger-carrier is able to transport a heavier load than the biplane type.

ENGLAND

FLYING 1000 MILES TO BUSINESS

A thousand mile to business via, airplanes sounds like the imagination of Jules Verne. Yet it is true that this remarkable performance was made by Mr. R. Wright, a Manchester Engineer, who chartered a plane for the purpose of flying to Bucharest in connection with a number of engineering projects he had on hand at that place, and thence return by the same route. The machine used was a passenger type Handley-Page.

The trip was made without accident and included a non-stop flight from London to Strassburg, 420 miles, in 3 hours and 50 minutes. The actual mileage by air from London to Bucharest one way is 1,635 miles, and the round trip 3,270 miles in all, was made in 21 hours.

There is something rather cynical in the moral drawn by a French journalist who finds in a big railroad smash with an attending large loss of life, an excellent argument as well as an advertisement for aviation. At the time of the wreck a large Aviation meet was in full swing at Buc Aerodrome. He asks, "How much safer is aviation than the railway train? Certainly the meet at Buc was a revelation. Everybody flocked out during the days on which the fete was held to witness the marvelous exploits - machines circling, falling, looping, spinning, performing the most hair-raising acrobatics under the perfect control of the pilots, without the slightest sign of an accident whereas, according to the opinion of the layman including myself, we had every reason to expect one. All this is just so much more to the credit of flying and the ultimate proof to the public that flying through the air is reasonably safe."

The average newspaper in America is as different from foreign contemporaries as white is from black in so far as their attitude toward aviation is concerned. A street car or a railway accident with a few injured or killed, receives a small insignificant notice in the papers here, but an aviation accident gets full headlines in the dailies, with the horror of aviation as a consequent effect upon the public.

In this connection the "London Globe" a few days ago carried an article on the crash of the Aerobus in which several people were killed or injured. It was interesting to note the serious discussion by the Editor with a helpful suggestion to the Department of Civil Aviation which would tend to prevent such accidents in the future. The story ends by asking the public to suspend judgment until all details have been thoroughly investigated. Here is a paper that is heart and soul for the promotion of Civil Aviation, aiding rather than pulling down, extending a helping hand instead of kicking it into the scrap pile. Accidents will happen in future in aerial as in other modes of transportation. With an organization such as the British Civil Air Ministry, together with stringent laws, that have proven their soundness by trial, together with the wholehearted support of the newspapers to minimize accidents, it is but little wonder that Commercial Air Transportation has been a success in England.

SQUADRON NEWS

LUKE FIELD, FORD'S ISLAND, PEARL HARBOR, H. T.

With the arrival of the long delayed camera obscura, several days have been partly devoted to Camera Obscura missions, which constitutes the primary flying training of Bombardment. The officers of the Group are showing keen interest in the instruction, and the charts denoting course of flights are carefully studied by all concerned, upon completion of scheduled trips.

Lt. Commander E. B. Latham dropped in on Lt. Wooten last week, and expressed a wish for a little altitude flying. The words were hardly voiced before arrangements were under way for the flight. A service DeH4B on the line was commissioned, two carrier pigeons quickly stowed away, and the plane off the ground. At 9:15 hours an altitude of 15,000 feet had been reached. At 9:50 the first pigeon was released. Trapped at 10:05 hours, at 16,000 feet, 10:15 hours, second pigeon released in good condition. When released it dropped about 50 feet, then it began flying until it was about 200 feet above the plane - when last seen it was going down towards the field. Trapped 10:41 hours. Flight above 16,900 feet was not attempted because both pilot and observer were dressed in light cotton uniforms and the temperature was rather severe.

Post Field, Fort Sill, Oklahoma.

On Thursday and Friday advantage was taken of the Garfield County Fair at Enid, Oklahoma, to secure recruits for the Air Service. Two planes were taken for the purpose of co-operating with the Army Recruiting Officer there. Although no recruits were obtained during the fair, we believe the trip has done much to stimulate recruiting.

During the past two weeks there has been a steady arrival of new officers at the Post - most of them rare and valuable men - Observers. The high quality of these officers is indicative of the care with which the selection boards performed their functions, and promises a nucleus of observer instructors.

ARMY BALLOON SCHOOL, FORT OMAHA, NEBRASKA

Lieutenant Colonel Theodore A. Baldwin, Jr., Majors William F. Pearson, Oscar Westover and R. M. Jones and First Lieutenant Clarence F. Kane, all Air Service officers, having completed their Free Balloon Training, left for Ross Field, Arcadia, Calif., to receive instruction in Balloon Observation. All were very enthusiastic over their experience in free ballooning.

Two weeks ago Major R. M. Jones, and Master Sergeant William J. Mansfield made their solo flights. Sergeant Mansfield left first at 11:15 A.M., and Major Jones left at 2:17 P.M. Both balloons left in a due southerly course.

The Wind- Aloft Report for the 29th showed the wind as gradually increasing to 40 miles at 5700 feet.

Sergeant Mansfield flew at an average altitude of 2,000 feet and after being in the air one hour and 8 minutes, landed in South Omaha, a distance of 8 miles. The netting of the balloon caught on a telephone pole and caused him considerable trouble in getting it loose. He landed in the midst of a football game.

First Lieutenant C. E. Smythe, A.S., reported for training in Free Ballooning. He is very enthusiastic about flying and expects to be greatly interested in the Observation Course at Ross Field, where he goes when he has completed his Free Balloon Training.

9th AERO SQUADRON, MATHER FIELD, SACRAMENTO, CALIFORNIA

On Tuesday five DeHaviland airplanes of the 91st Aero Squadron, under command of Capt. W. A. Robertson, arrived from Rockwell Field. Stops enroute were made at March Field, Riverside, Calif., Tulare, Calif. Flying time for the entire trip of 525 miles air line was five hours and 55 minutes. Movement of supplies was accomplished by a 33 vehicle truck train averaging one hundred and forty miles a day for four and one-half days. The squadron will take up training at Mather Field, which has been designated as their permanent station, and will endeavor to support their claim to being the best all around squadron in the Air Service.

Three men of the 9th Aero Squadron have left to take the Cadet Course at the March Field Pilots School.

Lt. Frank T. Honsinger, after an active year as Forest Patrol Pilot with the Ninth, was discharged November 1st, to take up his new duties as flying engineer for the San Joaquin Light and Power Corporation, Fresno, Calif.

Major H. H. Arnold, Chief Air Service Officer of the 9th Corps Area dropped in at Mather Field with Major T. H. Bane, Commanding Officer of McCook Field, Dayton, Ohio, as passenger. Their plane was escorted by a number of officers of the 91st Aero Squadron flying DeHavilands who came from Frisco to attend the lecture given by Major Bane to the enlisted and commissioned personnel of Mather Field. The lecture was illustrated with slides and motion pictures of development activities of McCook Field and gave all present a very comprehensive conception of the development program being carried out at Dayton.

Engineering Division, McCook Field, Dayton, Ohio

The Flight Test Branch lost one of its most reliable and experienced pilots the past week by reason of the discharge of Lieutenant Charley Miller. Lieutenant Miller has been with the Flight Test Branch since July, 1918, and has flown practically all types of airplanes in the service, as well as many types of foreign airplanes and seaplanes.

He was in charge of the proving work on the original DH-4's, and his record for the past two years in flying DH-4's and DH-9's is an enviable one. He has made many hundreds of cross-country flights with these types of airplanes, and has never yet failed to bring back his airplane intact. This record is very remarkable when it is considered that a great deal of his cross-country flying with DH's has been done in the mountainous region of Kentucky during various Liberty Loan drives.

Lieutenant Miller is also an expert rifle and pistol shot, and for the past two summers has represented the Cavalry team in the National competitions. This summer he won the eight-day continuous competition at Sea Girt, New Jersey, shooting against the best marksmen in the United States.

Aviation General Supply Depot, Fairfield, Ohio.

The entire Aviation Repair Depot, formerly located at Speedway, Indianapolis, Ind., is practically moved over to the Air Service Depot, Fairfield, Ohio, and operating almost as completely as at its old station.

A gathering of the commissioned, enlisted and civilian personnel of this post was arranged recently in the Radio Hut for the entertainment of all. A Magnavox was installed through which were heard a number of good musical selections and some interesting little speeches from various points. One of the most interesting incidents was hearing a boy on a ship a hundred miles out at sea, bidding good-by to his parents who were somewhere in Virginia. The whole party of the Radio Hut were vastly entertained and edified.

POST FIELD, FORT SILL, OKLAHOMA

Flight "A", 135th Observation Squadron arrived from Fort Leavenworth Kansas where it has been stationed for the past two months on duty with the Staff School at that station. Lieutenants Agee, Davis, and Walker, with three mechanics, arrived in three DH-4B airplanes, while Lieutenants Armstrong and Duke, with the remainder of the Flight, arrived by rail. The duty of the Flight while stationed at Fort Leavenworth was demonstrating to the students of the Staff Class, the part that an Observation Squadron takes in actual combat in Infantry Contact and Artillery Regulation.

Flight "B", 104th Aero Squadron, commanded by Lieutenant Raley, has been ordered back to Marfa, Texas. Lieutenants Raley, Sheridan, White, Meyers and Moon with three mechanics left in four DH-4B airplanes. Lieutenant Larson and the remainder of the Flight left the next day. The Flight arrived here from Marfa September 8th with orders to cooperate with the Bureau of Mines. There being no duties of that nature here, they were attached to the 135th Observation Squadron and were used to co-operate in the activities of the School.

CARLSTROM FIELD, ARCADIA, CALIF.

The 'highest ranking airplane crew in the world', consisting of three lieutenant-colonels and two captains, having completed construction of their plane from assembling the skeleton wings to final lining up, are now learning to fly in it. One of the number, Lt. Colonel Beck, is one of the very first American fliers, having flown in 1911.

Carlstrom Field still holds the altitude record for parachute jumping, 20,900 feet, recently made by Lieut. Hamilton. At one of the recent circuses a double parachute jump from a single Liberty was made, with perfect success.

SELFRIDGE FIELD, MT. CLEMENS, MICH.

Captain Norman J. Boots, A.S., has left this station for Dayton, Ohio, having been detailed to attend the Air Service Engineering School at McCook Field during the coming year. Captain Boots was relieved as Commanding Officer by Captain John H. Jones, A.S., who was ordered here from the Aviation General Supply Depot, San Antonio, Texas.

Captain Boots has been closely identified with the fortunes of Selfridge Field since the early part of 1918, having been sent here for the purpose of organizing the School of Aerial Gunnery. Under his direction this school came to be recognized by experts as one of the best of its kind in existence. For the past year Captain Boots has served as Commanding Officer of this Field.

In his new field of endeavor Captain Boots has the best wishes of the entire Command.

FLIGHT "A", 91st AERO SQUADRON, CRISSY FIELD, SAN FRANCISCO, CALIF.

During the week thirty-nine shots were observed most of which have been salvos fired from twelve inch guns. Each shot spotted and reported making the radio communication 100% for the week.

Twelve more shots, from twelve inch guns are to be fired before practice is started with the mortars.

Lieuts. Adams and Olson of the Coast Artillery have flown as passenger in some of the observation flights.

All officers of this detachment flew to Mather Field Wednesday, to attend a lecture by Major Bane on the experimental work at McCook Field.

AVIATION GENERAL SUPPLY DEPOT, AMERICUS, GA.

Colonel Frederick W. Phisterer, of the Inspector Generals Department made an inspection of the Motor Transport and Educational & Vocational property during the past week.

Record time was made by Hangar Crew at this post in getting five Curtiss JN4HC-1 planes, "set up" for delivery to Carlstrom Field, Arcadia, Florida. Captain Adlai H. Gilkeson, Lt. Custer, Camblin, Amberg, Torney, all from Carlstrom Field arrived here Thursday, and took off in formation with the above mentioned ships Friday, at 12:30 central time for their home field. Stops at Waycross, Ga., Jacksonville, Fla., Daytona Beach, Fla., are contemplated before reaching Carlstrom.

BROOKS FIELD, SAN ANTONIO, TEX.

Work is going on well with new steel hangar, the foundation work will soon be finished, blocks of concrete weighing around forty (40) tons will form the base for the steel structure. The fabricated steel will arrive within a short time. The road leading to the hangar is already completed, and the water main will within a short time be ready.

A number of cars of hydrogen gas having been received, it is expected that at a very early date free balloon training will be commenced for classes of student officers to be sent here.

Number of hours flown this week : 43
No free balloon flights.

KELLY FIELD, SAN ANTONIO, TEXAS

Kelly Field met and defeated the Knights of Columbus Football Team by a score of 14 to 6 before a large crowd at Garrett Field, San Antonio. The game was featured by the work of Lieutenant Tourtellet and Gadet Taylor who scored one touch-down apiece. The field was very slow on account of the rains and prevented a larger score from being run up by the soldiers. Incidentally, the game furnished the only score against Kelly this year. The forward passing of the team has improved more than any other department but there is also much better tackling being done. A new coach, Mr. Winters, has just been secured.

The whole field is beginning to take notice since the recent Polo game with the team of the Headquarters, Eighth Corps Area. The score in the last game was Eighth Corps Area-7, Kelly Field-6. When it is remembered that the first game was lost 30 to 1 and the second game 15 to 0, it will be seen that we are coming along. There was no handicap in the last game. Our ponies were new and had been trained by the members of the team, Captain Adler and Lieutenant Brophy doing most of the work.

A tournament is to be started soon with the following teams competing: Headquarters Eighth Corps Area, 16th Cavalry, Camp Travis, Kelly Field, and the civilian team from San Antonio. Polo is a game that takes most of an officer's spare time and much credit is due to the following named officers who compose the team: Captain Adler, No. 1 Major Garrison, No. 2; Lieutenant Brophy, No. 3; Lieutenant Clarke, No. 4.

99th and 10th OBSERVATION SQUADRONS, BOLLING FIELD, ANACOSTIA, D.C.

Monday of this week marked the beginning of aerial gunnery for the officers of Bolling Field. A target has been placed in the marsh near the field, and under the direction of Lieut. Jenkins the officers are showing marked aptitude in this endeavor.

Wednesday Lieut. Patterson flew a DH to Middletown, carrying as passengers Lieuts. Ames and Haynes, who returned to Bolling Field with two new Sopwith Dolphins. These ships are of different type from any we have at present on the field, but their performance on the homeward journey was very satisfactory. Neither Lieut. Haynes nor Lieut. Ames had flown ships of this type before and in view of the weather conditions, the trip was a very creditable one.

Thirteen new SE5's have recently arrived at Bolling Field. These ships are rapidly being assembled and will be ready for flying within a short time.

Saturday Lieut. Ames took Colonel Harrison, of the Adjutant General's Office, to Princeton, N.J. They are flying up in a DH4 for the purpose of witnessing the Yale-Princeton football game.

This post can now boast of an unbeaten football eleven. In all games played to date they have scored victories. Such teams as George Washington University, Bliss Electrical School, Naval Air Station, Seamen Gunners, Quentin, Washington and Eganon Athletic Clubs have been met and defeated. Not only have they been defeated but they have failed to score whereas Bolling Field has rolled up a total of 169 points.

The work of the ends, Johnson and Ploitz, and the back field men, Crudington, Dunn, Edson, Janowitz and Kennedy, has been especially noteworthy. Lieutenants Smith and Duke are coaching the team.

HEADQUARTERS PHILIPPINE DEPARTMENT

The weather having brightened in the last week, a chance came in which to make a few test flights with our HS2L, Flying Boats. On Tuesday last two boats piloted respectively by Lieutenant Virgil Hine, assistant Sgt. McComas, and Captain R. G. Ervin, assistant Captain D. R. Scott, N.C., flew from this station to Fort Wint, Grande Island. They made the trip for the Inspector, Coast defenses of Manila and Subic Bays, Lieut. Col. E. F. Wilson. The trip was made in record time and with the exception of light motor trouble experienced by Captain Ervin on the return trip, it was uneventful. It is the policy to protect these trips and complete Liaison with the planes by sending one of the boats out in advance and stationing it along the line of flight, keeping in constant touch with the system of radio Telephone communication.

Several minor observation flights were made with the HS2L Boats, and a few transportation flights to Manila and return with the N9H Burgess Seaplanes.

The 17th, and 27th, Balloon Companies have made several test ascensions during the week, and are looking forward to some interesting tests with the radio Telephone having for their aim Communications with seaplanes and Water Transportation Launches. The main trouble experienced with Radio Telephone in the tropics is the excessive amount of static that is daily encountered.

Every one is looking forward to the opening of the base-ball season and there is to be much rivalry within the units of the Air Service Garrison in contemplation of the establishment of the Garrison Team. Many old faces appear on the diamond and the athletic officer is confident of the Air Service putting up the finest team that has ever played in the Philippine Islands. Lieut. Jerry L. Bennett reports that the relay meet is to be an interesting event.

Lieut. J. P. Richter returned this week from duty on detached service with troops enroute to and from Ching Wang Toa, China.

It is reported that Lieutenant W. R. Sweeley of the 3rd Aero Squadron is soon to be transferred to the Second Aero.

2nd Lieut. Jerry L. Bennett has been assigned Transportation Officer, relieving Lieut. R. M. Wood, who has been ordered on detached service as Coast defense Utilities Officer of Manila and Subic Bays.

1st Lieut. George D. Litherland is relieved from further duty in the Department effective on the date of sailing on the next available transport for the United States.

1st Lieut. John B. Patrick was ordered on six weeks temporary duty in Manila in connection with the construction of a new hangar at Paranaque Beach. Lieut. Virgil Hine has temporarily taken his place as Commanding Officer, 2nd Aero Squadron.

CHANUTE FIELD, RANTOUL, ILL.

Armistice Day, was observed as a holiday at this post, the personnel of the station co-operating with the citizens of the village of Rantoul in observation of the occasion.

Major John M. Reynolds flew to Monticello, Ill., in an SE-5 airplane to attend Armistice Day exercises at that place. First Lieutenant Charles M. Leonard, Pilot, and Private Gerald E. Spates, Mechanic, flew to

Terre Haute, Indiana, in accordance with arrangements previously made with General Recruiting Officer at Indianapolis, Ind. A large amount of literature was dropped on the city and a considerable number of people inspected the plane at the landing field. Several prospective recruits were taken to the recruiting office in Terre Haute for examination, by enlisted men of the Recruiting Service. The weather was very unfavorable, being cold and cloudy, with unusually rough atmospheric conditions. However, both flights were successfully carried out, although the plane which made the trip to Terre Haute landed at this station about three quarters of an hour after nightfall, with the motor missing badly, as the result of attempting to fly on commercial gasoline in very cold weather.

Upon hearing that an HS2L plane, from the Great Lakes Naval Training Station, had been lost on Lake Michigan, the Commanding Officer at this station wired the Commandant of the Naval Station, offering the assistance of the personnel and equipment of this post in locating the missing plane and received a reply requesting that the plane from this field search the east coast of Lake Michigan as far north as the Straits of Mackinac. Preparations were immediately started for the flight and the lights in the shops burned until long after midnight while the men prepared the DH4-B for the trip. Major Reynolds left at day-break with Private Harold P. Little, as mechanic, intending to stop for gasoline at Chicago and then follow the shore of the lake north to Ludington, where a stop for gas was to be made prior to proceeding into the more sparsely settled country in the vicinity of the Straits of Mackinac. Major Reynolds carried, in addition to the usual equipment, a supply of food and medical stores for the relief of the stranded aviators. The day was clear and bright with a light west wind and seemed very favorable to the project, in spite of the fact that the temperature was 12° Fahrenheit, above zero. Another plane and pilot were held in reserve at this field, ready for immediate start in case any word was received of the location of the lost ship or in case the first relief plane became disabled.

On the 13th, Edward Nedoan, patrol from the White Lake Coast Guard station discovered the wreckage of the seaplane strewn along the east shore of Lake Michigan for a distance of four miles, but no trace of the flyers was found.

HERE AND THERE WITH THE EDITORS

GIANT AIR POST AT BREMEN, GERMANY

Bremen, September 22 - By Mail.- Eleven million marks have been subscribed for the establishment of an air post here on a huge scale with an extensive aerodrome, custom house, hangars, repairing shops, signalling apparatus and every improvement to facilitate international aerial navigation. This will place Bremen in a far better position than Hamburg, which has not exhibited the same interest in aviation. (The Pacific Commercial Advertiser, Honolulu, H.T. November 1, 1920)

HISPANO-SUIZA ENGINE NOW KNOWN AS THE WRIGHT

The Hispano-Suiza motor, manufactured for two years or more in this country by the Wright Aeronautical Co., has been so "Americanized" as the result of improvements added in this country that it will hereafter be known as the Wright motor, it was announced yesterday.

"The aeronautical engine which we are building today is no more the Hispano-Suiza than the Liberty or Rolls-Royce engine is the German Mercedes", F. B. Rentschler, vice-president of the company, said yesterday in announcing the change.

The "Hisco", as flying men call the motor, is famous as the engine which made it possible for American and allied aces to combat on equal or better terms the fighting Fokkers of the Germans. It was used in the Spad and SE-5 chasso machines.

(N. Y. Herald 11/13/20)

HERE AND THERE WITH THE EDITORS (CONT'D)

PRIZES FOR DESIGNS FOR PLANES TO LIFT HEAVY LOADS

Airplane designers who have plans for machines capable of lifting and carrying exceptionally heavy loads now have an opportunity to compete for \$5,000 in prizes. The contest is to be conducted by the Aerial L. of Am., 280 Madison Avenue, N. Y., and calls for designs of planes able to lift 20, 50, 100, 150, 200 tons cargo. The competition is expected to bring out many new ideas in weight lifting, wing design, and cargo carrying fuselages, and to have a large educational value. Enterprising shipping interests already have intimated their readiness to undertake aerial shipment as soon as adequate and efficient machines are demonstrated. (Popular Mechanics Magazine, December, 1920)

USE BALLOON TO EXPLORE HIGH AIR CURRENTS

At Wisconsin University from roof of the Zoological building, balloons are sent up twice daily to test air currents high above the earth. The information secured by the balloon is telegraphed to Washington for use in making the daily weather maps and forecasts. So far 350 flights have been made at the University.

An altitude of 19,000 meters or 12 miles was recently reached by one balloon.

Besides showing direction and velocity of air currents at various heights above the earth the balloons show the height of the clouds and the clarity of the air.

Flights of balloons are followed through telescope. Readings are taken each minute and computed and plotted on a chart.

(Illustrated World, December, 1920)

1000 BOMBAY CITIZENS FLY

The HC-9 having given joy rides to a thousand Bombay citizens, has proceeded to Karachi for further successful demonstrations. By the time the HC-9 returns to Calcutta it will have covered more of India than the average inhabitant of India sees in a life time. (The Acc, November 1, 1920)

THINKS OIL WILL RUN NEXT WAR

"If there is another great war it will be won by the nation most plentifully supplied with fuel oil", said Prof. Ernest H. Peabody of the Massachusetts Institute of Technology in reading a paper today on "recent advance in oil burning" before the twenty-eighth general meeting of the Society of Naval Architects and Marine Engineers.

"During the war", said Prof. Peabody, "the use of oil for the generation of steam presented an unprecedented importance, and the next great war cannot be won by any nation whose supply of oil will not successfully meet a stupendous demand. It must be hoped that our own government will immediately and adequately recognize this condition."

THE FUTURE AIRPLANE

The Dayton Herald of 11/10/20 published an interesting photograph of an enormous German Zeppelin airplane, designed for trans-Atlantic service. The distinctive feature of the plane was that it was a monoplane. The trend of airplane design today seems to be away from the biplane of the past several years and back to the monoplane which many had thought was in the discard.

While America is lagging behind, Europe is driving ahead in the development of aeronautics. Paris reports a \$25,000 prize for improvement in airplane security, and one of the bids for this prize is made by a plane with folding wings - wings that fold up from 20 feet to five feet when landing. Fokker, the Dutch expert, who designed the best German war planes, has developed a one-wing plane, with the fuselage attached under center. It, too, is reported to have contrivances for folding up this one wing.

The pioneers who blazed the trail for present-day aeronauts, began the development of aviation by studying the flight of birds. Apparently, after having wandered as far afield as the Caproni triplane, aviation is returning once more to the starting point of its discoveries. Airplanes are being designed more and more after the fashion of birds. Folding wings, single wings and wings of greater flexibility may prove the making of real aeronautical achievement. (Dayton Herald 11/10/20)

ELECTRIC HEAT KEEPS PLANES READY FOR QUICK STARTING

The motor of the airplane is nine-tenths of the outfit. Freeze it up or let the oil stiffen or congeal, and your plane is worth nothing. Uncle Sam's flying machines used in air mail service have, therefore, been provided with portable electric heaters which are hooked to the under side of the crank case as soon as they reach the hangar in Cleveland. The heat provided prevents the rapid cooling off and eliminates the delays incident to starting a cold motor. Accompanying photographs show what this heater looks like.

(Illustrated World, December, 1920)

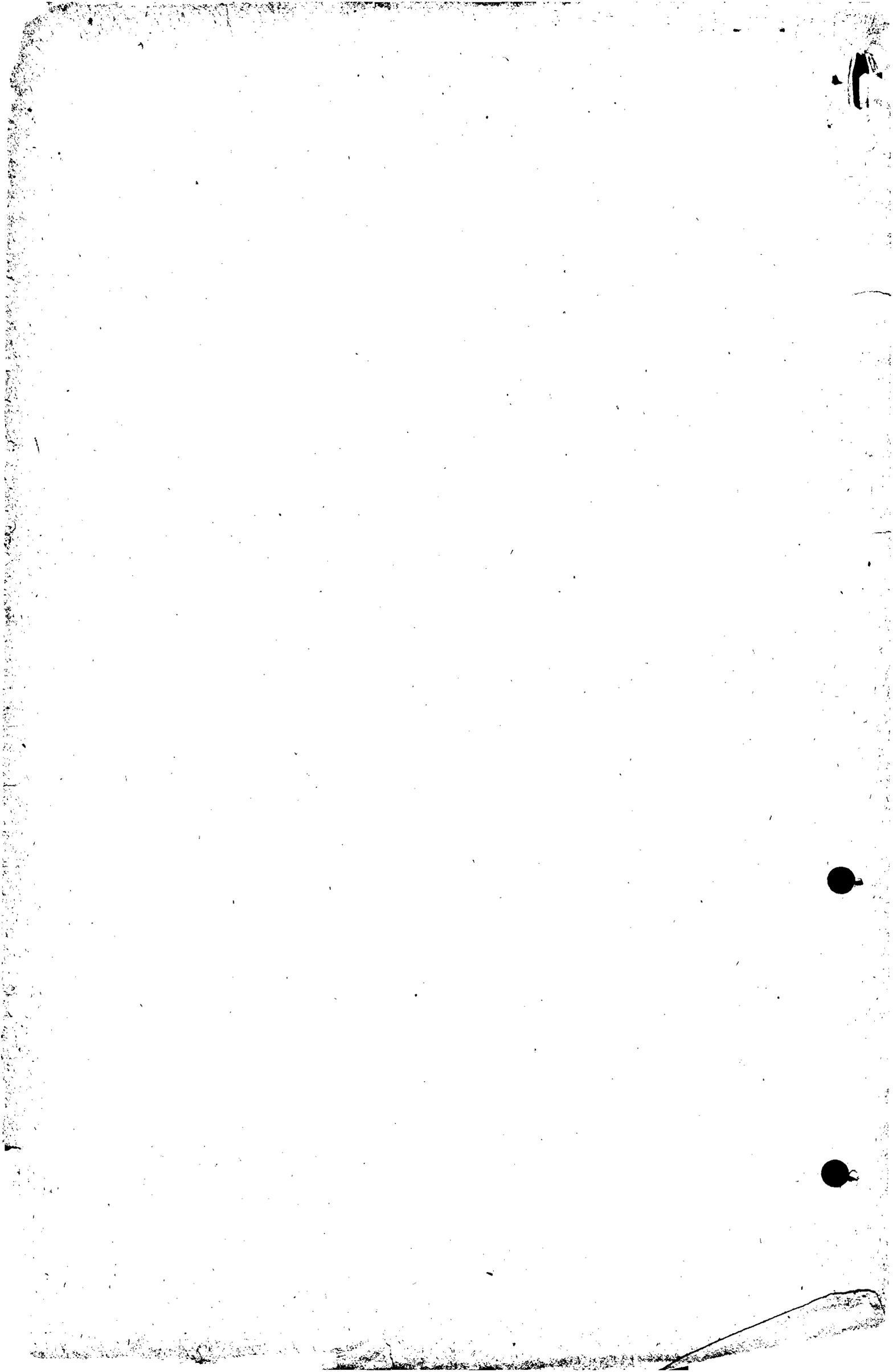
A I R S E R V I C E N E W S L E T T E R

Information Group
Air Service

November 30, 1920.

Building B
Washington, D. C.INFORMATION OBTAINED FROM OPERATIONS
REPORTS OF TACTICAL UNITS FOR WEEK ENDING OCTOBER 30, 1920STATIONS, FLYING TIME AND AVAILABILITY OF PLANES:

<u>Name of Stations</u>	<u>Location</u>	<u>Flying Time</u>	<u>Planes on hand</u>	<u>Planes Avail.</u>
1st Aero - Obs.	Mitchel Field, Mineola, L. I.	17:50	18	16
1st Obs. Group				
2nd Aero - Obs.	Fort Mills, P. I.	No report		
3rd Aero - Obs.	Camp Stotsenburg, Pampanga, P.I.	No report		
5th Aero - Obs.	Mitchel Field, Mineola, L.I.	15:50	17	12
2nd Obs. Group				
(4th & 6th Sqdns.)	Luke Field, Ford's Is., H.T.		25	13(10-16)
3rd Obs. Group				
7th Aero - Obs.	France Field, Panama, C.Z.	8:20	161	16(10-23)
8th-A Aero - Sur	McAllen, Texas	26:05	13	5
8th-B Aero - Sur	Pope Field, Camp Bragg, N.C.	8:40	2	2
9th Aero - Obs	Mather Field, Sacramento, Calif.	No report		
10th & 99th - Obs	Bolling Field, Anacostia, D. C.	41:06	17	11
11th Aero - Bomb.	Kelly Field, San Antonio, Texas	2:10	4	3
12th-A Aero - Sur.	Douglas, Arizona	15:15	5	2
12th-B Aero - Sur.	Nogales, Arizona	62:35	6	5
20th Aero - Bomb.	Kelly Field, San Antonio, Texas		2	2
27th Aero - Pur.	Kelly Field, San Antonio, Texas	14:45	21	8
50th Aero - Obs.	Langley Field, Hampton, Va.	14:55	15	9
88th Aero - Obs.	Langley Field, Hampton, Va.	7:08	12	9
90th-A Aero - Sur.	Del Rio, Texas	13:25	8	4
90th-B Aero - Sur.	Sanderson, Texas	13:25	8	8
91st A Aero - Sur.	Mather Field, Mills, Calif.	No report		
91st Aero - Sur.	Rockwell Field, Coronado, Calif.	No report		
94th Aero - Pur.	Kelly Field, San Antonio, Texas	15:05	23	6
95th Aero - Pur.	Kelly Field, San Antonio, Texas	15:35	24	12
96th Aero - Bomb.	Kelly Field, San Antonio, Texas	8:35	9	1
104th-A Aero - Sur.	Fort Bliss, Texas	11:35	15	8
104th-B Aero - Sur.	Attached to 135th-B, Post Field Fort Sill, Okla.			
135th-A Aero - Obs.	Fort Leavenworth, Kansas	4:30	8	5
135th-B Aero - Obs.	Post Field, Fort Sill, Okla.	25:25	14	6
147th Aero - Pur.	Kelly Field, San Antonio, Texas	8:55	23	6
166th Aero - Bomb.	Kelly Field, San Antonio, Texas	11:30	4	4
258th Aero - Bomb.	Aberdeen Proving Ground, Aberdeen, Md.	8:09	31	23
Air Service Troops	Camp Benning, Ga.	No report		
Air Service Troops	Godman Field, Ky.	2:15	17	7
Air Service Troops	Pope Field, Camp Bragg, N. C.	5:30	16	6
1st Bomb. Group				
Hdqtrs. Det.	Kelly Field, San Antonio, Texas	52:15	11	10
		430:48	529	219



"TACTICAL OPERATIONS

STATIONS	SQUADRONS	PERCENTAGE DAYLIGHT	TOTAL NO. FLIGHTS	PRACTICE FLIGHTS	SPECIAL MISSION	CROSS COUNTRY	PA-TROL
Ft. Bliss, Tex.	104th - Flight A	80%	11	4		2	
Del Rio, "	90th " "	60%	11		4		
Douglas, Ariz.	12th " "	85%	13	2		2	2
Eugene, Oregon							
McAllen, Tex.	8th " "	100%	12		5	1	
Mather, Calif.	9th Aero	-	-	-	-	-	
Nogales, Ariz.	12th Aero Flt. B	100%	35	6		28	1
Sanderson	90th " " "	100%	14	7	3		
Rockwell	91st Aero						
Aberdeen	258th Bombardment	-	30			2	
Bolling	10th & 99th Obs.	100%	42			13	
Camp Beiring							
France Field	3d Obs. 7th Aero	87%	34	29		3	
Ft. Leavenworth	135th Flight A	85%	19				
Godman	A.S. Detachment	45%	8	5			
Kelly Field	1st Bombardment Grp.	75%					
"	Headquarters Detach.		163				
"	11th Aero Squadron		57				
"	96th " "		12				
"	160th " "		34				
"	20th " "		12				
1st Pursuit Group		89%					
	27th " "		40				
	94th " "		19				
	95th " "		24				
	147th " "		10				
Langley	50th " "	85%	16	13		1	
"	88th		48	23		1	
Luke Field	2-4 & 6 Obs.	85%	23				
Mitchel	1st Aero Squad.	66%	35	7		4	
"	5th " "		27	6			
Post Field	135th Flight B	90%	69				
Pope Field	A.S. Detachment	100%	8				
"	8th Aero Squadron		14				
Philippines	2 - Aero "						
"	3 - Aero "						

"FOR OFFICIAL USE ONLY"

The purpose of this letter is to keep the personnel of the Air Service both in Washington and in the field, informed as to the activities of the Air Service in general, and for release to the public press.

FOR RELEASE DECEMBER 8, 1920.

**LIEUTENANT MOSELEY'S VICTORY:
RACE FOR PULITZER TROPHY MARKS AN EPOCH IN AVIATION.**

The race for the Pulitzer Trophy marks an epoch in the history of aviation. The winning of the race by a U.S. Army officer flying an American built airplane, and the additional number of honors captured by American pilots flying American designed machines, strike the highest note this country has contributed to aeronautics since the Wright Brothers wrought the miracle of the air at Kitty Hawk in 1908.

Forty thousand people witnessed the race at Mitchel Field, Mineola, on Thanksgiving Day, and when Lieutenant Corliss C. Moseley, driving his 600 h.p. Verville Packard at an average speed of 3 miles a minute for the entire 132 mile course made his smashing victory, the crowds became so wildly enthusiastic that they broke down the ropes and ran pell mell across the course to offer congratulations, despite the effort of the Military Police to restrain such spontaneous demonstration.

Viewed from every possible aspect, the race stands prominently forth as one of the most successful aerial events ever held. The records made will not soon or easily be beaten, and happily, of the total of thirty-four planes which made the start not one had a serious mishap, and not a single pilot suffered a serious injury. This means that the first of the Pulitzer races will mark the point in the history of aviation at which the public begins to realize that flying is, intrinsically, a safe means of locomotion provided the machines are properly built and are driven by skilled pilots. It cannot but be a matter of immense satisfaction to the public at large that American machines gained so signal a victory over those of any other countries, and, naturally, the Army Air Service is not a little proud of the number of distinguished honors won by its officers and its airplanes.

Lieutenant Moseley's complete race record is as follows: First lap, 11 minutes, 6.7 seconds; second lap, 11 minutes, 37 seconds; third lap, 11 minutes, 7.208 seconds; fourth lap, 11 minutes, 15.32 seconds; total, 44 minutes, 29.57 seconds; average per hour, 178 miles.

The achievement of Capt. H.E. Hartney, flying a Thomas-Morse 300 h.p. Wright motor, whose time was but 2 minutes, 30 seconds slower than Lt. Moseley's was not less notable, his skilled driving of a "stock" plane eliciting the admiration of all aviators.

Third prize went to Bert Acosta, one of the few civilian entries, flying the Italian Ansaldo S.V.A. with a 225 h.p. motor, while Lt. St. Clair Streett, who commanded the Alaskan Flying Expedition took fourth with an Ordnance 300 h.p.

By reason of the illness of his brother at Asheville, North Carolina, Lieutenant R.C. Moffatt, who was among the Army Air Service entries, was compelled to withdraw several days before the race occurred.

The event was conducted by the Aero Club of America, which at this date, has not rendered an exact official report. In the absence of the official figures, which will be published as soon as obtainable, the following figures are quoted from the press reports. It will be borne in mind, that under the Army regulations, army contestants cannot accept prizes of intrinsic or money value.

First prize, possession of Pulitzer Trophy for one year, gold plaque, \$1800 in Liberty Bonds; second prize, \$900 in Liberty Bonds, silver plaque; third prize, \$500 in Liberty Bonds, bronze plaque.

Distance 132 miles; 4 laps of 33 miles.

Finished	Pilot	Machine	Elapsed	Time
1-----	Captain C.C. Moseley,	U.S. Verville-Packard		44:29:57
2-----	Captain H.E. Hartney,	U.S.A. Thomas-Morse		47:00:03
3-----	Albert Acosta (Civilian)	Ansaldo (Itln.)		51:57:62
4-----	Lieutenant St. Clair Streett,	U.S.A. Ordnance		57:27:02
5-----	Lieutenant A. Laverents,	U.S.N. Vought		55:39:19
6-----	Lieutenant John P. Rouillot,	U.S.A. DeHaviland		56:36:58
7-----	Lieutenant Carl Eliason,	U.S.A. DeHaviland		56:09:39
8-----	Lieutenant J.B. Wright,	U.S.A. DeHaviland		56:52:20
9-----	Lieutenant Charles M. Cummings,	U.S.A. DeHaviland		57:08:12
10-----	Lieutenant D.J. Conly,	U.S.N. DeHaviland		57:40:76

CONTEST COMMITTEE INVITATION CLASS

Prize, Aero Club Aviation Trophy.

Finished	Pilot	Time
-----	Captain H.E. Hartney, U.S.A.	47:00:03
-----	Lieutenant St. Clair Streett, U.S.A.	52:27:02

DE HAVILAND CLASS

First prize, \$400, second prize, \$200.

-----	Lieutenant John P. Rouillot, U.S.A.	56:06:58
-----	Lieutenant Carl Eliason	56:09:39

VOUGHT CLASS

First prize, \$400, second prize, \$200.

-----	Lieutenant A. Laverents, U.S.N.	55:39:19
-----	Lieutenant W.R. Gwyn, U.S.N.	59:59:63

S E 5 CLASS

First prize, \$400, second prize, \$200.

-----	Captain Maxwell Kirby, U.S.A. (No others qualified)	59:42:67
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NAVY CONGRATULATES THE ARMY

The following letter from Captain Thomas T. Craven, director of division of Naval Aviation, extending congratulations to Maj. Gen. Charles T. Mencher, Chief of Army Air Service, upon the results of the Thanksgiving Day Race for the Pulitzer trophy, when the Army Air Service won such signal honors, is greatly appreciated:

November 29, 1920.

Dear General:

I would like to extend my congratulations to all those of the Air Service who were concerned in the events of Thanksgiving Day at Mineola.

The performance there was most creditable and remarkable in every way. That such a big event should have been carried off without a hitch or casualty was in itself a considerable achievement, and as a sporting event, the meet was certainly a great success.

The Army Air Service certainly did itself proud, and we of the Navy wish the Air Service to understand that we appreciate and admire the way in which things were put across.

With best wishes,

Very truly yours,

Thomas T. Craven.

Maj. Gen. C. T. Mencher, USA.
Air Service, War Department,
Washington, D. C.

LIEUTENANT CORLISS C. MOSELEY
FIRST WINNER OF THE PULITZER TROPHY

First Lieutenant Corliss C. Moseley, A. S. A. who, by his signal victory of Thanksgiving Day, becomes the first defender of the Pulitzer Trophy, thereby gaining for himself the title of "The Three Mile a Minute Man", holds an enviable record as an aviator. It will be remembered that, when Major Schroeder flew the Verville Packard in the International Race for the Gordon-Bennett Trophy at Etampes, France, Sept. 27-Oct. 3, Lt. Moseley was his second pilot. In that event Sadi Lacoite won, establishing the world's race record, averaging for the course a rate of a little better than 169 miles per hour for cross-country flying.

Following the Gordon Bennett race, one of the entrants, Count Bernard de Romanet, set up a new speed record by a straight-way flight at Buc Aerodrome on Nov. 4, by making a speed that would equal 192 miles an hour.

While Lieutenant Moseley in no single lap of his flight in the Pulitzer event equalled the de Romanet straight-way speed of 192 miles per hour, his average of 178 miles per hour for cross-country flying has Lacoite's average bested, and so establishes a new world's race record.

The Pulitzer Trophy, a beautiful silver figure of a woman holding in her uplifted hands an airplane, symbolizing the spirit of speed, was presented to Lieutenant Moseley on the evening of November 26 at a dinner given in his honor at the New York Yacht Club.

A brief history of Lieutenant Moseley's record will be of interest:

Age: 23. Education: Graduate of University of Southern California. Military Experience: Received commission at Second Aviation Instruction Center, Tours, France, on April 9, 1918. Received 1st Lieutenancy May 8, 1918. Graduated from Aerial Gunnery School at Caseaux, France, September 7, 1918. Assigned to 141st Aero Squadron for duty, per S.O. No. 45, Par. 27, dated September 24, 1918. Assigned to the 95th Aero Squadron as per S.O. No. 47, Par. 26, dated September 26, 1918, for duty at Rambecourt, France, which squadron was in actual combat at the front. Transferred to the 27th Aero Squadron, 1st Pursuit Group, on October 11, 1918. Transferred to the 5th Pursuit Group at Toul, France on December 14, 1918. Promoted to Captain May 12, 1919. Graded as Military Airplane Pilot, June 17, 1920. Appointed as Chief, Primary and Technical Section, Officer Director of Air Service, Washington, D. C., June 7, 1920.

Lieutenant Moseley has flown many different types of machines such as DH-4, Spad, Salmson, Brequet, Sopwith-Campbell, SE-5, Fokker, Rumpler and other types. He has also seen service over the lines and has one official enemy airplane to his credit.

DEATH BY AIRPLANE ACCIDENT OF CAPTAIN MAX L. MCCOLLOUGH

In the death of Captain Max L. McCollough by an accident to his airplane while taking a practice flight at Bolling Field on the afternoon of November 23, the U. S. Army Air Service lost one of its most valuable and most popular officers. Recognized as an expert on commercial aviation, Captain McCollough was one of the first Air Service ^{officers} to be re-commissioned under the terms of the Army reorganization law when it became effective last July.

Captain McCollough, who had 160 hours flying to his credit, was using a JN-6-H. Taking off at 2:30 P.M. and heading directly toward the wind, which was blowing a steady gale, Captain McCollough had completed his course and was coming in when the accident occurred.

Before entering the military service, Captain McCollough was assistant to the Governor of Moro Province in the District of Davao, Mindanao, Philippine Islands, and was for a long time secretary of the District. The duties which he performed demanded the exercise of those qualities which Captain McCollough

possessed in the highest degree; namely: tact, originality and executive ability. His work was thoroughly creditable and of distinct value in the establishment of better conditions in the Moro Province. Captain McCollough's military service is recorded briefly in the following data:

- Aug. 15, 1917 - Commissioned Captain Infantry, N.A., at Presidio of San Francisco, California.
- Aug. 27, 1917 - Reported for duty Camp Lewis, Washington, and assigned to 131st Infantry.
- Aug. 27 to Feb. 12, 1918 - On duty as Captain Co. D, 361st Infantry.
- Feb. 12, 1918 - Commissioned as Captain Aviation Section, Signal Reserve Corps.
- Feb. 12, 1918 - Ordered to Dorr Field, Arcadia, California for duty.
- Feb. 20, 1918 - Adjutant Dorr Field.
- Feb. 20 to Dec. 3, 1918 - Post Adjutant.
- Dec. 4, 1918 - Appointed executive officer, Dorr Field.
- April 21, 1919 - Transferred to office Directory Military Aeronautics, (Chief of Air Service), Washington, D.C.

In the office of the Chief of Air Service Captain McCollough was assigned to duty in the Information Group, a department of the work to which he was admirably fitted, his knowledge of commercial aviation in its various phases making his services of inestimable value.

A native of San Jose, California, a graduate of Leland Stanford University Captain McCollough was 41 years old, and unmarried. While in Washington, he made his home at the Delta Tau Delta fraternity house on Massachusetts Avenue.

Especially beloved by his associates, Captain McCollough's death cast a gloom over the entire personnel of the office where he was a familiar figure.

Buried with military honors at Arlington on Monday, November 29, at 2 P.M., the following officers acted as honorary pall-bearers: Major Horace M. Hickam, Captain Ernest L. Jones, Captain David S. Seaton, Lieutenants William V. Andrews, Henry J. Spalding, and Charles H. Mills. One hundred or more officers from the office of the Chief of Air Service and from Bolling Field formed the military escort, while a number of Delta Tau Delta fraternity men attended the funeral in a body.

Funeral services were conducted by Dr. Earl Wilfrey, pastor of the Vermont Avenue Christian church.

Those of Captain McCollough's relatives present at the funeral were his brother, J.H. McCollough of San Jose, California, and his cousin, Dr. Harvey Wiley, the famous pure food specialist, and Mrs. Wiley.

PURSUIT GROUP ACTIVITIES, KELLY FIELD

The usual routine flying has been carried out by all available pilots during the past week on those days when the weather permitted, and a few cross country flights made.

Cadets Johnson and Cayton flew to border points in SE5's during the past week, both starting for McAllen, Texas; Cadet Johnson terminating his flight at Laredo and Cadet Cayton finally reaching McAllen after an eventful flight.

These two cadets took off at noon Saturday, taking an almost due south course along the S.A. & A.P. R.R. by error, due to low hanging clouds and fog, instead of along I. & G.N. as instructed, the purpose being for them to fly via Laredo to McAllen. Encountering mist and rain after about 30 minutes flying they endeavored to climb above the clouds and rain with the idea of proceeding by compass. Johnson succeeded in clearing the clouds at an altitude of 10,000 feet, and succeeded in reaching Laredo after making one landing, and being in the air 2 hours and 30 minutes.

Cadet Cayton after climbing to an altitude of 3,500 feet experienced some difficulty in maintaining his course and equilibrium in the solid clouds and returned to within sight of the earth, flying along the S.A. & A.P. R.R. to Corpus Christi. During the greater part of the flight rain was encountered which often made it necessary to fly at less than 100 feet altitude in order to follow the course. After "gassing" up at Corpus Christi and it having cleared somewhat, Cayton proceeded to fly by compass towards McAllen but again after twenty minutes of flight rain was encountered. The terrain now being flown over was unbroken

mesquite and small underbrush, making a safe landing impossible. Flying at an altitude of less than fifty feet for thirty minutes or thereabout, keeping a sharp watchout for a possible landing field, Cayton proceeded on his flight until his prop began to vibrate due to rain eating into blades of propeller. He then decided to attempt to climb above the clouds and rain and did so by spiralling up after finding a pocket in which the clouds were thin and partially visible, clearing the clouds at an altitude of 6,000 feet at which height he flew until he thought McAllen should be close by. Coming down below the clouds the flight was continued until the Rio Grande River was reached and the sun having gone down a landing was safely negotiated just northwest of Salineno about 50 miles west of McAllen. Due to loss of compression he was unable to start his motor the next day and it was necessary to call on McAllen for assistance. After this the flight was uneventful, being finished via Laredo to Kelly. Cadet Cayton declared it was a wonderful experience and is of the opinion that the trip was rich in instructive value in cross country flying.

Both Cadet Cayton and Johnson had a landing wire break in the air while on this trip, but experienced no inconvenience to speak of on account of these accidents.

BOMBARDMENT GROUP ACTIVITIES, KELLY FIELD

Thursday was observed as Group Organization Day by the First Day Bombardment Group. Addresses were given by Lieutenants Palmer, Commanding Officer, by Chaplains Monahan and Swanson, also by Lieutenant W. R. Maynard. Lieut. Maynard is the only officer present who served over-seas with the Bombardment Group. The history of the Group was read to the men.

On November 6, 1918, a thirty five ship formation crossed the enemy lines on a bombing raid. As a defensive unit they shot down nineteen German ships, and only lost two of their own. On this mission several thousand pounds of bombs were dropped, causing considerable damage to enemy fortifications. The afternoon was declared a Holiday!

The Camp Hostess, at the Hostess House, gave the Group a dance in honor of their Organization day.

172 FLIGHTS AT MARCH FIELD

One hundred seventy-two flights were made from March Field during the past week. Flying time was 143 hrs. 45 min.; including 54 hrs. 35 min. preliminary instruction; 38 hrs. 35 min. advance instruction; 46 hrs. 55 min. miscellaneous flights and 3 hrs. 20 min. test. Approximate mileage covered 9,130.

122 GRADUATES FROM AIR SERVICE MECHANICS SCHOOL, KELLY FIELD

During the month of October, one-hundred and two students were graduated from the Air Service Mechanics School; fifty-eight were graduated from the Course for Engine Mechanics; fifteen from the Course for Airplane Mechanics and Parachute Repairmen; five from the Course for Parachute Repairmen; fourteen from the Course for Airplane Mechanics; and ten from the Course for Auto Repairmen. At the completion of their work, these men were sent to nineteen different Air Service Stations in the United States.

AVIATION THE INDUSTRY OF THE FUTURE ✓

The following article written by Staff Sergeant C. W. Manning of Kelly Field, is not only an excellent boost for aviation, but an evidence of the morale that prevails at this school, where men are trained for efficiency:

"The writer prophesies that within a very few years Aviation will be the leading industry of this country, and that the young man who takes up the study of this industry now, and sticks to it will, within a few years be earning more money than he ever dreamed of earning.

In 1908, the Wright Brothers of Dayton, Ohio, were practically unknown to the world at large and among their friends they were known as 'dreamers' of impossible dreams.

The dream they had was one as old as man himself - the problem as to how man could defy the laws of gravity and soar into the upper air like birds.

They had a small Bicycle Repair Shop in Dayton, Ohio, where they sold and repaired bicycles and 'dreamed their dreams'.

The world as a whole, laughed at them, but Wilbur and Orville Wright paid no heed to the adverse opinion and dreamed on until one day in 1908 the world was electrified by the news that at last man had accomplished the impossible, and sustained himself in free and controlled flight by means of a man-made apparatus!

In this manner were the age-old dreams of man accomplished.

Having accomplished the 'impossible', the name of Wright Brothers soon became a household word wherever men congregated and the news traveled - they had flown!

The first flight, made at Kitty Hawk, North Carolina, was merely a hop into the air, a few hundred feet in a straight line and a landing, no turn being attempted at that time. That was a bare twelve years ago, yet, within the last year man has soared into the upper ether over six miles above the earth and made a continuous flight of over twenty-four hours. If progress continues to be made at the same rate for the next twelve years as it has in the past, and there is no reason to show that it will not advance more, then it is within the bounds of possibility that, by 1932 man will be able to completely circumnavigate the globe within a day!! This will be possible because he will be able to penetrate into the upper strata of the atmosphere where, due to the decreased resistance offered, he will be able to attain to speeds which are even now, undreamed of.

The young man who desires to take up the study of this fascinating game as a means of earning his living will, just at this time, find difficulty in getting a position among the comparatively few manufacturers of aircraft in this country; for this industry, like all other business enterprises in the country, is in the throes of re-adjustment following the feverish activity of war-time manufacturing.

However, the invaluable lessons learned by the manufacturers during the time they were building war planes are at present being utilized in the designing and building of machines in which the 'factor of safety' is not disregarded in order to obtain speed, maneuverability and high altitudes as it was in the war machine.

It will take some time to make the necessary changes and re-adjustments which will place aviation where it will mean a great deal in our industrial life, and in the meantime YOU, young man, will be growing older, and this is without a doubt, the 'age of youth'.

If you attempt to find a remunerative position in the Aviation industry today, unless you are a highly trained specialist in some phase of this business you will find no openings. If you decide to wait until the time when the business grows to such an extent that you can find a position, then you may be too old. This is a young man's game.

Now is the time for you to start learning if you are ever to know anything that will do you any real good in your future life, and there is just one place in this country where you will have no difficulty in obtaining a position where you can learn all there is to know about Aviation.

The Government will give you a position, send you to school and teach you Aviation from the ground up under the supervision of some of the most expert men in the whole country--men who have been with the game since its beginning and who are without a peer in their line. In addition to teaching you, the Government will pay you to learn. It will clothe you, feed you, give you heat, light and medical attendance at the same time; the only requirement on your part being that you will study when given a chance to do so.

The Government maintains an enormous school down in Texas where they do nothing but teach men the different branches of Aviation. This school, under the supervision of Captain George E. Stratemyer, A.S., is the most completely equipped school of its kind in the world. Nothing new in aviation comes out that it is not sent to the Air Service Mechanics School first, where the men are given instruction

in the construction and operation of the thing in question.

An enlistment period in the Air Service covers a period of three years; within the next three years the Aviation Industry will have found itself and will need trained men; you will step out of the service into commercial aviation, an expert; you lose no time, you are young; you have been paid for three years while learning, and you will have no difficulty in finding employment in your chosen field. Sounds good to you? Why of course it does, for it is common sense.

The writer predicts that, if you enlist in the American Air Service for three years and study, you will have cause to look back on that period of your life in future years, as the most pleasant, beneficial period of time in your life.

Then follow the dictates of your better self and enlist in the Air Service United States Army, and REALIZE YOUR DREAM IN LIFE.

POST FIELD TO FABRICATE COMPLETE SPHERICAL BALLOON

The basis of successful endeavor is a thorough knowledge of essential details. The Balloon and Airship personnel are realizing this, and an example of this realization is given at Post Field, Fort Sill, Oklahoma. It is planned to fabricate at this field a complete spherical balloon. The work is to be done by the enlisted men of the field under the direction of the officers. The balloon will be made of salvaged materials. The men will select the fabrics, test them, cut them, fit them, and assemble them in the finished balloon. Further than this it is planned to make a net for the balloon with all the difficulties of rigging-assembly which that entails. This balloon is expected to fly in regular free balloon service. The man who flies in that balloon, knowing that it is a product of his work and that of his associates, will appreciate what a thorough knowledge of essential details means. Later, perhaps, when he helps to put into service a million foot airship, he will realize this still more keenly. When he stands in the navigating room of the ten million foot airship of the not distant future, he will act in full confidence in controlling the flight of his huge air vessel because he knows that the ship has always been handled by men who, like himself, were taught their profession in a service which gave full consideration to the basic importance of essential details. Consider the potential value of Fort Sill's adventure in balloon making.

NEW ERA IN MOTOR PERFORMANCE AT CARLSTROM FIELD

The Engineering Department at Carlstrom Field reports that it is getting remarkable performance from its motors; such performance as they believe sets a new record in this line.

Instead of its being necessary to send a motor to the overhaul after thirty-five or fifty hours in the air, it is now possible to get two hundred and even two hundred and fifty hours from the Hispano-Suiza motors being used there. These power plants do not wheeze and cough at this venerable age, either; they make up to 1450 revolutions like the fresh ones, and are as reliable. One motor even shows that it is going to outlast its wings and fuselage.

This remarkable success is attributed to care used in cooling the motors -- "jazzing the throttle" while the motor is idling for a landing or on the ground, the ability of Lieutenants Frederick Johnson and Omar Neirgarth, in charge of motors, and the fine work and enthusiasm of the men in the shops.

The above seems the more remarkable when it is remembered that these motors are used for instruction of cadets and student officers.

SUCCESSFUL ARTILLERY SHOOT AT FT. DADE

A very successful artillery shoot has just been completed at Fort Dade, near Carlstrom Field. Five hundred rounds were used, and all corrections were reported to the batteries by wireless telephone from an airplane.

The speed with which the guns were put on the target was a surprise to the artillerymen. All targets were land targets, and all except one were invisible to the batteries. Captain Keane, a student officer, made the corrections for all except the last shoot. This, a demolition problem, was done by Cadet Bear. Although it was his first shoot, Cadet Bear put the guns on the target like an

experienced artilleryman, very much to the surprise of all. Lieutenant R. C. MacDonald piloted for all the shoots, and Captain Shumaker installed the wireless 'phone.

CADET SENTENCED FOR UNAUTHORIZED FLIGHT

A point of interest to the whole Air Service has been settled by the approval in the Judge Advocate's Office of a courtmartial held at Carlstrom Field. In the case referred to a cadet took up a ship without any authority whatever, flew about for his own amusement for a time, and then landed it at a nearby town. In landing he smashed the plane so that it caught fire, and walked off without putting out the fire. The sentence is a year's imprisonment and dishonorable discharge.

DEPARTMENT OF COMMERCIAL AVIATION

The Department of Commercial Aviation has been added to the Weekly News Letter for a definite purpose. It is designed to promote the interests of civil Aviation by letting the public know just what is being done in this regard in our own and in foreign countries. To this end we invite contributions to this department from those who may have information that will be of general interest pertaining to any and all branches of commercial aviation.

CIVIL AVIATION A NATIONAL QUESTION

In considering the question of civil aviation, it must be borne in mind that its development is a matter of national importance, not alone for its commercial value, which, of course, should not in any way be underrated, but, more especially on account of its influence in a crisis such as that brought about by the war just passed. The uses of aviation in warfare have been rendered so obvious that its effect in future wars can easily be imagined.

It is, therefore, of immense importance to keep the aviation industry going and to be sure that there is being maintained an organization from which machines and trained men could be drawn in time of stress to supplement the aerial branch of the Military arm. Properly developed civil aviation would constitute such a reserve, and at one and the same time, perform its function in the world of commerce.

The question presents itself to every thinking mind: will commercial aviation pay? The answer to this vital question is most emphatic: it must be made to pay. Its vital necessity demands, not only its existence, but its development to the highest possible point if it is to perform its function of giving efficient service in time of national stress. That commercial aviation will pay its own way, once it gets over the pioneer stage, there is not a shadow of doubt in the mind of any thinking individual.

The realization of this as a fact will materially simplify the question to be considered, namely: that every assistance possible must be given the pioneers who are striving to develop commercial aviation along any line, whether in the manufacture of aircraft, the organization and operation of aerial transport lines, the development of aerial photography, the initiation and extension of aerial advertising or in any other direction.

How this encouragement and assistance may be put on a national basis is a matter that is just now exercising the attention of all of the great countries. France has adopted a system of out-and-out subsidy, based upon the service rendered. The British Committee on civil aviation has also set aside a small allowance in the interest of aircraft manufacturers.

The problem on this side of the Atlantic will be more difficult than in western Europe, because of the tremendous expanse of this country, and the corresponding difficulty in working out a complete and co-ordinated organization.

Nevertheless, our trans-continental mail service is now in successful operation; and our neighbor, Canada, is reported by the press to have arranged to open up a mail service between Halifax and Vancouver. The successful completion of the Alaskan Flying Expedition recently undertaken by the U. S. Army Air Service gives additional proof that the matter of distance is simply one of degree.

The United States must develop commercial aviation as a self-sustaining, efficient, dependable industry to be relied upon to function properly in the hour of national need. How this is to be done should engage the immediate attention of legislators, of government and other agencies at work for the public good.

France.

FRENCH CODE OF AIR REGULATIONS ✓

The new code of regulations issued in France by the Under-Secretariat for Aeronautics is most complete and shows conclusively the trend toward the development of commercial aviation by government recognition of the industry and the establishing of laws for minimizing the risks. The regulations cover many topics, as air material, personnel, landing places, wireless communications, etc. Government testing of all material will be strictly enforced. A manufacturer wishing to construct a new machine will be required to submit his plans to the technical section of the Air Department. After the plans have been approved, the construction of the machine is supervised, and trials must take place under the direction of a Government representative. Should the tests prove the machine to be reliable, the manufacturers will receive a "certificat de navigabilite" and a "certificat d'immatriculation".

Armed with these certificates, he must make application to the National Aeronautical Society for a tag bearing a distinguishing group of letters, arranged much on the same system as motor-car numbers, as many as 16,000 combinations having been arranged for this purpose. The letter "F" showing that all machines are registered in France, precedes every combination. By this system of tags, the aerial navigation service is enabled to know at once the registered number of every aeroplane, its owner, the port of registry, the date of its construction, and its history, including repairs, etc. The regulations provide for an inspection of a plane by qualified inspectors after each 100 hours of flight, with a full report entered on the books of the port of registry. Any damage or mishaps, however, slight, must be reported, and the machine must be examined by an inspector after it has been repaired.

According to the "Auto", up to September, 1920, there had been issued 350 certificats d'immatriculation. That is to say, on that date there were 350 machines for public aerial transport as against 100 reported in July.

In view of the very considerable increase in aerial passenger and freight service, permits to pilots will, in future, be of three kinds: (1) tourist pilot's permit: (2) public transport pilot's permit: (3) navigator's permit.

A tourist's permit will be issued to a pilot flying for his own pleasure, and not carrying paying passengers or freight. Ample proof of skill in the air will be required before the permit is issued. In order to obtain a public transport pilot's permit, it will first be necessary to hold a tourist's permit, but the test goes a great deal farther, requiring a written examination, and including night flying as well as a thorough knowledge of all the rules of the air.

The navigator's permit will be of two classes, first and second. The first class is for navigators accompanying pilots on long distance flights; the second class is for short distance flights when the pilot acts as his own navigator. Mechanics belonging to the navigating personnel will be required to pass an examination before they are permitted to fly.

Age limits have been fixed for all of these permits: a tourist permit may be granted at the age of 18; a mechanic's permit at the age of 19, while 21 is the lowest age at which the other permits may be obtained.

A very severe medical examination, repeated every six months will, of course, be required of all applicants, and different permits will be issued for aeroplanes and for seaplanes.

These regulations have been drawn up in an earnest endeavor to encourage and facilitate aerial activities, and, at the same time, to reduce to a minimum the risk incurred by the general public in making use of air transportation.

Japan.

ESTABLISHMENT OF AIR BOARD

The Osaka "Mainichi" of 9/25/20 contains the following excerpt from the speech of the War Minister before the local governors:

"Judging from the present condition of the world, the providing of all forms of service connected with aviation and the development of the business constitute, without doubt, an urgent and important question for the attention of our country. In the military direction the matter is now, at length, in the way of proper progress the light of hope being seen ahead. But in other directions the aspect is not so roseate. Only two or three companies or individuals are engaged in the building of air machines besides the Imperial Aviation Society (Teikoku Hiko Kyokai) which is the only civil aeronautical body devoting its energies to the promotion of the service. The number of civil fliers is, also, not large. We cannot but compare our incapacity in comparison with the Europeans and the Americans. The observance of a treaty concerning international aviation is also in sight. As a matter of course, the activity or inactivity in the matter of aviation will seriously affect us as a nation. There is immense necessity, therefore, for making proper provision for its development. For this reason, therefore, the Government decided some time ago to establish a Board of Air to take charge of the guidance, encouragement, protection and supervision concerning civil air service, and of control of aerial navigation and of all provisions pertaining to the air.

This office having been assigned to my control, I shall engage the activities of all concerned in forming necessary plans to insure steady progress, first of all issuing rules for control over aviation in the form of a departmental ordinance at an early date, and then the establishing of necessary regulations. However, the scope of the business being very wide, everything depends on the assistance and co-operation of all in respect to practical execution. Placing reliance on your zeal and enthusiasm, I earnestly desire to make our aviation world achieve a sound development through the united efforts of the official and the unofficial.

Chile.

PROGRESS IN COMMERCIAL AVIATION IN CHILE ✓

Chile was one of the first of the South American countries to show practical interest in aviation. While the government and commercial circles set the stamp of disapproval against flying for mere pleasure both have consistently supported and in every way encouraged aviation from a commercial point of view. In this connection - as in the case of Argentina - Chilean aerial enterprise has been greatly stimulated by both the British government and individual British concerns.

The presentation by Great Britain to the Chilean Government of three hydroplanes was followed later by six large aeroplanes and another giant aeroplane. The whole latter consignment was dispatched to Santiago where the machines were delivered formally to the Military School of Aviation. The biplanes were of the "bombing" type, each of 350 h.p., and especially adapted for long distance flights. The hydroplane was of giant proportions, possessing every modern device, and capable of a wide radius of action.

Apart from the practical interest displayed by the British Government, the British firms of Handley-Page, Limited; Vickers, Limited; and the John Thomas Aircraft Manufacturing Company, have exemplified their interest, having early regarded Chile as a country favorable for aviation development. The John Thomas Company proposed, some months ago, the establishment of a factory in Chile for the manufacture of aircraft, and the organization of an aerial postal service between the principal cities. Messrs. Vickers placed before the government of Chile an offer to establish a service of aero-navigation, the terms of which were accepted with certain modifications. They include the establishment of a small aerial transport company with sufficient capital to acquire six hydroplanes and six aeroplanes to carry mail, passengers and freight between the coast ports and interior points. The company also undertakes to build commercial machines and to establish a school of aviation.

Representatives of the Handley-Page Company, after making a tour of inspection of the country, proposed to introduce the "O" type machine possessing two motors of 700 h.p. each, and the "V" type of airplane summing 1500 h.p. Both machines are of the "bomber" type, fitted with Rolls-Royce motors. In this class of machine 5 or 6 passengers can travel comfortably, allowing 150 lbs. to the passenger, leaving over as dispensable weight capacity about 3,600 lbs. for baggage, mail and freight, the carrying weight being lessened, of course, proportionate to the length of flight.

As an instance of the possibility of employing these machines for transport in South America, the following estimate has been given for a flight from Valparaiso, Chile, to La Pallice, Spain, a journey which has hitherto necessitate 16 days under ordinary conditions, but which, under the itinerary of the Handley-Page project, could be completed within eleven days:-

Valparaiso to Buenos Aires-----	40 hours
Buenos Aires to Pernambuco -----	48 "
Pernambuco to La Pallice -----	192 "
Total -----	280 hours

England.

THE NORTH SEA AIR MAIL

The newly established British-Norwegian Air Traffic Company, operating direct from London to Christiania, expects by next spring to have fine machines in service, each carrying ten or more passengers. The fare one way is £20.

SQUADRON NEWS.

Pope Field, North Carolina.

A very interesting schedule of training was carried out during the past week introducing a course of instruction for officers and also a course for enlisted men. The course for officers includes lectures on Artillery Observation, which are being given by Lt. Johnson for the purpose of training the pilots principally so they might become more familiar with the work of the observer, and practical work on Airplane Rigging. These classes in rigging are very instructive and rather interesting at times, especially when one of the officers tries to tell the rest of us how an increase in "stagger" will decrease his "angle of attack."

The course of instruction for enlisted men is being carried out under the direct supervision of Lt. Crocker, engineer officer, who has very carefully selected his assistants from the men - commissioned officers who are graduates of the Air Service Mechanics School, Kelly Field. This course consists of practical and theoretical work on airplane motors, Liberty and Hispano, and affords excellent and interesting training for the men of this organization who have not had the opportunities of studying these subjects. So far the men seem very enthusiastic over this course of training.

This field with its organization is undergoing extensive changes in anticipation of a permanent station. Headquarters building has been "reclaimed" and new furniture installed in the different offices. All the walls have been burned with blow torches giving them the rustic appearance of a mottled stain and all the floors have been carefully "waxed" making the building a more liveable work shop. During the week this field was visited by a Farnham bi-plane piloted by Mr. Tucker of Charlotte, N.C., an old flying student of the Commanding Officer of this field, Lieut. Stoner. Tucker is agent for this plane and is making quite a few sales throughout this country.

March Field, Riverside, California.

Orders have been issued by the Adjutant General of the Army, directing Chaplain Edward L. Spalding, now at headquarters, 9th Corps Area, to report at March Field for assignment to duty. It is expected Chaplain Spalding will arrive at this field during the next week.

Successful landing of a DH-4 at the Los Angeles speedway during the past week assures an Air Service recruiting display on Thanksgiving Day at the mid-winter auto racing classic event. It is planned to fly all types of planes from this field to the Speedway next week where a complete display of Air Service equipment will be arranged.

Class room instruction of student officers and cadets is well under way. Flying instructors are reporting back from short leaves and preliminary flight instruction is expected to begin within the next week or ten days.

Captain Eugene G. Reinartz has reported from Mitchel Field, L.I., as flight surgeon for this field.

Major Oscar Westover and Major Harold Geiger, Air Service officers from Ross Field, Arcadia Balloon School, were visitors at March Field during the past week.

Aerial forest fire patrol operated from this base during the summer months has been discontinued for the winter season. Captain Ernest Clark is working on a complete report of the patrol operated over both the Los Angeles and Cleveland forest reserves and will release same for general information of the Air Service as soon as completed.

Carlstrom Field, Arcadia, Florida.

Congressman Drane and the newspaper editors of De Soto County visited the field on Friday, the first field "circus day" of the month, and observed the aerial events. They stated that the performances far exceeded what they believed was done at present on Army flying fields, and went home much gratified.

Five Liberties sent here from Birmingham, Ala., are having a somewhat hectic trip. One received a bad sprain in landing at Jacksonville, another broke its propeller at Daytona Beach, and is waiting there with its companion to be repaired by the crew of both and the other shows a clear road so far. Planes were in a rather poor state of repair when they started.

Brooks Field, San Antonio, Texas.

On account of inclement weather work on new hangar has been interrupted.

On the Red Cross drive several organizations of this field going 100% the entire field about 75%. Mrs. Thornall, wife of the Commanding Officer was in charge of drive at this Post.

Kelly Field and Brooks Field, old Air Service rivals, mixed in on the football field at Kelly November 6, score 32 to 6 in Kelly's favor.

Balloon hours in air for week -

No free balloon flights.

Temporary Storage Depot, Selfridge Field, Mount. Clemens, Mich.

To date fifty carloads of bituminous coal have been received at this station for storage purposes. This coal was in transit from the mines to Camp Custer, Michigan, when the abandonment of that camp was announced, making it necessary that shipments be diverted to another station. The unloading of this coal has taxed the capacities of our small personnel, but so far it has been accomplished without any great delay. It is expected that ten more carloads will complete the shipment.

The Motor Transport Officer at Fort Wayne, Michigan, has received authority from the War Department to utilize vacant hangar space at this station for the storage of motor vehicles. It is expected that four hangars will be used for this purpose and that vehicles will arrive during the coming week.

Kelly Field, San Antonio, Texas.

The past week has been quite interesting on account of a Red Cross drive and Armistice Day parade.

Kelly's chief contributions toward Memorial activities were in the form of addresses and athletics at Camp Normoyle and the A.S.M.S. Football Field. The officers and men almost as a whole attended exercises of the day. We had arranged to have ten ships do formation work and acrobatics over the parade, but the weather prevented.

Red Cross activities claimed the attention of many, and the Army as a whole gave ample evidence of their appreciation of the heroic and unselfish services of the Red Triangle in their behalf during the period of hostilities by supporting that organization in their present drive for funds. According to newspaper reports the Red Cross workers have found the soldiers the most ready and generous donators. Kelly is proud to have taken a very active part in this Red Cross work.

Despite the rain and fog that attended the ^{day} of our drive for funds for the American Legion Hospital only one town out of a total of one hundred and twenty was missed. When it is considered that a great deal of this flying was done off the line of railroads at an altitude of only two hundred feet with a visibility of just a few miles, it will be seen that this was really a fine bit of work. In all eleven ships were in the air working from various towns over the state. There were two forced landings, one to inquire the way, the other to dislodge some papers that had become caught in the rudder rendering it useless. No damage was done and with the exception noted above the orders were carried out exactly. Each plane was ordered to appear over a certain town at a specified time.

Football is still claiming the attention of the Field in the matter of sports, and every game adds new glories to the already excellent reputation of the Kelly team. The local team may well be excused if by any chance it should display a little vanity for its achievements would justify a healthy pride in any normal person.

The field is sorry to lose Post Surgeon, Major Raymond F. Longacre, U.S. The Major is going to New York to take the new course for Flight Surgeons. Major Longacre holds the unique distinction of being the only real New Yorker who ever admitted that he had had enough of Gotham. He states that he has been here

so long that he likes it and is not anxious to live in the city again.

A.S. Temporary Storage Depot, Chanute Field, Rantoul, Ill.

On Tuesday, the Commanding Officer received a message, by telephone, stating that a plane had fallen about seven miles south-west from the field. The ambulance made a fast run to the place where the wrecked plane lay and found that an aerial mail plane, piloted by R.A. Reed, had struck a fence post while making a forced landing and was badly smashed up. After the party in the ambulance came near to the wreck, they were very glad to see the pilot walking about on the ground as the wreck from a distance had the appearance of being a very bad crash. The pilot and mail were brought back to Chanute Field in the ambulance and proceeded to Chicago in a plane loaned to the mail service by the Commanding Officer, this station. As a result of rapid work on the part of the military personnel at this station the mail was transmitted to Chicago with only about an hour's delay, as the result of the crash.

First Lieutenant Charles M. Leonard and Private Gilbert T. Baker are leaving by airplane, this morning, for LaFayette, Ind., to take part in the recruiting drive in that town, which has been planned by the General Recruiting Service.

A.S. Flying School, Mather Field, Sacramento, Calif.

Recruiting activities have opened for the securing of one hundred men for the Mather Field Supply Detachment. During the week ships were sent to Modesto, Marysville, Watsonville and San Jose. In addition to their recruiting activities these planes added materially to the interest in local Armistice Day celebrations at these places.

HERE AND THERE WITH THE EDITORS

SURVEYING THE WORLD BY WIRELESS. ✓

It is proposed to utilize wireless telegraphy in determining the exact position of the boundary between South and West Australia. The boundary is fixed by Act of Parliament as the 129th degree of longitude east of Greenwich. The exact position of the longitude will be ascertained by the use of the time-signals from a high-power wireless station situated at some point between Greenwich Observatory, in England, and Sydney, in Australia, the signals being received simultaneously at both stations.

Most of the great observatories of the world are now collaborating in a redetermination of the longitudinal division of the earth's surface by means of wireless time-signals, and this is one of the earliest uses of the system to settle a disputed position.

Given favorable static conditions, it has been found that signals from the Lyons wireless station in France can be received in Australia as well as at Greenwich, and signals from other stations more favorably situated are also being tested. The cooperation of the United States as well as the British Government has been invited. The scheme is the first step towards a comprehensive redetermination of the whole longitudinal survey of Australia. A committee has been appointed to carry out the work in Australia, and includes the State astronomers, the Commonwealth Surveyor General, and the Director of the Royal Australian Navy Radio Service. . .
(London Times 11/11/20)

THE "CLOUDSTER"

An airplane, which its builders say will set new standards of efficiency and has already attracted considerable favorable attention from the Army, Navy and Post Office Departments, is being rushed to completion in Los Angeles and will be flying the latter part of this month. The plane is the "Cloudster" model being built by the Davis-Douglas Company.

Expert workmen are hurrying work on the machine in order to make an official demonstration of it to the Army, Navy and Post Office officials as soon as possible. Representatives of the Army and Post Office Departments have already inspected the giant machine and will return to Los Angeles for the trials.

The "Cloudster" is a plane adapted to many uses, having unprecedented weight-carrying ability for its power, its makers say.

The performance of the "Cloudster" with pilot, seven passengers 1500 pounds of mail and fuel for six hours is 105 miles an hour, high speed, an 18,000 foot altitude possibility, and fifty miles per hour landing speed.

(Los Angeles Times 11/15/20)
("Ace" November, 1920)

SEVENTEEN CONCERNS BID ON CONTRACTS FOR NEW PLANES.

Seventeen aircraft companies and corporations submitted bids on contracts for five experimental types of airplanes at McCook Field yesterday. The estimated cost of these new machines is \$1,500,000 according to Air Service officers here.

The types on which bids were received were for single seaters, two and ten-passenger ships for military service as battle planes, ground-strafting machines, day and night bombers and observation and training planes. Most of the representatives were from eastern companies.

The new planes will make up a large part of the development program of McCook Field, which ends June 30, 1921.

(Dayton Herald 11/16/20)

TESTING KITE BALLOONS

Miniature kite balloons are being tested at the naval air station, Pensacola, Fla. They have a capacity of 6,000 cubic feet and are intended for use in obtaining records of wind, humidity and temperature aloft. They are designed to have sufficient free lift to carry the necessary aerological instruments and a light cable to about 5,000 feet.

If successful under tests, these balloons will be flown astern of vessels at sea, and used when the ordinary methods of obtaining aerological information fail.

(Washington Star 11/19/20)

DIESEL TYPE ENGINES FOR AIRPLANES

For years engineers have been doubtfully inquiring into the possibility of utilizing a Diesel type engine in light automotive practice, but have been deterred from serious consideration of its possibilities by fear of excessive weight and size. It is said that a German engineer has developed a two-stroke six cylinder engine with characteristics somewhat on Diesel lines, fuel being injected into the cylinder where the air pressure is 200 pounds per square inch, although there is an ignition system which the Diesel system does not have.

The engine is said to be light and efficient, while the absence of a carburetor and the possibility of using low grade fuel renders it very interesting from an automotive point of view.

Engineers are doubtful as to the possibility of using such an engine for aircraft, but it certainly offers important advantages as compared with the conventional internal combustion engine.

The functioning of the engine is easy to understand. The pistons move in together. As they move out they uncover the intake and exhaust ports. The exhaust ports are larger and are exposed first; this permits the major portion of the exhaust gases to escape before the intake ports are uncovered. Vibration is minimized since the forces generated by opposing pistons cancel each other.

The engine is peculiarly fire safe since fuel is delivered directly to engine cylinders there is no dangerous mixture of air and gasoline outside of the engine; and not the same danger from fuel leaks that obtains in the ordinary engine

(Aviation 11/15/20)

V-2842, A.S.

GENERAL SEELY ON AIR SUPREMACY ✓

Speaking at a meeting of the Air League at Cambridge last night Major General Seely, M.P. said that air power and sea power must go together; without these we could not survive. The next war, as Marshal Foch had said, would be in the air, because that method of warfare was the most secret, most swift, and most deadly. We must for centuries to come carry our foodstuffs on the sea. We must, for generations to come, maintain supremacy on the sea by a fleet of ships and submarines, but they would be hopeless without aircraft. He argued that in the future we must have all-metal aeroplanes. Wood was the worst substance possible. It had every drawback, yet all our machines were made of wood. We were behind other nations in this respect. He believed that the Government would come forward to help commercial aviation as distinct from military aviation.

(London Times 11/11/20)

FRENCH VARIABLE SURFACE AIRPLANE ✓

In Aviation 11/15/20 we find an illustration of an interesting French machine with variable wings, recently flown before the French Technical Section at Etampes.

This machine has its upper-plane in three parts, one of which forms part of a fixed biplane truss, while the other two are movable, one sliding forward, the other backward. The chord of the upper plane is 5 feet, 8 inches when movable surfaces are displaced.

The plane was designed by Levavassour and Castambide and flown by the aviator Grandjean, after whose demonstration of its power it was officially accepted by the commission.

The machine is a 250 h.p. biplane of which a new mechanism enables the pilot to vary the wing surface from thirty to fifty square meters and alter his speed from 60 to 200 kilometers an hour. The surface variation is made in the upper plane. The speed range of the machine is from 125 miles to 37 miles an hour.

Military experts declare themselves well satisfied that a great step is made by the invention toward securing safety of landing of an airplane which can be capable of great speed.

MAIL PILOT FLIES 423 MILES IN 3 HOURS

Mineola, L.I., Nov. 19. - Elmer C. Davis, a pilot in the United States Air Mail Service, established a new record between Cleveland and Mineola, flying the 423 miles in exactly three hours, an average speed of 141 miles an hour. Davis left Cleveland at 11:21 A.M., and landed at Hazelhurst Field at 2:21 P.M. He used a DeHaviland No. 4 plane.

The fastest previous flight was made a month ago by William Hobson, another air mail pilot, who flew the distance in three hours and one minute. Davis was a lieutenant in the Aviation Service during the war and received training at Kelly Field.

(Special to The New York Times 11/20/20)

AERIAL INVENTOR SUES - CLAIMS PATENT OF "STICKS" ✓

Paris, Nov. 11. - Some years before the war, when aviation was in its infancy, M. Robert Esnault-Pelterie, who was one of the pioneers in aeronautics and in the art of flying took out a patent in connection with that part of the controlling gear of an aeroplane known as the "stick".

During the war thousands of aeroplanes were fitted with this "stick" and M. Esnault-Pelterie has now brought an action claiming from the makers 2000 francs for each "stick". As no fewer than 33,000 aeroplanes are fitted with this stick, the claim, if realized, represents a fortune of about 66,000,000 francs.