

Autobiography of an Ancient Aviator

W. Sanger Green

Here's the story of the beginnings of aviation in this country, written by a man who was there when it started — who had commercial flying license number 73 — who knew Lindbergh and Amelia Earhart personally — who helped start one of the first transatlantic airlines — and who was one of the early barnstormers.

Wayne

First Allurement

The time: Just after sunrise on a bright sunny morning in July 1914.

The place: A newly mown meadow on the Lisbon Road just below Littleton, NH.

The Event: First test flight of a locally home made aircraft.

John Woods, a Littleton boy, had bought plans, specifications, some materials and a small engine for a single Wright type pusher biplane. During the previous winter and spring he had built the wings, control surfaces and other parts of the machine in his barn, mostly by himself. He had finished final assembly and rigging of the machine and had run up his engine the afternoon before. However, he put off his test flight until the next morning when the early morning air would be more dense and would give his wings more lift.

The machine had a pilot's seat in the center of the lower wing with controls for engine, elevators, rudders and wing warping. Since this aircraft was designed before the invention of ailerons, a combination of rudder and warping of the wings was used for banking and turning flight. As I remember, it had no wheels but used skids instead.

When all was ready John got two of us to stand at each wing tip to hold the machine back while he rev'd up the engine. Then he had another fellow pull the propeller through to start the engine. After a few tries the engine started and appeared to be running satisfactorily. Then, at a wave of John's hand, the four wing men started the machine forward and let go.

The craft gathered speed and, after going about 100 feet, left the ground and had gained about two feet altitude when a small rise in the meadow proved to be an insurmountable object. The craft was traveling at a speed of about forty miles per hour when it hit the knoll. The frail stick and wire construction collapsed and the machine was shattered beyond repair. In those days the wing struts were not bolted in but were held in place by the flying and landing wire rigging.

John Woods' injuries were quite superficial — only a few bumps and scratches. We helped him gather up the pieces and load them on his truck. Later he told me that he had decided not to try to rebuild the machine and that, although he was determined to learn to fly, he was going to wait until a more air worthy and less fragile craft was available.

This is how my interest in aeronautics and desire to fly began.

About fifteen years later I met John at the Philadelphia Naval Air station where we spent several hours talking about what each had been doing since 1914. John was then a test pilot for an aircraft engine company. Only the day before it had been necessary for him to bail out of a plane with an experimental engine he was testing when the engine blew up. I was investigating the accident. Our paths haven't crossed since then.

Next Exposure

The first World War came along and I was kept busy as an Infantry 2nd Lieutenant until I was discharged in June 1919. I returned to Littleton with the idea of taking

the rest of the summer to demilitarize myself, do a little fishing and prepare for the next phase of my life. Two or three weeks after my return Bob Fogg arrived in Bethlehem in his Curtiss OX-5 Jenny. He was carrying one passenger at a time from a hillside field on Lewis Hill. I was interested enough to pay him \$5 each for three ten minute rides. By that time my mind was made up. I wanted to learn to fly as a start in the aviation business that I felt was sure to develop in a few years. If I had known then that it was going to be another ten years or more before aviation would amount to much as a business I might have made a different choice.

Since I was then a 2nd Lieutenant in the Army Infantry Reserve I thought I might be able to get the Army to put me on active duty assigned to the next Air Corps flying school class. However, when I got to Washington in the fall of 1919 I found that I was about the only one to which my plan appealed. So I went over to Bolling Field in Anacostia and asked some of the officers for their advice on how best to go about getting an appointment to the Air Corps Flying School. Their advice was to get as many letters as possible from the New Hampshire Senators and Representatives to the Chief of the Air Corps recommending me for appointment as a Flying Cadet.

I finally got letters from both Senators and one Representative and delivered them together with an application to the office of the Chief of the Air Corps. I was told that it would take some time to process the application and that I would be notified of their decision. I then got one of the Senators who knew my father quite well to phone the Chief once in a while to inquire about my application.

Thus matters drifted on for a few months. I was back in Littleton when, in March, I received a letter from the Chief of the Air Corps requesting me to appear before a selection board at Bolling Field in April. This board would determine my fitness for appointment as a Flying Cadet. I appeared as requested, answered all of their questions and asked a few of my own. The decision of the board was to recommend my appointment provided I could pass their physical examination for flying. The next day I took the physical examination and passed with no waivers. After this the board advised me that, since the 1920 class was full, they would enter my name for the class starting in Sept. 1921.

Marking Time

I told about my good fortune in passing the Air Service Cadet Selection Board and the physical examination for flying. That was late in March 1920. The class for which my name was entered didn't start until September 1921 — almost a year and a half wait. I filled this time with various jobs from selling kitchen gas ranges to working as an inspector for the Lawrence Aircraft Engine Co. in New York. During this time I also met my wife-to-be, Cleo Willson.

When August 1921 rolled around, having had no word from the Air Service, I went to Washington to make sure all was well with my appointment to their flying school. I got an old friend of mine who was then director of the U.S. Coast Guard Geodetic Survey to make an appointment for me with Brig. General Billy Mitchell who was Assistant Chief of the Air Service. I had an interesting half hour with the general during which he had one of his aides check the status of my appointment.

I asked him about the types of planes then being used for training. He said that, since no funds had been made available for newer types, they had upgraded the old

WWI OX5 Jennies by installing 180 HP Wright Hispano-Suiza engines in them. These were used for primary training and WWI DeHaviland DH 4B planes with 400 HP Liberty engines for advanced bombardment and observation training and also for most routine flying. WWI SW5s and Spads were used for pursuit training. The general complained that the army seemed to think that flying was a passing fad, that it was not worth spending money on, while he considered flying of major importance, an attitude which got him into considerable trouble later on.

The general's aide returned and reported that I was indeed assigned to the Flying Cadet class scheduled to start September 15th at Carlstrom Field, Arcadia, Florida. The general mentioned that I would have a good *flying* commanding officer at Carlstrom in the person of Major Ralph Royce. Since I was going back to Littleton, NH, I was advised to enlist as a Flying Cadet at Fort Ethan Allen, Vermont (near Burlington) and a letter authorizing this enlistment was sent to the commanding officer at that post.

Back in Littleton I got my things in order and, since I expected the class to take more than a year, I asked Cleo to marry me and come along to Florida. So we were married August 25, 1921 and had about a week honeymoon at Patridge Lake (near Littleton). Then I went over to Fort Ethan Allen, enlisted and got my travel orders to Arcadia, Florida. Since my orders from Washington to the C.O. Fort Ethan Allen said nothing about transportation for any family, I had to pay Cleo's fare to Arcadia.

We arrived at Arcadia the afternoon of September 12th and checked in at the only hotel. It was a hot afternoon and we were pretty dirty after our long train trip so, without question, a nice bath was top priority. There was no shower so I turned on the water in our bath tub. In a few minutes the sickening rotten egg odor of sulfur water filled the room. How could washing in such water get you clean? You'd just be trading one bad odor for another.

Next morning I rode the six miles to Carlstrom Field on the railroad the town of Arcadia built on the level "Big Prairie" in a few days early in 1918. The military business of reporting to the post commanding officer, assignment to the Cadet Detachment and reporting to the Detachment C.O. took most of the morning. In the afternoon I passed a very thorough 64 examination (for flying) without difficulty. The fact that I was married caused a bit of a flurry. There were no married quarters on the post so we would have to live in Arcadia and I would commute on the "Florida Special" (train) leaving Arcadia at 6:30 a.m. and returning after retreat (end of day's work). Since I would be having only the noon meal at the Detachment mess I arranged to have two thirds of my mess allowance (\$1 per day) issued to me in kind (canned and fresh food). I also tried to get a Commutation of Quarters to help out on my rent in Arcadia. However, since the rank of Flying Cadet seemed to float somewhere between enlisted men and officers, they could find nothing in the regulations that would permit such a payment. Flying Cadet pay at that time was \$75 per month.

Since my morning arrival at Carlstrom was at about 6:50 a.m. I missed the reveille health class (calisthenics) as well as first mess. The cook, however, always had a cup of coffee and a bun or so for me. While I was having my coffee the rest of the class was in barracks cleaning, making up bunks and standing the daily inspection by the detachment C.O. Then, during the early part of the training, they all had to turn out

for military drill. Because of my wartime experience as an Infantry officer I was detailed to perfect the class in close order drill and the manual of arms. Of course no one could see the importance of or reason for this drill. I explained to them that, since the Air Service was part of the Army its units had to be trained to at least not fall all over themselves when executing "squads right" in case of an inspection by high brass and that the sooner they got the hang of it the sooner they could go back to their bunks. In two weeks they were proficient enough for a 2 star general's inspection. The manual of arms drill proficiency was so low that I got the C.O. to forget about it and send the rifles back to the warehouse.

Primary Ground School started September 25th. It consisted of 24 subjects and took some 460 instruction hours plus examination time. The usual Army subjects such as Infantry drill, Army Regulations, property accounting, military law, paper work and interior guard duty were covered first (stuff every Army commissioned officer should know). Then aeronautical subjects such as aero-dynamics, engines, propellers, rigging, meteorology, instruments, aeronautical navigation, radio and code were covered in some detail. Then the various machine guns and synchronizing gears (to shoot through propeller blades) followed. These were morning and afternoon classes until flight instruction began on November 15th. Then flying in the morning and school in the afternoon.

The ground school courses were quite thorough and the instructors well qualified. It was no tea party. They had a board of officers nicknamed the "benzine board" that checked the record of each student after each examination and if any failed the examination or gave any other cause for disqualification he was immediately "BENZINED" (discharged). As a matter of fact our class started with 72 cadets and only 21 graduated (29%) from the advanced flying school. Two cadets from my class and a cadet from the class following ours "Went West" in a DH crash near Brooks Field, Texas on June 28, 1922. It seems that Cadets Farrell and McCoy, two of the best rated pilots of our class, had flown from Kelly Field over to nearby Brooks Field early in the afternoon of June 28th. When they were ready to return to Kelly Field, Cadet Thompson, who had just arrived from Carlstrom Field a few hours earlier and was on his way to report for advanced training at Kelly Field, asked them to give him a lift to Kelly. Farrell and McCoy agreed so all three climbed into the DH, Farrell in the front cockpit piloting and McCoy and Thompson in the rear cockpit (made for one passenger) for the ten minute hop to Kelly. They took off at about 5 p.m. and had only gained about 200 feet altitude when the ship suddenly spun in and burned. All three died. The consensus of barracks guesses was that, since most of Farrell's recent flying had been in single seater SE5s, he may not have been as familiar with the eccentricities of DHs as he would have been if he had had a lot of recent time in them. It was quite evident that he tried to pull up too fast after take-off with an extra heavy load in the rear cockpit — and the DH had said "NO."

Wild Blue Yonder

Carlstrom Field, Arcadia, Florida, 0800 15 November 1922.

This morning flying instruction started. Each Cadet was assigned to a flying instructor and not one failed to draw the best instructor on the field. I drew Lt. Tommy Claude. He was a tall, affable fellow who used the “follow me” method of instruction. His idea was that if a student became proficient in air work, and had a good feel of the ship, take-offs and landings would come more easily.

The planes used for primary instruction were Curtiss JN6H (Jennies) with 180 HP Wright Hispano-Suiza engines. These planes were used for training during WW1 equipped with 90 HP Curtiss OX5 engines. They had two open cockpits, front for instructor and rear for student. The Hisso Jennies were very easy to fly and had practically no bad habits. Of course, like any other airplane, if they “ran out of air” (stalled) they came right down.

While I was busy practicing wing-overs, figure 8s, rolls, loops, side slips and other air work, Lt. Claude would watch for any cars crossing the prairie. If they stopped and hid a package under a mesquite bush he would mark the spot on a map. A few times we were lucky enough to spot a bootlegger caching some of his liquor load near a place where we could land. The Claudes lived in the same apartment house we did so the next Saturday evening we would give a party, inviting guests to come and bring the food.

About the sixth or seventh morning of my instruction, Lt. Claude told me to go to the hangar supply room and get two shot guns, ammunition and hip boots. He said that the lesson this morning would be duck hunting. The prairie north of Carlstrom was dotted with small ponds that were quite shallow and surrounded by high roads. They provided excellent cover for migrating ducks. He landed near one of them but the meadow was too soft so the ship stuck its nose in the ground and the propeller went the way of all nose-over props. Claude said not to worry, that soon someone would spot the tail of our ship in the air. Sure enough it was only about 15 minutes before Lt. Hez McClelland came over low. We pulled the tail of our ship down and pointed to the broken wooden propeller. He left and was back again in about half an hour and landed on some nearby higher ground with a new propeller and installation tools. In the meantime Claude and I had each bagged a couple of ducks from the pond. It took us about 45 minutes to remove the old prop hub and install the new propeller. The Claude taxied the ship to firmer ground, I got in and we were back at Carlstrom in time for lunch. Lt. Claude got the officer’s mess cookee to pluck and dress the ducks so the Claudes and Greens had wild ducks for dinner that evening.

In spite of all the extracurricular activities, Claude soloed me after about eight hours dual and hunting instruction. I must have been a trifle overconfident because at about my tenth solo landing I leveled off a bit high and ended up with my nose in the ground, tail in the air and a broken propeller. This made necessary another hour of dual time with a new instructor — Lt. Umpstead. Lt. Claude was not available as he was in the hospital as a result of a slight miscalculation of his own.

It seems that Lt. Claude had flown a DH4B (DeHaviland with a Liberty engine) to Fort Myers, about 40 miles south, to pick up two majors who had cracked up there earlier in the day and bring them back to Carlstrom. His crew chief went with him. They got a late start back, the two majors squeezed into the rear cockpit, with the crew chief out on a wing straddling a strut. In those days field lighting for night

landings consisted of a few lights on the hangars that dimly lit the field a short distance in front of them. By the time Claude got back to Carlstrom it was dark and he evidently didn't allow for the extra load he had aboard, for his wheels hit a drainage ditch at the edge of the field. That put the DH over on its back tossing out Claude and the two majors and killing the crew chief. Claude sustained a broken leg and numerous cuts and bruises while the two majors were only bruised and shaken.

The rest of the primary flight training was uneventful as far as accidents were concerned. I practiced landing to a mark (180s and 360s) acrobatics and other air work, formation flying, cross country trips and night flying with periodic instruction and checks to make sure I was not developing any bad flying habits.

Ground school terminated on February 18th and from then until my departure for Post Field on May 15th my only duties consisted of flying. I passed all the numerous check flights and was glad to be checked out to fly DH4Bs. I also got a small amount of time in some WW1 single seater fighter planes such as Nieuports, Spads, SE5s and Thomas-Morse Scouts. The Nieuports were different from the other planes I had flown in that they had a rotary engine (the entire engine revolved). These engines had only two speeds — on (full speed) and off. There was a coupe button on the top of the control stick that, when pressed, cut off the ignition. When you were coming in to land you had to keep giving the engine spurts of power in order to keep it from quitting altogether. Same thing when you were taxiing. My total flying time at Carlstrom Field was only 68 hours.

When we got ready to go to Post Field about the middle of May, Cleo and I found that we had around 250 cans of food I had brought home from Carlstrom during my eight months of duty there (2/3 of my ration allowance). We couldn't take them with us so we sold them to our landlord for \$25.

Special Orders #73, HQ Carlstrom Field dated 13 May 1922 sent Cadets Fredericks and Conerton along with us to Post Field, Fort Sill, Oklahoma by train.

Carlstrom Incidents

One morning early in March at my 8 o'clock flying line briefing, my instructions were to fly about 10 miles north of Carlstrom and practice loops, each starting at 3000 feet, and keep it up until I could come out of them going in the same direction from which I had started. After this I was to practice barrel rolls without losing much altitude. I was allotted an hour.

Since I had been practicing these maneuvers for some time, and was able to accomplish them satisfactorily, I did a few loops and rolls and then watched some cowboys herding some cattle on the prairie below. I had every intention of diving on the herd as soon as the cowboys had it rounded up. The results of this were always the same — cattle going in all directions and cowboys shooting at the ship. Once in a while you might get a bullet hole or so in the wings.

I was circling and watching the herding procedure out of the left side of the ship when, all of a sudden, there was a sharp jolt. I looked around to see what had happened and found that I had a full grown whooping crane caught in the rigging wires of my right wing. It seemed to be quite dead and the impact hadn't had any effect on the way the ship flew so I headed back to Carlstrom.

Whooping cranes were not an “endangered species” then. Several times I had observed one flying and had gone over to get a closer look. The crane would usually turn its head and look at me but would never miss a beat of its wings or change course. When these cranes started to go somewhere, they wouldn’t let a little thing like a plane change anything.

However, since I had killed one inadvertently, I thought I might as well make the most of it. So when I got back to Carlstrom I put the crane in a barracks bag and took it home. That evening I plucked and cleaned the bird and put him in the oven to roast. Right then I found out that whooping cranes are not an “endangered species” because people kill them for food. This one was so tough that after hours of cooking, you couldn’t stick a fork in him. In addition he smelled so bad while cooking that even the neighbors complained. He joined his feathers in the garbage can.

One of our forms of entertainment at Arcadia was frog’s legs cookouts. There are many sloughs (pronounced slews) in the prairie east of Carlstrom Field. These are shallow streams inhabited by frogs and once in a while a gar. The frogs were very large and in great quantity. So Cleo (my wife) and I with two or three sergeants and their wives would drive out to one of the sloughs and rig a place for a cooking fire. Then we would short-cut the business of frog catching by tossing a hand grenade or two into the water.

This would stun the frogs long enough to enable us to net them easily. Then cutting off the legs and skinning them was an easy job. Of course they were delicious dipped in corn meal and fried, together with roasted potato or yams and the best vegetables and fresh rolls we could get from the mess. Some kind of fruit for dessert usually topped off the cookout. I might add that no party such as this would be complete without some of Sergeant Bunn’s eau d’ vie from his still in the enlisted men’s mess kitchen.

After we had departed from Carlstrom one of the cadets made headlines in the local papers and got himself “benzined” (discharged) all in one maneuver. The first of several cross country flights in the curriculum was from Carlstrom to Okeechobee City, a distance of about sixty miles, and return. The outbound course was 90 degrees and the homeward bound course was 270 degrees with a small allowance for compass deviation and for the declination from true north which could be easily figured out ahead of time. I made this round trip on March 28th in two hours and twenty minutes including 25 minutes on the ground at Okeechobee.

On June 8th, however, Cadet White left Carlstrom at 8 a.m. and, after two hours flying, arrived at Okeechobee. (Two hours to go 60 miles?) He refueled and took off for Carlstrom. He said he had a ceiling of about 1500 feet under some scattered cumulus clouds. For some reason he thought he would be safer above the clouds so he climbed above. He then flew for about two and a half hours until he ran out of fuel. When he broke through the overcast he was over the Big Cypress Swamp south of Immokalee, about a hundred miles south of Carlstrom. He was unhurt in his crash landing so he smeared his face and hands with engine oil to keep mosquitoes off and started walking through knee deep swamp, saw grass, etc. The second day he came upon an old wagon trail which eventually led him to a Seminole village. After spending the night there the Seminoles drove him to Immokalee in a buck-board wagon. He was picked up there by one of the searching planes and flown back to

Carlstrom. The part of his story that was the grabber and made headlines was his statement that he ate grasshoppers to keep alive on his way out of the swamp.

The Carlstrom "Benzine Board" decided that White might do better in some occupation other than flying so they sent him home.

Art Smith, a well known civilian pilot, arrived at Carlstrom with a new gadget that would enable the pilot of a plane to shorten his landing run by reversing his propeller after he had touched down. He demonstrated it several times and it functioned beautifully. It cut his landing run by about 60%. Airplanes didn't have brakes in those days. Then one morning when Smith was on a demonstration flight he came in to land. There were about twelve jennies in a double line on the edge of the field near the hangars. Art came in low over the hangars and at the last second figured that he needed a little more power to get over the line of Jennies. He must have forgotten that the idling propeller was already in reverse for he gave the engine a quick "jazz." The result was that his Jenny came down like an elevator on top of the line of Jennies and made instant junk out of his ship and four others on the ground. No injury except to his pride. He was before his time on this one.

Lt. Wade was Post Exchange Officer and a very fine young man, but he had a problem: "John Barley Corn." With one thing and another, things finally got to the point where Major Ralph Royce, the Post C.O., found it necessary to put Wade "up the pole" (on the wagon) for two months. Immediately Wade got the nickname "BEVO" (a prohibition beverage that was supposed to taste like beer — eccck). Just as immediately Bevo solved his problem by appearing at cocktail parties, and other happenings where liquor was being dispensed, adorned with four army canteens attached to a G.I. belt. He accepted every drink that was offered and poured the gin into one canteen, scotch in another, bourbon in another and mixed drinks in the fourth. When the two months were over it was almost a week before Bevo was back on duty.

Vacation at Post and Kelly Fields

We arrived at Lawton, Oklahoma on the afternoon of May 19, 1922, made our way out to Post Field, and reported in. The matter of married quarters on the field was solved the next day by assigning us to a low ranking officer's house. (Who ever heard of a married Flying Cadet?) The place hadn't been lived in for a while, judging by the quantity of mice, ants, roaches and scorpions we had to clean out. We never did quite get rid of the scorpions. They kept popping up in unexpected places such as on the wall in back of pictures, etc.

Several members of our class had preceded us to Post Field. They greeted us with the news that their only duty so far had been "bunk fatigue" and that there seemed to be some doubt as to whether our advanced training was to be at Post Field. It seems that a class of officers, among them Gene Vidal, had not yet finished their training, so no instructors were available for us cadets. Gene was famous as a West Point football star. He was to be Gore Vidal's father. I was associated with Gene several years later in the Ludington Line.

There was a flying game that I was able to participate in a few times. Ten to fifteen cadets and student officers would be assigned to DHs (DeHavilands) on the line,

then go to the operations office and each put \$2 into a pool. Then we would put our names on slips into a bag and have the operations officer draw one out. The one whose name was drawn would take off and have a ten minute start. He carried some identifying article and had to land somewhere on the reservation. (The Fort Sill reservation was something like ten by twenty five miles in area.) Then the others would all take off at once and try to find him. The first one to find him, land near him and bring the identifying article back to the operations office would split the pot with the pilot who took off first. There were usually a number of near collisions in the mad take off scramble. I won once. It was fun.

On June 20th I received orders to proceed to Kelly Field, arriving there no later than 1 July. By that time Cleo was quite pregnant and was expecting in early September. We wanted the baby to be born in Littleton, New Hampshire so we decided that it would be better for her to join her parents there for the last two months of her pregnancy than to go to Kelly Field for a few weeks. So on June 25th I put her on the train for New Hampshire.

Cadet John Paul Riddle had a 1920 Dodge touring car, so he invited myself and three other cadets to ride to Kelly Field with him (and share the expense). We got away from Post Field on June 28th and arrived at Kelly on June 30th. We made pretty good time on the 500 mile trip, considering the road conditions in those days. There were practically no paved roads except in cities and towns. We only had three flat tires on the trip. In those days you changed the tire and inner tube — not the wheel. Also you carried chains to get you out of mud holes in case no farmer was near to pull you out with a team of horses (\$2). Some farmers used to maintain mud holes in the road near their farm.

There were two Kelly Fields at that time. Kelly #1 was a flying instruction field during WWI, but now housed an air depot with storage hangars and aircraft and engine maintenance and repair shops. Kelly #2 was adjacent. All the routine and instruction flying was done there. When we arrived we found that the Flying Cadets were quartered at Kelly #1. The Carlstrom Field class following ours arrived a day or so after we did, and was combined with us to become the class of 1922.

There followed three weeks of no classes and no flying, We made good use of the officer's club swimming pool which was turned over to us four afternoons a week. Ed Conerton and I bought a 1913 Cadillac touring car for \$20. It was something of a maintenance problem but it lasted while I was at Kelly Field. Gasoline at the Post Exchange service station was only 10 cents a gallon so we visited most of the points of interest in and around San Antonio. We also made a little extra cash once in a while by hauling other cadets to and from San Antone.

During this waiting time I visited the Kelly #1 hangar where Jimmy Doolittle was modifying a DH for his projected transcontinental one stop flight from Daytona Beach, Florida to San Diego, California via Kelly Field. He did everything he could to streamline the ship, and also installed auxiliary gas and oil tanks and some navigating instruments that were an improvement over the regular equipment. Our Advanced school started before he finished the job, so I wasn't around to see it completed. I know that he tested it several times before he was satisfied with it. I got

to be pretty well acquainted with Jimmy during the short time I was able to call on him. He made the flight successfully after I had left Kelly.

Along toward pay day each month I was a trifle short of cash. I solved this problem by hocking the gold watch my grandfather Sanger had willed me (now valued at \$250) for \$20 and redeeming it right after payday for \$21.50. Two or three Saturday evenings a month Ed Conerton or Art Caperton and I would step out to the extent of having dinner at the St. Anthony Hotel roof. Dinner and music at \$2 each with a 25 cent tip. Caperton and I couldn't go the same evening because I had the only presentable civilian suit that fitted Caperton.

The Advanced Flying School got under way full throttle the last week in July — ground school in the morning and flying in the p.m.

Kelly Field and the Happening of September 3rd

The 1922 Advanced Flying School at Kelly Field was composed of ground school and three flying schools: pursuit, bombardment and observation. The five best suited cadets got fighter training, seven were assigned to bombardment training and all the rest, including myself, were assigned to observation training. Ground school was in the morning and flying in the afternoon.

We all had schooling in the operation, repair and maintenance of liberty engines and training in DH4b rigging. Other subjects covered were aerial photography, radio and Morse code, anti-aircraft and searchlights, maps, reconnaissance missions, artillery regulage, aerial gunnery, infantry contact and a lot of army related subjects such as staff duties, rules of land warfare, combat orders, tactics of other arms, military law, army reg., field service reg., service of supply, etc. they kept us busy.

At Kelly Field army discipline was slightly relaxed. We had to stand reveille but no other formations, except to stand in front of our planes for instruction when we were scheduled to fly. Of course we had to stand at attention beside our bunks for the Saturday morning barracks inspection by the Detachment Commander. This took him about two minutes and then we had the rest of the weekend off.

In the flying department the observation and bombardment cadets had DH4bs with liberty engines for equipment. We were paired into teams for our flying. My teammate was Homer Munson. One of the field regulations was "no stunting in DHs" so when pushing DHs around got a little tiresome I'd go over to the pursuit hangar and borrow an SE5 to "wring out" for half an hour or so. In September the SE5s were condemned and withdrawn from service as a result of an accident that Cadet Harris had in one. He dove at a mark on the field and when he pulled out the wings folded and, since we did not wear parachutes in those days, he had to ride it in. None of those who witnessed the crash thought that Harris would possibly come out of it alive. However, due to the fast and expert work of the meat wagon crew that removed him from the wreck, he came out of it with only numerous cuts and bruises, a broken leg, a broken arm and several broken ribs. He was back on flying status again in four weeks.

I told you that Cleo (my wife) was expecting early in September and had joined her parents in New Hampshire to await the event. I felt that this was to be one of the most important happenings in our lives so I requested a ten day furlough to be with

Cleo when the baby was born. I had to make some arrangement with Lt. Chauncy who was in charge of ground school with regard to making up the subjects I would miss while on furlough. He knew that I was a reserve infantry officer so he offered to give me a passing 70 with no examination in five purely military subjects that he would schedule during my absence. He also offered to give me whatever coaching was necessary to pass examinations in any other subjects I might miss.

My furlough was from 9/4 to 9/15. I was fortunate to get a lift to Dallas on September 3rd, thereby saving me half a day on my train trip to Littleton, NH. I thought I would be in plenty of time for the big event since the doctor's prognostication was for September 7th to 14th. But Cleo fooled us all. Her birthday was on September 2nd and her folks and some friends gave her a party to celebrate. Whether the party had anything to do with it or not, Cleo had to be rushed to the Littleton hospital in the early hours of the 3rd where Doctor Giles smartly thumped the new baby's rump at 06:00 and started him on his career. I first learned that my son had preceded me when I arrived in Littleton the afternoon of September 6th. Naturally the hospital was my first stop.

One omission in our planning was brought to my attention immediately. Cleo and I hadn't reached an agreement on a name for the new arrival. Birth certificate and letting relatives and friends know of our good luck, you know. So I assembled a council of a few friends for the purpose of recommending a choice of a name. I won't go into details of our evening long discussion. After much deliberation we chose the original name of Wayne Sanger Green II. That is how and where Wayne was born and named.

The ten day furlough only allowed less than four days in Littleton so I sent a telegram requesting a ten day extension. This was granted at once. I was glad to have this additional time to be with Cleo and Wayne and to do a little local trout fishing. I reported back for duty at Kelly Field on September 25th.

When I checked in with Lt. Chauncy I found that I had only missed three written exam subjects: Staff Duties, Tactics of Other Arms and Combat Orders. These I already knew so I bushed up a bit and had no trouble with the exams. The flying part of the school was different. I had missed several missions. However, when ground school was finished on 9 October I could fly mornings and afternoons. So, with Homer Munson's help, I got through everything OK.

Kelly Field Flying

The Kelly Field flight training was very interesting. We didn't just fly around aimlessly. Each day some aspect of our ground training was put to use in the air.

Visual reconnaissance missions (There were several of these to different towns): We were instructed to fly over a certain town or district, usually within a 50 mile radius, and make a sketch of the area indicating any features of military interest such as factories, railroads, highways, water towers, flying fields, etc.

Aerial Photography (Several to various locations): Same procedure as Visual Recon Missions except that we photographed strategic places. I even took a good shot of Art Caperton riding on the turtle back of another ship.

Puff target range: We dropped simulated bombs on the smoke bomb range and were marked according to our accuracy.

Artillery Regulate: This was more fun. It was done in cooperation with a Field Artillery unit at Camp Stanley (about 30 miles away). Our job was to fly over a target at a low altitude and direct the artillery fire (live ammo) to right, left, forward or backward of the target center. The radio equipment we had for communication with the artillery consisted of a transmitter with key and an antenna that trailed below the plane with a fish (weight) to hold it down and a reel in the rear cockpit to raise and lower it. One time I tried to climb too fast with the antenna out and the DH fell off into a turn of a spin. This wound the antenna around the tail of the ship. The rudder didn't work too well but the elevators were OK, so I got back to the field and landed with no trouble. I didn't get a very good mark on that mission.

Aerial Gunnery: For this work we spent several days at Ellington Field (near Galveston). Small ponds, shadows, panels and birds were our targets. Live ammunition was used in the two Lewis machine guns which were mounted on a scarfmount over the rear cockpit. While we were at Ellington the rigid flying rules of Kelly Field were dispensed with. Everyone enjoyed a wild orgy of flying calculated to draw flowers. However, all eventually returned to Kelly more or less safely. Although the return weather was CAVU (clear and visibility unlimited) some got lost on the way and didn't straggle in to Kelly until the next day.

Cross Country Trips: The trip to Ellington and return was our first, about 235 miles each way. Our longest trip was to Post Field, Oklahoma, via Dallas, with return via Waco. An overnigher of about 720 miles if you flew in a straight line. There were several other shorter cross countries of up to 300 miles.

Formation Flying: Only about ten hours of this flying was done by our observation group. Five ships to a Vee formation. A lot of this practice was in formation take-offs, lands and turns. The object was to keep away from the other fellow and not let him put his wing in your lap.

As we approached Love Field, Dallas, on our way to Post Field, I was driving the ship. As I came in to land I saw giraffes, zebras, camels, elephants and other animals grazing on the field. I decided to circle the field again while I reviewed what I had eaten in the last 24 hours and asked Munson in the rear cockpit if what I was seeing was really there. Affirmative. Then I managed to land without hitting any of the beasts. When I climbed out of the ship an over-friendly black bear came up to be petted. This one exuded that rare combination of B.O. and halitosis. I have a snapshot of this delightful experience.

When Munson and I were coming in to land at Kelly from our cross-country trip to Post Field, we had a slight mishap that could easily have been much worse. It was almost dark and what we didn't know was that during the two days we were away, they had put up some goal posts for a football field, one of which was right on the hangar line. Munson was piloting and made his landing approach in the usual manner. He landed and taxied up to our hangar. Then we found out that on our approach we had hit one of the goal posts with our wing and broken the post off. The fortunate part of the mishap was that contact with the goal post was at the root of the right wing (next to the fuselage). If it had been farther out on the wing we would most probably have been in serious trouble.

I can't leave Kelly Field without telling you about the G.A.X. (ground attack experimental). This was a masterpiece of aeronautical engineering with a heavy Army hand laid on. I understand that only two of them were ever built, and if they had tried to fly #1 first they would have quit work on #2. The one I refer to was housed in a large hangar on the far side of the field. It was a large biplane powered by four liberty engines, gunner's cockpits forward and aft and half inch armor all around the two pilot cockpit. It looked pretty ferocious sitting on the ground but the main trouble with it was that it had a ceiling of about 200 to 300 feet on a cool day. The only time I saw it fly was when we put on an aerial revue for General Patrick, Chief of the Air Service. Jimmy Doolittle managed to get it around the field twice at full throttle with very, very shallow turns.

Good Bye Kelly — Hello Brooklyn

Graduation from the Air Service Advanced Flying School was on December 17, 1922. Forty-one cadets from the combined classes received their "Airplane Pilot" rating and their A.P. wings. All were commissioned 2nd Lieutenants in the Air Service Reserve Corps. All except myself had to buy officer's uniforms. Fortunately, I was able to have my father send me my WW1 uniform so all I had to do was replace the Infantry Collar insignia with the Air Service prop and wings and pin my A.P. wings above my WW1 medal.

Lt. Chauncy asked Munson and me if we would mind staying over a couple of days to do an artillery adjustment mission that had been requested for December 19th. We agreed, if he would arrange a lift to Dallas for me on the 20th. (Better train service to New York out of Dallas.) We spent half a day near Fredericksburg telling an artillery battery what poor shots they were. They had no anti-aircraft guns so we were safe.

Along in late October Cleo and Wayne had moved from her parents' farm in NH back to their home in Brooklyn, NY. I arrived there on December 23rd, just in time to put up and decorate the Christmas tree. Wayne was almost four months old. He had grown quite a bit since I had seen him in September. However, he was still small enough to fit nicely in the temporary crib Cleo had made for him out of a bureau drawer with a pillow in it for a mattress. We had a marvelous Christmas — our first together.

A few days after Christmas I went out to Curtiss Field, near Garden City, Long Island, to see if any flying job was available. I talked with Casey Jones and he said he had nothing available but suggested that I go over to Heller Field in Newark, where an outfit called Federal Aviation had a hangar full of boxed LWF planes. He said he understood that they were assembling them for sale and that possibly one of their customers might want a pilot. Mitchel Field was nearby so I went over there to check in with operations for some army reserve flying.

Next day I went over to Newark and found my way out to Heller Field. Sure enough there was the hangar and I found Mr. Gillespie and his son in a lean-to with a potbelly stove going to keep the place livable. Yes, they owned the crated LWFs in the hanger but had no definite orders with deposits at that time. However, they had

several warm prospects and were going to assemble a ship for display and would need some help for that. They explained that LWF stood for laminated wood fuselage (not loose, wobbly and frail as some people thought). The LWFs were originally equipped with a Sturtevant engine that was supposed to put out 200 horsepower. However, these engines had so thoroughly demonstrated their unreliability that Federal was junking them and installing 220 HP Hissos instead. (There is some question as to which of the two was more unreliable.) Gillespie said there was no problem in getting 220 Hissos if you had a case of whiskey to trade at a nearby Air Service depot. They offered me \$8 a day to help assemble the ship. Since my transportation to and from Brooklyn and lunch would be only \$1 a day, I told them I'd be there the next morning with my coveralls.

It took us until late February to assemble the plane. We had to remove the Sturtevant engine and install new hickory engine bearers. Then we got the new Hisso engine, cleaned the cosmoline preservative off it and installed it in the ship. We had to remove all controls from the front cockpit and cut away the fuselage to make seats for four (midgets). This, together with some soft places in the laminated wood fuselage (a result of rain water from a leaky roof), made it advisable to reinforce said fuselage. This was taken care of by bolting a two by four on each side of the fuselage all the way from nose to tail. Well, it looked like an airplane, anyway.

There was no such thing as flight testing the plane from Heller Field. It may have been a flying field at one time but by 1923 there was barely enough cleared field to take off with no passengers and only enough gas to get to Newark Airport. There was no coming back into Heller, so the ship had to be rigged accurately enough to enable the pilot to get it to a larger field and land it.

By the end of February the LWF was finished but still not sold, so I got a part time job selling Hupmobiles in Brooklyn on salary and commission.

As a reserve officer I was able to get enough flying time in Jennies and DHs to keep my "hand in" at Mitchel Field, Long Island. I'd get out there almost every week and put in an hour or so.

Around the middle of July, Gillespie phoned and told me that the ship we had put together was sold to Hal Bazley of Everett, MA. Delivery was to be at the East Boston airport and would I be interested in flying it up there? I had just finished a two week tour of active duty at Mitchel so I had some catching up to do on my Hupmobile prospect list. Gillespie offered \$150 plus expenses for the job so I told him I'd be over on July 27th to take the ship out of Heller.

On July 27th we gave the ship a final check and put ten gallons of gas in the tank. I got over the wires at the end of the field by about ten feet on my way to what is now Newark Airport. The ship handled very well with only a few minor adjustments to be made at Newark the next day. On the 30th I took the ship over to Mitchel and let some of the fellows over there look at it and shiver. Then on the 31st I flew her to Boston in two hours and forty-five minutes. Hal Bazley was there to meet me and take over ownership. I came back to New York that night on the "Old Fall River Line."

\$7.50 for 10 Min.

Soon after I had gotten back to Brooklyn from delivering the LWF plane to Hal Bazley in Boston, I heard that Juan Trippe had some boxed Aeromarine 39b seaplanes that he needed help in setting up. They were located in a hangar at the inactivated naval Air Station at Rockaway, Long Island. I got Art Caperton to join me on a journey to the N.A.S., where we talked with Trippe. He said he wanted to set up one of the ships to survey a possible airline route from the East River at Manhattan to Southampton, Long Island. We agreed to set up a ship for him, if we could set up another for our use in passenger carrying at Port Washington. The 39b was a biplane with a single pontoon under the fuselage and small wing tip pontoons. It was equipped with a Curtiss OXX6 engine that was supposed to put out 100 HP.

It only took us a week to set up the two seaplanes and test them. These ships were not ideally suited for making money at passenger hopping. They had only two single seat cockpits, the aft one for the pilot and the forward one for a \$7.50 for ten minutes passenger. One week was enough to convince us that we weren't going to have enough money to keep it up. At this juncture we were both fortunate to have other flying jobs offered. Caperton was recruited to fly mail from New Orleans to Pilottown, at the southern tip of the Mississippi delta, in HS2L flying boats. Gillespie, of Heller Field, Newark, NJ, wanted me to fly a Curtis R4 land plane that he was assembling near Middletown PA. We each accepted our offer and I notified Trippe that we were turning his 39b back to him. I flew the ship to a seaplane base at College Point for fueling. Trippe joined me there and flew the ship to Sheepshead Bay, Brooklyn, where I disembarked, and he went on to the N.A.S., Rockaway. A few years later Juan Trippe started Pan American Airways with a flying boat service between Key West, Florida and Havana, Cuba. As almost everyone knows, he built Pan American into one of the largest international airlines in the world.

Although the Naval Air Station had been decommissioned and there were no Navy activities, a maintenance crew and several watchmen were stationed there. Trippe, Caperton, a mechanic and I were lodged in a barracks. It was interesting to see the great number of cases of -----y (your first guess was correct) that were landed there and loaded on trucks for further transport. I got a lift on one of the trucks one night to a place where I could get a subway to Brooklyn. We sailed right through with no interference at all — and only one stop to pay a “toll.”

When I arrived at Middletown I found that they had the R4 nearly ready to attach and rig the wings. A 220 HP Hisso engine had been installed and the center section and tail surfaces all rigged. The ship was really an overgrown Jenny with the front cockpit enlarged to accommodate four passengers. The ship was owned by Pat Doyle, who proposed to barnstorm through western Pennsylvania and West Virginia under the name of “Doyle's Flying Circus”. He had hired a wing walker and parachute jumper named “Baby Otto Hoover.” Hoover was quite a character. He owned about a dozen pairs of leotards of many different colors with contrasting trunks to go with them. These served as his underwear as well as his performing uniform. All he needed was a purple cape and a big red “S” on the front of his leotards to look like Clark Kent.

By September 12th the ship was ready to go. Of course the field where we had done the final assembly was small and completely surrounded by high tension wires, but it was available. That morning, however, there was a good breeze blowing

the long way of the field so I took the ship off with no trouble and flew it the few miles to the Air Service Middletown Air Intermediate Depot field. The Commanding Officer of the field came out to greet me personally with orders to "get that crate the h--- off the field." I told him that a few things had to be done to put the ship in flying condition and that the owner and his mechanic would be there soon to make the necessary adjustments. He finally agreed to let us keep the ship there overnight. He even sent some men out to tie it down for the night. My reserve officer's ID card helped, I guess. Doyle and Hoover arrived about an hour later and we re-rigged the wings so they didn't flap quite so much. The boys on the gas truck came out after dark and filled our gas tank for a couple of dollars.

Next morning, after a test hop, we piled all our gear, including Hoover's two parachutes, Doyle and Hoover, into the front cockpit, and flew to a field just south of Harrisburg where we could leave the ship for the night. Harrisburg was having some kind of a celebration the next day and Doyle had contracted with the committee to have the plane fly over Riverside Park where they were having the doings, do a few stunts, and put on a wing walking exhibition and a parachute jump. So we did the show and Hoover jumped and landed in the middle of the Susquehanna River in about two feet of water. Embarrassing, as he was supposed to have landed in the park. His chute was very large, so it gave him time to perform on its attached trapeze on the way down.

A couple of days later we got to Hanover, where they were having a carnival. We stayed there four days and did quite well carrying four passengers at \$7.50 each on about 25 flights a day.

Pat Doyle had made advance arrangements for a performance of our show and several days of passenger-carrying at Elkins, WV. We arrived there safely on the afternoon of September 11th and landed on a hillside meadow on Dice Harper's farm.

I learned a few things about Pennsylvania mountain-flying on that trip. First of all, the R4 loaded down with the three of us and all our gear did not have a ceiling high enough to get us over some of the higher ridges. So when we came to a high ridge we would have to fly alongside it until we either found an updraft that would take us over or a pass we could get through. We did quite a bit of wandering up and down valleys.

We based in Elkins for about three weeks, making side trips to several nearby towns to put on shows at \$200 each with \$50 more for a parachute jump. We also did quite a lot of passenger carrying from small local fields. I learned a lot about bouncing over fences on short field takeoffs and landings, and also about hillside operations. I had to be my own mechanic, too.

Two Lucky Ones

Doyle had plans to start working our way south from Elkins, West Virginia about the middle of October, with his "Flying Circus".

On Saturday, October 6, the local high school football team was entertaining its biggest rival, and they asked us to fly over the field and drop a football to start the game. Dice Harper, who owned the field we were operating from, volunteered to go

along and toss out the ball. All went well as I throttled back and came in low over the football field. Harper dropped the football on the button but when I gave the engine the gun to climb out of there it picked that moment to "pack up." I only had enough flying speed to allow me to turn and get over some high tension wires into a very small field with woods at its end. Not even enough room for a ground loop before hitting the trees. So I aimed our nose right in between the two largest trees, took off my goggles, and ducked. Dice Harper and I escaped with only a few superficial scratches, but the R4 was totaled except for the undependable engine.

My pay automatically stopped when the R4 did, so I came back to Brooklyn. When I got there I found a letter from the Mitchel Field operations officer saying that they were putting on a carnival from November 6th to 10th and asking me if I would lead a formation of five jennies piloted by reserve officers. I phoned him at once and gave him a list of the reserve pilots I thought might be best for close formation work. We had two weekends to practice together, and so were able to put on a pretty good show.

That ended my flying for 1923. I got a lot of experience that was to be a great deal of help in later years. Then back to the Van Alstyne Huppmobile Company and the beautiful new 1924 Hupps.

Just after the first of 1924, Gillespie of Federal Aviation Co. in Newark phoned me to say he had sold another LWF and that the owner wanted a pilot to fly the ship on a few advertising missions over Newark. He was willing to pay \$30 a flight, so I took the LWF out of Heller Field and based it at Hasbrouck Heights (now Teterboro Airport). The missions turned out to call for flying very low over Broad Street, Newark, with my passenger throwing out a large load of advertising leaflets. I flew ten of these missions, changing landing fields several times, before the police caught up with the plane's owner. Fortunately, I was not around when the ax fell.

The next call from Gillespie came around the first of July. He had sold an LWF to a David Morris of Youngstown, Ohio, who wanted a pilot to fly passengers from a field he had rented near Amityville, Long Island. By that time my price for taking an LWF out of Heller Field had gone up to \$50. My log book says that I took the ship out of Heller on July 1st, picked up gas and Morris at Hasbrouck Heights, and flew him to his field at Amityville. From then to August 20th I put in forty odd hours hopping passengers on weekends and evenings.

I have no recollection of many of the hundreds of people I carried during those two months. Morris just collected \$5 a head and loaded them into the front cockpit four at a time, and I gave them a ten minute ride around the field. There was one rider, however, whom I won't forget. We were about to fold the operation late one afternoon when Morris put a lone passenger aboard. This fellow quite obviously had more than "one over the eight" but he seemed docile enough. Anyway, we were no sooner airborne than he unbuckled his seat belt, stood up in the cockpit, and proceeded to relieve himself. I was piloting from the rear cockpit so the type of shower I was getting was most unwelcome. I maneuvered the ship every way I could think of to make the force of gravity work in my favor. Believe me, he got a real fast roller coaster ride around the field.

On the afternoon of August 20, when I arrived at our Amityville field, Morris told me he wanted to get some repair parts at Curtis Field, so we flew over to get them.

Arthur Berry, another Van Alstyne salesman, was with us. Just as we were starting back Morris suggested that we climb to 2000 feet and do a turn or two or a spin before landing. I had spun the ship many times before so I agreed. When we neared our field I put the ship into a shallow tail spin. Just then the good old unreliable Hisso conked out. Well, that didn't worry me until I tried to get the ship out of the spin. Evidently the tail surfaces were not large enough to do the job without power. I couldn't even rock the ship out of it. So we rode it in.

We hit a field in Meridale Park, Lindenhurst. I certainly didn't pick the place but "some one up there" sure did. All three of us were knocked out and a fire started around the engine. It just so happened that the Lindenhurst Fire Department's two running teams, the Liberty Hose and Union Hook and Ladder, were practicing in the field for the annual tournament of the Suffolk County Volunteer Firemen's Association at Bay Shore the next week. They put the fire out quickly, pulled all three of us from the wreckage, and rushed us, with sirens at full blast, to Dr. Reid's Private Hospital in Amityville. It was only eight minutes from the time we hit until we were being treated by Dr. Reid. Try to beat that one. Dave Morris died that evening. Art Berry escaped with a broken jaw and leg and various contusions. I had some broken ribs and a few cuts and bruises.

In spite of strapped ribs I was able to report for two weeks active duty at Mitchel Field on September 3rd. I put in some twenty odd hours of flying time during this tour with no further incidents.

Back In The Air Service

About the two crashes I told you about, I finally got the message about flying the types of civil airplanes that were available at that time. The luck that was with me in the Lindenhurst, Long Island crash, where the ground that came up and hit us happened to be in a field where a fire department was drilling, couldn't be expected to continue. If I wanted to keep on flying, the answer was better equipment. In those days it was either flying mail or getting extended active duty in the Air Service. I opted for the Air Service with the idea that, if I found it was the kind of life Cleo and I wanted, I would take the examination for a regular commission. So I applied for six months active duty. In May 1925 I received orders to report at Langley Field, Virginia for six months active duty from 1 July.

For \$50 I bought a model T Ford sedan that I had taken in trade on a new Hupmobile. It was in good mechanical condition so I just piled our luggage in and drove to Langley. When I reported in I was assigned a house that I later found was supposed to be a major's quarters — and I was only a first lieutenant. Too good to be true. A few days later Cleo and Wayne arrived by train.

I was assigned to the 11th Bombardment Squadron. They had one hangar and seven active Martin bombers, plus one in the back of the hangar that was being cannibalized to help keep the rest in the air, and another that was so near the junk pile that, when it was in the air, its tail wagged like that of a dog. These NBS-1s were stick and wire jobs that were built during WW1. They were biplanes equipped with two Liberty engines.

My first flight in one of these bombers was on the 4th of July when, as co-pilot to Capt. Early Duncan, the Squadron commander, we lead a seven ship, three hour, formation flight to Richmond and returned. In a few days I was checked out in the bombers. The NACA (National Advisory Committee for Aeronautics) had a hangar on the field for their experimental planes. Tom Carrol, a very good friend of mine, was their chief test pilot and through his good graces I was able to borrow various types of planes, most of them single-seaters such as Spads, SE5s, Fokker V11s and Vought VE7s, to have fun in. I reciprocated by checking Tom out in Martins.

During my six months tour at Langley I made some 52 cross country flights in DHs and Martins. Some were eventful (mostly due to the very sketchy weather information available), others just pushing the ships along: Bombers cruising at about 70 mph and DHs at about 85 if you weren't bucking a wind. The ground doesn't go by very fast unless you are right down on the tree tops. Some of the more important trips I made were to Bolling Field at Anacostia, D.C., when it was my turn to bring back the 5 gallon can of grain alcohol that was needed each week to keep the "Anonymous Alcoholics" on the "prohibition dry" post properly lubricated. It made about ten gallons of gin, but then there were a lot of thirsty subscribers on the post. If Wayne can remember (he was three years old at the time) he can attest to the gin's potency, as he somehow got hold of a glass with a little in it and choked it down. He was reeling before Cleo realized what had happened.

Around the first of August, Capt. Duncan was transferred to the Command and General Staff School at Fort Leavenworth. I was quite flattered when Major (Tubby) Westover asked me if I would take over command of the 11th Squadron until Lt. Ken Walker arrived in December to be its regular C.O. Westover was Commandant of the Field so I said "yes" even though I knew it meant a great deal of responsibility as well as the loss of what otherwise would be leisure time. So, after an audit of the squadron fund, I took over Capt. Duncan's cigarette-pock-marked desk.

The personnel of the 11th consisted of four reserve lieutenants, on active duty like myself, and 124 enlisted men. I inherited an excellent team of noncommissioned officers: a first sergeant who, with the squadron clerk, ably handled the mass of squadron paperwork, daily work assignments, discipline, etc.; and a supply sergeant who not only knew his way around Langley but had excellent connections at several other Air Service posts, as well as nearby Fortress Monroe and Camp Eustace. he could get almost anything needed in record time. No questions asked. The mess sergeant seemed to be "grouse" (grumble) proof, which is saying a lot. He had two cooks and two or three KPs (kitchen police) to help, and had to operate on a very tight budget. Our hangar crew of mechanics and specialists and their maintenance shops were bossed by a master sergeant who had been in the service for about 18 years and was "bucking" for a 20 year retirement. Very few things escaped his notice, and when he had inspected a ship and signed it out to the line you could be sure that it was airworthy. These NCOs can teach a young lieutenant much more about running a squadron than any officer's training school. However, a squadron C.O. is needed to oversee and coordinate the work of the several jealously guarded squadron domains.

The administrative procedures I set up seemed to work pretty well. The four lieutenants and I took turns at standing the reveille roll call every morning. Two

mornings a week I had a short staff meeting attended by the officers and the first, supply, mess and hangar master sergeants, to discuss and settle any squadron problems and also to finalize the next day's operations schedules. The other four mornings a week I was in my office right after barracks inspection to sign papers and to discuss the problems of any of the men. One of the officers or myself had to be available on the post at all times day and night.

About the end of September a major arrived at Langley with his family, so we were moved to a house in the lighter than air section of the field, about a mile from my hangar.

Langley Field Incidents — 1925

Along toward the end of October, one of my men told me that his mother was in serious condition in a Boston hospital and asked me for a few days furlough to visit her. I gave him the furlough and, in addition, I got Major Westover to authorize a flight to Boston for him. We started out early the next morning in a DH and got as far as Cape May, N.J., when we were forced down by weather. Next morning we got an early start, stopped at Lakehurst for weather information, fueled at Mitchel Field, and got to Boston by early afternoon.

While my passenger was visiting his mother I tested a Moraine Parasol that a group had assembled but hadn't been able to find anyone to flight test. After inspecting it I offered to take it off and fly it around for a few minutes for \$25 and another \$25 if I landed it safely. I got my \$50.

I stayed the night with the Hal Bazleys. (I had delivered an LWF plane to him in 1923.) On the way back the next day I ran into treetop weather between Bolling and Langley. I decided that before the trees got any taller I had better sit down in the first field that came along. I landed in a muddy farm field near Mimini Grove, Va. The farm was run by four bachelor brothers. They had no phone, so I got them to hitch up a horse to a wagon and drive me to the nearest phone, which was in a small store three miles away. Then I checked in with Langley operations so they wouldn't start a search for us. While at the store I bought 10 lbs. of flour, 10 lbs. of sugar, 10 lbs. of salt and a gallon of molasses to take back to the farm. This was real back country. The farm was pretty much self-sustaining, so they were glad to get the staples I brought in exchange for dinner, bed and breakfast. They had no watch or clock on the place — lived by the sun. No electricity or running water (a pump over a well in the yard), but they did have a three hole back house. By noon the next day the field had dried out a bit, so I managed to lift off and get back to Langley that afternoon.

Sometime in September a young recruit was assigned to my squadron. I had a talk with him when he first reported: a nice kid just out of high school in the Pennsylvania Dutch country. He was assigned to one of the maintenance crews in the hangar. About the middle of November several bombers on the line were idling their engines preparatory to a formation takeoff when, for some reason, this recruit, who had been told to remove one of the wheel chocks, came from under the wing and walked right into an idling propeller. We sent a corporal and a flag home with him.

On the 30th of November my turn came to fly what they called the “Model Airway.” this was a weekly scheduled DH trip that took 5 days, with stops at 16 Air Service fields from Detroit to St. Louis, and averaged about 25 flying hours. Anyway I was away on this trip when two of my lieutenants paid off the squadron for November. Among those they paid was the deceased recruit. The error wasn’t discovered until a couple of months after all three of our tours of active duty had ended. The two lieutenants and I had correspondence with the Army on the subject for the next five years.

Sometime in September I got orders to provide a bomber and crew to transport General MacArthur to Bolling Field, D.C. I got the word that he was going to either testify at or be on the court of the Billy Mitchell trial in Washington. The message was clear so I had the real shaky ship pulled out of the back of the hangar and dusted off. I tested the engines, made a short test hop to make sure it would hang together, then set her out on the line to await the General’s arrival. Oh! I forgot. I had my electrician rig a wire to the right engine ignition switch from a button on the side of my seat. When the button was pressed, the right engine would cut out. When MacArthur arrived, we fitted him out with helmet and goggles and loaded him into the copilot seat — and away we went. I pointed out the empennage (tail) that was fishtailing its way behind us and told him that, after all, we couldn’t expect these WWI stick and wire planes that were engineered and built 8 to 10 years ago to last forever. I also told him that I thought we were just lucky that there was no war going on where we had to use the types of aircraft we had for any military missions etc., etc. In the meantime, that right engine kept misbehaving. I managed to keep our average ground speed down to about 50 mph on the trip. Upon our return to Langley that afternoon Old Wobbly was put in the back of the hangar again.

One day I was checking Bill Winston (an old friend from Carlstrom Field) out in a bomber. He was an excellent pilot but he had never flown a two engine plane. In about twenty minutes his air work was OK so I told him to try a landing. Before I go any further let me explain that in those days flying fields were all grass — no runways. So, to get on with the story, Winston was making a good landing approach into the wind when I saw a DH coming in for a landing downwind — and headed right for us. We were leveling off when I decided that the fellow in the DH hadn’t seen us, so I poured on full power and told Winston to pull up right. We missed the DH so Winston took the ship around and landed it OK. We missed a collision by about 30 feet. This was not an enjoyable experience, so I went right to the field operations office to enter a complaint. While I was talking it over with the operations officer, who should walk in but Major Westover, the field Commandant. He was the pilot of the DH and was all shaken up. He took the entire blame for the incident and begged pardon, etc. I told him that we were all lucky and should be glad that we hadn’t made the boys in the hospital heat up that big pot of wax.

Three or four nights a month we had to do a tow target mission for the anti-aircraft and searchlight batteries at Fortress Monroe. This was a bomber job. The target was about 25' x 10' and was made of canvas with weights to keep it flying as near horizontal as possible. A tow cord with release was attached to the tail of the bomber and then laid on the ground parallel to the takeoff run for about 1200 feet to the tow target. When you took off after dark you would pick up the target and climb

as fast as possible and proceed to the Chesapeake side of Fortress Monroe at about 1500 feet. The searchlights would try to find the target and pass it on from one to the next. Then the anti-aircraft battery would shoot at (hopefully) the target. We would make passes over the battery for about an hour, each time coming over at a different altitude and from a different direction. Then we would go back to Langley, release the cord and target and land. It was sort of fun except that sometimes the anti-aircraft shells would come too close for comfort.

Hotel Ranges and A Real Close One

I had just returned to Brooklyn from a six month Air Service active duty tour at Langley Field, VA., so the first thing on my calendar was to get a job. I could go back to selling Hupmobiles but that was a dead end street. My father-in-law told me that the Michigan Stove Company of Detroit was looking for a man to handle their hotel and restaurant kitchen range business (wholesale) in south New Jersey, Pennsylvania, Delaware, Maryland and DC., with headquarters and warehouse at Philadelphia. So I phoned, made an appointment, and went to Detroit to see about the job, since nothing worthwhile was doing in the aviation business. They offered me the position with a good salary and liberal traveling allowances, and I accepted. The next ten days were spent at the factory familiarizing myself with the various products I would be handling, getting all the information I could about the firms and people I would be dealing with in the territory, and all available information about our one competitor and its products.

It took me awhile to get acquainted with the hotel supply house and gas company salesmen as well as the chief chefs in the larger hotels and restaurants. Regular calls on these and A & E firms doing plans and specifications for new hotels in my territory produced a good flow of business. Detroit was happy.

One very lucky experience comes to mind. I was just finishing breakfast one morning in Atlantic City when the fire sirens sounded. I walked up the boardwalk to see where the fire was. It happened to be in the rear of one of the larger hotels in town — right where their kitchens were located. The fire was brought under control very quickly but it had gutted both the American plan and European plan kitchens. I knew the head chef so I found him and told him that I had all the equipment to put him back in business at my Philadelphia warehouse and could have it shipped out that afternoon. Then, with the gas company's help, I could start installation as soon as he could get the debris cleaned out. I got the Atlantic City Gas Company representative over and he, the chef, and I made up the new kitchen layouts. The old equipment had been in use for about 12 years so the hotel manager thought this was a good time to install new ranges, etc. (fire insurance, you know). Anyway, the gas company got its order, I got my order from them, and had the ranges on their way that afternoon. The importance of the order can be gauged by the fact that the gas company man (a noted tightwad), who worked on a salary plus commission, took me to Hartney's that evening for a lobster dinner. Detroit also came along with a nice raise.

One of the trips I made for the stove company was to Dayton, Ohio. Several of my Kelly Field classmates were stationed at McCook Field, near Dayton, so we got

together for a reunion. They brought along Ralph Lockwood, who was chief test pilot at McCook. Ralph claimed to be the only man to bite himself in the behind. He said it came about like this: He had false teeth that didn't fit very well so when he was getting ready to take off for a test flight he would put them in his rear pants pocket. This day he parked his teeth, put on his parachute and took off. About 1000 feet over the field the engine blew up, taking a lot of the front end of the ship with it. So Ralph bailed out. When he hit, it was at a pretty good clip. He landed on his gluteus maximus with his false teeth making his only wound. He swears that's what happened.

In 1927 I was on active duty at Mitchel Field, L.I., the last two weeks in July. On my way home from Mitchel I stopped by at Curtiss Field to visit some of my friends there. While we were talking, Casey Jones came over and said he had a photo mission over Manhattan and would I like to take it. I said I'd be glad to help out so they rolled out an old C-6 Standard, put the photographer and his cameras in the front cockpit and away we went. We were only a few minutes out of Curtiss and over New Hyde Park when there was a fair-sized explosion up front, no more power and the ship became quite tail heavy. Then I saw that we had a pretty good fire going up forward where the six cylinder engine block had been. The gas tank in this ship was in the center section over my passenger. There was a petcock in the gas line from the gas tank to the engine and I tried to get the passenger to turn it off and stop feeding gasoline to the fire. The fellow was too scared to move, so, as the flames blowing back were getting pretty hot, I had to side slip to keep them away from the fuselage. There was not much choice as to landing place, so I skipped to within a few feet of the ground and landed in a small potato patch. By that time the right wing was burning briskly, so I hauled the photographer and his cameras out of the front cockpit just before the gas tank exploded. A water pumping station was nearby so I borrowed their phone to advise Curtiss Field of the good news: One Standard they wouldn't have to scrap. Ed Conerton came over to pick us up. When we got back to Curtiss, I offered to take the young man on his mission in another ship but he was too badly shaken. So Ed and I retired to a nearby speakeasy to freshen up a bit. I later learned that the C-6 engine block that left me without warning landed in a service station in New Hyde Park but did no damage — just scared them.

A few days after this I received a wire from Lockwood, who had joined the newly-formed Aeronautics Branch of the Department of Commerce, asking me to come to Washington to talk about joining them. The next week I went down to see what was going on.

In 1926 Congress passed the Civil Aeronautics Act, under which was established an Aeronautics Branch in the Department of Commerce. Its function was to exercise a certain amount of control over civil aviation by means of licensing pilots, mechanics, aircraft and engines. William P. McCracken was appointed Assistant Secretary of Commerce for Aeronautics, and Clarence M. Young, Director of Aeronautics. With the help of Gil Budwig, Dan Scarritt and Ralph Lockwood, they were in the process of recruiting a group of qualified inspectors to do the examining and testing for the licenses.

They offered me the job as supervising inspector of their No. 2 region, which consisted of south NJ, PA, DE, MD, VA, WV, NC and DC. The salary was less than I was

getting with the stove company, but the job was important in aviation and I figured it would put me in contact with some of the top people in the business. While I was there I got my transport pilot license (#73) and also an aircraft and engine mechanic license. I agreed to start work for them on November 1. That meant moving my family (Cleo and Wayne) to Philadelphia, where my headquarters would be.

Early Aeronautics Branch, U.S. Department of Commerce

In the early part of its organizational phase, the Aeronautics Branch of the Department of Commerce was very short of help. Applications for pilot, aircraft and mechanics licenses were pouring into the Washington office. They had the country divided into regions with a Supervising Inspector in charge of each. About all the Washington office was able to do with these hundreds of applications was separate them according to regions, then ship them out to the Supervising Inspector of each region. Since the District of Columbia was in my region, I would stop in at headquarters as often as necessary and pick up my new applications, sort them out and make up itineraries.

The pay on this job was something like \$300 a month to start. You were provided with a book of government travel requests to take care of transportation. When you were away from your official headquarters you could collect \$6 per diem to cover food and lodging, tips (not over 25 cents), taxis, street cars, buses and local phone calls (not over 10 cents) on an expense account. Don't you wish you had a shot at a deal like that?

Since quite a few pilots at NAS Norfolk and Langley Field had expressed a desire to obtain a civilian pilot license, I got approval to spend a few days there checking pilots for transport pilot tickets. The Department assigned me a brand new J5 Laird for the trip. Now the Laird was a beautiful shiny ship, but it was an open cockpit job with no heater; the month was December and no winter flying clothes went with the machine. I had my own helmet and goggles so I bundled up as best I could in my business overcoat and set sail for Langley. The temperature on the ground at Bolling was about 45 degrees so I flew low to Langley and didn't suffer too much. The trip back to Bolling a few days later was a different story. It was around 30 degrees on the ground at Langley the morning of my departure for Bolling (Washington). As the trip progressed, I got colder, and the colder I got the more I leaned on the throttle, so I made the 130 mile trip in about an hour. That was unquestionably the coldest ride I ever had. They had to help me out of the ship at Bolling.

First thing I did upon my arrival at the "Deep de Com" hangar was to ask the man in charge to "scrounge" some winter flying gear for me. He said he thought he could help and this is how he did it. It seems that only a few days before, there had been a fairly extensive fire in one of the Bolling Field hangars. Now this is an event that every Supply Sergeant on the field welcomed, because it enabled him to claim that almost every item in his charge that had been lost, strayed or stolen was destroyed in that hangar fire. So all my man had to do was to get a winter flying suit, boots and gloves from a Supply Sergeant who would survey them as having been lost in the fire. I got my winter flying gear for a \$10 bill. Since this was some 48 years ago, I guess that the statute of limitations will cover all participants.

As of March 1, 1928, my official headquarters were changed from Washington to Philadelphia. They also issued me a J5 Travelair. I was glad to swap the Laird for the Travelair. The Laird was a much better looking plane and it was faster, but the Travelair was much better for getting in and out of small fields — particularly the many where you had to land up hill and take off down hill.

After four months of operating out of Washington as a temporary headquarters, I was pleased to get the permanent assignment to Philadelphia. First thing I did was to rent a small apartment and move Wayne and my wife, Cleo, to Philadelphia.

The Ludington Philadelphia Flying Service operated the municipal flying field just south of the city. Bob Hewitt, an old friend, was the manager. They did a lot of flying instruction, passenger hopping, cross country work and had an excellent service and repair shop. Bob was kind enough to provide me with a small room for a field office, complete with a desk, chairs, etc. Everyone was happy.

In those days there were only three classes of pilot licenses: Transport, Limited Commercial and Private, each with its limitations. All required a written examination and a flight test. It was up to the applicant to furnish the airplane for his flight test. If the flight test was in a dual control ship, I'd ride with him to see how much he slipped and skidded on his turns, figure 8s, 180s and 360s — in other words, to see whether he was flying the ship or the ship was flying him. Also, I very seldom licensed an airplane without test flying it myself. I had three inspectors assigned to my region, so the first thing I did was make up a schedule of dates and places where one of us would be available to inspect aircraft and to examine and test for pilot and mechanic licenses. This was sent to all the active airports in the region and to all applicants.

On one of my trips to the Richmond Flying Field I had an application for a license for Roscoe Turner's "Flying Cigar Store" ship. If I remember correctly, it was a large single engine biplane that, I believe, was an early Igor Sikorsky stick and wire job. It was very well built and, according to Roscoe, was very nice to fly. It had to be good since the runway he operated out of, across the field from the Pitcairn hangar, was only about 30 feet wide and had deep ditches on each side. At that time Roscoe had a pet crow that he took everywhere with him. The crow had a habit of picking up anything that was shiny such as a wrench, pliers, etc., and hiding it. What fun. As you may possibly remember, Roscoe was always dressed in smart uniforms. I asked him where he got them and he said that his wife designed and had them made for him. Anyway, uniform or not, Roscoe was an excellent pilot.

In late 1927 and early 1928 I spent quite a little time based at Langley Field, Virginia. I was stationed there in 1925, so I still had a lot of friends there. They put me up in the B.O.Q. (Bachelor Officers' Quarters) and, for a very nominal fee, fed me at their mess. The NACA (National Advisory Committee for Aeronautics) very kindly hangared my plane. Quite a few of the pilot personnel at Langley and at the Naval Air Base at Norfolk wanted to qualify for civilian pilot licenses, so I processed their applications. Also, some of the "Non Coms" and Specialists qualified for airplane or engine mechanics licenses. The NACA had quite a stable of planes in their hangar, some of which they were nice enough to let me fly. For my money, their Fokker D7 was the best handling ship of the lot. Tom Carrol, an old friend of mine, was chief test pilot for the NACA at that time.

On the morning of the 15th of November 1928, I answered the phone at my office at the Philadelphia Airport and heard someone say, "This is the White House Vacuum Cleaner Department" (Hoover was then the Secretary of Commerce). I knew right away that it was Ralph Lockwood, the Supervising Inspector in Washington and my boss. I asked him why he was wasting the taxpayer's money on long distance phone calls. He said they had a problem and needed my help. He said, "You know that nice new Stearman we have in our Bolling Field hangar?" I said, "Yes." "Well," he said, "Clarence Young (Chief Air Regulation Division, and Lockwood's boss) is going to make a tour of Europe next month and wants to take the Stearman along. However, in order to do this, the ship needs some additional instruments and a radio installation that can only be done at the Stearman factory in Wichita. So Clarence wants you to ferry it out and back." I told him that it would be sort of difficult for me to get away just then as we had just raised the price of an untested pilot license to \$100 and the price of covering up a dry rotted longeron to \$150, and we were busy running to the bank. His answer was for me to throw a couple of shirts in my flight bag and fly down to Washington that afternoon. They would have the Stearman on the line, all gassed, warmed up and ready to go first thing in the morning. Well, an order is an order — so I complied.

Instrumentation in most civil aircraft in those days was pretty sketchy. Many were equipped with only a compass, altimeter and air speed indicator, some with a turn and bank indicator. This was about the story for flying and navigating instruments. The Stearman had all these for the outbound trip plus a rate of climb indicator and radio on the return trip. An 1100 to 1200 mile cross-country trip, especially if it was not over established airways, was a bit more complicated in 1928 than it is now. To be sure, there were airway strip maps to be had, but once you were off those, the Rand McNally state maps were about the only maps available. So you drew your flight line on the state maps and tried to follow it. Following railroads in mountainous country was not recommended as they sometimes went into tunnels without warning. A combination of visual and compass navigation was what I generally used.

The trip out was normal for late November — high head winds, snow, sleet, etc. I had to make an unscheduled landing and overnight at Terre Haute because the ground was getting a little too close. There were a lot of heavily flooded areas between Anglum and Kansas City, and snow from there to Wichita. Upon my arrival, I phoned Stearman and told him I had arrived with the package he had been expecting from Clarence Young. He said he'd sent a pilot to take the ship over to his postage stamp sized factory landing place. It took them four days to do the work on the ship. Then while I was testing it, prior to returning to Washington, the lever controlling the horizontal stabilizer let go and put me into a dive I couldn't control with the elevators. I lost about 800 or 900 feet before I realized what had happened and I corrected it just in time. All I had to do was to pull the stabilizer control lever up and hold it with my left hand while I operated the control stick and throttle with my knees and right hand to come in for a landing. It didn't take Stearman more than a couple of hours to make the necessary repairs, so I was on my way by noon.

I got back to Washington the afternoon of November 24th just in time to jump into my Travelair and make Philadelphia before dark.

A Hunting Trip

In early November, 1928, Belin DuPont of Wilmington, Delaware, invited Bob Hewitt, (manager of the Ludington Philadelphia Flying Service), Victor Dallin (aerial photographer), Jack Thropp (manager of Trenton Airport), John Steffin (Philadelphia businessman) and myself for a week of hunting at the Dupont Combahee Plantation in South Carolina. As I remember it, the plantation consisted of about 10,000 acres situated near the mouth of the Combahee river, about halfway between Charleston (of horse diaper fame) and Savannah. Bob Hewitt made arrangements with Townsend Ludington for the use of his flying service's new six passenger Travelair for the trip.

We were scheduled to depart on Saturday, November 24th, but, due to my late arrival that day from my trip to Wichita, our departure was postponed to Monday. So Monday morning we loaded our gear and cut cards to see who would drive to Raleigh on the first leg of our 600 mile trip. I cut the high card so we got under way. The weather was cold with rain and sleet, but the weather report was for warmer temperatures to the south. However, a few minutes after takeoff we began to take on quite a little ice. By that time we were nearer Bellanca Field (near New Castle, Delaware) than Philadelphia, so I set the ship down there. We had so much ice onboard that I had to land at about half throttle. The Bellanca boys put our ship in their heated hangar, so in about an hour the ice melted off. Also, weather had improved considerably, so we were on our way again. The rest of the trip was routine. The plantation had its own landing strip, which was well marked. We made it just before dark.

Combahee Plantation was beautifully organized for hunting parties. There was a choice of deer, duck, quail or pheasant hunting. In the evening, after dinner, the guests would meet with the plantation manager and each plan his next day's hunting. Breakfast was at 0500, so the duck hunters could be in their blinds with their live decoys in place well before daylight and the deer and bird hunters could be in position. There were plenty of guides. One went out with each duck hunter, taking him to his allotted blind by boat, anchoring his live decoys in the proper places, retrieving the birds he shot, and bringing the hunter, bag and decoys back to the big house when the morning flight was finished. The deer hunters were posted along a trail, and beaters with whistles, horns and bells would form a chain and drive the deer toward the hunters. The field hunters each had a guide and a retriever. Gold plated hunting.

The meals, of course, were marvelous. We were there for five days and arrived back at the Philadelphia airport on 1 December with some 18 quail and pheasants, 35 ducks, one small deer, and an unpayable debt to Belin DuPont.

When I got to my week's accumulation of mail the next Monday, I found one letter from Washington giving me a \$400 a year raise, and another one advising me that I was transferred to Kansas City as of 1 January 1929, to be in charge of the Central Region. I didn't like the idea of moving so far away from our farm in Bethlehem, New Hampshire and from all my friends in the East.

When the Ludingtons learned of my pending transfer, they offered me the job of building and managing an airport on land they owned near Camden, New Jersey. The salary they offered me was about double my Dept. of Commerce pay. In addition they offered to rent me a house they owned in Pennsauken, N.J. (near the airport site) for about half the going rate. So who could refuse? The frosting on the cake was that they would like to have me pinch hit as a pilot for the Ludington Philadelphia Flying Service when needed. I took my resignation to Washington as soon as I could get it off the typewriter.

Washington offered to let me stay at Philadelphia at the new salary, but I had to refuse. After all, the reason I joined them in the first place was to find a worthwhile job in commercial aviation.

First thing Ludington wanted me to do was to make an inspection tour of the more active airports in the U.S. and see how they were doing things, their problems, and get any idea that would be of value in building Central Airport at Camden.

I was already familiar with the airports in my old territory and around New York, so I started my itinerary with a visit to Lt. Duffy at Buffalo Airport. Then, next day, on to Major Berry and his Cleveland Airport. Then I traveled by train at night and made one day stops at Detroit (Ford Airport), Chicago's Midway, and St. Paul Airport. While in Detroit I contacted a friend who was a "revenue agent." He very kindly drove me around and, before I left, gave me six bottles of very fine confiscated (he called it "liberated") Scotch. Those were prohibition years. Remember? I spent the weekend on the choo choo from St. Paul to Salt Lake City. Time to relax and get caught up on my reports. Not much to see at Salt Lake, so I caught the midday train for Oakland, California. Ed Mouton met me at the Oakland Airport and ferried me over to the San Francisco Airport at San Bruno in his "Deep de Com" plane. Roy Francis showed me around his 'port, brought me dinner, and put me on the train for Los Angeles. I spent the weekend looking in on C.C. Mosley at Grand Central, Maj. Barnitz at Inglewood and the L.A. Metropolitan Airport at Van Nuys. I only had two bottles of Scotch left by then, so I climbed on the rattler for Kansas City. A couple of days enroute and another two in K.C. and I was ready to go on to St. Louis.

While I was in K.C. I heard that air transportation to St. Louis was available the next morning. I can't remember the name of the carrier but I remember buying a ticket and being the only passenger in a 4 passenger Ryan. The ship had dual controls so I sat up front with the driver. He told me he had just started work for the line and that this was his first trip over that route. I told him that I had been over the route a couple of times the month before under similar conditions and I thought that, between us, we should have no trouble. I suggested that he take a 100° course until we came to the Missouri river then, if it was still snowing and the visibility wasn't too good we could follow the river right down to Lambert Field. That's what we did — and arrived a few minutes ahead of schedule.

I had a nice weekend in St. Louis. Those people certainly know how to entertain visiting firemen. In Cincinnati I caught up with a couple of old friends at Lunken Field: Ed Conerton and John Paul Riddle. Paul was running the airport and the Embry-Riddle Airline. Ed had landed the "Voice From The Sky" Fokker trimotor there the day before and the heavy sound equipment it carried was enough to break

its back in landing. So I spent an extra day with them before climbing on the night sleeper for Philadelphia.

Amelia

I had just returned from a 25 day swing around the country on an inspection tour of the more active airports. All but 3 of the 14 airports visited were city-owned; some were city-operated and some were leased to private operators. All had money problems, and nearly all had high tension wires on at least one approach to the field. I have a copy of my lightly padded expense account for the trip, which totaled \$610. That included all transportation, meals, hotels, entertaining, etc. That was in 1929 when waiters, no matter how insulting they might be, would only get a 10% tip.

Now I had to get down to the business of changing a small flying field into an airport. The Ludingtons had already engaged the Airport Development and Construction Company of Philadelphia to do the engineering part of the job. My part was to tell A.D.C. what we wanted and where we wanted it, to keep a check on materials and workmanship, to approve designs and layouts, and to generally supervise the job. There was a small dirt floor hangar already on the field, with a lean-to which served as an office during the construction period.

There is nothing very exciting about building an airport, so I'll spare you the details. It took nearly a year to complete Central Airport, which included two hangars with lean-tos for shops and offices, a combination administration and station building, boundary lights, a beacon light tower, a BBT floodlight for night landings and two paved runways. In order to provide extra income, we built a public swimming pool and a miniature golf course, and leased a corner lot for a gas station.

When I got back from my survey trip around the country on February 8th, I learned that Bob Hewitt, General Manager and Chief Pilot of the Ludington Philadelphia Flying Service, had been critically injured in an automobile accident a few days before. So I made myself available to pinch hit for Bob on any flying jobs when they needed help. The Flying Service had quite a stable of airplanes: a clipped wing Waco 9, 3 Waco 10s with different engines, a Fairchild FC2, a Fairchild 71 and a Travelair 6000. Then, for fun, they had a Taperwing Waco. My flying for them included passenger hopping, testing, demonstrating and some cross-country trips (some more interesting than others).

Early in the morning of April 27, 1929, Bob Hewitt, who was still on crutches, phoned me and said that the Chamber of Commerce was *willing to pay* to have a plane fly down to Wilmington that morning to pick up Amelia Earhart and bring her back to Philadelphia for a reception and dinner in her honor. So I dashed out to the airport and found that they already had the new 6 passenger Fairchild 71 on the line and warmed up. Since it was my first flight in that type of plane, I took it around the field and landed it a couple of times before heading for DuPont's private field near Wilmington. I got Amelia to Philadelphia in plenty of time for her luncheon engagement. Next day (also on the Chamber of Commerce) I took her on an aerial tour of the "City of Brotherly Love."

Later in April, Brooks Parker, an insurance executive, wanted to fly a party down to the races at Havre de Grace, Md. One hitch was that he wanted to be set down on

the track infield. It was early and there were very few people on the infield, the approach was good, only a low fence to get over, so we set down with plenty of room. Getting the field cleared off after the races for our trip home was a bit more of a problem.

On July 3, 1929, the Ludingtons started a summer weekend line from Central Airport to Cape Cod, departing Central Friday afternoon and arriving back Monday morning. The Fairchild 71 and Travelair 6000 were assigned to the run and four pilots (including myself) were provided with neat conservative uniforms. I had the honor of flying the first passengers in the Fairchild. Two of the passengers wanted to deplane at Jamestown (an island in Narragansett Bay across from Newport). The others were going to our terminal in a field on the Coonamessett Ranch near Falmouth. I never had even seen either place and my Jamestown passengers had no idea of where we could land, so after looking around a bit I set the ship down in a cemetery that had enough unobstructed room. We were not entirely welcome. Some of the people in the crowd that gathered were saying things about desecration and police, so I unloaded the passengers quickly and took off before Smokey could get there.

Although the line was supposed to be from Central to Cape Cod, there were usually variations. One time I had to find a place to land on Fisher's Island and several times I had to land at Martha's Vineyard or Nantucket (the latter two are islands just south of Cape Cod). There are a lot of deserted beaches on the south side of Martha's Vineyard, so when I had to go to Nantucket I would fly along them at treetop height and give my passengers a view of the "buff" bathers rushing to cover up. On one trip late in August I had to go to Nantucket with a stop at Newport. Headwinds had made me a trifle late, so by the time I left Nantucket alone for Falmouth it was getting real dusky. There were no lights on the field at Coonamessett, but Bob Hewitt, who had gone ahead of me in the Travelair, had a half dozen autos lined up at the approach to the field with their headlights shining down the field. Since I didn't have enough gas to take me to Boston, I had a "Hobson's choice" and came in over the parked cars as low and slow as I could. The lights didn't illuminate very much of the field so on touchdown I cut my ignition switch and stood on the brakes. I ended up about three feet from a big haystack.

The Coonamessett people really "did themselves proud" (as they say in New England). We had a small cottage, fully equipped, to ourselves. Our arrival night dinner always consisted of all the steamed clams and lobsters we could eat, with all the trimmings and a homemade desert. All our meals over the weekend were on the same scale. Regrettably this Cape Cod caper only lasted one season (1929). I guess the passengers were buying their transportation cheaper than the Ludingtons were.

It was a bright, sunny morning in May, 1929. I arrived at Central Airport (Camden, N.J.) at eight o'clock, checked progress of the construction of the two new hangars, and went to my temporary office in the old hangar lean-to. I was looking over the morning mail when Bob Hewitt, manager of the Ludington Philadelphia Flying Service, phoned and asked if I could take a charter trip to Cincinnati that morning. I asked what the nature of the trip was, and he said they wanted to transport a man's body, his widow and two brothers. He proposed to use their Fairchild 71, so I said I'd check the weather and call him back. The Weather Bureau's forecast for the route

was good, so I called Bob and told him to send the 71 over to Central from Philadelphia and I'd take the trip. He said he would have the party there by 9:30 and that the Philadelphia undertaker would make arrangements to have us met at Lunken Airport, Cincinnati, at about four that afternoon.

The party arrived at Central on schedule, but when I got a look at the casket the body was in I knew we weren't going to get it in the plane door. So I had them drive the hearse over to the far side of the field where there were no onlookers and I taxied the plane over. We had to take the body out of the casket, tie it in a seat, cover it, load the passengers and take off from there.

The flight was uneventful, weather C.A.V.U., and, after a brief refueling stop at Bettis Field, McKeesport, Pa, we arrived at Lunken Airport at 3:50 that afternoon.

Unloading at Cincinnati was not quite as discreet as our loading at Camden. I turned the ship so that the unloading door was away from spectators and the field personnel managed to keep photographers from taking pictures of the proceedings. Nevertheless, one of the Cincinnati papers carried a story about the "Flying Hearse."

That evening I had a sort of 1922 Cadet Class reunion with John Paul Riddle, "Jiggs" Huffman, and "Dubissary" Harris. They were then pilots on the Embry-Riddle Airline that operated a contract airmail route between Cincinnati and Chicago. In the morning I had a good tail wind, so I was back at Central in time for lunch.

The Jacobs Engine Co. was located at Central Airport, and from time to time I did some test flying for them. One test I'll always remember was when they had mounted a small engine of their own design in an Aeronca Scout single seater. Tom Carrol was their test pilot, but he weighed over 200 lbs. and couldn't get the ship off the ground. At that time I weighed around 140, so Al Jacobs asked me to try it. Early the next morning, when the air was its heaviest, I tried to take the ship off — but it would only get a few feet off the ground. So I taxied it back to the factory and shed all but my shorts. This time we got off and up to a ceiling of about 40 feet, so I made a very wide trip around the field and came in for a full power landing. I guess Al figured that his little engine was only good for lawn mowers. I never heard anything more about it.

My office in the new administration and station building at Central Airport had a large picture window facing the field. One morning I was working at my desk when I happened to notice a small Cessna coming in for a landing. Just as he came over the fence at the far side of the field I thought I saw a large object drop from his plane. He landed OK and taxied in to the line, killed his engine, and sauntered over to the hangar — leaving no indication that anything had been amiss. I was so sure I had seen something drop that I went out and inspected the plane. Nothing was wrong there, so I picked up the pilot and drove to the far side of the field. It didn't take long to find a young man lying there unconscious. He seemed to be breathing all right and his pulse was OK, so I called an ambulance and had him moved to a local hospital. After a complete check, the hospital advised that he had no injuries that they could discover and that probably his "wind was knocked out" when he hit the ground.

How could an accident like this happen? Well, the pilot's story was that he had landed in a pasture about four miles away and, after visiting some friends nearby, was ready to take off for the short hop back to Central. Since the field was quite short, he had asked a couple of men to hold down his horizontal stabilizer (one on

each side) until he had “revved” his engine up, and to turn loose when he waved his hand out of the left window. It seems that he opened his throttle wide and waved out of the window OK. The man on the left stabilizer saw it and jumped away, but the man on the right didn’t see it and before he knew it the plane was gathering speed and the air pressure had him glued to the stabilizer. When the pilot came in to land he reduced his air speed enough to take most of the pressure of the man clinging to his stabilizer and allow him to fall to the ground. Not a broken bone. Not a bruise or abrasion. A miracle.

On a Saturday in May, 1931, I had a rather unique flying experience. They were having an air meet at the Philadelphia airport that afternoon, and one of the attractions was a “Sportsman’s Pilot Race.” It was open to anyone with an airplane. They had sixteen entries and, since there was such a difference between the planes involved, they decided to give each one a handicap. To do this they wanted to have each ship timed flying over the same one mile course at full throttle and piloted by a neutral qualified pilot. So they asked me if I could take on the job.

The procedure was for me to take each ship off from the Philadelphia Airport, make a wide circle at low altitude, fly low at full throttle over the timing course, come back around the field, and land. When I took off with one ship, the next to be tested was to have its engine started so that I’d lose no time in transferring from one ship to the next.

At this point I might say that the Philadelphia Airport in those days was little more than a flying field. It was small, had no runways, and the approaches left a lot to be desired. Anyway, we got the tests started promptly at 8:00 a.m., and from then until 12:30 I flew sixteen different airplanes over the course to qualify for their handicaps. The types varied from an Aeronca to a Taperwing Waco. Each had its own characteristics, but fortunately they all behaved well for me that day. It was an experience. The race went off on time that afternoon.

Tragedy at Trenton

In the early 1930s a popular way for various organizations, such as American Legion posts, service clubs, etc., to raise funds was to sponsor so-called “Air Meets” or “Air Races” at their local airports. One of these was a two day affair at Trenton’s Mercer Airport on October 19th and 20th, 1930. It carried the prepossessing title of “All Eastern States Air Meet.” I was serving as Judge and Starter in the closing event of the meet, a 25 mile race over a triangular closed course with one pylon on the airport field.

Five planes were lined up ready to start when Mrs. Opal Kunz landed and asked to compete in the race. I asked the pilots of the other five planes if they had any objection to her last minute entry and they all agreed to let her compete.

So I started them off at 50 second intervals and went over to the home pylon to make sure that no one was cutting any corners there. On the last lap three ships were bunched on their approach to my pylon. George Zinn in his Taper Wing Waco was low and on the inside, Mrs. Kunz a little ahead of him and on the outside, and Dick Mackie in his Cessna flying a high, safe race about 150 feet above Mrs. Kunz. Just as they got to the pylon, Mrs. Kunz suddenly cut around directly in front of

George, which forced him to pull up sharply to avoid hitting the Kunz machine. Just at that moment, however, Mackie was just above. Zinn's Waco collided with the Cessna and cut its whole tail off. Zinn's Waco lost its flying speed and dove in about 100 feet from where I was standing. Mackie's Cessna seemed to fly along straight and level for a few seconds, but when he throttled back it went straight in. Both were killed instantly. Pieces were also falling all around me. I'll never forget it.

Ludington Line, Etc.

In early 1931, the New Jersey legislature passed a bill setting up a State Aviation Commission consisting of a Director and five Commissioners. I was one of the five. This Commission had jurisdiction over all aviation activities in the State. Meetings were twice a month. You got a nice commission signed by the Governor, a gold badge of authority, and special auto license plates. Actually there wasn't much for a State Aviation Commission to do, since the Aeronautics Branch of the U.S. Department of Commerce already had jurisdiction over most aviation activities. I resigned my commission in December, 1933, when I changed my official residence to New York State. Just wanted to let you know that I carried a badge for a while.

During the spring and summer of 1931, Gene Vidal, Paul Collins and Amelia Earhart were quite busy getting the Ludington Line ready to start operations. The idea was to furnish a frequent, low fare service between cities on a highly traveled route — in this case, between New York, Philadelphia and Washington. The Ludington brothers furnished the bucks and the "know who," Vidal and Collins, the "know how," and Amelia, the visibility. The original officer lineup was as follows: Chairman of the Board — Townsend Ludington; President — Nicholas Ludington; Executive V.P. — Gene Vidal; V.P. Operations — Paul Collins; V.P. Public Relations — Amelia Earhart; Equipment — 12 Stinson 10 passenger trimotors.

Their "Every Hour on the Hour" service from 7 a.m. to 5 p.m., to and from New York and Washington, started Sept. 1, 1930. In the first 14 months of its operations, Ludington Lines carried some 85,000 passengers; in 1931, it carried one fourth of the total passengers of all other airlines in the United States.

In the spring of 1931, Nicholas Ludington developed a case of tuberculosis and had to retire to his house in Santa Barbara, California, for a year in bed. That left his brother, Townsend, who was in very poor health, to direct their investment in the airline. So they hired Jim Eaton from Pan American and installed him as President in the fall of 1931. Eaton then tapped me for Assistant to the President and General Traffic Manager of the line. I was glad to shift from the airport to the airline.

The Stinsons had seats for ten passengers and a crew of one — the pilot. The only radio aboard was an airway radio beacon receiver. As an economy measure, the Stinson's center section 20 gallon tank was filled with aviation gasoline, which was used for take-offs. After climbing to about 1000 feet, the pilot switched to the cheaper automobile fuel in the other tanks. This worked very nicely during the winter of 1930-31, but along in April we had a day of unseasonably hot and humid weather. That day Ludington had five forced landings before they knew what had happened. No damage except for some "seized up" engines and a few scared

passengers. It seems that they were a bit late in changing from winter auto gas to the summer type.

A more serious thing happened in November, 1931. In the middle of September, the line introduced a new high speed nonstop service of two round trips a day between Washington and Newark Airport, using a new Lockheed Orion. One of these schedules departed Newark at 4:40 p.m., and by the time it reached Central Airport (in mid-November) it was dark. On this flight, Capt. Floyd Cox was on his final approach over a golf course when he "ran out of air" and the unforgiving Orion did half a turn of a spin before hitting the ground. Four passengers, the pilot and the Orion became statistics. Townsend Ludington wanted to shut the airline down the next morning. It was the only accident the line had in its two and a half years of operation.

In March, 1932, our airline headquarters was moved from Philadelphia to the Washington-Hoover Airport, so we rented an apartment out on Conn. Ave. By midsummer, 1932, the "Depression" was being felt by everyone. More and more people were finding air travel, or for that matter, travel of any kind, more than they could afford. So our passenger revenue declined somewhat in spite of the many remedies we tried. Then came the Presidential election of 1932 when FDR swept the country except for Vermont and Maine. As a sort of last resort we made a good try at selling the Post Office Department on putting mail on our frequent service. All to no avail. So Nick Ludington sold the line to Eastern Air Transport. Eastern asked me to stay on for two or three months to set up a new passenger ticketing and accounting procedure. This took almost three months, after which I joined Jim Eaton in New York to form an aeronautical consulting firm.

Boston and Maine Airways

One of our early jobs was for the Ludingtons in an attempt to interest the Boston and Maine RR in operating an airline over some of their routes. Nick Ludington agreed to back the project if our estimates could show a chance for breaking even or for a small profit. The B&M was interested but was only willing to subsidize the project at 30 cents per mile for each mile flown. Our estimates showed that we had to have a minimum of 35 cents. So negotiations broke down. Note: A few months later Vidal, Collins and Earhart made the deal with the B&M and started the B&M Airline @ 30 cents per mile. This grew into Northeast Airlines, which was eventually sold to Eastern Airlines.

Marine Airlines

The next project Jim Eaton and I worked on was an airline between New York and Boston, using amphibian airplanes. We proposed to land in the East River in New York and use a ramp that was already constructed at the Skyport at the foot of Wall Street. In Boston, we'd land at a city-owned South Boston pier or the Boston Airport. Equipment was to be two Sikorsky S-40 38 place amphibians.

We had the S-40s on order, I had passed \$5000 under the table to get a pier lease from the city, and we had a public offering of our stock ready to hit the market,

when Sikorsky advised us that Pan Am had “exercised an option” on the two S-40s and that no more would be available for eight months. I guess it only took a phone call from the President of the airline we would be competing with to the President of Pan Am to do the trick. This was in October, 1936. While Eaton and I were tearing up those nice new stock certificates of Marine Airlines, a phone call came in from Tommy Hitchcock, a partner in Lehman Bros. He said he had a new proposition that he wanted to see us about. \

Here We Go Again

After years of hard work, Marine Airlines was quickly extinguished when the planes they were planning to use were “pulled out from under them.” I also mentioned that Tommy Hitchcock, a partner in Lehman Brothers (bankers), had a situation he wanted to talk to Jim Eaton and myself about. Well, believe me, we wasted no time in getting over to Lehman Brothers to see what he had in mind.

It seems that Lehman Brothers had the controlling interest in the American Export Line, which operated steamships from New York to Mediterranean and Black Sea ports. In addition to some twenty-odd freighters, they operated four combination passenger and freight ships on a scheduled biweekly service to the more important ports. They called the latter the “Four Aces.” Hitchcock’s idea was that Export, with its well-established routes and connections with the countries touching on the Mediterranean, would be a fine vehicle with which to start and operate a transatlantic airline. Now, Tommy Hitchcock, as you may remember, was a top-notch polo player. One of his principal adversaries on the polo field was “Sonny” Whitney. Sonny was on the Pan American Airways board of directors. Although nothing was ever said on the subject, I have always thought that Hitchcock’s enthusiasm with the American Export idea was partially due to his desire to have a go at Whitney in the airline business as well as on the polo field. Hitchcock himself was a good pilot, and owned and flew his own plane.

Talks with Hitchcock started about the first of November, 1936, and then gravitated to officials of American Export, William Coverdale, President, and John Slater, Vice President. Both were associated with the well-known New York engineering firm of Coverdale and Colpitts. All agreed that the days of volume transatlantic passenger transportation by boat were numbered, and, also, that although the “state of the art” had not yet produced aircraft capable of carrying an adequate payload over the transatlantic distances, it would not be too long before such equipment would be available. Export wanted to protect the passenger and light freight traffic on its Mediterranean routes by originating its own airline service. At that time, most American steamship companies were heavily subsidized by the federal government. Each had its own routes laid out by the Federal Maritime Commission. The U.S. Lines, for example, couldn’t send ships into Mediterranean ports, and Export couldn’t go to Cherbourg, Southampton or North Sea ports. So all their thinking was along the lines of their maritime routes.

Export intended to initiate its service by carrying passengers on the “Four Aces” between New York and the Azores (possibly Horta on Faial), and then to transport

them on to the continent and Mediterranean destinations in large flying boats. The equipment for this service could be available in less than a year. The use of flying boats on the initial phase of the operation was made necessary because of the lack of adequate land planes and land plane airports in the Azores and around the Mediterranean. We all knew that, since there was very little difference in safety between flying boats and land planes when it came to a forced landing at sea, land planes would most likely be the ultimate vehicle for over-ocean travel.

Pan American Airways had been largely responsible for pushing American flying boat development. By mid-1936 they, and their associated air carriers, were operating scheduled services from Miami all through the Caribbean islands and around South America. They also flew from San Francisco to Hawaii and on to Manila. In addition, they operated routes in China and Alaska. For over-water routes they used Sikorsky S-42 and S-40 flying boats (32–39 seats) and Sikorsky S-38 and S-41 amphibians (7–22 seats); Ford tri-motors and Lockheed and Fairchild land planes were used in Alaska and over land.

At that time, the U.S. domestic airlines were flying Ford (tin geese), Fokker and Boeing trimotors. The new Douglas DC2 was just coming into use. All snails compared to the present-day jets. Douglas was working on the DC-3 for TWA and Boeing was starting on the development of its 314 flying boats for Pan Am. It took WW2 to speed up development of the four engine DC-4. These planes could make it across the North Atlantic to Northern Ireland by refueling at Gander (Newfoundland) and Reykjavik (Iceland).

Pan Am's ambition was to be the U.S. "chosen instrument" in international air commerce worldwide. They already had plans and equipment being designed for an around-the-world service. Quite an antagonist for American Export to take on. A few years later after extended and bitterly contested hearings, the Civil Aeronautics Board perversely awarded Pan Am the routes sought by Export and gave Export the northerly route to England, Holland and the Scandinavian countries. More on this later.

My mission on this trip was to check on the availability of adequate flying boat facilities on American Export's route. I was instructed to confer only with Export and U.S. consular personnel and not with government or airline officials of any of the countries involved. Strictly tourist on the surface, camera and all.

After a couple of weeks discussion and briefing in New York, and before we quite realized what had happened, Eaton and I were scheduled to depart on November 24th on the *SS Excalibur* (flagship of the "Four Aces") for a Mediterranean survey trip. Between conferences with the American Export people and putting Marine Airlines to bed, we had a very short time to update wardrobes, get shots, passports and visas.

Come sailing day, Cleo (my wife), my baggage and I arrived at Pier F, Jersey City, only to find that the poor downtrodden engine department was on strike for some nebulous reason. So we hauled everything back to Brooklyn. Evidently the deck and steward's departments didn't think the engineers had much of a beef, because on December 2nd the *Excalibur* finally set sail as a cargo-only vessel. Eaton and I were signed on as supercargoes. The Engine Department was made up of personnel on loan from various oil companies' ships. The Chief Engineer was fresh off a tugboat in

Boston harbor. Since Eaton and I were the only passengers aboard, we were assigned the best cabins and got lots of service.

Everything went fine, good weather, etc., until the fifth day out. Then we started to get salt water in our showers and basins. Due to the engine crew's unfamiliarity with all the various valves, etc., most of our fresh water had been pumped overboard and the tanks filled with sea water. This resulted in corroding quite a few boiler tubes and causing leaks that put one boiler out of commission entirely. So they had to heave to, put out a sea anchor and spend two days replacing boiler tubes. This was no easy task, as only two of the borrowed engine crew were small enough to be able to crawl into the boilers to make repairs. We limped into Ponta Delgada and, after a couple of days of boiler refitting, we took on a supply of fresh water and sailed for Marseilles. I took advantage of the Ponta Delgada stop to go ashore and have a talk with our consul about our proposed operation. I could see that the Ponta Delgada harbor was not large or protected enough for our operation, so the consul suggested the Horta harbor on the island of Faial and furnished me with a detailed map of the islands.

When the *Excalibur* docked at Marseilles, Jim Eaton and I were taken before the U.S. consul, discharged from our supercargo duties and paid \$1 each for our services. That was December 14th.

Budd & Co., the Export agents at Marseilles, got Eaton and I rail tickets to Nice for that afternoon. We stayed the night in Nice then went on to Genoa the next day. John Gehan, Export's Mediterranean V.P., met us in at the station and settled us in at the Grand Miramare Hotel. This hotel was situated high on the hilly part of Genoa and had an excellent view of downtown Genoa and the harbor. The Miramare was a beautiful old hotel. It was built before the modern concept that every cubic foot must bring in its share of the revenue. Everything — lobby, dining room, guest rooms, etc. — was spacious. Eaton and I each rattled around in a large two room suite. The only bad feature was that it was too far from the Export office to walk — particularly on the uphill return trip. When Cleo and I were in Genoa in 1963, I drove up to what had been the Miramare hoping to stay there, only to find out that it was by then a convent.

A week was spent in Genoa conferring with Gehan and his staff. Eaton and I had to get used to slowing down our working speed to half throttle. The Export offices were in an old palace on the Via Garibaldi. The palace had no central heating, but it did have high vaulted ceilings that were painted hundreds of years ago with biblical scenes. The days went something like this: Get to the office about 9:30 a.m., out for a cappuccino at 11:00, then to the Union Club at 13:00 for a few drinks, a game of dice and lunch (excellent food). Then back to the office at 15:00 and work until cocktail time (19:00). Dinner was usually around 21:00 at someone's home or at the "Buca di Santa Matteo," "Gambrini's," or another fine restaurant. Then possibly a few rubbers of bridge and we were ready to "hit the sack."

After much discussion about procedure, it was decided that I should take a look at the possibilities for flying boat operations at Marseilles, Algiers, Oran, Casablanca and Tangier. Jim Eaton was to go to Paris and confer with our ambassador regarding French landing rights possibilities, for survey flights. So on December 23rd I flew to Marseilles in an Ala Littoria Savoia-Marchetti twin-hulled flying boat. That afternoon

I went to Algiers in an Air France flying boat. The next morning was spent with the Export agent and the U.S. consul. The Algiers harbor seemed to be OK for flying boat operations. That evening I caught the wagons-lits for Oran, about 250 miles away.

Very, very early Christmas morning I debarked from the train at Oran and checked in at a hotel to get some more sleep and freshen up a bit. After looking over the harbor and deciding it wasn't our "cup of tea" I dispensed with the formality of disturbing the agent's holiday. Instead, I treated myself to a very fine roast goose and liebfraumilch dinner and got the afternoon train for Casablanca (about 500 miles via Oujda, Fez, Meknes and Rabat). A very comfortable journey with good accommodations and service. Of course, there was the usual commotion at the frontier. All very polite.

Before leaving Genoa, John Gehan advised me to live at the Hotel Excelsior while in Casablanca, so I checked in there on my arrival. Since it was Saturday, I phoned Toledano & Son (Export agent in Casablanca) and told them I was in town and would be in to see them Monday morning. They were expecting me and invited me to tea on Sunday. They were a very nice family and I enjoyed several fine meals with them. I spent over a week based in Casablanca. The port was entirely inadequate for our purposes, so I got Joseph Toledano to drive me up to Port Lyautey (about 85 miles). On the way we made a courtesy call on the U.S. minister at Rabat to advise him of our plans. Port Lyautey provided the only adequate place for a large flying boat base on Morocco's Atlantic coast. Its disadvantage was its distance from Casablanca (85 miles) and Rabat (25 miles).

On January 4th I was ready to return to Genoa, so I phoned the Export agent at Tangier to see if any passenger ship for Marseilles or Genoa was sailing in the next few days. They had a Rotterdam-Lloyd ship, the *Indrapoera*, departing for Marseilles on the morning of the 6th on her way to the Dutch East Indies. I asked them to arrange space for me to Marseilles on the *Indrapoera*, and, since I was coming up to Tangier on the evening train, to reserve a room for me at the El Minza Palace Hotel. Quincy Stanton, our consul in Casablanca, gave me a "laissez-passer" to get me through Spanish Morocco. They were having a good-sized revolution going on in Spain at the time between Franco and the communists, and I didn't want to get caught with my passport down (no Spanish visa). It was lucky I had this document, for when we got to the frontier the train filled with armed soldiers. They not only checked passports, but also examined all luggage and personal papers. They spoke no English and I no Spanish, but they were plainly not happy about my passport. Something that the "laissez-passer" corrected. I still don't know which side those fellows were on.

In the morning, I called on U.S. Ambassador Blake and obtained advice from him and information of value from his abstracts and files. The afternoon I spent sightseeing. Next morning, I boarded the *Indrapoera* at 8:30 for the trip to Marseilles. On the evening of the 7th they had a big party aboard to celebrate the wedding of Princess Juliana of Holland to Prince Bernhard of Germany. We arrived at Marseilles at 10:30 on the 8th and I was back in Genoa before midnight on the chemin de fer.

I returned to Genoa after a 16 day survey trip to Marseille and the northwest African coast. Genoa felt like home — but not for long. I had three days to make up my report and get ready for a trip to Egypt and the Levant. On January 12th, Jim Eaton flew down to Rome with me on Ala Littoria. Since we arrived late, we just had time to check in at the Ambassadors and have a quick dinner before an evening conference with our Commercial Attaché. This was interesting, as he appeared to know more about Export's plans than Export did. After he finally bought us a drink, we retired.

My schedule was to take the 05:30 Ala Littoria plane from Rome to Brindisi (about 300 miles), arriving there in plenty of time to catch the 10:30 Imperial Airways (British) flying boat to Alexandria via Athens. All very fine. Up at 03:00, shower and shave in haste, no coffee, bus to the 20 mile distant airport, no coffee, bumpy ride to 09:10 arrival at Brindisi, and still no coffee. Then, finally, breakfast at the International Hotel. Then I found that Imperial Airways would be a day late: "Be in some time tomorrow morning." What do you do with a day at your disposal in Brindisi?

That question was solved for me by what you might call a coincidence. Just as I was leaving the Imperial Airways office at the airport I heard well-raised voices in an adjoining room, some Italian and one American that I recognized as that of an old friend — Wesley Smith from Philadelphia. It seems that a fellow named Welch had shipped his plane over to Le Havre and had hired Wes to fly it and him from there to Saigon. They had arrived at Brindisi that morning and had planned on going on to Athens after refueling. The Italian officials had different ideas. Some technicality was preventing them from clearing Wes's flight. Their negotiations were apparently quite difficult due to the Americans not understanding Italian and vice versa. I butted in and helped get matters cleared up by getting the Imperial Airways Station Manager to act as interpreter. By that time, however, it was too late for Wes to start for Athens, so Wes, Welch and I had an enjoyable evening together "on the town." They got away early the next morning, but my 10:30 Imperial Airways flying boat didn't arrive until 13:00. Accommodations and service on Imperial were the best, and we had a good flight to Athens. Wes and Welch were already checked in at the El Brittan Hotel when I arrived, so we had dinner and a night club together. Next morning I had a stormy and very bumpy three hour crossing to Alexandria. Jim McCormack (Export's Near East Representative) met me at the flying boat station and settled me in at the Windsor Hotel.

I have a couple of clippings from the Egyptian Gazette (Alexandria) following up the Smith-Welch Saigon flight story. Both dispatches were from Nicosia, Cyprus. The first, dated 1/16/37, reported that Smith and Welch had arrived there at 07:30 that morning after a flight of nearly 600 miles from Athens, and that "The recent rains having left the Airdrome in a very muddy state, the wheels of the machine became embedded in the ground when landing, but were later extricated and the plane was found to be undamaged." The second, dated 1/18/37, stated that Smith and Welch "left at 10:15 for Damascus. The airdrome officials witnessed the take-off which they believed to be impossible owing to the muddy state of the ground, and they held fire extinguishers ready in case of emergency." I have talked with Wes about this trip several times since at Quiet Birdmen meetings in New York.

I found that Jim McCormack had a fairly tight schedule arranged for me. My first evening in Alexandria he took me out to Judge Brinton's home after dinner to obtain his advice on how to proceed with my mission in Egypt. The judge was an American and for years had presided over the "Mixed Court" in Alex. He was very friendly and advised us not to talk with any Egyptian officials at that time, but to put the matter before Mr. Childs, our Consul, and the Minister (don't remember his name) in Cairo for our guidance. So we made an appointment with them for Sunday afternoon, January 17th, and rode the railway up to Cairo. They told us that since the August 1936 Anglo-Egyptian Treaty which turned the government of Egypt back to the Egyptians, most of the new government's efforts had been directed at replacing British civil servants with Egyptians. They thought that the time was inopportune to try to talk with them about air rights. Their advice was to wait a few months until things had settled down a bit. With this, my business in Egypt was concluded for the time being. I still had Haifa and Beirut to check, but had to wait until January 23rd for the Exochorda (one of Export's Four Aces) to make the trip up the Levant coast and back. A brand new Chevrolet sedan belonging to John Gehan was unloaded from the Exochorda at Alex. It already had Italian number plates on it and a note from John Gehan told me that it was completely insured and to use it as much as I wanted to. I didn't have an international driver's license (don't even know whether they were available at that time), so I took out an Egyptian driver's license and drove all around Alexandria as well as to Rosetta, Damanhur and other native villages. Driving through a native village was a pretty slow process in those days. No amount of horn blowing, yelling or nudging would get a person, donkey or camel to move over to let you pass — particularly in a narrow street. Small boys would jump on your running board, some for the ride, but mostly to yell for alms.

Alexandria is pretty well surrounded by water with the Mediterranean on the north, Lake Mariut on the southwest and Lake Idku on the east. Both these lakes were too shallow for flying boat operations. It wouldn't take much wind to build up too much of a sea. Imperial Airways used the ship harbor which was well protected, so I decided to recommend that for our use.

Speaking of Lake Mariut reminds me of the novel way of catching wild ducks that was practiced in the lake. As I mentioned before, Lake Mariut was quite shallow in places. Several Egyptian young men equipped with weighted shoes, a hat with a lot of reeds or rushes sticking up from it, a wide belt with cord loops attached all around it (20-25) and five or six live decoys with strings attached to one leg, would wade out in the lake until the water was nearly up to their chins and have the decoys swim around near their hats. Cruising wild ducks would spot the decoys and join them. When one got close enough, the hunter would grab its feet and pull it under water and attach its feet to a loop on this belt where it would drown quickly with a minimum of commotion. When his belt was full he would bring them into the city (Alex) and sell them for anywhere from 10 to 20 Piasters each (50¢ to \$1), according to the buyer's bargaining ability. They were mostly small black ducks and were delicious if not overcooked. Guess I better stop here and not get into any cooking directions.

Ended here 11/76