WWII STORY: THIS IS IT!
By Bill Goodman


Foreword:
The attached letters were written to my sons, Richard and Bob, and to two of my grandchildren, Brant and Margaret Jane, now in college. I wrote the first one fifty years from the day I flew across the North Atlantic Ocean, and about the same day Brant started another year at Auburn University. The children and others seem to enjoy the letters, and I enjoy writing them.

All I write is from memory, notes I made at the time of the event, and talking to David Hutchens and Hilbert Braun, the tail gunner who saw a lot from another view. I remember a lot dimly and some vividly. I shall never forget the short interval of time when four Me-110's were on our tail just out of 50 caliber machine gun range. They were firing rockets at us, and had done significant damage to our plane. Another one or two hits would have finished us when Lt. Walker Mahurin, in a P-47, came diving out of the sun and in one pass flamed all four German planes. Or watching the total destruction of another Bomb Group flying next to us, and wondering if the wulfs would turn on us next.

Bill Goodman
July 28, 1993

About fifty years ago, I was at an Air Force base at Gander, Newfoundland, waiting for favorable weather to fly to England. We had picked up a new B-17 at Salina, Kansas, and had flown it here. We also picked up a Major Fred Key. Key Field in Meridian, Mississippi, is named for him and his brother Al for their aviation exploits. Al was later Mayor of Meridian, and Fred was an outstanding pilot and leader. Salina was a modification center and had the largest hangars I had ever seen. They were installing two forward firing fifty caliber machine guns in the nose of all new B-17's. We picked up a new, modified B-17 here to fly back to Walla-Walla and then to England.

Departing Salina and heading for Walla-Walla, Washington, we ran into a front that we could not go by, over, or through, and we had to make an instrument approach and land at Boise, Idaho. This was the first precision instrument approach and landing David had ever made, and we hit the high cone, turned to the outbound leg and descended to 2000 feet above ground level. We made a 180 degree turn and hit the low cone at 1200 feet. with gear and flaps down with power set for takeoff, We descended through the cloud until--There was the runway directly ahead for an easy landing. The next morning David went by himself to Operations to file a flight plan but he had never done one. However, a young lady took his arm and said "Can I help you?" He turned around, and it was a friend who had taught him to fly a Piper Cub before the war and who was now a ferry pilot for the Air Corps. She helped him fill out the forms, and after refuelling, we departed for Walla-Walla. After picking up our luggage we departed for Gander, Newfoundland.

Gander was cool after the heat of Kansas. We had no recreation—this was a place to refuel and wait. We needed a tailwind, no icing in route, and good weather in England. We planned the trip to fly the great circle route, take off at dusk, and land at Prestwick, Scotland, early in the morning. Prestwick was pretty much out of the combat zone, and we didn't want to face combat with German fighter planes at this time in our experience. We departed Gander at dusk with the setting sun behind us on a heading of 60 degrees true. We were near the magnetic pole, and the compass spun erratically. The tailwind was not there as forecast, and we were flying in clouds at 12000 feet. As the night quickly darkened, we began to pick up light icing on the airfoil surfaces and the propellers. It was probably warmer at a higher altitude, and we began a climb to a higher altitude. The icing increased, and the de-icer boots on the wings broke off large chunks of ice which made a loud noise when they hit the tail surfaces. However, the propeller de-icing equipment cleaned the props real good. Finally, at 15,000 feet, we flew into warmer air. So much for weather forecasts. We still had a problem, and a serious one. Because of the clouds we had not been able to secure a position fix by the stars- a three star fix. We should have been following a homing beacon, but it was being jammed by the Germans. We flew on. In the cockpit no one was sleeping. The engines droned on. There was an occasional noise which worried everyone. We continued to transfer fuel from the auxiliary tanks to the main tanks. Suddenly, POW! WE WERE IN THE STARS! A quick read of three stars, a plot of the three stars, and we knew where we were. A ten degree course correction right, and we are headed for Donegal Bay.

September 30, 1993

We made landfall at Donegal Bay, Ireland, just as the first glimmer of dawn began. The day was July 27, 1943. We changed course to head to Prestwick, Scotland, where we would land. As we crossed Northern Ireland, a distance of about 120 miles, the sun rose, and I was astonished by the beauty of the countryside with the deep green of the fields and the deep blue of the many lakes. Ireland and Newfoundland are in the same latitude. Newfoundland is arctic in nature, but Ireland is temperate because of the warming effect of the Gulf Stream. We then crossed the Irish Sea, and hit the downwind leg of the traffic pattern (good navigating).
Prestwick was untouched by war. If we had landed further south, we could have been interdicted by an enemy fighter, and we were not ready for combat at this time of our training and experience. We were 10.5 hours from Gander. We spent the night in a classic English hotel—red brick, immaculate, chamber maids in uniform, scullery maid (beautiful) scrubbing the front steps, white tablecloths-china-crystal-silver in the dining room. It was cold, and I was cold. The next day we travelled to London by train. The engine was a real chufferbelly, puffing giant clouds of black smoke and small clouds of spewing white steam. A slow train is a wonderful way to see rural and small town England. I think every house and barn had a thatched roof, and half the wagons were pulled by oxen. The passenger cars were divided into rooms, each seating about eight people, with doors for exit from each room to the station.

We stopped many times, and I exited at one station for a cup of hot tea. I was interested in the pastries-called pasties—small round fried pies obviously containing apples or some other fruit. I purchased tea and pie. The tea was wonderful, but when I took a bite of the pie, I could not eat it— it was a kidney pie. Never buy a kidney pie.

The trip to London took twelve hours and we hunted for a hotel room to spend the night but we had no luck so we changed to the subway, then to another train, arriving at Ridgewell at midnight. We were at our home in England, and I had seen many things for the first time.

October 31, 1993:

Ridgewell was a disappointment. Barracks were Quonset huts—buildings made of corrugated sheet metal with no insulation or covering on the inside, and a small coal stove in the middle of the building for heat. It was about fifty yards to the latrine (bathroom), and about three hundred yards to the showers with lots of red mud and no sidewalks. For about four weeks there was no heat or hot water because of a coal strike. This made keeping clean very difficult. A B-17 swallows most gun smoke to inside the plane—lots of it—and gun smoke leaves a lot of greasy black all over every one's faces, and you feel dirty all the time. I showered once in this period. I took all my fur lined clothes with me, got under the shower, and pulled the chain. Cold water came out, and I stood it until ice began to form on the floor. This was the last shower I took until we got warm water. After arriving at Ridgewell, we had two weeks of training that included formation flying, escaping if shot down, and radio procedures. Formation flying meant flying in a 'box' of 54 B-17's. This box was designed to interdict a bogie with two or more 50 caliber machine guns from every B-17. This formation was devised by General Jimmy Doolittle, who earlier made a B25 raid on Tokyo.

To escape if we were shot down, we were given a packet of French money for bribery, a compass, some rations, a first aid kit containing morphine, and I was given a French passport with my picture in civilian clothes. The instructions were to walk to Spain and the U.S. Air Force would get us out. This led to an unusual situation. Lt. Jones, a pilot, was shot down, parachuted, landed in the woods and was not hurt. He started walking toward Spain and came upon a German airfield. There were about 24 parked Me 109's—a super fast fighter, and Lt Jones climbed into one with the intent to start it and fly home. But the airplane would have to start quickly or he would be caught by the guards. He sat in the plane for two hours, and found all the gauges, instruments, and controls except the primer. The primer really helps in starting. Not finding the primer, he climbed out and walked to Spain. The walk took two months of being cold, hungry, and fearful at every turn. Had he but known, the Me-109 has an excellent automatic primer. If he had turned on the ignition and hit the starter button the engine would have started. He would have been airborne and wheels up in thirty seconds, and home in Ridgewell in twenty minutes. There is a moral here, but I don't know what. It could be: trust a 1150 horsepower Daimler-Benz engine to start.

Radio was simple— the only thing new was DARKY (code word). Anywhere in England you could call DARKY properly, and he (or she) would tell you anything you
wanted to know- nearest airfield, weather, winds, what time the movie starts-anything. We
had no precision instrument approach radio which was badly needed.

November 30, 1993:

We also had a familiarization flight conducted by a Lt. George Darrow. He had flown
a number of combat missions, and was an excellent pilot and instructor. On the flight, he
stood between the seats and pointed out the landmarks that would help us get in position
to land. These landmarks were quite distinctive. For instance, we could find a certain
church steeple (I think it was Catholic), and a heading of 270 degrees from this steeple
would place us at the end of the runway in 85 seconds. Something else new to us was a
glide slope indicator. This was a light at the end of the runway that was yellow if the plane
were too high, red if too low, and green if "just right." I loved those "just right."

I was impressed with Lt. Darrow. He knew what to do perfectly. The field was very
well hidden, and later, without his advice, I am sure we would have been lost many times.
At the end, we flew a normal pattern, and landed on runway 27. We always departed and
landed on runway 27. After we had landed and were slowing down, POW!- a tire had
blown. In an instant Lt. Darrow was gone. He had jumped out of the plane through the
front emergency door. I did not see him leave, but David said he saw him running through
some parked B-17s. We did not see him for about three months, but he returned and
assumed wake-up duties.

I did not know it at the time, but during the day before, his plane had taken a severe
beating by a swarm of German fighters, and he had crashed in the English Channel. His
plane was fifty feet under water when he managed to get out of the sinking B-17.

Lt. Darrow was a tough little redhead. He later went back to flying missions and
completed his tour. After the War, I sent him a Christmas card thanking him for not
shining the light in my face when he woke me up. I also asked him if he remembered the
episode. His reply was one word: "YES." However, George was never close to us
afterwards. David noticed his coolness also, and said perhaps it was because we had
witnessed his breakdown. However, I understood completely- combat is tough. I never did
anything like this, but I had some strong feelings. For example: After my tour of duty and I
returned to the United States I attended some classes, and I noticed ALL of the class
were watching me to see me jump when the retreat cannon was fired. I did jump.

December 31, 1993:

We had finished all of our training: flight school, transition, the flight to England, and
four weeks of combat-type training at Ridgewell.

On August 8, 1943, we prepared for our first combat mission- a search for the
Schornhorst in the North Sea. The Schornhorst, a German battleship, had been docked in
a deep fiord in Norway protected by land-based fighter planes, ship and shore-based
anti-aircraft guns as well as the adjoining mountains. England and Russia were entirely
dependent on the convoys of merchant ships which were helpless in the face of a modern
battleship. The Schornhorst was prowling in the North Sea, scanning with radar, a wolf
searching for lambs to devour.

Briefing gave us the last seen location of the Schornhorst, and each crew was given
an area to search. The cloud cover was total, the ceiling was 500 feet, and visibility was
one mile. We had no radar. Our Group-- eighteen planes-- departed individually at two
minute intervals, and we were last. It was a fantastic sight; flying at low level over England
and Scotland. The boundary of England and Scotland was marked by Hadrian's Wall
stretching into the distance east and west -- still there. From the air, Scotland was dark
green pastures of sheep with many deep fiords. The cottages all seemed to have a thatch
roof and a smoking chimney. It looked cold but it should - parts are within the Arctic
Circle.
The Romans had conquered England in about 5BC, and in about 5AD there was a thriving city called Londonium on the banks of the Thames River. The chief export was lead which was mined and sent to Rome to manufacture water pipes. The Governor was Julius Caesar who left about this time to attend an appointment with a friend named Brutus in the Senate in Rome. He was never able to subdue the Scots, so he built the wall to keep the Scots out. The English did no better, but finally England and Scotland were joined by some efforts of Elizabeth I, daughter of Henry VIII and Anne Boleyn.

We crossed the coastline, and reaching our assigned area of search, began our search. I was really concerned - our mission was to find and bomb the Schornhorst. With the limited visibility, we had about twenty seconds to turn toward the target, zero the Norden bombsight on the ship, lock on the target, and get the bomb bay doors open. The Schornhorst had excellent radar and would have us in their gun sights ready to shoot when we appeared. There was no way we could survive if we found the ship. Butch O'Hare crashed a B-17 on the deck of a Japanese battleship and was awarded the Medal of Honor posthumously and had the airport at Chicago named after him. I could see the sign on the Cincinnati airport: “Hutchens Field- named for Lt. Hutchens who crashed a B-17 on the battleship Schornhorst and was awarded the Medal of Honor posthumously. All the crew were killed.”

We searched for six hours, used 1500 gallons of avgas and never saw the Shornhorst. A small twin engine airplane equipped with radar could have found the ship easily in a couple of hours at no risk. This was an example of grossly incompetent leadership and we never questioned it, but followed our orders as in Lord Cardigan’s time. Look it up. We also did not get credit for a mission.

January 31, 1994:

Our next two flights were to impact significantly the course of the total war, and together with the third flight end a threat that few knew about, or have since recognized.

Albert Einstein was a poor student, and after graduating became a teacher of mathematics. One day while waiting for his train at the train station, he pulled a piece of blackboard chalk from his coat pocket and wrote on the side of a stopped train car "E=MC squared." This postulated that matter and energy were interchangeable. Thus, the energy from one pound of matter is \((5280 \times 186000)\) squared, or 98,500,000,000 foot pounds per second, or the yield of one hydrogen atom is one billion electron volts.

In 1938 two German scientists produced nuclear fission (a small atomic bomb) and assembled a team of scientists with one objective - to produce atomic bombs and thus win the war. They had learned that neutrons spilled from the triggering sustained the explosion, and heavy water is rich in neutrons.

Hydrogen contains one proton; deuterium, a form of hydrogen, contains one proton and one neutron (makes heavy water); and tritium, also a form of hydrogen, contains one proton and two neutrons (makes heavy heavy water). The neutrons are essential to the triggering of the bomb.

In the meantime, Einstein, a Jew, was expelled from Germany, moved to the United States, and began teaching at Princeton. He was concerned about what Hitler would do with the bomb, and persuaded a Jewish friend of his (I wish I knew the name of the friend) to personally carry a detailing letter to Roosevelt. The letter was to the effect that Germany was building a bomb of unprecedented power, and could deliver the bomb to the United States by long range four engine bombers and by submarines, and likely targets were New York and Washington D.C.
With this as a background, the entire 8th Air Force (small at this time) departed for Knaben, Norway, to destroy the heavy water plant located there. The British had made commando raids and bombed at night with zero success.

After breakfast and briefing, engine start was 0530, taxi at 0545, take off at 0600. Our bomb load was twelve 500 pound and two 2000 pound bombs. Because of the long flight over the North Sea, there would be no fighter support, and we could expect both heavy flak over the target and Luftwaffe fighter planes as we neared the target.

The day was clear and cold. We assembled at 10,000 feet over Bury St. Edmunds, and began our long climb to 31,000 feet over the North Sea. We were glad to see the British Navy strung out along our path to pick up anyone who had to ditch in the sea. However, they really seldom helped in that in this area the water was so cold a downed flyer would only last about thirty minutes in the sea.

We met enemy fighters who really did not press their attacks with the determination they did over their Homeland. I think they did not realize the importance of the heavy water plant. I didn't. I thought the flight was of no value. Who knew of heavy water in 1943? At our altitude, the flak did not bother us, and without deadly flak, all made nice bombing runs in real stable air. We returned with no planes downed, and no casualties.

The next day, we were able to review pictures taken by photo reconnaissance, and the heavy water plant had been totally destroyed - so badly it could not be repaired. If rebuilt, we would destroy it again.

One unusual thing happened. We were flying on Captain Baltrusitis' wing, and casually noticed the ball turret gunner was getting into the turret - the guns were pointing down. When the guns rotated rearward, the door swung open and blew off. The gunner almost fell out, but struggled desperately in the cold wind to get back in the turret, and finally succeeded. He had forgotten to put on the safety belt and lock the door. In 1992, I chanced to meet him again at Wright Patterson Air Force Base, and we talked about this. He remembered it well!

Captain Baltrusitis was flying lead at this time. Once he stacked the formation so we did not have a slot for our airplane. We were completely exposed and by ourselves; David was so angry that if he could have gotten to Baldy, he would have killed him. Fortunately, while we took a real beating by the German fighters, we survived with no one hurt, and David had changed his mind, but told Baldy if he ever failed to slot us again, we would take such dramatic steps that Baldy would never do it again.

We had destroyed the heavy water plant in Norway, and took the second step to end the menace of an atomic bomb. This second step was the destruction of the atomic bomb delivery system. There were two delivery systems-long range four-engine bombers which Germany had, but more reliable were their submarines. Germany had a fleet of submarines which was sinking ships regularly, and if the United States had not given a fleet of sub hunter destroyers to England in early 1941, and declared war on Germany late in 1941, England would have been defeated. At this time German submarines were camped just outside U.S. harbors waiting for merchant ships to leave port.

The focus of German submarine operations was Audpico which was near Nantes, France, with a small operation near the Kiel canal in northern Germany. These were the repair and provisioning harbors for the submarines, and we learned quickly enough these were our next targets.

Wake up was early, and we were airborne by 6:00 AM. Assembly was at 12000 feet at Beachy Head, but en route to Beachy Head, Hilbert Braun, our tail gunner, announced over the intercom that three B-17's had exploded in mid air, and the remains were falling to the ground. I asked "What remains?" He replied "Four engines and four fuel tanks. There are no parachutes." Later, I thought there would be some mention of this at de-
briefing, but there was never any official mention of lost crews. However, the losses were significant, and at this time our Group loss rate was twelve percent per mission.

We climbed to 35000 feet over the English Channel, and flew over France directly to the target. There were no enemy fighters encountered. It was very cold-so cold the oil in the propeller hubs congealed, and the plane flew as if the props were fixed pitch. It's hard to fly high altitude formation with a fixed pitch propeller.

As we passed Nantes on the right, the submarine pens appeared, and the lead bombardier began the acquisition of the target on the scope of the Norden bombsight. He acquired it, we began a series of gentle turns, and the bomb bay doors began opening. The B-17 formation closed up very tight. Heavy flak began at this time, and a number of B-17's took big hits, but kept their place in the formation. We took some small hits but nothing vital was hit. We were locked in tight, and committed to this bombing run.

The contacts closed automatically in the Norden bombsight, and the twelve five-hundred pound bombs were falling. The bomb bay doors closed quickly, and our speed increased to about 170 indicated and about 300 MPH true as we lost weight, turned right, and descended 5000 feet. The flak stopped hitting us, and the bursts were all well behind us. We had substantially destroyed this viper nest, as well as killing some of their best U-Boat commanders. The story of this raid was told by a German book "DAS BOT."

We flew east until we were clear of France, then turned north for the long flight over the Atlantic Ocean toward England. We passed close to the Brest Peninsula, looked at it, and did not mistake it for Lands End as was done on a previous flight. We were not in England when this happened, but we knew about it. As told, the flight leader decided that this was Lands End, he was low on fuel, and turned to land at an airfield that he saw. Jim D, the lead navigator, insisted that this was German territory. The Colonel told Jim that he knew where he was and to quit bothering him (the Colonel). Three B-17's were on final approach when the German machine guns began firing. No B-17's were shot down, but all three sustained significant damage. That was a height of dumbness display. If the Germans had not started firing, all the B-17's would have landed and been captured - 18 B-17's and their crews. Jim D never flew again while I knew him, but I never heard any complaint.

We continued on, descending to 12000 feet, and made landfall at Lands End. As we left Lands End, we spread the formation (turn 45 degrees right if on right side, fly one minute, then turn left to original course). Based on the weather forecast, we were to descend through about 2000 feet of stratus clouds, and below the stratus clouds there would be a 10000 foot ceiling with visibility unlimited.

As we descended, we could hear other planes over the Command radio " I'm at 2000 feet and still not clear" then ominously "I'm at 200 feet and still not clear." We didn't have the fuel to seek a clearer airfield, so we continued down. We were well in the soup at this time, on the way down, eyes straining to pierce the fog. Our position and landing lights were on but it was dark in these clouds, and we saw no other airplanes.

Finally we broke out at about 200 feet, supercharged engines roaring to stop the descent, and by sheer chance we were in view of a marker light which was a part of a circle of lights which ring and funnel planes into the landing runway at Royal Air Force Air Fields. We acquired the light ring, getting the gear and flaps down, switching to the main tanks and setting the props for takeoff. We followed the light line around, almost hitting a barn at one point, until we intersected the glide path indicator and rode it down to the runway. We were down and rolling!

We rolled to a turnoff, cleared the runway and taxied to the ramp as directed by the tower. We were too late for supper, and the barracks where we slept had no mattresses, sheets, blankets, or hot water. We bedded down in our flight clothes, tired, dirty, cold. So much for the Limeys! The next morning we loaded about 6000 pounds of fuel -enough to get us home- and flew to Ridgewell. The ground crew was delighted that we were back.
I later talked to Hilbert about the three B-17's that were lost, and he was greatly concerned. He said "This is a real war." We seldom if ever saw the final destruction of a B-17. We often saw a B-17 that would have a gasoline loss with or without flames, an oil loss, a supercharger failure and the consequent loss of power in one or more engines. A flamer required quick action. First, turn off the gas to the affected engine. If the flames are in front of the firewall, be patient- the fire will go out. If there is more involvement, dive to a speed of at least 450 MPH and blow the fire out. Try very hard not to pull the wings off when you pull out of the dive. This works- I know.

When the B-17 could not keep up, it would drop the wheels partially, immediately retract them, and slowly slide out of the formation. The others in the formation would see the wheels and clear a path for the cripple. After the plane left the formation, it disappeared from view except sometimes the rear gunners could keep it in view. The German fighters would immediately attack a cripple, but the B17 was a tough old bird, and we seldom saw the total destruction.

Lt Frye had this happen to him. After the war was over in Europe, I was getting a flight clearance at Ellington Field in Houston, Texas, when I realized I was standing next to Lt Frye. After joyous greetings, I asked him what happened. He told me that he got the fire out, and headed towards England, but the fighters killed six of his crew, and he was relatively helpless. He bailed out the remaining crew, and continued on one engine at maximum power. Before he got to the channel, the fighters had shot his flaps down, and he could go no further. He bailed out and spent the rest of his time in a prisoner of war camp.

While the B-17 was a tough bird, it had design errors that contributed to the losses. The worst were the naked fuel primer lines that ran from the main fuel tank to the manual primer beside the co-pilots seat and back to the intake manifold for each engine. The fuel booster pumps were always on with 60 psi pressure in the lines, and one bullet or piece of flak would sever a line. This would result in spraying high octane fuel on a red hot supercharger. Proper design would have a bullet resistant line about six inches long from the tank to the intake manifold controlled by an electric valve operated by a switch on the console. The second worst design were the oil tanks. There was one oil tank for each engine containing thirty-two gallons of 50 weight oil. If this tank got a hole in it all 32 gallons of oil would drain out, and there was no oil for feathering. This happened to us twice, and we were not aware of any oil leak until the oil pressure dropped to zero and the cylinder head temperature rose to the top of the gauge. Once the whole engine fell off (wonderful feeling- we had already sounded the bail-out alarm and left our seats). The second time the propeller broke the gears, spun at a very very high speed, then fell off going downward instead of at me (wonderful feeling). This could have been corrected by a separate oil tank for feathering or a standpipe in the tank for engine oil with the bottom fitting for feathering.

March 31, 1994

Hilbert Braun was the tail gunner, and was absolutely great. He kept his two 50 caliber machine guns in perfect working order, immaculately clean and perfectly oiled. He probably used more ammunition than anyone else, and never had a weapon failure. The tail gunner position had a terrible ride, having greatly more vertical and horizontal movement than anywhere else in the airplane. He was always first to be ready to fire, and never removed his guns until the propellers stopped turning. This was probably because three B-17’s were shot down in the pattern one day, and in all three planes the tail guns had been removed. It was dusk-almost dark, and the Me 109 had simply entered the pattern, and probably would have shot down more if his ammunition had not given out. We always removed the guns after every flight, and cleaned and oiled them. Prior to the next flight, all the anti-rust oil was carefully removed, and the guns were very lightly coated with thin oil.
We were aware of Hilbert's concern, and we made a trip to the airplane junk yard and secured a lot of non-standard armor plate. When we returned to Base, we met with ground crew, and some of us asked them to cut up the armor plate and put it under our seat. Things did not work out as well as we had hoped. The next time we flew, old "This Is It" staggered into the air with a mighty heave on the wheel and flew like a dog. This was flying 4725, the best flying B-17 ever made, and we had to find out what happened. When we parked the plane, we finally found the problem. Hilbert had built himself a fort in the tail. He was safe, but we had to remove most of his treasured armor plate to safely fly the plane.

Hilbert was really a great guy. A dependable gunner, and a dedicated Christian. He and I regularly attended Chapel together. The Chaplain, Rev. James Good Brown and I still correspond. He was well thought of by all-he even wanted to fly missions with us and he did. When the great General Curtis LeMay died in the 80's, he gave the Eulogy. James told me later "Few came- he was a forgotten man."

In the meantime, Roosevelt was concerned about the atomic bomb. Democritus, a Greek, conceived of the atom as being the smallest particle in about 400 BC, and for 2000 years nothing was done about it. In 1939, Fermi approached the U.S. Navy with a plan to build a very powerful bomb, and the admirals nodded-'Thank you, Don't call us. We'll call you.' But after Einstein’s letter, General Groves was put in charge of developing an atomic bomb, and Groves was ruthless in accomplishing an objective.

Groves first sought a technical director. He interviewed Robert Oppenheimer, was impressed by Robert's thoughts on a proposed organizing the of the research to avoid duplication, and hired him as technical director. Even though Oppenheimer had "Communistic leanings", he was the best man for the job. Groves and Oppenheimer selected Los Alamos, a remote site of 54,000 acres in New Mexico, for the location of the laboratory because of its remoteness coupled with a need for complete secrecy. Fermi, Fuchs (a Russian spy),Hornig Conant, Warren, Bainbridge, and Einstein were hired in great secrecy, and were moved to Los Alamos. A story is told that a young guard saw a strange looking man wandering around. The guard stopped the man ,and asked him where he was going. He said "I'm looking for the men's room." The guard led him to the men's room and said "I'm Private Jones." The man replied "Einstein."

We now began the third step - the destruction of the laboratory, and the killing of the scientists. We knew exactly where the laboratory was, and I remember how it lay in the bend of the Seine River close to Paris. To make the most effective run, we would skirt the suburbs of Paris.

We were up at 6:00 AM, with takeoff at 8:00 AM, and fly at 22000 feet for better bombing accuracy. Spitfire fighters would accompany us across the channel to France, then P-47's would pick us up at landfall and accompany us to the limit of their range of about twenty minutes. We would have clear weather over the target, and flak was expected to be heavy.

Engine start was 7:30 AM, but we always waited for the tower to fire a green "go" flare before starting engines A red flare was a scrub or cancel. We did not get the flare - fog was over the target, and we would have to wait for the clearing of the river fog. New start time was set for 8:30, then 9:00, then 9:30. At 9:30 the flares were fired, and we got back in old 4725. The auxiliary power unit was running, and we started, taxied, and the planes began takeoff at 30 second intervals beginning at 10:00. When the plane ahead of you began its takeoff roll, the second count would begin, and the pilot would roll forward until the plane was straight, lock the tail wheel, and begin to push the throttles toward maximum power while holding the plane with the brakes. At the 30 second mark, the brakes were released, throttles went to maximum, and the plane was committed to takeoff.. Group assembly and wing assembly went smoothly, and we were soon at 22000 feet in three boxes of fifty-four B-17's headed to the initial point in France. We had started on oxygen before takeoff, our guns were armed, and all were alert for friend or foe.
Spitfires joined us as we left England, flying along beside of us until we reached the French coast. We occasionally shot at the Spitfires because they looked like a Me 109. They were safe unless they pointed their noses toward us. If they did this they were almost certain to draw fire from us, and I think we shot some of them down. The P-47's arrived as the Spits left, zigzagging above us leaving contrails. The P-47's had auxiliary gas tanks, and to engage the German fighters, the P-47's would drop the auxiliary belly tank. After that, they would have gas for one short engagement, then they would depart. However, the P47 was the best fighter we had - until the P-51 had not appeared. The P-47 had tremendous acceleration in a vertical dive, and had eight forward firing 50's synchronized at 500 yards to an area about six feet high and three feet wide. I saw Walker Mahurin dive on four Me-110's on one flight, and he flamed all four.

The German fighters appeared, the tanks were dropped, the P-47's dove for the 109's who promptly disappeared, and the P-47's headed home. The 109's promptly reappeared, began lining up, and engaged us in head-on attacks. The guns in the nose and the guns in the top turret in all fifty four B-17's began firing. Two 109's were sent smoking and three B-17's were crippled - one engine out but keeping up - but the formation was intact. The German fighters did not make a second attack, They probably thought we would be bombing Paris, and they weren't going to die to save some of the French.

We intercepted the Seine at the initial point, turned to the left, and headed for Paris. I hated this route - we would encounter 1000 Flak guns at Paris, and we were flying low. Paris appeared, Flak guns began firing, and the Flak bursts rattled the plane. But: The lead bombardier had acquired the target, and we were committed - nothing could stop us now. The bomb bay doors began opening as we crossed Paris, and the formation closed up very tight. The bombs were away, the bomb bay doors were closing, and we were heading home.

The target was not impressive - just two buildings about the size and looks of a gymnasium. I wondered what could be so nothing but so important to commit 162 B-17's. The trip home was uneventful, and the next day we got the bombing results, including pictures taken from the ground. All was destroyed, the French thought that all were killed, and this was a research laboratory.

Now, knowing more than I did then, there was not a more important target, and the 1944 500 pound bombs totally destroyed such a tiny target and killed the scientists. One tenth of that would have wiped our atomic bomb effort at Los Alamos, and I now understand the need for the complete secrecy at Los Alamos. The scientists were the important target - the buildings were nothing. This ended Hitler's attempt to develop an atomic bomb.

PS: See "Day of Trinity" by Lansing Lamont.

April 30, 1994

Now that we were almost certain that the problem of the Atomic Bomb had been done away with, our priorities changed. The United States was committed to invading the Continent and destroying Hitler and all he stood for, and it was necessary that the invasion not be subject to attacks by enemy aircraft, especially during the initial phase of the invasion. Ground troops cannot survive with enemy airplanes roaming the skies.

The Germans knew this, and were trying to destroy the Royal Air Force. A popular song of the Germans was "We Are Marching On England", and it was played often on their radio stations- played with band music, drums and trumpets. (We listened to their radio stations). But the Germans knew they must destroy the Royal Air Force, and their 109's and 190's methodically roamed the skies looking for targets of opportunity while their bombers methodically bombed English airfields and parked airplanes. Then the German fighter planes were destroying RAAF fighter planes on the ground and those that
rose to attack the bombers. The higher plane always has the advantage, and the 109's came at tremendous speeds out of the sun. Often the Spitfires never saw what hit them. At this time, the Germans had 4500 operational combat planes in this effort, and the RAF had 1200 operational combat planes.

The Royal Air Force was on its knees, with only one partial runway on one airfield operational in all of England when a Group of Lancaster bombers, flying singly at night with a pathfinder to mark the target, bombed Berlin, and did significant damage. I think the Germans were feasting and drinking while listening as a band played "We Are Marching On England." Hitler was in a fury, lost all reason, and ordered bombing attacks on London.

The fire bomb attacks devastated London. During several raids the fires were so widespread that all water pressure was lost, and all the fire fighters could do was watch the city of London burn. The English first line of defence for the fire bombs was to equip each fire warden with a small hand-held water pump about the size of a tire pump. This had a long hose attached to stick in a bucket of water and pump. This would send a stream of water the size of a pencil about ten feet on a fire of fifty pounds of jellied gasoline. The fire bombing continued for several days and nights, but the airfields were restored, and the restoration of the airfields made the air defence of England possible and the invasion of England impossible. Hitler's furious stroke at London had now lost the war for him.

With the fine English radar system and the now flying fighters radar directed and intercepting the German bombers, things got a little better, but blocks and blocks of buildings in downtown London had been destroyed. The rubble was bulldozed, and block after block of antiaircraft guns and brilliant searchlights were installed. Balloons with explosives attached were run up on steel cables. There were so many balloons in the sky the joke was that if the cables were cut, England would sink.

We went to London probably twice a week. Once I stayed out and watched the searchlights defining the German planes in the night sky, and the antiaircraft cannon fired at them with thunder greater than any noise that you could imagine. They were getting good hits, too. This was a fantastic experience- bombs falling all around, planes being hit, burning and falling, exploding and falling, spent shrapnel falling. Occasionally a Spitfire would appear in the lighted area in pursuit of a bomber and would flame or explode a bomber. I never saw a parachute, and always a falling plane. This was the turning point of the air war over London. I never watched again, but went to a bomb shelter. Of this, Winston Churchill said of these fighter pilots "Never have so many owed so much to so few."

The readily available bomb shelters were the underground subway stations, or the "tube", as it was called. They were usually packed with all sorts of people waiting for the all clear. The main lights were usually off due to the bombing, and the emergency lights were dim and flickering. If you were lucky, you sat on the floor next to a pleasant person and talked. There was a joke that went like this: Girls voice" Take your hand off my knee. Not you-you!"

If you were in an apartment in London, and the air raid sirens sounded, the place to go was under the dining room table. The dining room tables were made of steel and would hold up the roof in the event of a bomb hitting the building. This happened often, and the rescue units would dig you out. The dig-out time was measured in hours and days, and the diggers were tops in bravery because the Germans would fuse one bomb for one-tenth second and another bomb would be fused for four hours. When the diggers were digging and came to an unexploded bomb, they knew it was going to explode, but they would continue digging. Many were killed by the delayed fuse bombs, but I assure you they came out a lot faster than they went in.
Fun under the dining room table- the whole family got under the table- kids, mom, pop, sisters, girl friend. It was real snugly. I often wondered how many marriages resulted from an air raid siren and a steel dining room table.

It was not clear at this time what the original architects of the strategic bombing offensive against thought they might accomplish. Up to now, almost all of our missions had not been against Germany, but had been more against specific and necessary targets. As events unfolded, it seemed to me that there were no goals of a sustained strategic bombing offence. However, over time, the proper goals were reached- the destruction of the Luftwaffe, ie, the German Air Force.

The techniques of engagements were also significantly changed: combat would no longer be by gentlemen's rules. The strategy was real simple- break the back of German fighter defences by relentless pressure from Allied combat aircraft.

The German fighter pilots were reluctant to close with us as long as we did not bomb Germany itself. The Luftwaffe, headed by Goering, had promised Hitler there would be no bombing of Germany, and when we began to bomb military targets such as ball bearing factories the Luftwaffe fought us diligently and fought at a very high level. Some fighter pilots made as much as seventy kills. However, when we began to bomb the center of large cities as we did on October 10, 1942, air combat was brought to a very high level. This was their families we were bombing. This was the strategy to destroy all their fighter planes.

Our missions now began at 6:00 AM and we did not try to get back in time for afternoon tea. Takeoff would start at seven. The first airplane would be first in line with all engines at max and the tail wheel locked. Promptly at seven, the pilot would release the brakes, and he was committed to take off. There was no go stop decision because the runway, 27 was too short. After takeoff and wheels up he would fly a big oval at 140 MPH and climb at 200 feet per minute to allow the rest of the planes to join the formation. A pilot would be in the tail gunners position and would advise the Mission Commander when the formation was formed. There would be three planes flying spare who would turn back at the enemy coast, usually Belgian, if no one in the formation aborted. Speed was increased to 140 MPH and the rate of climb to 400 feet per minute and we headed for Germany by a very crooked course. We would not turn toward the target until we were about seven minutes away. We had been on pure oxygen since takeoff, the guns had been loaded, auxiliary fuel tanks had been transferred to the main tanks, and we were flying at 40000 feet at an indicated airspeed of 160MPH and a true airspeed of about 300 MPH.

The P-47's would be zig-zagging over us at 45000 feet leaving contrails, and shortly after crossing the coastline we picked up German fighter planes, Me-109's and Me 190's. The P-47's quickly dropped their auxiliary fuel tanks and spilled avgas all over the world. Usually a few P-47's had forgotten to transfer all the gas in the auxiliary tank to the main tanks, and would head for home immediately but those which had full mains would go for the German fighters and attack vigorously. But, in a dogfight there was only fuel for about five minutes, and the P 47's quickly left us and headed for England, and we had just started. On one of these dogfights Mahurin lost supercharger boost and went to ground level with a 109 hot on his tail. Walker had an armor seat back and the German used all his ammunition on Mahurin, but the P-47 kept on flying. He told me about thirty cannon shells hit the back of his chair which knocked about fifteen rivets into his back. The German pulled alongside Walker and waved to him but Walker did not wave back. Those rivets in his back hurt.

As soon as the P-47's were gone, the Luftwaffe planes came after us like a swarm of bees. The twin engine 210's were loaded with rockets, and would park about 7000 feet behind the formation just out of fifty caliber range and would lob rockets into the formation. They got a lot of hits. Hilbert could tell where a rocket was going and would tell David how to dodge. He would say"UP" and David would respond but we still got a lot of hits.
While the rocket firing Me210's were getting in position slowly, the 109's and the 110's were be on a parallel course on our right trying to get about two miles in front of us. As soon as they as did get in position, by five at a time they would execute a 180 degree turn and with a speed of closure of 600 MPH would fly through our B-17 formation firing cannon at us. They would always come in rows of five and aim for the lead B-17 . I could tell when they began firing- the shell cases and the gunsmoke came out of the bottom of the wing.

Some German fighters would make 90 degree approaches and these planes were hard to hit at first because the gunner needed to aim behind instead of leading the oncoming fighter. But a Dr.Hewitt visited us and told the gunners how to aim- behind. We then began to get good hits and the Germans quit this route. Incidentally, I think our crew destroyed twelve enemy fighters. On one of these side attacks a German fighter rammed the B-17 flying next to us and almost cut it into. It made the trip home ( We flew close to him to offer some gun support ) but broke apart on landing. However, most of the attacks were head-on's and destroyed a lot of B-17's. For instance on one flight, the entire squadron of B-17's were destroyed. We were next in line but we were left alone probably because the Germans were out of gas.

The ball turret gunner was Sgt Purdy and he fired a lot of shells and he handled his position well. However, one B-17 was shot up badly, and the gunner could not get out. When the plane came in to land the wheels would not come down. The pilot circled desperately , had no success and finally had to land.

Over time, due to the way the bombing offense actually played out over Germany and occupied Europe, the actual focus of the campaign became the destruction of the German fighter force. At first, through most of 1943, the idea was to destroy the German fighter planes arrayed along the bomber (B-17's) routes as they attacked the bombers. The Germans were up and waiting for us on the way to our targets. But the targets quickly became the components of the German aircraft industry. Airframes, engines, and ball bearings assembly plants became the targets. Schweinfurt with their ball bearing plant, quickly became THE target on October 14,1943. I did not fly this mission and let me tell you about this. I was in the hospital with ruptured ear drums as the result of a dive from 36,000 feet to 200 feet. Our aircraft was on fire- a gasoline fire. We needed to blow out a gasoline fire, and to blow out this gasoline fire, we reached speeds in excess of 450 knots in the dive. David pulled about ten G's (from G meter on panel) and almost did not level out in time, but he leveled out at 200 feet and we flew home at about the same level on three engines. We were so low the German fighters could not make a good run on us, and we had all of our stingers so they had to be very cautious. It was interesting flying across Germany so low. At that level, often we were down to ten feet above the wheat fields to hide. In flight school, I had to complete ten hours of low flying- below two hundred feet with a mean instructor flying overhead- but this was different- we were being shot at. The hospital was nothing great- a Quonset hut with sixteen cots and a PFC orderly to fuel the stove and read a comic book.

There were sixty B-17's shot down on this mission to wipe out ball bearing production for airplanes. Braun told me that he could see the 305th Bomb Group from his tail gunner position, and all planes in the 305th Bomb Group were shot down. He thought they would come for us next. Old "THIS IS IT" did not make it back all the way, but because of battle damage, landed at the first airfield they came to. I was really upset . I thought they had been shot down.

May 31, 1994

The new strategy to destroy the Luftwaffe by air battles between the U S Air Force and the Luftwaffe initialized quickly with a bombing mission to one of their key cities-Stuttgart . The Luftwaffe had not diligently attacked us when we bombed outside of Germany. The target was a factory producing electrical parts probably for airplanes. David
and I were the last to get on the plane, and we stood together and talked. I told David "We do not have enough gas to get there and back in formation. You get to decide if we cancel here and now. There is no point in flying halfway and then aborting. We must fly not in formation from the target home, and you know what our chances of survival are. It's a maximum effort." He thought a minute and said "Let's go." What follows was mostly written August 7, 1943.

Bomb load was 42 incendiary bombs. We flew old 4725 (THIS IS IT). The target was a factory at Stuttgart which produced electrical components for airplanes. There was no escort. P-47's were flying, but were of no help. The trip to the target was relatively uneventful. We flew at an indicated airspeed of 160 MPH, but the wing ahead flew at an indicated 155 MPH, requiring our wing to "S" to maintain the proper distance. B-17's covered the sky. I never saw so many B-17's in my life.

The target was hidden by low clouds, so we bombed the alternate target which was the railroad marshaling yards at Offenburg (near Strausbourg). As you may recall, old 4725 only carried about 1560 gallons of gas, while the later models had another 1400 gallons of gas in the wing tips, or a total of 2960 gallons of gas. As we approached the target the lead bombardier acquired the target, and opened his bomb bay doors. With this signal, all planes opened their doors and the pilots closed up the formation. There was little or no flak, nor were the German fighter planes active. Suddenly, with no warning, the lead plane made a sharp turn to the left, and we slid under the plane on our right. It was that or a mid-air collision, and a mid-air collision will ruin your whole day. Wheels down, cowl flaps open, anything to stop this bird and get out from under this plane who is going to drop his bombs any second. Slowly we oozed out from under, the Norden bombsight contacts closed, and the bombs were falling. Then, with bombs away, the formation began a turn to the right and increased speed to 170 MPH indicated. With this, David reached to the console and pulled the props all the way back to 1200 RPM, the mixture to automatic lean, and the boost to 30 inches of mercury. We began to lose speed, and the formation slowly and then faster left us as our speed slowed to about 100 MPH indicated while the formation probably was indicating 170 MPH. David never said a word when he did this. In one of our meetings after the war, I asked why he did this. He said "You told me to." I think he had his mind made up because he reduced the power setting as the bomb bay doors were closing.

Coming back we didn't have enough gas to fly back in formation, so we conserved gas and straggled. Naturally, the fighters jumped us-109's, 110's, and 190's-approximate total of about 150. Again they did not press their attacks, and we learned why on the next mission- they had developed a new weapon which would soon be used on us. Only one plane got close- the plane looked like a Spit and the pilot flew like a Spitfire pilot. The top turret gunner advised all "Don't shoot, that's a Spitfire." I thought a minute and realized it could not be a Spit then said " A Spit doesn't have this range. Shoot him!" Top turret fired a short burst over his head. I wanted him to destroy this plane and he could not miss at this range. However, the plane peeled off and disappeared. I can understand his reluctance- the intruder, had English markings, and he cosied up to us like a friend. He was only about fifty feet from us but was directly behind the plane on our right wing. I am sure he had his gun switches on, and his guns were cannon. He would have exploded the other Fort if we had not clearly indicated to him that he was not welcome.

For a while I didn't think we would make the channel. The yellow low fuel lights had been on since we dropped our bombs at. Before we reached Paris, we feathered the prop on number three engine as we ran out of gas in that tank. When would the next tank run out was the unspoken thought. Usually all tanks on a plane will run out within five minutes of each other. We were now flying on engines one, two, and four converting altitude into distance. All the while fighters were attacking from six and seven o'clock low, and I am sure Hilbert Braun was up to his knees in spent fifty caliber cartridge shells.

Before we reached the coast, engine number two ran dry and was feathered. We now had symmetrical thrust, and the plane was flying better. Everyone thinks we will ditch in the Channel, and the entire crew is preparing for ditching. The radio operator, Eddie
Knauth, was trying to contact air-sea rescue, but was unable to due to the crowded MF/DF. Eddie was a great radio operator and in addition to the radios he had another duty—he looked in the bomb bay and made sure all bombs had fallen. If some had stuck he would get Mike Jasinsky to help him clear the stuck bombs, and Mike was the strongest man on the crew. I say this because once in a basketball game I made an illegal block on Mike (stuck out my hip). I don’t remember the details, but I lay on the floor a while wondering where the truck came from. Eddie did something I thought strange—He would stick his head out his window and yell to the German fighter planes "I'm German—don't shoot me—I'm on your side." I had some bad thoughts too. I wanted to divert to Switzerland—we were only about twenty miles away, things were looking very iffy, and I needed a new watch. We could make Switzerland easily, but we had been told by American Intelligence that Swiss were turning over all airmen landing in Switzerland to the Germans. As we reached the channel we began to jettison cargo. Everything loose went overboard.

Eventually we saw Beachy Head. At this time a British Spitfire flew close alongside and pointed to the camouflaged air strip, then flew toward the airstrip. I was absolutely sure we would not make it. We were low, and I thought we would crash into the white cliffs of Dover. I really wanted to ditch close to the shore. But the Wright R-1850 engines kept turning. About this time we called for Darky, who fired a Red-Red flare, and we saw a small grass field that other planes were using. Darky insisted we make a normal traffic pattern, but we did not have the gas to circle the field. Engine number one chose this time to run out of gas, and we were flying on engine four. We landed down wind with other planes landing the other way. We were going too fast—we crossed the fence at 120 MPH instead of 90 MPH. There were no brakes. Number four then lost all fuel pressure, and was losing power. We touched down, and David pinned the plane to the ground as a plane landing the other way zipped by us. As we slowed, the tail wheel touched the ground, and David did a ground loop to the left. We went sliding down the airport sideways making all sorts of scraping and sliding noises. The right wing dropped almost to the ground, and we slid sideways to a stop. We sat there for a long time, and did not say a word. After refuelling, we flew back to Ridgewell.

This trip back from Stuttgart to England had been particularly difficult. Bombing in the heart of Germany was like kicking over a hive of bees. The bees don't like a bit and neither did the German fighters, and they swarmed around us like bees.

June 30, 1994

The Luftwaffe fighters had fought the unescorted B-17’s to a standoff, with both sides having unacceptable losses, with the B-17's losing planes and men, and the German fighters losing airplanes. The new strategy was not possible with the aircraft presently in England. The fighter craft simply did not have enough range to be effective. The P-47 was equipped with a big belly tank which was of no value on a deep penetration of Germany. The twin engine P-38 was brought in, but was a failure. The first group of twelve was all shot down on their first flight. The P-38 had a wing that was too thick, and with only a low blower supercharger in the Allison engine, performance deteriorated quickly above 22,000 feet. We were flying above 30,000 feet, and the P-38’s were no match for the Me-109.

Early in the war in the spring of 1940, the English were shopping for fighter planes in the US. Their top of the line fighter plane was the Spitfire, but required 330,000 man-hours per airplane to build. There was no way they could build an air force with their limited manpower sources, and realized they must to turn to other source for combat aircraft. They preferred the P-40, but the Curtis factory was totally booked with orders. They approached James "Dutch" Kindelburg, President of North American Aircraft, who said he was booked solid with P-40 orders but he could build a better plane in 120 days. Legend has it he stayed late that night and drew the new plane design on sheets of butcher paper. The same technique was used by Bill Lear in his Lear Corporate Jet. The next morning, Dutch called his team of engineers and builders together, and told them he
wanted a flyable airplane in 120 days. In 120 days, North American rolled out the first P-51 (called the Mustang by the English) without an engine and with wheels borrowed from an AT-6. In a few more days, a 1200 horsepower Allison engine and the proper landing gear been had been installed. On the first test flight the test pilot radioed "We have a winner here. I'm at 400 indicated, and it flies sweet."

The RAF got its Mustangs in late 1941, and combat loaded, flew at 380 MPH, and was the best aircraft they had ever seen. However, it was powered with the Allison engine with only a low speed supercharger, and at 20000 feet it simply ran out of puff. Then someone had a brilliant but obvious idea of mating this wonderful airframe with the Rolls Royce Merlin engine. Merlin, of course, was King Arthur's magician and the engine fit like magic. It would do 432 MPH at 32000 feet, for the Merlin had a marvellous two speed supercharger. However, when it shifted from low blower to high blower, it seemed like the engine was about to fall off.

North American immediately switched to Packard-built Merlins. Packard had superb quality control and built precision engines. Incidentally, in 1941, a new Packard cost $7000, a Lincoln $1500, and a Cadillac $1400. General "Hap" Arnold immediately ordered 2000 P-51’s. They made a few changes such as removing a few big heavy radios and installing a small four channel FM transceiver which was clear as a bell. This made space to add an 85 gallon fuel tank directly behind the pilot. Two 110 gallon drop tanks were added under the wing. There were two main tanks in the wing containing 90 gallons each for a total fuel tank capacity of 485 gallons, or 2910 pounds of fuel. Fuel consumption at economical cruise was sixty gallons per hour.

Blakleslee's Fourth Fighter Group got all the new P-51’s, and immediately-they said "We can learn to fly it on this mission" and flew fighter escort for B-17’s on the next flight which was to Berlin. This was a gigantic air battle, with 800 Mustangs and Thunderbolts in support of 1300 bombers against 1000 Luftwaffe defenders. This was standing toe to toe with no subterfuge - straight battle.

This was the beginning of the end for the Luftwaffe. When the June 6th, 1944, invasion began, there were no German planes flying during the landings, and no significant flights for the rest of the war.

This plane changed the course of history. It could hit 437 MPH at 15000 feet and could do it more than 1000 miles from home. Prior to its arrival, the bombers and fighters had fought to a stalemate. When Goering heard of a P-51 at Kiev, he said "the war is lost."

There was something else the P-51’s did- they destroyed planes on the ground getting ready for takeoff. This was hard to work out. The B17’s would cross the enemy coast at an altitude of 36000 feet and an indicated air speed of 160 MPH and a true air speed of about 320 MPH. Often we would pick up a jet stream of perhaps of 50 MPH, and this would give us a ground speed of 370 MPH. The P-51’s flew at an altitude of 200 feet and an indicated air speed of 270 MPH with a true air and ground speed of 270mph. We were flying 100 MPH faster than the P-51’s and the P-51’s needed to leave before we left. They would come in to a Luftwaffe air field in France or Germany, and all the fighters would have left to attack the bombers. They did not make this but mistake but once, and later they would come in low and line abreast with all guns blazing and did tremendous damage to the parked and taxiing fighters. They would not make a second attack immediately. However on one flight, a P-51 was crippled, and the pilot landed. A second pilot landed and taxied to the damaged plane. "Get in", the pilot of the good plane shouted, and the other pilot climbed in (right foot on left wheel, left foot on wing, right foot into cockpit). Don’t get your head in the big four-blade propeller. All this time the other ten pilots were strafing everything that moved, and the Germans were firing cannons at everything that flew- a real little war going on. Back at Base the two pilots tried to repeat the two in one for the newsreel cameras but this was a complete failure. One pilot said "We didn't have any trouble when the Germans were firing those cannons at us."
The P-51 was different. It had a symmetrical wing; that is, the top and bottom of the wing were equally rounded. All other plane’s wings were flat on the bottom and rounded on the top. We were still locked into the Bernoulli Theorem which stated that the air went faster over the rounded top and produced a vacuum which lifted the wings. This was taught in pre-flight school. In flight ground school I asked "If this is true, how can an airplane fly upside down?" I was an SME (Subject Matter Expert) on flying upside down. On my first flight after soloing, I flew stall and spins -stalls to the right, left, straight, power off, and ended by a power off stall straight ahead followed by a two turn tailspin to the left. As we headed back to the field, the Instructor said "Mr. Goodman (Instructors called all cadets mister and only one way conversation was possible due to the use of the gosport, a simple flexible tube ), I think you are a little nervous. Fly back to the field upside down." I flew the pattern upside down, and turned on final approach still inverted at which the instructor said "for God's sake Mr. Goodman, turn this airplane over!" I flew all over the County inverted, and I was still NERVOUS. The truths are that lift is a function of the amount of air deflected downward and flying upside down does not ease the mind.

The P-51 had the oil and coolant radiators on the bottom of the fuselage, and everyone tried different locations, but none were better. All of the other locations reduced speed. Another item- someone had done a wonderful weight and balance job. The airplane flies with the tail up, and not only does it look good, but it flies faster and is more stable. Another item- the P-51 had combat flaps. This was a detent on the flap control, and in this setting, the flaps opened about three inches when flying about 250 mph, but at 400 MPH, the flaps were down about 1/4 inch. This really improved turning, and it could out-turn, go faster, and with six fifty caliber machine guns out gun any other fighter plane in the world. The P-51 was thin. From behind, the P-51 disappeared very quickly.

It was very easy to fly. Starting is simple-Tank selector to left main, battery on, fuel boost pumps on, throttle cracked, two shots of prime, and hit the starter switch, let four big propeller blades go by, then turn on the magnetos while still cranking. One cylinder hits, and the shudder is enough to believe the engine is going to fall off its mounts, and great belches of blue smoke go by the canopy. Run up is at 40 inches of mercury.

The pre-flight is ordinary- check the propeller by going to high pitch and get a reduction in RPM. Coolant and oil switches are on automatic, mixture on automatic rich, props full forward, friction locks are tight, fuel boost on, canopy locked, harness tight, and controls free.

Takeoff- roll out to the center line of the runway and line up with the center line and check the trim tabs- the rudder trim is full right and the elevator trim is one inch back. Pull back on the yoke to lock the tail wheel, and add power to 61 inches of mercury. In a very short time, the Merlin has pulled the plane level and is departing as you retract the wheels. As you reduce power to 46 inches of mercury and 2700 RPM, you are spinning the altimeter upward like you have never seen before.

At 16000 feet the supercharger shifts from low to high with a wrench that shakes the fillings in your teeth, and you wonder why the engine didn't fall off.

The P-51 was the best airplane of World War II, and with some great flight leaders like Captains Gentily and Godfrey, changed the history of the world.

I really wanted to fly a P-51. I did all the preliminary work which included reading the two books of the Technical Manual. The second preliminary was to memorize the cockpit to where you could touch every handle, gauge, or knob blindfolded. The third preliminary was to make six takeoffs and landings from the back seat of an AT-6. I did this plus starting the engine (by the check list, of course) and slow taxiing. Now I was ready to solo a P-51. However, as I was waiting in line for takeoff in a C-47, five P-51's ahead of me lost it on takeoff by ground looping to the left. Prior to this, David lost it to the left and the engine moved back into the cockpit and killed him. I lost my nerve. I wish now I had flown that P-51.
July 31, 1994

We were beginning to get too tired and edgy. We had done a good job of flying; we were dependable; we flew excellent formation; we did not drink; we saw that the airplane and guns were always in good condition; we always supported our mission. We never left the formation prior to dropping the bombs, and we flew a tight formation. David and I had been awarded the Air Medal and two oak leaf clusters. But we were still tired.

The weather was always bad; summer came on July 17th this year and we missed it. There were no precision approaches to runways in bad weather, and we groped our way to the runways. This was bad enough but there were ten or twenty OTHER airplanes groping their way to the end of the runway at the same time, and all were low on gas. A missed approach was always a heart stopper; we saw the runway and were too high or at a forty-five degree angle to it. So we would execute a missed approach- full power, turbo superchargers at maximum, wheels starting up slowly, flaps starting up, fifteen degrees nose up, and watch the airspeed and the change in altitude. You wanted the altitude to increase, and there was always some sink but we were so close to the ground it seemed like a lot of sink. However, the B-17 is a heavy bird, and is not at all nimble and is slow to react. It seemed that we were always flying with four yellow lights on which indicated low fuel. We stuck it out, but this seemed to be a daily event.

Another thing that bothered us a lot was our friends not coming home and intruders coming into our hut and packing up their personal belongings for shipment home of those that did not return. Care was taken in what was sent home in that some flyers had a wife and sweetheart, and letters to sweethearts were carefully removed. Subconsciously, this was impinging on our own mortality. We had reached the stage where we were not very friendly to new flyers because it was so painful to lose a friend, and in our numbness we found a solution- don't make new friends and stick to your old friends in our crew and in Cecil Clore's crew.

So the Flight Surgeon, in his Flight Surgeon wisdom, gave us his blessing to go on Rest and Recreation for one week in southwest England.

We took a series of trains and went through London to get there. A wooden-bodied station wagon met the train and took us to a red brick mansion. I was amazed- it looked like a high school. On instructions, we left our luggage at the train station, and later our luggage appeared in our rooms as if by magic. Inside, we met the staff- all lined up for our inspection. Then we met a number of Red Cross young ladies, all young, beautiful, and poised. Next we went to our rooms to, as the Director put it "freshen up." I immediately put in a bid for his job.

There were thirty-seven large bedrooms, each with four beds, and they were spacious. Each two bedrooms shared a large bathroom. Each morning when I awoke, Mike, a ruddy cheeked Scot with a cheerful way and a cheerful smile, who was one of the staff, stuck a large glass of freshly squeezed orange juice in my hand. After bathing- hot water!- we put on civilian clothes which had been laid out for us, and went to the garden room for a first class British breakfast. This included fresh eggs, bacon, ham, toast, sweet rolls, cream cheese, orange marmalade, (Jelly was always Orange Marmalade) and hot tea. Milk was not available because some cows were tuberculosis carriers. The English could drink it because they had been exposed to TB for years and had either built up an immunity or died.

After breakfast, I took a walk around the grounds. This included a session of trapshooting- shooting at clay pigeons going away with a twelve gauge automatic shotgun. After this I visited the barnyard and saw the Holstein milk cows- beautiful and immaculately groomed (a Holstein set a new record for milk production in 1993: 72000 pounds of milk in a 300 day year).

I came back in for lunch then spent the afternoon relaxing in the great room with a small group of pilots. Walker Mahurin was there and I thanked him for destroying the four
Luftwaffe fighter planes. Surprisingly, the fighter pilots were somewhat deferential to us, and said they had seen the beating we were taking. They had an advantage; they could accept or reject combat, and they got to their range limit in thirty minutes, and must return to their base. The bombers would never turn back but would continue for another ten hours.

The next day an American Red Cross girl took me under her wing, and we spent the day visiting an old castle that was built about the year 1200. It was in excellent condition. Of note, there were no halls - halls had not been discovered yet. The castle contained a complete small church almost completely hidden. The church was added when the Protestants were in power and put a confiscatory tax on anything Catholic. I realized my guide was Catholic; she genuflected when we entered. We also visited the small church where the parish priest translated the Bible into English and read it in church. For this he was burned at the stake, and his ashes were scattered on the river Streit which flows into the river Thames thence into the sea and from there to all the oceans of the world.

This young lady was very nice to me. She was twenty-four and I was nineteen; she was sophisticated, charming, rich, and beautiful, and I think she had a husband and I was a substitute for her husband whom she probably missed very much. Being very nice, she invited me to her apartment for "a real English breakfast." At breakfast, I left my spoon in my cup of tea. She looked me straight in the eye and with an affectionate and gorgeous smile, reached over, took the spoon out of the cup and put it in the saucer. I was so entranced by her I probably would have put out my eye when I drank the tea. All in all, we had a delightful time. At the end of the week we returned to flying, and I think we all felt better.

We made other trips when not on standby. One day we flew to Glasgow, Scotland, to see the first suspension bridge ever built. The supports were wrought iron links about twenty feet long instead of cable. I made a dumb mistake; I plotted the course to the wrong airfield. Later, I discovered there was an airfield downtown and one way out in the country with both on the same latitude and one was 30 degrees west latitude and the other airfield 30 degrees east longitude. When I plotted the course, I did not pick up the one further out on the pilotage map. When we arrived at the airfield, the runway had a forty-five degree turn at the midpoint of the runway. I told David,"We can't land this big bird on that runway"-but he did. We were right downtown, and had a very nice visit. I think Scotland is twice as clean as England. Departing, we had about six Royal Air Force flyers hitching a ride to London. We put them in the nose which improved the balance and despite my worries, we had a nice takeoff. I did not tell David about my dumb mistake until after the war.

Another bad flying day I got a Jeep and driver and rode to Bury St. Edmund. I think St. Edmund was the last child of William The Conqueror (Also called William Plantagenet for the broomstraw he wore in his hat like a feather) to be a King. Edmund was canonized because he always wore a hair shirt which made his life a torment but supposedly holy. While there, I visited a high school friend, Roy Davidson, a B-17 pilot at his air base. We had a good talk, and I got back to Ridgewell really late. I had forgotten about the requirement for blackout lights.

August 31,1994

I think you may be interested in some key points of this world war called II. The Nazi Party Program of the 1920's made the explicit proclamation "No Jew can be considered a countryman." On April 1, 1933, a boycott of all Jewish businesses officially began. In April, 1935, the Nazi Government ordered all Jewish children expelled from school. In December, 1935 all Jewish property was seized by the Nazi Government. October 31, 1938, was Crystal Night (Kyrastallnacht). This was the beginning of the Holocaust which lasted until September, 1945. This night the German storm troopers smashed the windows of all the Jewish jewelry stores, entered the buildings, and smashed every thing
inside including the Jewish owners. The troopers were merciless and thorough, and the Jews were helpless in this show of inhuman behavior. All the world heard of this the next morning and did absolutely nothing about it. England had disposed of their Jews about 1650, and this was nothing off their skins.

This action was acceptable in Germany. The Jews were considered less than people, and the German people continued with the Holocaust. Ten million Jews were slaughtered without mercy - old men, old women, young men, young women, children, babes in arms. I was not aware of this at the time. I thought it was like the Japanese containment camps in California in which the Japanese had everything except freedom.

The German Government offered to let 160,000 Jews leave Germany if any country would take them. They were first offered to the British Prime Minister, Neville Chamberlain, who was negotiating with the Germans at this time. His objective was "peace in our time." Hitler saw this as a weakness and broke every treaty that was secured. However, Chamberlin declined to accept any Jews with the question "where would put we then?" The Jews were next offered to the United States. This was referred to Cordell Hull, Chief of the State Department at this time. Hull asked the same question "where shall we put them?" On behalf of the US Government he declined to accept the Jews. Roosevelt was privy to this decision and did nothing, but kept the truth a secret. This was despite the fact that his best advisor was a Jew. Cordell Hull later was involved in peace negotiations with the Japanese. Negotiations became very tense just prior to December 7, 1941. We had copies of the instructions to the Japanese negotiators but Hull refused to read them even though the information indicated that a war was imminent saying " Gentlemen don't read other gentlemen's mail." He was a political appointee with no special talent in this area.

The Germans had developed an unbreakable code based on machine technology. The United State obtained one of the decoding machines as follows: A Polish worker (probably a Jew), stole one of the decoding devices from the factory, and was able to pass it to an English secret agent who managed to get it to 10 Downing Street in London. The English passed the only machine, called Enigma, to the United States. Since the top Japanese used Enigma, we used Enigma all through the rest of the war to great advantage.

In September, 1939, our peacetime preparation for war began very slowly. Two years later we had one mortar per division and a division needs about 3000. A mortar is only a piece of stovepipe with three legs and an aiming system - nothing complicated.

In September, 1940, the air war began in England. England's Spitfires and were no match for Messerschmitt 109. PS: The English always named their airplanes. We used letters and numbers as follows: P - Pursuit, 51- number assigned to the airplane, G Model - the last and best. The English called it a Mustang. At this time we were building P-40's, not as good as a Spitfire. December 6, 1941, a fleet of US ships was bombed at Pearl Harbor, and all battleships were sunk with a great loss of life. The aircraft carriers were at sea, and were not touched. Admiral Halsey perceived we could not risk exposure of our aircraft carriers and Halsey seldom came into Pearl. When he did he only entered one carrier at a time. The Admiral commanding the battleships came into Pearl every weekend. I think he said " What? Me worry? "

The attack on Pearl Harbor was considered by the politicians as a "sneak" attack. Roosevelt's words were " a day that will live in infamy." But for hundreds of years combat forces would try to catch their opponents off guard, and the only place where intentions are announced is the game of hide and seek where the "it" person says " coming ready or not" Japan had a good reason for the attack. When sailboats began to sail across the oceans, the Pope distributed the world. Indo China was given to France, England got India, the Portuguse got Japan, and Spain got North and South America. England did a fine job in India, stealing only what they needed, but France stole whatever they wanted and began a campaign of systematic looting of the country for more than a century. A Vietnamese named Ho Chi Minh, with a battle cry of " Asia for the Asiatics" began a revolt
against the French. Japan began to sell the tools of war to Vietnam. France immediately went to the US for help which we readily gave, and issued a paper which was a blockade of the Japanese ports. Japan, that small island, had to import or die, and chose to attack our battleships at Pearl Harbor, and sunk all of them. No carriers were sunk - they were all at sea. These Commanders at Pearl Harbor were a motley crew - one Commander cared more for his weekends with his battleships tied to the pier so he could party. Combat ready? No. Early in his career another commander planned an airplane flight around the world but got lost on the first leg of the flight and crashed his plane. But one commander was doing his duty and safeguarding his trust - his aircraft and the men that manned the ships. He stayed at sea as much as was possible, and his ships were untouched by the Japanese. The war continued, and we were able to almost destroy Japan with the B-29's but an atomic bomb at Hiroshima and one at Nagasaki ended the war with Japan. We immediately returned Vietnam to the French. PS: The Bridge On The River Quai was in Vietnam.

Meanwhile, in December 1941, the P-39 and the P-51 appear, and the US began jet engine and airframe development. The jet was smooth as glass and with great power. It would cruise at 900 kilometers per hour, but we were unable to manufacture the hot rotor blades that would last more than five hours without a major overhaul of the jet engine. The cold rotor blades are located in the front of the engine, and the hot rotor blades are located in the tailpipe. Normal tailpipe temperature is 1700 degrees but a hot start will have a tailpipe temperature much higher. However, a real downer is when the co-pilot says calmly "Number 1 is going cold." The man who came up with this solution said "I can't find a metal that will stand these high temperatures but I can blow cool air through the inside of the main shaft and then through the blades." October 1942, the Germans had solved the hot blade Problem. The blades were nitratated cast iron, and worked to perfection.

In June of 1941, the Russians, flying slow ILU -2s, begin to win some air battles against the Me-109s but the big news is that the German Panzers are stopped by the Russian army, and the Germans begin their retreat leaving their Third Army behind to starve or be shot. The Third Army was a total loss.

On June 6, 1942, three top of the line battleships, the Shornhorst, the Prince Engen, and the Gneisesenau leave Brest and sail up the English Channel to Norway. England's attempts to damage these ships were futile in an attempt by four Swordfish (a seaplane which is big, slow, and could carry only one torpedo ). I think the Battleships were going faster than the Swordfish.

Also on June 6, 1942, B-25's led by Jimmy Doolittle, departed from a 467 foot flight deck of an aircraft carrier(1), and bombed Japan. All of the planes but one took off with full flaps. The one without flaps dropped out of sight to those on deck; there was a long silence and the B25 appeared directly in front of the carrier slowly, slowly gaining altitude. Fourteen of the eighteen were lost primarily because the carrier was out of range of the B-25's when they departed, but the task force had been seen by a fishing boat. The captain thought the boat might have a radio and would advise Japan of our presence. They didn't.

On July 18, 1943, a German pilot flying a Me 262 jet attained an airspeed of 800km per hour. The next time he flew this airplane the air speed was 900 km per hour. The rotor blade problem had been solved.

The V-1 and the V-2 weapons appear. The V-1 was an unmanned airplane equipped with a pulse jet engine which flew at about 300 MPH. It was launched from a car riding on a short section of railroad track located in the Brest area. Faster than almost any propeller driven conventional airplane, and flying low, they did tremendous damage to London. They flew making a put-put noise. When the gas ran out, the put- put stopped, and the plane dived into the ground, buildings, barns. I have seen them flying directly over my head with the fighters trying to shoot them down, but the put- put stopped very soon after it passed over. We bombed one of these sites, and the bombardier could not see the site it was so well camouflaged. We were flying second lead, the lead plane had to abort,
and we took the lead. This was Colonel Leber's first flight as commanding officer of the 381st bomb group, and he contributed absolutely nothing. At pilots meeting he really dug into Clore's flying, but Clore was tops. The V-2 was a pure rocket- you never heard it or saw it, and the terminal damage was tremendous. I think Von Braun designed them and aimed them at me.

In September, 1943, a later model of the P-39 appeared. The P-39 was a poor airplane. It sounded great- tricycle landing gear, engine behind the pilot, firing a 37 mm cannon through the propeller hub. It was too small for me to get in. I could get in, but could not close the side door. The plane was too small, too heavy, too slow, too low (about an 18000 foot ceiling, and easily and quickly slipped into a flat spin from which there was no recovery. It also badly overheated during taxiing.

However, the chief of aircraft procurement loved a lady at the P-39 headquarters, and he pushed the P-39 beyond all reason. For instance, he did not want the P-51's to have any Packard engines. The Allison engine had a ceiling of 18000 feet, the Packard had a ceiling of 40000 feet, and the B-17's flew up to 40000 feet. The problem was helped when an Air Force pilot went directly to Hap Arnold and told Hap that the P-39 was a flying coffin and the P-51 would win the war. Hap decreed that the P-51's would get half the Packard engines. Whereupon the lady got the General to let them build the jet airframe. The plane's apparent results looked good but they had only stuck the jet engines on each side of the P-39's body, and still had the NACA 1930 wing which was too fat. The pilots who flew the P-39 jet all said that it was not going as fast as the instruments indicated, and a thorough search revealed the pitot tube had been modified (a bump of solder) to create a vacuum on the static line. This increased the apparent speed and rate of climb. At this juncture the Truman Committee became involved, and the P-39 company was out of business.

On April 4,1944, the Germans had completed twelve Me 262's with big guns and rockets, but B-17's bombings had destroyed eleven of the twelve. The remaining Me 262 attacked a formation of 54 B-17's and destroyed three B-17's and one P-51. The 262 could throw 96 pounds of lead at 1300 feet per second in three seconds. The jet was going so fast the gunners could not track the jet and the jet was untouched. The jet attacked the B-17 formation diagonally, and his first shot of three seconds knocked an engine and a wing off the target B-17. The other two B-17's destruction was similar. The P-51 was chasing, went supersonic, had control lock and crashed. If the 262 had not run out of fuel he probably would have shot down all 54 B-17's. We did not have a jet until after the war. I think they finally gave the project to Kelly Johnson down at the Skunk Works who finally put it all together.

I think there were 58000 thousand casualties in the 8th Air Force. If we had had the P-51 in 1942, I estimate the casualties would have been cut in half. That's enough people to be a small town. Of course, there is a statue of the Procurement officer at Muroc Air Force Base.

The aircraft factories or the engine factories were slow to build a top of the line jet fighter, and did not complete the jet fighter until about 1947, two years after the war ended. The plane that was developed was the F-80, and was called the shooting star. In 1947 an F-80 came to Birmingham on Memorial Day for a fly-over of the Birmingham Airport, but as the F-80 crossed the airport at maximum speed, a P-51 flown by Lt. Dan Nunnaly, passed the F80 easily. On the return flight Dan passed it again.

In the meantime the Squadron Commander, Lt. Sam. McClurkin, was trying desperately to stop the embarrassment as General Donaldson on the ground was telling Sam what he would do to Sam if the F-80 didn't win. However, the P-51 won again. I asked Sam later why he didn't stop Dan. He said "I explained it as best I could. I would have shot Dan down if the guns had been loaded."

Dan later flew into a mountain and was killed. Sam was called up and went to Korea. He survived the war.
(1) See C. Faulkner.

September 30, 1994

I was graduated from Flight School at Hondo, Texas, a remote place that time forgot, on April 1, 1943, All Fools Day, and I kind of felt like one. The day before, we received our 2nd Lt. clothes, and discarded a lot of Aviation Cadet clothes. We had a nice new uniform made by Hart Shaffner and Marx with gold 2nd Lt. bars, new low cut shoes instead of G.I. boots, an officer's hat instead of a cap, new shirts and ties instead of grungy olive drab fatigues. I did not pay for all of this from savings from my $75.00 per month Cadet pay which I had spent on riotous living but from a $200.00 U.S. Army grant. I retained my olive drab short coat, and think Jane is now wearing it- anyway, she has acquired it. Surprisingly, cadets and soldiers now saluted me which at first gave me quite a start. Once, when one passed me from behind, he saluted me and said "By your leave, Sir!" as he passed.

I had received orders to report to the 381st Heavy Bomber Group at Blythe, California. As a hint, the orders included a bus ticket. I packed all my gear, and departed by bus to Blythe. I looked forward to seeing the beautiful Emerald Valley and all the movie stars. I was nineteen years old, and felt fearful for the Odyssey I was beginning.

Two days later, by traveling all night, I arrived in Blythe, and a G.I. in a jeep was waiting at the bus station to take care of me and he did. First was quarters assignment, then to the quarters- a tar paper covered shack. I was amazed at the number of scorpions in the barracks. I learned to shake out my clothes before wearing, and to quickly take off my clothes when I felt a scorpion crawling inside my shirt or pants. You undressed quickly when you felt a scorpion inside your clothes no matter where you were. Blythe was a desert, hot, sagebrush, sand, and no movie stars.

I always liked to look at airplanes, and I hiked down to the airfield to look at the airplanes. I was overwhelmed with the size of a B-17. As I was examining the nose, a second Lt. came over and said " I am expecting an officer to join my crew. You don't know a Lt. Goodman, do you?" I replied "You're looking at him." He was David D. Hutchens, and this was the beginning of a close 51 year friendship. I feel I owe my life to him, and he says the same thing to me. He was a superb Aircraft Commander, pilot, and friend. I completed his crew, and I was the youngest.

We shook hands, and he introduced me to Lt. Cecil Clore, another Aircraft Commander. Lt. Clore was short and stocky, and I judged him to be a two cushion man, and he was- needed two cushions behind his back to reach the pedals.

That night at sleep time (10 PM taps) a B-17 taking off at max power cleared the roof by about two feet. I got up and repacked. I was moving to another building. I don't like to sleep at the end of the hot runway. But David met me in the hall and said " That takeoff was from a taxiway. This won't happen again". And it didn't. I unpacked and went back to bed. I had survived the endurance test of the two day bus ride, and it had been a long day. I thought as I lay there that there was no excuse for this takeoff on a taxiway. Runways have a white center line, white center line lights, and large numbers indicating the compass heading of the runway, ie, a runway with a compass heading of 200 degrees would be runway 20. Twenty is a bad number, incidentally. {because the other end (180 degrees opposite) is runway "2", and people get confused- bob} Taxi ways have yellow center lines, yellow center lights, and no numbers.

However, it still happens. Recently, at the Anchorage Airport, an experienced pilot nonchalantly tried to take off a 747 cargo plane on a taxiway instead of the runway. He never left the ground. A little smoked bridgework was all that they found.
After breakfast with David and Cecil Clore we sat around and talked. Cecil was a farm boy from Indiana and had little to say, but I was impressed with both of them. I strongly felt they were intelligent, dependable, prudent, and knew well their limitations and the B-17’s limitations. It would seem that a four engine plane as heavy as the B-17 would be very stable but it was not. We lost a lot of planes because of the inherent qualities of the airplane. For instance, going from twenty per cent power to max power was very slow to have any effect.

After mid morning coffee (I was beginning to like this officer business- mid morning coffee served) I asked "When do we fly?" The answer was "Only at night- the asphalt runways are too soft when it gets hot to support a B-17." And it was hot.

It turned out that at Palm Springs, a small town forty miles away, there were movie stars. I never got to go there, but a Captain Howard went enough to meet and marry Dorothy Lamour.

The next day we packed up and took a troop train to Walla-Walla, Washington. We went through the western part of California and Oregon and saw the beautiful west coasts of the two states, and they were fabulous. The trip took three days so we had Pullman cars to sleep in. I took an upper because only one person slept in an upper but two were assigned to a lower berth and I sure didn’t want to sleep with anyone. In these three days I came to know David and Cecil very well.

Walla-Walla was an oasis after Blythe. Cool, permanent buildings instead of tar paper covered shacks, nice tarmac and runways, green trees and snow covered mountains in the background, a nice officers club, and next to a big town.

After breakfast the next morning, I went down to the flight line and watched a B-17 taking off. The pilot lined up on the runway, released the brakes, and advanced the power to Max. At about 120 MPH he rotated upward not to five degrees but to 10,20,30,40,50 degrees. The B-17 then stalled and fell back to the runway in a total crash and slid about 1000 feet. There went $250000. Here I am, assigned to fly for two weeks now, haven’t been in an airplane, and have seen one total crash and one near miss on the only two flights made- what am I into?

It turned out on investigation that the pilot had failed to unlock the controls. As a matter of interest, I was in a B-17 when this happened. One day in England after lunch, Col. Hall, The Group Operations Officer, said "Hey Bill, come fly with me." I was glad to go. After the checklist, after the run-ups, and on the runway, Col. Hall lined up, released the brakes, and advanced the throttles to max. When we reached an indicated airspeed of about 60 MPH Col. Hall jerked the four throttles to idle and applied maximum brakes.

We stopped at the end of the runway, and Col. Hall reached down and unlocked the controls. He looked me straight in the eye for a full minute, then taxied back to the other end of the runway and we made a normal takeoff. I never said a word of this to anyone until today.

At Walla-Walla, we initially flew a practice bombing flight in the morning, in the afternoon, and at night. On each flight we dropped twenty four 100 pound practice bombs, flying at various altitudes. Corrected to 15000 feet, the best we ever did was a circular error of thirty feet at night when the air was completely calm. With flak and fighters leaning on us, we missed the target two miles at Schweinfurt.

I had one bad experience. I commonly entered the nose of the B-17 through the front escape hatch by opening the hatch, jumping up and grabbing the edge of the opening and going into the plane feet first and upside down. This saved a long walk from the rear door. (When Margaret and I visited Wright- Patterson Air Force Base in 1992, I told Margaret I was going in their B-17 that way. She laughed and said "You'll fall on your butt!" She was right.) On this particular occasion I cut all four fingers of my right hand deep enough to need stitching. I went ahead and flew, but I got terribly airsick. I had
gotten airsick many times before, but this was the worst. I decided to give up flying. When we landed, I hiked over to the hospital, and went inside. There was a Sergeant sitting there, and I told him, "I want to see the Flight Surgeon." He replied, "He's at supper." I told the Sergeant, "Go get him." He disappeared, and came back in a little while and said, "He'll be here shortly." He did not come shortly, thank goodness, and I took this time to go to the latrine and wash my face, hands, and arms real good and drank a lot of ice cold water. I sat there waiting, relaxed and feeling better. When the Flight Surgeon came with a worried look he addressed me and asked, "How can I help you?" I replied, "I need some cuts sewed up," and showed him my cuts. He said, "Is that all?" "Yes," I replied. He said, "The sergeant said you looked pretty bad, and thought you probably intended to quit flying." I said," I couldn't do that." He sewed up the cuts, and I never got airsick again and always enjoyed flying after that.

What a dope I was. I should have shared my problem with such a good friend as David and I know he would have helped me. By myself, what would have happened if the doctor had been there and I had quit flying? It would have changed my whole life.

October 31, 1994

To go back to an earlier time, on Sunday, December, 1941, I was working as a staff photographer for The Birmingham News, earning $100 per month, and had to furnish my own camera. With the news of the Japanese attack on our fleet at Pearl Harbor, I was called to come down to the News. There was nothing I could do in the way of taking a picture, but prior to this, I had spent a lot of time doing publicity for both the Army and Navy recruiters. I knew them well, and I made a prompt visit to them early Monday morning.

Working at the News, I had been immersed in war talk, and realized that regardless of any personal feelings, I would be a part of this war. With this as a background, I consulted the Army and Navy recruiters to pick a desirable assignment. I had thought of being a photographer. My newspaper buddy Draighton B Colley had already picked this and it sounded so glamorous. However, both recruiters advised me to try for the Aviation Cadet program which was now available to me, but prior to this time all cadets were required to have completed at least two years of college. I signed up for both services with the understanding that I would go with the first service that called me up. The Army took me first.

I departed Birmingham from the old Terminal on May 10, 1942. Alex and Mildred Lemon came to the train station to see me off. I think this was my first trip on a train. This train took me to Ft. McClellan (named after General McClellan of Civil War fame) and was turned over to a Sergeant for directions. We were soon issued Army fatigues, boots, and some clothing. Our civilian clothing was taken from us and mailed to our next of kin. We were then marched to a building across the street from Headquarters and sworn in. It went something like this: "I swear that I will support and defend the Constitution of the United States of America, so help me God." The swearing in was done on May 12, 1942, by a Mr. White, and I understand that he swore in about 40,000 soldiers during the war. Incidentally, I went back to this same building on May 12, 1982, and had no trouble finding it.

The next day, about two hundred of Air Corps types and about six Cadet types (we were not Cadets yet) took the train to Fort McPherson (named after General McPherson of Civil War fame). Nimrod William Ezekial Long had had ROTC, so he carried the papers of the to-be Cadets, and was in charge of our small group. Nim lives in Birmingham, and still calls me "Billy". He was really a great friend to me while we were together. At Fort McPherson, we were given the rest of the clothes we needed, and unlike the earlier clothes, these clothes fit much better. We also had drills in shoe polishing, cleanliness, a GI haircut, military appearance, marching, and Army customs including saluting. I decided the best thing for me to do was to salute anything that moved. The sergeant was tough on these things. For instance, one GI from the hills had never had a bath in his life. At every formation, the sergeant called him and two other soldiers out of
the formation with instructions to scrub-brush him with GI soap. GI soap is like Octagon soap, and after a few days he looked and smelled a lot less grungy.

After a few weeks of this, a group of about two hundred Army Air Corps types and six Cadet types with Nim carrying the papers and supervising the six Cadet types, departed for Keesler Field at Biloxi, Mississippi. The train went through Opelika, Loachapoka, Notasulga, Tuskegee, and similarly named other small towns. The Air corps types were from downtown New York City, and did they give the Southerners on the train a hard time about such names. I kept quiet - those names were hard for me too.

We arrived at Keesler Field late in the afternoon, and were promptly introduced to the Sergeant who would rule us while we were there. I think these Sergeants are made from a mold - loud, imperious, profane, and dumb. The Sergeant commanded "Count off!" The first man said loudly,"One!" The second man was silent - frozen in absolute fear. The sergeant walked slowly over to the man who by now was about to faint, put his face about one inch from the man's face and shouted, "You're two, damn you, t-u-e." Absolute silence. The sergeant then marched to our assigned quarters, and we went in, found a bed, and unpacked. The sergeant never got a count of how many men were there. Incidentally, the word "sergeant" originally meant "servant," but not any more.

Keesler was a very large operation, and its mission was the testing, classification, training, and assignment of the recruits to the proper school. Also, probably twenty percent of the recruits at Keesler Field were waiting for a school opening or an assignment to the proper MOS.

At Keesler Field, Air Corps and Cadet types went through testing and classification together, and I probably would have been assigned to aircraft engine school but I opted to take the test for photographer. I passed, and was placed in waiting in the assignment pool, but I was really waiting for a Cadet slot. While waiting, I attended a formation every morning at which announcements of orders for anyone selected to attend a school or transfers to another organization. At one formation, the Sergeant asked if anyone wanted to make a flight on the China Clipper. The China Clipper was a four engine flying boat which flew from San Francisco to Hawaii then to China and back. This sounded real glamorous, but almost anything was better than what I was doing. I immediately volunteered, and in about ten minutes I was loading china dishes on a rack which went into a dishwasher. This mess hall fed about ten thousand soldiers every day and my work was hot, dirty, long, and tiresome, and if the dishes were finished, I got to peel potatoes, crack eggs, or stack milk bottles. I comforted myself with the thought that I was learning a trade and earning twenty one dollars per month. I worked all night, and one night the Sergeant came by and asked,"Well, what do you think of the old China Clipper? But your time here is finished. Tomorrow afternoon be on the train to Kelly Field. You are being sent to Aviation Cadet Selection. I hope you do well. You took this job and handled it like a man."

You can be assured I was on that train early, and I was happier than I had been in a long time. There were five other cadet types including Nim.

Since we had departed in late afternoon, we stopped in the New Orleans train station for breakfast the next morning. I had not yet received my twenty one dollars less deducts pay for my time in the military and had spent what little money I brought from civilian days and did not have a penny. So I asked Nim for a loan of five dollars. He gave it to me but he also gave me a Government meal ticket and said,"You won't need any money .You have a meal ticket". As I went through the "IN " door, I saw a girl I had met in Washington,DC, coming out. Both of us turned around, each surprised to see the other in the train station in New Orleans. Grace and I enjoyed a long, talkative, and excellent breakfast. I introduced her to the other cadets and carried her suitcases out to her train, told her "Goodbye" and never saw her again. It was five dollars well spent. I got on our train, and we headed for Kelly Field in San Antonio, Texas. Grace was really a beautiful, poised, charming, and well dressed young lady, and my stock with the other Cadets had gone up 500%.
The permanent part of Kelly Field was classic pre-war design with a large and beautiful grassed parade ground with large two story brick houses for senior officers on three sides. The fourth side was open, and across the street was Headquarters. In front of Headquarters was a flagpole supporting a large US flag whipping in the breeze. The day was hot but the humidity was low, and with a cobalt blue sky and a nice breeze, it seemed like a great place to be. However, the temporary part was all pyramidal tents for Cadets and for offices. We were greeted by the ubiquitous sergeant as we unloaded, and marched to our quarters. After a talk on where things were and the more important rules by the sergeant, we moved into our quarters with five men to a tent. The classification would begin right after breakfast the next morning.

We marched (we marched a lot. Sometimes we sang as we marched) to the classification building which was a permanent structure. The first day was spent in a series of written tests. The next day was a test of reflexes under stress. Bedlam reigned as we operated a number of devices, and accuracy and speed both counted. Several soldiers stopped under the pressure which meant failure. The third day was a class 1 physical for flyers. The eyesight exam included acuity of vision, and 20-20 vision was a must. Eye balance was also measured and it was pass-fail. If you failed you were out. One of my buddies failed this, and he was distraught- I thought we were going to lose him. The next test was depth perception, and I did real good on this. The color blindness was next, and I did real good on this. The last test in this area was the Barony Chair. You sat in the chair, the chair was spun, then stopped, and you tried to walk to the door. You had to do it. Everything was tested, from the top of your head to the tip of your toes.

The fourth day was being interviewed. One interview was strange. I was standing in line in my skivvies when my time came to go in this office. I peeped in, and the Doctor was sitting at his desk. I walked in, stood at attention, saluted, gave my name and serial number, and gave him the exam packet. He took the papers out of the packet, studied them, laid the stack on his desk, and said, "If a battleship is made of steel, why doesn't it sink?" I thought that this was the dumbest question I had heard this year but answered, "The entrapped air plus the steel is lighter than the displaced water." He wrote something on my file and handed the packet to me. I saluted and departed. The tests were over, and I was glad, pass or fail. I had walked around that building for two days in my skivvies with nothing but an envelope to hide behind. Civilians, clerks, nurses, and others walked up and down the halls where we were waiting in line to be examined, and I did have some modesty.

In 1944, when I returned to the US, I happened to see this strange Doctor sitting at the bar in the Officers Club. He was still a Captain. I went over to the bar, sat beside him, and ordered a drink. He was looking into his glass and never looked up. I asked him, "What is the significance of the battleship question?" He took a swig of his Bourbon and said, "I'm a psychiatrist, and the US Government is not going to permit a crazy person to fly a combat aircraft. I asked you that question and decided by your facial expression, your body appearance, and your speech and answer that you were not crazy. We have a perfect record in this. Some flyers have committed suicide, some have gone to padded cells, but none have harmed anyone else.

The next day while we were in Retreat formation, our grades and pass-fail were given to the group. There were cheers and tears. I had an excellent grade- one of the best. I was surprised when the Squadron Commander came over and congratulated me on the excellent grade. This meant I had my choice of three careers- Pilot, Navigator, or Bombardier. I needed to think on this.

November 30, 1994

Now that I had passed all the tests required to become an Aviation Cadet, I had to decide which discipline was best for me to pursue. As I saw it, the factors involved are listed below.
1. With pilot training and my size, I would be a bomber pilot, and probably the Aircraft Commander in charge of a crew of nine or more. Did I have the coordination required of a pilot? I did not know.

2. Could I acquire the leadership skills required of being an Aircraft Commander? I did not know. I was only eighteen years old.

3. Could I become a proficient Navigator? With the navigation accent on mathematics and my proficiency in mathematics, yes.

4. I did not want to fail and end up being a soldier in the Infantry.

5. I would be in the Navigation School sooner than in Pilot Training because of the particular scheduling at this time.

After deliberating on these factors as well as some others, I choose to follow in the shoes of that great navigator Nathaniel Bowditch and become a navigator. I formalized the choice in writing the next morning.

The next day the great move began. Those who had washed out (failed the tests) left Kelly Field and went to those assignments determined by Classification at Keesler Field - Gunenery School, Aircraft Mechanic School, or if you were a truck driver you became a cook. Of course, if you were a cook, you became a truck driver.

Those who had passed moved to another section of Tent City, and began the wait for the school of their choice. First, we were given Aviation Cadet types of clothing which was designed to become officer type clothing upon graduation. For instance, the khaki shirts had shoulder straps suitable for officer insignia. The hat had a cadet insignia which could be easily replaced with the eagle of officer's insignia. We also got a nice warm coat called a "short coat", and low cut brown shoes. All the clothing I received fit me very well. I now felt good about all that had happened at Kelly Field. This was the first time I had been treated with respect and as an individual. I was now called "Mister" instead of the names the Sergeants used such as "meathead."

The facilities in the tent city were not bad. This was the summer of 1942, and while the weather was hot, the humidity was low. It was only a short walk to the latrine which was equipped with showers, and there was always plenty of hot water. The pyramidal tents were placed on wooden platforms of about ten feet by ten feet size with a wooden railing built of two by four lumber all around except at the entrance. There was a center pole supporting the tent, and ropes attached to wooden stakes and the edge of the tent kept the sides of the tent taut. There was a slit in the side of the tent, and at the top end of the slit was a hole for a stovepipe. The slit had large snaps to close the tent. Five of us were in my tent, and the all seemed very nice. I got along particularly well with one Cadet who was Russian born and lived in Russia until he was twenty. He seemed particularly sophisticated.

All of the Aviation Cadets were assigned a work duty of some kind. I was assigned to a group which was erecting tents to increase the available accommodations. There were five men in each group, and my group was very cordial. I had the misfortune to step on a nail, and was excused from duty for one week, then back to work. Back to work was back to erecting pyramidal tents, and I had the job-- among others-- of snapping the tent around the stovepipe and snapping the slit shut. I think I was pushed into this because of my height. I was the tallest man in the Squadron. I knew this because when we marched-- and we marched everywhere-- we lined up according to height, and I was always in front and on the right.

One day we were working on an end tent, and I was standing on the railing reaching to snap the tent around the stovepipe, became overbalanced, had nothing to hold on to, and fell through the slit. That was bad enough, but there was a desk in the
tent, and I landed on it. This was bad enough, but there was a second Lieutenant Tach Officer sitting at this flimsy desk. When I fell crashing through, I scared the bejeebers out of him. He was sitting quietly at his desk in his office bothering no one, and KABOOM! his desk and papers were totally destroyed. Both of us jumped to our feet. With heart pounding and body hurting, I stood at Attention. He looked me over slowly from head to toe and he wasn't laughing— not even smiling. He was mad! He said, "What is your name, Mister?" I replied, "Aviation Cadet William L Goodman, Serial Number 14227431, Sir." He looked at me slowly and thoughtfully, still thinking, and wrote my name on a piece of paper he found on the floor and said "Report to your quarters until we decide what to do with you!" I saluted, did an about-face, and went to my tent. I spent the rest of the afternoon sitting in my tent wondering what they would do with me -- prison, expulsion, wash out, I had no idea what would happen. I did a years worth of worrying in that short afternoon.

Retreat is at 5:00 PM and all work stops. There is quite a ceremony associated with Retreat. All the troops march in formation to the parade ground and stand at attention as the bugler sounds Retreat. When the bugler ends Retreat, a cannon is fired, and the bugler plays "The Star Spangled Banner" as the flag is lowered. I can still whistle Retreat.

I listened to the distant bugle notes and wondered if I would ever hear them again. At this time, my Russian tent-mate came in and said to me, "You will never guess what happened today." I said, "I know. I fell on the Lieutenant's desk today." "Not that," the Russian said, "The Lieutenant and the Sergeant were talking about promoting someone to Corporal so there would be someone to do bed check at Taps and do Roll Call before breakfast. Both of them live in San Antonio and have families. Neither knew any Cadets, and they were both fishing around for a name when the Lieutenant discovered on the floor a piece of paper with Aviation Cadet William L Goodman's name on it." Post this Cadet to Corporal immediately!" the Lieutenant said to the Sergeant." Now we can leave." The Russian continued, "It's posted on the bulletin board!" I looked, and it was.

Thus began my rapid rise to leadership. I was now the highest full time Officer in the Squadron. The Sergeant gave me a whistle, flashlight, the list of names, and told me what to do. I had no problem blowing the whistle for "Fall Out", bed check at Taps, but at Roll Call the next morning I could not pronounce one forth of the names properly. I would call a name like Rabinowitz or Tiahnybic and Rabinowitz or a friend would cry out, "You dumb Rebel! Can't you pronounce a simple name!" I would always say," See me after Roll call. I will wait right here for you." Rabinowitz, and his friends would approach me cautiously shuffling their feet and looking apprehensive. I would always apologize for my incompetence, never having met a Rabinowitz before, and ask for their help in pronouncing their name correctly. Then I would engage in some small talk to get them in my mind. I always asked them what they did before the War, and talk from there. They quit calling me names, but continued to come up and help me to properly pronounce their names.

December 31, 1994

I spent several weeks at Kelly Field - long enough to build a forest of tents but I never saw an airplane. I still called roll in the morning and did bed check at night. Why I did these things I don't know. Each Cadet was looking forward to becoming an officer and an airman wearing silver wings with lots of beautiful girls flocking around the hero. It was very unlikely any Cadet would run away. We were all waiting for a class to open, and all were anxious for a move to Pre-flight.

The move came for the navigation group in August, 1942, and I was one of the lucky ones to be one of the first of those qualified to receive orders. Packing one duffel bag was easy and quick, and a group of us took the train to Ellington Field at Houston, Texas.
Ellington Field had permanent new two story barracks. We were issued foot lockers (a partitioned trunk placed at the foot of the bed) and a wall hangar for hanging clothes. There were about forty men on each floor, with a large latrine on the first floor. I was on the first floor and had a lower bunk - I was afraid of heights. Present was the ubiquitous Sergeant. He was pleasant but tough. I guess you can be pleasant when you are really tough.

The Sergeant set high standards, and immediately set the ground rules. The first rule was that the barracks was always neat and clean. All Cadets were scheduled for their turn at cleaning the latrine, and it was always spotless for inspection. After the latrine was pronounced clean, no one could use it until after inspection regardless of the pain or the fear of bursting. "You can't come in here. Go to another barracks," the latrine orderly would say. Throwing a cigarette butt on the floor was not permitted, and any violation of this rule brought swift and unpleasant consequences. A cigarette butt thrown on the ground led to a the casual butt thrower having to bury the butt in a hole six feet long by six feet wide by six feet deep, and this hole was in sandy soil.

We immediately began training, both officer training and airman training. Military courtesy rules were covered again. The rules on appearance were a short haircut every week, a bath and shave daily, and polish all shoes daily. Clothes must be clean every day, bed made with hospital corners with the top blanket tight as a drum. All hanging clothes were to all hang the same way with footlocker clothes neatly folded.

We had one problem. Bill Smith would not make his bed. He said, "That's woman's work." We would make it up for him, but one day the Sergeant caught us making Bill's bed, and he asked Bill, "Why aren't making your bed?" Bill replied, "That's woman's work." In about ten minutes two soldiers with rifles put handcuffs on Bill and carried him to the stockade for two weeks of hard labor. It wasn't really hard, just picking up a little litter. When Bill came back, the Sergeant met him at the door: "Are you ready to make your bed?" Bill said, "It ain't fittin" I think he intended to say more, but two Military Police hustled him away. Bill was a nice and pleasant guy, and we hated to see him go. This time, however, Bill was sent to a psychiatrist who interviewed Bill, and sent Bill back to the Sergeant with a note to the effect that Bill had very firmly encapsulated ideas of male and female roles, but he had the potential to be an excellent airman. Don't send him back. When Bill returned, the Sergeant met Bill at Bill's bunk and asked, "Are you going to make your bed?" Bill replied, "It's OK for me to make your bed. I'll make your bed every morning." And every morning the Sergeant made Bill's bed, and Bill made the Sergeant's bed.

Eating rules were a special case as few of us had previously taken eating manners seriously. Properly, we were to sit with backs straight with your napkin and left hand in your lap and eat slowly. Don't ask for someone to pass you something until all the food had been passed. When you wanted something which was out of reach, you quietly asked the person beside you, "Pass the grits, please." You must eat all on your plate. If you thought something was steak that you put on your plate and it miraculously turned to liver, you sat there contemplating the liver until you ate the liver, no matter how long it took. Friends couldn't help, either.

I became close friends with another Cadet named Bill Rennhack. We went to Chapel together every Sunday. One Saturday afternoon the Sergeant came into the barracks and asked for our attention. We had not been given permission to leave the Base, and since no one had any money because we had missed the last two paydays almost all were present. When we were quiet, the Sergeant said in a quiet voice, "I need two volunteers." When asked what for he would not tell, but said he would not force anyone to volunteer. Rennhack was standing beside me and said, "The sergeant is an OK guy. Lets help him out." I was fixing to explain to him about Sergeants and volunteering when Rennhack said loudly, "Mr. Goodman and I volunteer." We slowly walked up to the Sergeant with Rennhack pulling me by the arm. As we walked, I tried to think of something I could do to get out of this - fall, break a leg, or knock Rennhack down, but
nothing that I could think of seemed workable. When we reached the Sergeant, He smiled. I thought to myself, "He's enjoying this." But he said, "Get dressed, and in fifteen minutes a Staff car will pick you up and take you to a dinner and dance at the Houston Country Club. Be on your best behavior and have a good time." I did not believe this for one moment - I had been suckered by too many Sergeants. But in fifteen minutes the Staff car was there was there, and in thirty minutes we were eating rib eyes at the Club. With Rennhack, I was eating crow.

Sitting across from me was a young, beautiful, and charming girl named Rene'. Soon she and I were dancing and talking. She was a sophomore at the University of Houston and was a member of a sorority. She was making good grades in school and she was an only child. I was wishing the night would never end but it did, and I had had a wonderful time.

Rene' gave me her telephone number, and told me to call her. We soon were allowed to leave the Base after the Saturday morning inspection and parade. I was properly dressed, and I hitched a ride into town. I called Rene'. She promptly came to get me in her snow-white Packard convertible. She was wearing a white silk dress with light green accents. She was a beautiful girl with long blond hair, and was painstakingly well groomed. I had never even touched a Packard before. I was impressed by the Packard, the silk dress, and her beauty in that order. I have always admired silk and linen dresses. She drove me to her house to meet her family. The house was very large; it looked like a high school. Her parents were very hospitable to me and tried to include me in their luncheon conversation, but I was out of my league. We ate in the Garden room, and were waited on by two serving maids. It took about an hour to eat lunch, and I was used to eating lunch in ten minutes. I had no idea of what I was eating, and I was an absolute failure at making conversation - I did not know what they were talking about. I quickly decided Rene' was out of my league - what could I offer her? I never saw her again after that day. What a dope I was - she had not asked for anything, but my preconceived ideas were all wrong - the man drives, the man picks up the check. Here, with the world turned upside down, I am looking at trifles. We could have had a good time together.

January 31, 1995

Not all at Ellington Field was fun and games. We had eight hours of ground school a day and at least two hours of night homework. We were, in effect, taking the college equivalent of forty hours of courses about subjects of which we had no prior knowledge. The courses included the most basic method of navigating, dead reckoning, or as most commonly called, DR. DR is based on the fact that if you fly on a magnetic compass course of 90 degrees and fly one hour at 150 MPH, you will be at the end of that vector, or if I had flown this heading and speed from Pell City, I would be over PDK (Peachtree-De Kalb) Airport in Atlanta in one hour. Adjustments are required for compass deviation, magnetic variation, and wind drift to obtain the proper compass heading. Indicated airspeed must be corrected to true airspeed for altitude and to ground speed based on wind. This is dead reckoning, and from my experience is accurate and dependable.

Navigating by stars was very important since there was no other way to navigate over the oceans at that time. To become proficient, we had to learn the exact location and appearance of the forty plus navigation stars. I still remember the seven in Ursa Major-Dubhe, Merak, Phecta, Megrez, Alioth, Mizar, and Alkaid, and, in the Hunter, Beetelguese, Bellatrix, Rigel, Saiph, and nearby is Sirius, the brightest star in the sky. We spent frigid nights outside with the instructor pointing out these select stars to us. He would point to a portion of the night sky and say, "See that one. That's Castor!" It was almost impossible to tell which one he was pointing to. Then we would take our chronometers and sextants, take altitudes of selected stars, do our calculations, and plot our location. We knew we were at Ellington, but it was not unusual to make a calculation error or incorrectly identify a star. I once plotted my location in downtown Manhattan at 42nd street and Broadway. Another Cadet plotted his location in Westminster Cathedral and asked the instructor what he should do. The Instructor suggested he say a prayer, and he probably did.
We were doing math to solve a spherical triangle using the locations of three stars to determine our location. This is called a three star fix, and the solving is difficult even when we used an algorithm devised by a Lt. Ageton and named H.O. 218. There was a better way called the landfall method. It is based on the fact that the altitude of Polaris is the latitude of the observer.

To use this method, you cruise to the latitude of the destination, turn toward the destination, maintaining this latitude by additional Polaris sights until you reach the destination. The altitude of the sun at noon gives the similarly usable information, and the calculation is very easy. This is called a landfall; why, I don't know. Fred Noonan, Amelia Earhart's navigator, always flew landfalls, but he is quoted by the people who talked to him just prior to his final flight "I am going to try a three star fix on this flight." He missed his destination.

The two types of navigation, dead reckoning and landfall, were based on work by Nathaniel Bowditch. Nat was indentured by his parents for ten dollars to the proprietor of a large merchandise store in Boston. Nat was ten years old. He missed his parents but was happy because he was no longer cold nor hungry nor wore rags and tatters. He was bright and cheerful and a hard worker, and in time the proprietor began to treat Nat as a son. In his late teens the proprietor commissioned Nat as supercargo (supervise the cargo) on one of his sailing ships.

This ship would carry merchandise from Boston to Africa, and slaves from Africa to Boston. There was a lot of spare time for Nat as he had no sailing duties. Curious, he asked the Captain how he navigated the ship. The Captain was baffled by the question - there was no science to his sailing. He finally said "Sail toward America until you find it, and when you find it, sail along the coast until you sail into Boston harbor. How could you miss America?"

After Nat returned to Boston, he spent some time with the navigator of an English Man O' War and learned their system which was the landfall technique. This system made finding the latitude easy, either with Polaris or sun observations. He secured copies of the English books, but the books had numerous errors. They also required long division, and American sailors could not do long division. So Nat learned about logarithms which only require adding and subtraction, and published his book on navigation with the use of logarithms and complete with instructions. He also corrected all errors that were in the English Book. The English navigators were his best customers for the books.

He then cleaned up the ship - no iron near the ship's compass and calibration of the compass. For determining boat speed, he used a log tied to a knotty rope thrown over the side of the moving boat. If five knots of the rope passed through your hands in one minute, your speed was five nautical miles per hour.

On Nat's next trip from Africa, he sailed out of sight of land for the entire trip, and sailed into Boston Harbor on Christmas Day in a blinding snowstorm. He dropped anchor by the sound of church bells. He had set a new record for this trip. Now his book was a best seller.

We also learned Morse Code at a sixteen word-per-minute rate for use in radio navigation. There a large number of radio beacons in the United States, and many outside the United States. All are identified by a continuous repeat of the letters in Morse Code which identified the station. Birmingham is BH or "-...". Memphis is EL (For Elvis) or ".-..". I had trouble learning the Morse Code, but the Cadet who sat next to me could read it easily. He came from the hills of Arkansas, ate garlic as if it were peanuts, and dipped snuff. My only chance to learn the Morse Code was to get a key and sounder and practice at night. I wrote a friend in Birmingham, Alex Lemon, and by return mail I received the equipment. At night in the barracks we would have a large group practicing code. That little machine probably saved my neck and the necks of at least twenty other Cadets.
The days were turning cloudy and cooler after the hot summer days. The wind was picking up and blowing from the southeast. The word was that a hurricane was in the Caribbean and was headed this way, but there was no real basis for this rumor. We had no radios or newspapers. Slowly but surely the wind continued to blow harder, and the rain came in torrents. The cadets were all in their barracks, and there were sounds of loose debris hitting the barracks. These large barracks were shaking in the wind, and parts of the buildings were being blown away. As the storm became more intense, an officer appeared and ordered us to fall out (assemble in the street). Outside was bedlam. The officer was trying to get us into a formation but a loud shout could only be heard about three feet due to the express train roar of the wind.

I understood what he was trying to do so I fell in directly in front of him and stood at attention. Quickly a Cadet fell in beside me, and soon there were about 800 cadets in four ranks beside me. The officer came over to me and said "March these men to the Chapel." I saluted, stepped out of the formation, went to the four cadets on the end, and standing in their faces, said," Follow me." I happened to know where the Chapel was. Fortunately, I had gone to chapel one Sunday when I was walking demerits. It would have been terrible if I had gotten 801 men lost in a hurricane. I managed to get them to the Chapel where we spent the night in safety. Several barracks blew down and many were damaged. We were all wide awake listening to the storm. It would have been nice if the Chaplain could have been there to preach a sermon. He would have had a wide awake captive audience.

The next Saturday I did not go into Houston, but Sunday morning I decided I would go to a beautiful grey stone Episcopal Church we had passed going into town. Rennhack was walking demerits, so I was on my own. I quickly caught a ride almost to the door of the church. It was a little early, and looked around a bit. The lawns were a brilliant green and the church was beautifully landscaped with no trash anywhere. The blood red doors looked great beside the grey stone walls. Inside was a vaulted ceiling with all the trusses finished natural. I selected a seat in the back left corner, and watched the church fill.

Sitting there, I became aware of an older couple sitting behind me. I did not hear them come in. Soon the service began. I joined in with the singing and really enjoyed all the service. I did not have a hymn book, but I did the best I could. As the service neared the end, I heard the lady say( I was eavesdropping. I always do.)"I don't care what you say, I'm going to invite him home for lunch." I hoped she was talking about me - anything is better than Army cooking. The man replied "You don't know anything about him!" The lady said "Well, he sang all four verses of "Amazing Grace" without a hymnal. He can't be all bad." Then she spoke to me, introduced herself as Mrs. Pritikin, then introduced her husband and daughter. The daughter was a sophomore at Rice, and was very nice. I think they wrote the song "Just the Way You Look Tonight" just for her. She was wearing just a simple black dress with a tiny red tie at the collar, and was poised and elegant. I went to church and had lunch with the Pritikins every Sunday for the rest of my time at Ellington. I even quit getting demerits so I could enjoy a good Sunday dinner.

February 28, 1995

The Pritiken family had a long term effect on me. I had never been in a Christian household for a significant period of time in my life. I was more of an observer than an invited guest, but was treated more like a family member than a guest. For instance, after Sunday dinner, Mr. Pritiken and I would sit in the living room and read the Sunday newspaper. We talked about the news, and he would ask me my opinions about the war. He knew more about the war than I did. We had no newspapers or radios on the base.

The Sunday dinner was always a joy. All used careful table manners and dined leisurely. There was always talk, and all listened respectfully to whomever was talking. If someone said something that was not agreeable to someone else there was no
commotion, but soft comments such as "Why do you feel that way?" or "I understand." There were no sharp corners but only softness.

Mrs. Pritikin set the tone for the home, and I quickly recognized the love and respect they had for each other, and their respect for others. Visiting in this home with this family made me realize they had something that I didn't have but wanted very much, and started me on the road to becoming a Christian. It was a sad day for me when I left Houston.

At Ellington I continued my Preflight studies, and I continued to learn more about navigational methods. For instance, I learned there were strings of lights with the lights spaced at twenty mile intervals between all major cities. Each light flashed a specific letter in Morse code permitting you to tell exactly where you were. The lights were called flashers and the string flashes were W U D R K D B G M , or to help remember, "When undertaking difficult routes keep directions by good methods." These lights were really not that bright, but it was amazing how far the flashers could be seen. Later while in pilot school on a very clear night, I counted five in a row or eighty miles. We had finished Preflight, and it was time to leave Ellington Field and go to Hondo Army Air Corps Base. I had done well academically. I had also been promoted to Cadet Major. This was not a real title but meant I marched about five hundred cadets to meals and reviews and handled a few minor discipline problems usually by conciliation. I almost never saw the Sergeant who really was in charge, and when I did see him he had no adverse comments, and treated me with respect. I discussed many small problems with him concerning the cadets, and he was always understanding and helpful. I wished I had been Adjutant instead of Battalion Commander because the Adjutant carried a beautiful sword, and would whip the sword out of the sheath and salute the Base Commander. I thought this was great, but I probably would have cut my nose off or tripped over the sword and broken my neck.

One of the Cadets who shared a room with me had come to the Cadet Program from the Horse Cavalry - that meant that he rode a horse in the Army. To have horses in the Army in 1942 was unreal - the Polish Cavalry was totally destroyed by German tanks in a few hours in 1938. However, he and I went to a Dude Ranch (I was the dude) and he taught me how to ride like a soldier - back straight, reins in your left hand, and guide the horse by neck reining. The horse that I rode was real dumb and in two days couldn't learn to do anything right and did everything all wrong.

I left Ellington Field with mixed feelings. I knew in my heart I would never see the Pritikins again, but I would get to fly in an airplane. We were told we were going to Hondo, Texas. Hondo is about sixty miles west of San Antonio in the desert. The base was temporary, and all we saw were runways, a tower, temporary wooden barracks, and tumbleweed. The wind blew all the time and so did the tumbleweed. I understood when they sang "Drifting along like a tumbling, tumbling, tumbleweed." In downtown Hondo there were a-filling station with a glass topped hand pumped gas pump and a saloon with a bar, mirror, and a brass rail. In the center of the saloon was a pot-bellied stove set in a four inch wooden box partially filled with ashes. This was for tobacco chewing spitters. What a dramatic change from Houston!

After breakfast the next morning, we had a brief period of orientation and were assigned to an instructor. Our flight schedule was posted on the bulletin board and woe betide us if we missed a scheduled flight. We were to fly in AT-7's - a twin engine Bostone quite similar to the plane Amelia Earhart flew on her last flight and got lost. On every flight we were given two or three destinations and the last destination was always back to Hondo. We were measured by how close we came to our destination and how close we came to our estimated time of arrival (ETA).Passing was five miles and five minutes, and the method of navigation was prescribed. Pilotage, Dead reckoning, Landfall, Radio Bearings and Star Sights were the primary methods but included were Point of No Return, Fuel availability, and ship interception. I did very good on the first twenty three flights which saved me when I blew Flights 24 and 25.
On my 24th flight, the destination was Scott Field at Belleville, Illinois, just across the Mississippi River from St. Louis, and the specified method of navigation was dead reckoning. There was a forty knot wind from the left which made a drift to the right of thirty degrees. I did not believe the drift calculations that I had made and assumed a smaller drift. My instructor disciplined me severely for this. Not for missing Scott Field but not having confidence in myself. He asked me "Who else would I pick to rely on. Is he better than you. You have proved your competence in twenty-three flights. I have confidence in you." At Scott Field the runways were clear of snow but the snow was ten feet deep beside the runway. I felt like burying myself in the deep snow.

On my last flight, the flight was from Hartsfield in Atlanta to Hondo. The wind was pushing us slightly to the left. I did not correct for drift because I planned to wait until we were about ten miles from Hondo and make one big correction. When we passed New Orleans, the wind began to push us to the right, and my calculations indicated we would hit Hondo right on the nose with no corrections and we did. Also, we were within one minute of our ETA. Again my instructor got on my case- he thought my navigating was again showing a lack of confidence and I had sat out the entire flight. I showed him my calculations, and he was satisfied. Now I was ready to graduate.

All of the graduating class were jubilant. The thirty percent wash-outs had left earlier. Another Cadet named Gover and I decided that we would hike into town and have some excitement. We went first to the filling station, waited around until a pick up truck stopped at the gas pump, and watched the attendant put four gallons of gas in the pick up truck. This was so exciting we elected to go into the saloon. We walked right up to the bar, put one foot on the brass rail and told the barkeep "Whisky!" The barkeep brought two small glasses and a bottle of whiskey, put them in front of us and departed.

We watched the spitters hitting the stove for a few minutes, then called for the barkeep. He picked up the bottle, studied it for a minute, then said, "Twenty-five cents." We paid, then departed. This was my last night as a Cadet, and tomorrow I would be an Officer and a Navigator.

March 31, 1995

Back to England! We had lived in England about six months and we knew our way around London. We also learned some English history, and what a great man Churchill was. I was now a First Lieutenant and was the Squadron Navigator. With First Lieutenant pay plus flight pay plus combat pay and no expenses, I was financially secure and was able to save most of my pay. I felt rich. I been rich and I been poor. Rich is better. Later, I used some of the savings to help pay my way through college.

However, I did spend some money. For instance, I bought a cute young lady named Margaret Buck a white linen table cloth with twelve napkins which is still in new condition. One day, I would like for Margaret Jane Goodman, my first granddaughter, to have that tablecloth. I also bought my mother a similar tablecloth. I think the store was Harrod's and was in Nelson's Square. Nelson Square is named after Lord Nelson who defeated the French Navy at the Nile and also at Trafalgar. At Trafalgar, both fleets were sailing in two parallel lines just out of cannon range. Lord Nelson had flags run up on his ship which said, "England expects every man will do his duty." Nelson then said," Close on their flagship " and immediately engaged a French man of war. Nelson was killed in the ensuing battle in which the English destroyed the French and Spanish fleets. This ended Napoleon's plans to invade England and Lord Nelson has remained a hero to all of England to this day.

I also did some touring by catching rides on military trucks or borrowing a jeep and a driver, and saw a lot of the English countryside. I also visited some RAF bases and got a good look at their airplanes. I think their bombers were about twenty years behind our B-17.
One unusual thing happened. One night about ten P.M. an airplane entered our traffic pattern but did not contact the tower nor was he squawking the proper IFF (Identification friend or foe). The English were using our field to practice night landings, and all lights were on. The tower gave him landing instructions but was concerned because several weeks ago an enemy fighter had entered the pattern and shot down three B-17's. Properly, the tower officer should have turned off all landing lights and sounded the alarm but by now the plane was almost at touchdown. The tower officer realized this plane was an Me-109, the top of the line of the Luftwaffe, and turned off all runway lighting. The intruder made a good landing using only the landing lights of the airplane and stopped in the middle of runway 27. The tower officer then sent a "follow me" jeep to lead him to a parking slot.

We had no prisoner of war facilities but the German pilot was questioned. He was a top notch pilot and a real nice guy. It seems that someone had turned him in as having a trace of Jewish blood. He heard of this, considered the options, and knew if he stayed in Germany he and all his family would be killed. With him gone, his Aryan family might survive. He did not hesitate, and within ten minutes he was departing Germany at maximum speed at two hundred foot altitude. As soon as he reached England he had to find an airport with landing lights on before he was picked up on radar or one of our night fighters realized he was there. He was fortunate we did not turn off the lights.

He bunked with us and ate with us for about three weeks. No one knew what to do with him. No one thought that a bomber group would capture any of the enemy. We bought him some clothes and other things he needed, and really enjoyed visiting with him. Yesterday we were bitter enemies. If we had met in the skies he would have tried to kill us, and we would have tried to kill him.

Our next target was Romilly, France, a very important airfield near Paris. Bomb load was twelve 500 pound bombs with ten bombs fused for one-tenth second delay and two bombs fused for a time interval of thirty minutes after estimated bomb release time. This worried me. There were too many happenings that delay a flight, and I didn't have a lot of confidence in how good they were on setting these timers. Once set, there was no way to change the time of bomb explosion. We had some experiences with this.

The one tenth of a second permitted the bomb to be under ground when it exploded to make a large crater. The long delay of thirty minutes harassed the people who were putting out fires, and people who were trying to rescue people trapped in building wreckage. These slow bombs were set for a specific time which could not be changed. Sometimes a B-17 would lose braking ability, run off the taxi strip, and mire up in mud. The main wheels would sink up so deep in the mud that the bomb bay doors did not have room to open. A plane in this situation had to be extracted from the mud as quickly as possible. Col. Lord was good at extricating these stuck B-17s by digging a ramp and using flaps and maximum power.

For the flight to Romilly we expected no fighter escort. We flew 2nd element, high squadron in the 91st Bomb Group which was located ten miles south of Ridgewell. Clore flew beside us. We were awakened at 0130 with departure at 0540. We were not concerned that we had no fighter escort - Intelligence had told us that the Luftwaffe had moved all their fighters to Germany and would not defend France. Things did not work out that way.

When we crossed the English Channel we encountered heavy Flak. This, with the flock of FW 190's, quickly began to take a toll of B-17's. Lord's old plane, 789, the armor plate special, began its death dive, and all ten men of the crew escaped (we counted ten parachutes that opened). A B-17 next to us lost power on one engine and could not keep up with the formation. As the plane slowed and slipped out of the protective formation, the German fighters pounced on the cripple. One Focke Wulf was sitting about fifty yards away pouring cannon shot into the doomed B-17, and it appeared that none of the crew was trying to bail out or were unable to. The pilot should have been able to keep up on three engines at Max or double Max but its a hard decision to have all of the engine
instruments way past red line maximum values. All guns on the doomed B-17 had been silent but someone managed to get the top turret working and blew the nearest Focke Wulf to bits, but the remaining FW’s swarmed on the crippled B-17. It also took the death dive but no parachutes were seen so we presumed that all of the crew were killed. We were making large contrails, and a Focke Wulf got in our contrail about a mile out and flew in it until he was one hundred feet away. He then climbed until he broke out of our contrail. Our tail gunner, Hilbert Braun, had the guns aimed carefully at the Focke Wulf as soon as it appeared but hesitated to shoot. Hilbert told me that the German was just a young kid like himself. But Hilbert shot first and downed the enemy plane. I think the German did not have the firing switches turned on and it took a milli-second to find and turn on the switches. This time Hilbert saw the person he killed, and it really got to him. Hilbert and I talked about this incident last summer. Hilbert said he could see the expression on the German pilots face.

On the bomb run the Flak was heavy and accurate. One FW came at us from beneath. Purdy, the ball turret gunner decided he needed to go to the bathroom, and asked me if he could leave the ball turret. I said "NO!" He said if he didn’t get out immediately he would wet his pants. He stayed, shot down the FW, and wet his pants. He was too tired to change until he went to bed.

Tilson (our bombardier), was confused by all the enemy fighters, and dropped our bombs too early, but the leader was turning toward the alternate target which was the airfield at Evreux. The groups bombed this target and put this airfield out of commission big time.

April 30, 1995

We felt a little more comfortable in our flying. We were more aware of what we could do in difficult situations, although our first rule was "Avoid difficult situations." Probably because of our seniority we were flying more in the center of the formation, and we had said "Goodbye" to the most dangerous spot, namely, the tail end Charlie location which was at the tail of the low squadron. A real helper had been installed - an electronic supercharger control which was great. Without it it was necessary to change the throttle and supercharger controls on each engine with every change in thrust. Flying formation, we probably changed thrust at least four times per minute. The problem was that the supercharger lever on number one engine may be all the way back and the supercharger lever on number four engine would be at max and both engines would have the same thrust. This problem of the superchargers was completely solved with the new electronic control.

We were now flying new airplanes with all of the latest equipment. However, the new airplane, a B17G model, did not fly as good as the B17 E model. Clore also got a new B17 G and it was not as good as our new B17 G. Clore got in trouble over this - he lagged behind the formation and anybody that lags is inviting multiple fighter attacks. Col. Leber, the Commanding Officer and a West Point graduate, told Clore in no uncertain words such flying would not be tolerated. This put down was in front of all the air crews. So we had a big sign made that said , "DON'T MANHANDLE THE CONTROLS! ", and placed the sign on the front windshield of Clore’s airplane. When Clore saw the sign he thought that it was funny. I think it brightened his and everybody’s day. I really think Clore was having a problem with the new super charger control.

About ninety percent of the fighter attacks were from the front and the balance were from the rear. We would see the fighters off to the right or left all lined up trying to get ahead of us. When they were far enough ahead, the fighters would make a one hundred and eighty degree turn and in blocks of five fighters abreast would attack us head on, each having picked a separate B17. The speed of closure was about nine hundred miles per hour so they went by very fast. A gunner had about five seconds to aim and fire and they were gone. Right behind was another group of five and another group of five. In some cases, this continued for an hour or more. It looked like the Germans were trying to
ram us, and I could see bullets from the German cannon shells coming at us. Their guns were good. The guns could throw ninety four pounds of lead at thirteen hundred per second in five seconds. With all these guns firing, some of us got smoked, and some of them got smoked. Always behind us were the smoked trying to get back to home, and some made it. For example, Lt. Frye was badly hit, and bailed out nine of the crew, and all nine of the chutes opened. That was the last I saw of that. But two years later, I realized that the pilot standing next to me at the Operations desk in Houston, Texas, was Lt. Frye. I was thrilled to see him and asked, "What happened?" Frye told me," The engines were badly damaged and I was crossing the channel. I could have made England, the fighters were leaving, but the last one took one more shot at me and my flaps went down. The plane would not fly now. I turned back toward Holland and as soon as I was over land I bailed out. I became a guest of the Dutch for a week, Then I walked to Spain and took a boat back to England."

I was concerned about ramming and talked to David about it. But David thought the Germans would not ram us if the pilot was alive. If we didn't shoot at the pilot, the pilot would damage us with his guns, and if we did shoot at the pilot and hit him hard, he would ram us. Talk about oxymoron! I knew of three planes that were close to me that were rammed.

The first was Eugene from Oregon. I don't remember his last name but he was super nice, and the second was Col. Lord, a great leader, soft as silk on the outside and tough as nails inside. Both of these head-ones resulted in death of all on the planes. The third collision was a B17 from another Group flying on our right one day. I don't remember who it was. The pilot of Me109 that hit the B17 made a side approach to the formation with all cannons blazing at us. All of our guns on that side were firing at him. At one thousand yards he should have broken off the attack but he didn't. This German pilot was crazy or dead and was aiming at us. Time stood still. At the last micro second, the Me 109 passed over our plane and missed us by inches, and with his wings vertical, hit the B17 on our right. There was a lot of destruction at the waist on the B17, and the control cables to the tail were cut. The B17 immediately was out of control but quickly recovered. The pilot had put the plane on auto pilot, and the auto pilot motors were in the tail. The electrical wires were intact, and by using the auto pilot controller, the pilot could direct the aircraft.

We were not in good shape either. We were flying on two engines and transferring all the gas we could find to these two good engines and were not far from the B17 that was rammed. We stayed within five hundred yards of him hoping to help him if we could. We continued across the channel, and soon we sighted an airfield. He also saw the field, and headed straight for it. Both of our radios were battle damaged. We could hear on our radio but our friend could neither hear nor talk and we sure tried to talk to somebody. This was an English field, and they gave both of us exquisite details, but our friend bored straight in to land on the grass. The English finally cleared the field of all traffic, but they didn't like anyone landing on the grass. We could not maneuver because of battle damage so we quickly found another field, and landed there.

I was told later that our ground crew was really upset when we didn't show up. We did send an "On The Ground" message. The entire ground crew spent many sleepless nights getting old "This is It" in shape to fly. However, if there was something wrong with any airplane, it was entered on Form 1 in red and the Pilot in command had to sign the form indicating he was aware of the problem We never flew that airplane without having to sign the Form 1.

Our ground crew was really tops. The crew chief was committed to give us a plane in top condition, and the ground crew did their best. I knew the name of the crew chief, and I would look him up if I ever remembered it. I think he was from Atlanta and his name was Robert E Lee ______?.

David was beginning to get worried about the mid-air collision problem, and as some say, "One midair collision can spoil your whole day." David chose me to learn to fly
and land a B-17 or assist in helping if the need arose. The need would be significant damage to one or both pilots. So I began schooling in flying and landing this B-17. We began with starting the engines, and it takes a lot of priming to start the engines. We skipped departure, and began practice on lining up with the runway and dropping wheels and flaps. The next practice was approach to a landing from 2000 feet. After a few days we began the real thing. Cross the outer marker(a tall church steeple) , and fire a red -red flare. The tower would pick this up and clear the runway for me. Next the tower would have ambulances and the fire truck near the touch-down area. Next, landing gear and flaps down and don't bother to check them. I only get one try. Set RPM at maximum. Boost pumps on, fuel tank on mains. Adjust throttles for 120 MPH, and aim at the numbers at the end of the runway Slowly slow up and cross the fence at 90 MPH. Don't worry about getting or staying on the runway but keep the airplane straight. After crossing the fence, ease up on the nose and power quickly off. Hold the nose up and let the airplane land itself. I could do it. I would learn to be a pilot.

May 31, 1995

We are stronger now with additional B-17s and crews to fly the airplanes. Before, we had to team up with the 91st Bomb Group to have eighteen flyable airplanes. Now, in addition to the eighteen B17s, we had two backup B-17s in case we had a problem. All of our airplanes were in excellent or new condition, but the cannon fire from the enemy disabled many a B-17, and repairs often required weeks.

Cecil Clore (Cecil was short and required three seat cushions to see out ) and his crew and our crew were tied at twenty missions, with each crew needing five missions to complete their tour. In addition to getting to go home, the crew to finish first would go on a bond selling tour to cover the whole United States. This sounded great, and it also meant we would not go to the Japanese area. Dave and Cecil had fiancees waiting for them, and I knew how badly David wanted to see and marry Mary. In effect, everyone just wanted to complete our tours and go home, but we were superstitious about pushing too much.

We were still careful. For instance, after having significant work on our plane, we would fly that airplane on a " training flight." At this time our bird was having an engine replaced and we would be flying one of the spare B-17s. We would definitely flight test this airplane. There had been a lot of fixes, and I can assure you our crew chief would fix all he could fix, and give us a list of all he could not fix. We were ready for the test flight. We climbed into the plane through the front emergency door, and took our places. Wonder of wonders, this was a brand new airplane.

We started the check list - fasten seat belt, adjust seat , brakes on, master switch on, etc. We took our time on this and were completely sure all was satisfactory. Now we can start which we did by sticking our head out the window and yelling " clear the props " and receiving a reply from the crew chief " props all clear ." All engines started easily, magnetos could not been any better, but number three engine would not do 2500 RPM at 46 inches of boost. This meant number three would not develop one hundred percent power, and we needed one hundred percent power for takeoff. All the other engines were good.

The crew chief was in the co-pilots seat in a second , started number 3 engine, and advanced the throttle to maximum power, but the engine only went to 2300 RPM.. The crew chief shut it down and said, " there is nothing wrong with this engine. It is OK. We said it was not OK, and called for the Engineering Officer. The Engineering Officer arrived in a very short time, and immediately started number three. He looked at the gauges for a short time with the engine at maximum power and insisted all engines were OK. David argued with him but the Engineering Officer was adamant and so were we. While they were talking, I went outside the plane and stood near number three engine when a noisy bucket of parts came out of the exhaust pipe. These included valves ,valve springs, keepers, and certain other metallic parts, and the engine stopped. I kept one of beat up valves for a long time, but I no longer have it. I also kept a piece of flak which hit my steel
When something like this happens, you call on Col. Lord because he is smart, resourceful, and pleasant to work with. He quickly realized this plane would not fly on today's mission, and we only had seventeen flyable B-17's. Col. Lord leaned back in his chair and said, "I will flip a coin to decide who gets to choose the one remaining airplane."

He pulled a handful of change from his pocket, looked at the coins in his hand, selected a Victoria Crown from the handful of change, and studied the coin very carefully. He handed it to David who looked at the coin for a long time. Cecil also studied the coin for a long time. It was a simple coin with a profile of Queen Victoria on one side and some building on the other side, and was worth about fifty cents. Cecil handed the coin to Col. Lord who told Cecil, "Call it in the air." Lord flipped the coin in the air. Clore said, "Heads." Lord caught the coin in the air, looked at the coin and said "It's heads" and showed us the coin. Clore said, "I choose to go." We now have the day off.

I decided to go to London and get my usual haircut and shave. I always did this when in London because the barber would wash my face and hair real good. A B-17 swallows its own gunsmoke which coats your face and all your exposed skin and you always had a grungy feeling. I spent some time at Trafalgar Square and in Harrods, and met David at the Red Cross at 6 PM for the obligatory call to see whether we needed to return tonight or return for tomorrow mission. David called, and hung up the phone in a tone of great emotion. I asked, "What is it?" David replied, "Clore crashed on takeoff and all were killed. We need to get back." We returned to Ridgewell, arriving about midnight. The next morning we found out what happened.

Clore was not flying his usual plane but this plane was almost new. Clore, I am sure, went through the check list thoroughly, took the proper place in the take off line, and departed on runway 27, our longest runway. At this night take off, the right wing and number 3 engine were immediately involved in a very hot fire. Clore shut off all fuel to that engine and feathered the propeller. He dropped all bombs non-exploding, called the tower and said he was having a problem and was returning. However, he could not gain altitude, and crashed into a very large oak tree. The fuel tanks exploded when he hit the tree which turned the B-17 into total flames. All aboard were killed.

The next day we buried Cecil Clore and his crew at the Cambridge American cemetery. I looked at the ten holes in the ground- ten men who had lived and flown with us for nine months. It was a sad scene when they lowered the ten caskets and the bugler blew "Taps." It was a cold and foggy day, and I shall never forget it. If the coin had landed "tails" they would have been burying me.

The cause of this disaster was slow to be developed but it seems that the outboard fuel tank had fuel leakage caused by a loose clamp on an inter-tank connection of the wing tip fuel tanks and the main gas tanks. This leakage finally filled the right wing with many gallons of AVGas. When the tail wheel was on the ground there was no leakage from the wing but when the tail lifted on takeoff, the fuel drained on to a white hot turbo supercharger and flamed. No pilot could have prevented this.

Clore's fiancee did not believe he was dead for many years. However, I recently received a letter from Chaplain James Good Brown. I quote: "One of my daughters, Leata, went to England soon after the war ended. She visited the home of Mr. George Goodchild, on whose land Clore crashed. Mr. Goodchild took Leata to the little woodland where the crash occurred. She stooped down, picked some violets, and laid them where the plane crashed.

June 30, 1995

We are at briefing, the briefing room map is uncovered, and we see that we are going to Gelsenkirchen. Gelsenkirchen is in the Ruhr valley and it is going to be a tough flight. First, it is going to be a long flight which means no fighter escort, and because of the
length of the mission we will be low on fuel. The target is located where the Ruhr and Rhine Rivers intersect. This is a highly concentrated industrial area. The Me 109's and the German jet fighter, the Me 262, are built here. We have to stop the building of these extremely dangerous fighter planes. This a very sensitive area and is guarded by 2000 large cannon and eleven hundred top of the line fighter planes. We have talked about this area for some time, but this is our first mission to this area. If the intelligence people only knew how close the Germans were to having an operational jet they would have more aircraft assigned to this mission to more completely destroy these plants. Incidentally, there are twelve Me 262's nearing completion at this plant. We will destroy eleven of the twelve and the twelfth will destroy two B 17's and a P-51, and will be untouched in the encounter.

When we were shown where we were going, a common sigh went up. But when they told us we would have fighter escort all the way there and back we felt a little better for a while, however, we had been promised fighters before and never saw the fighters.

Our crew was flying Wing spare. The 381st was lead, and we would fill any slots anywhere but first we keep house on the First Air Wing. The 351st was low, and the 91st was high. There was one aircraft in the 91st which had a supercharger failure, couldn't keep up, and aborted the mission. If he had been over Germany, he would have stayed in formation by going to maximum power on the other three engines. As it was, he headed for home at maximum speed and we moved quickly into his place. There was no using of the radio- we had radio silence. But the airplane without power and wanting to abort would drop his wheels about a foot and immediately pull the wheels back up. The other airplanes would slowly and carefully clear a way out. There were 162 airplanes in this Group flying a very tight formation, and those on the inside of the formation that had to leave often had a difficult time getting clear. I think the best way is to keep your altitude, reduce power, and slide out of the back of the formation.

There was very little Flak until we got to the target and the weather was fairly clear in the target area. I think, despite the fact that we were to use Pathfinder, we bombed with a bombsight. We made a fairly long bombing run with lots of evasive action. About two minutes before "bombs away" the flack began to explode all through the formation. I looked out the left window and just watched it burst. The flak was dense, but only one piece hit our plane. With the flak and attacks of the German fighters our group really took a beating.

Col. Nazzaro, West Pointer, tough guy. who was leading the 381st Bomb Group had two engines knocked out which immediately slowed his speed to about 130 mph, and the whole Group broke up. He wanted to keep the formation intact and creep to England, but he lost it when he slowed. Standard procedure in this situation is to save the formation, and get out of the way unless you can keep up. I flew with Nazzaro several times and noted that he was absolutely fearless. If the Luftwaffe had been here at this particular time, we would have at least twenty aircraft lost.

We took some damage on this trip as the Luftwaffe harassed us to the English Channel where the fighter escort drove off the Luftwaffe. This harassment smoked Butler and his crew bailed out. Butler and his co-pilot flew his airplane home. Hopp went down in a high speed dive and never recovered. Hopp was a nice guy and he brought his motorcycle with him by hoisting the bike into an empty bomb bay. He stayed in trouble because he would not tell where he got the gasoline to drive . Of course , all knew he was siphoning the gas out of his airplane' s auxiliary tank.

The flak was the worst I had ever seen. We were at 29,000 feet and it was thick and accurate. We made it back to Ridgewell ok. I knew one thing: the German pilots always picked on the cripples. Don't be a cripple- stay in tight formation.

Outside of this mission, I had an interesting trip with Col. Nazzaro. After each mission we would meet with Intelligence to divulge any thing new. For instance, the Germans had developed new rockets to fire at us and they were getting good at laying out of machine
gun range and shooting these rockets at us. The Col. called me out of this debrief and asked me to fly with him to London to pick up two wet pilots. Within England a co-pilot was not required but a navigator was required. These two pilots had bailed out over the English Channel and had been picked up by Air-Sea Rescue. They were delighted to see us. It would have been terrible if they had been forced to spend the night in London visiting the pretty girls.

We flew back to Ridgeville in short order, and to and behold a staff car was waiting to take us to supper. There was a small room just off the main dining room that I did not know about, and there was a server. He asked the Col, "How do you want your steak cooked, Sir." The server turned to me, "How do you want your steak cooked, Sir?" This was the first real steak I had ever had, and I did not know how to answer. All I could think of was country fried. I was saved by the server who suggested, "You might like it cooked as the Col's is cooked." That server saved my life and the next day I looked him up and thanked him.

P.S. In my last letter, I did not clearly explain about Cecils Clore's wife who could not accept the fact that Cecil was dead. After the war, she visited the Goodchild family. She wanted to see the spot where her husband had died. She had to be sure. Mr. George Goodchild took her to the little woodland glen where Clore crashed. The area was still burned with marks of the crash. They stood for a long time. She seemed to gain composure, or perhaps I should say that she accepted the fact that he had died. The wooded spot was still burned.

P.S. The Pathfinder was a wooden airplane, twin, and fast that would mark a target with flares just before the bombers arrived.

July 31, 1995

We had completed twenty - four missions as an intact crew, and had gone through briefing for our twenty- fifth mission. All our friends came by and wished us well, and made jokes such as "I can take your place." We were jubilant, and the well wishers were happy for us. First, for about a month, we would be at home or getting medical treatment such as much needed tooth fillings. Then we would go on a bond selling tour throughout the United States which could last for as long as six months. After that our crew would move intact to the Japanese Theater as an experienced B-17 crew.

While we were waiting for transportation to our airplane, Eddie Knauth came over to me and asked, "How do I look?" I told him I thought he looked OK but he said "I think I'll check with the Flight Surgeon." I followed Eddie as he walked over to the Flight Surgeon, and told him,"I feel punk." The Flight Surgeon looked just a moment and said,"Didn't you look at yourself when you shaved this morning?" When Eddie admitted he had not shaved the Flight Surgeon said,"You have the worst case of yellow jaundice I have ever seen. You are grounded. Report immediately to the hospital." We were stunned. We did all we could to get Eddie released and even told the Doctor, "Eddie looks like this all the time." Another crewman offered,"I have seen him looking a lot worse. I think Eddie is part Chinese" All of this did no good, and soon we had a replacement Radio Operator.

This immediately changed what our future plans would be. Since we would not be flying our twenty - five missions as an intact crew we would have a short leave in the United States and thence go to Japan. There was nothing we could do. We were committed to fly that day.

We flew our twenty fifth mission on February 4, 1944. It was an easy mission and there was little battle damage. On our return to Ridgewell David buzzed the airfield big time and not in a safe manner. We were lower than the tower which was deserted quickly but as we flew by the Tower Control Officer fired a red flare at us which lodged in our number two engine nacelle. As a result of this wild ride, all buzzing was banned at this base. After we landed and parked this old bird, many of our friends came out to the pad. They were as proud as we were of our accomplishment.
The crew was given a special dinner that night, and Colonal Leber had some nice things
to say about us. We were presented some awards including the Distinguished Unit
Citation and a letter from Winston Churchill. I also received two more Oak Leaf Clusters.

Our crew was as follows:

David D Hutchens Pilot and Aircraft Commander
Tex Stephens Co Pilot
Bill Tilson Bombadier
Bill Goodman Navigator
Lester Bucey Flight Engineer and Top Turret
Eddie Knauth Radio and Top gun
Gene Purdy Ball Turret
Mike Jasinski Right gun
Barnett Left gun
Hilbert Braun Tail Gunner

We were a dedicated crew, and liked and respected each other. Hutchens was a great
pilot. I thank the Lord for helping us survive twenty five combat missions over Germany at
this crucial time in the war.

I have enjoyed writing these letters and hope you have enjoyed reading them.

Bill Goodman

Addendum

I had been concerned about the progress of the atomic bomb. The following is of interest.

In October, 1940, a meeting took place in President Roosevelt's office that was to have
great consequence for mankind. The caller was Alexander Sachs, Wall Street economist,
a Director of the Lehman Corporation, and an amateur scientist. He wished to discuss
nuclear fission.

The President had received some preliminary briefing from one of Elizabeth Dilling's
alleged Communists, Albert Einstein, in a letter which said, "This new phenomenon would
lead to the construction of bombs. A single bomb of this type might destroy some of
the surrounding territory.

Dr. Sachs came armed with another letter from Einstein and a memorandum from Dr. Leo
Szilard. The President was bored and not particularly interested but Dr. Sachs refused to
be fobbed off, and began to read aloud the letter from Einstein. Once the president's
attention had been caught, the Doctor read on through to the end.

"Alex," said Roosevelt then, "what you are after is to see that the Nazis don't blow us up."

"Precisely."

Roosevelt set the building of atomic bombs in motion that very night. He also insisted that
Dr Sachs come back to see him at the White House late that very night.

Going Home

The morning after the celebration dinner we were still stunned that we had completed
twenty five bombing missions against the best of the Luftwaffe airplanes and pilots and
the best Flak guns concentrations the Germans could put together. The Nazi 88 gun was
tough and many fliers felt that if they ever met the Kraut that invented it, they would kill
him on the spot. We also were apprehensive about our future assignment. We discussed
the future, and came to the conclusion that we would have fifteen days home leave,
fifteen days in a hospital facility, and then would begin training as an experienced B-17
crew to go to the Japanese theater in a combat assignment. This was not nearly as good as the expected six month War Bond tour in the United States.

David was offered an immediate promotion to Major if he would stay in England and fly lead. If he had taken this offer he would be flying lead alternately with Colonel Lord who was later flying lead when he took a head-on and was killed with all of his crew. Lead was the number one target by the Luftwaffe pilots. If the lead is knocked out, the formation goes askew and is easy pickings for about two minutes. David declined the offer. He told me he thought it was too risky and I am glad he declined. If he had accepted I would have tried to stay with him as his navigator.

Incidentally, (I had forgotten about this) a Lt. Plant was our first co-pilot back in Walla-Walla, Washington. Although he was a two cushion B-17 pilot he was an excellent pilot, a really nice guy, and flew excellent formation. He never seemed to tire, and his flying was ultra smooth. He had an absolutely charming wife who often joined us for supper back at Walla-Walla. I was still in the airsick phase and when she was there it was like a breath of fresh air. Later, Lt. Plant was separated from our crew and was made Aircraft Commander of another B-17 and another crew. We then got a new co-pilot, Lt. Tex Stephens, who could not fly good formation which meant David had to do almost all the formation flying. Lt. Plant later followed us to England and was killed in a head-on while flying on a mission over Paris.

Colonel Leber talked to me and told me he was recommending me for pilot training. He also offered an assignment to West Point, but I declined this- I didn't want to spend another four years without a wife. He said he was sure I would be a good pilot. Col. Leber was a West Pointer and was always nice to me. When we were both bunged up and were side by side in hospital beds, all I wanted to eat was an orange, and he got me one.

We received our travel orders, and our crew was separated - no two were on the same ship. I took a train to London and thence to Liverpool. The ship assignment for me had been a French luxury liner before the war, and for me it was like a cruise ship of today. There were only about 120 flyers aboard the ship which normally carried about 2000 soldiers. For instance, there was one waiter per person in the dining room. If you wanted another steak there was no problem. My room was not in the hull but was on the top deck and was kept immaculate by the attendant.

After moving slowly with the aid of tugboats out of busy crowded Liverpool Harbor, we sailed into the Irish Sea and formed up with a battleship on our left and an aircraft carrier on our right. By direction of the U.S. Commander in the battleship the convoy slowly formed into three long lines of empty freighters and petroleum tankers riding high in the water showing their Plimsol mark. The convoy gradually picked up speed and we were joined by a battle cruiser on each of the four corners of the convoy. Forty seven destroyers were pinged in the distance rocking about forty five degrees in each direction. Our ship was gyro stabilized and rocked very little but pitched a lot. We saw no enemy action for the entire trip but I knew there was a guttural voice somewhere in the distance saying, "Catch you later when you are full."

It took us ten days to cross the North Atlantic mainly because of the storms. The waves were enormous and we were slowed to steerage way for days at a time. The battleship was little affected by the waves even though the waves would course over the bow and rise to the bridge. The waves would cover the bow of the carrier and the propeller, still turning, would come completely out of the water. The wave on the bow would speed down the deck and run off the stern. Our ship's behavior was similar- bury the bow, the propeller would come out of the water and sound, "chop chop chop chop " then the stern would bury. As the successive storms abated, we began to pick up speed, and one night the feel of the ship changed. The waves had diminished, and the engines were at maximum power. On deck, I realized we had left the convoy, and I could see shore lights. I watched the lights for a long time, then went to bed. The next morning when I awoke all was still. I looked out the porthole and there was the Statue of Liberty not fifty feet away looking at me straight in the eye.
I was home!

But not really home: I still had a long way to go. I had breakfast, tipped the waiter (the first and only time while in the service) for he had treated me well. I set my suitcase and duffel bag in the hall and took a personnel boat up the Hudson River to Fort Dix, New Jersey. We motored past New York City, and the City to me was breathtaking with the towering buildings and the smaller buildings and factories that lined the shore.

When we arrived at Fort Dix, we signed some papers, received our orders and train tickets (coach) home. My orders were for a fifteen day delay in route then to report to the medical facility at Miami Beach. Because of train scheduling, I could not leave until the next day, so I visited a friend who lived in downtown Manhattan. We had a good visit and a good dinner. I also visited a grocery store. After England, the food displayed was enormous and there were no lines or queues as they were called in England. A store in England would have one hundredth as much as this and the line would be a half a block long. I asked a clerk, "Are there other stores like this one?" She looked at me, puzzled at the question. "I mean all this food" She replied "Of course. This is really a very small store."

My orders called for me to report for pilot training in thirty days to Pryor Field in Decatur, Alabama. I think Colonel Leber had a lot of pull and had written some letters to accomplish this assignment.

With a train ticket in my wallet, an olive drab suitcase in one hand and a duffel bag in the other hand, I was in the enormous Grand Central Station in downtown New York City early the next morning. The Station was crowded with soldiers and civilians, and it appeared that there was no room for me to even get close to a train much less get on one. As I was standing back looking for some way to get on that train, an MP sergeant walking past me said, "Just landed from England?" I replied, "Yes, and I believe I could get back to England easier than I could get on that train." He said, "Follow me." And I did. As we walked toward a side entrance, the Sergeant added. "I can't get you a seat, but I can get you a standing place which won't be too bad. Maybe someone will get off later." I replied "Thanks," and in a minute I was standing in first class. The train filled rapidly, and with an "All aboard!" from the Conductor, the train pulled out of the station and we were bound for Alabama.

The seats were saved for civilians who had made reservations earlier, and I had no problem with this. However, I could not look out the window because of my height, but I improved my comfort by going to the Dining Car. At this time, the railroads probably served the best meals in the United States, and I proceeded to eat a very leisurely breakfast. The meals provided some sitting, but it was mostly standing.

I went home, and Mother fried chicken for breakfast the first morning. I also visited my aunts and uncles and friends.

Mrs. Wall, the local matchmaker, had selected my future wife, but I excused myself and took the next train to Auburn. With a little help from Alabama Polytechnic Institute, I found out that Margaret Buck was in a Home Economics class and would be there until Four PM. I immediately hiked over to the Home Ec building and went in. In the front row, wearing an apron, and holding a pan of hot biscuits was Margaret. She offered me a hot biscuit, and I discovered it was the best biscuit I had ever eaten. She hugged me and told me she loved me, and that was the happiest moment of my life.

I stayed in Auburn several days visiting Margaret between classes and eating supper at an old hotel located one block east of Toomers Corner. Harriet McGuire, Margaret's room-mate, ate supper with us one night and I was glad she did- I had run out of things to say. Margaret and Harriet seemed to really enjoy each others company but often I did not know what they were talking about. I was no better. All I could talk about was flying. Margaret was so absolutely charming. I wanted to ask her to marry me but
while I was making a lot of money now, what would I do after the war was over? I was in no position to get married.

The next morning I left Auburn headed for Miami Beach where I was housed in a deluxe beach front hotel. For five days I had physical exams including a flight physical. In the afternoon I had dental work. When I left Labrador headed for England I had no cavities. When I arrived at Miami Beach I had thirteen cavities. The next ten days I spent on the Beach then I took a train for Pryor Field at Decatur, Alabama.

After arriving at Pryor Field, I reported to the Commanding Officer, a Second Lieutenant who had never had any combat duty and never wanted any. I was a First Lieutenant which was an unusual arrangement. He, I, and the cadets were the only military personnel on the Base. Even the cook was a lady civilian. I assured him that all I wanted was to learn to fly an airplane and he seemed glad to hear that. However, he made a few telephone calls, and the protocol would be as follows:

I would find my own quarters off the base but eat my meals with the cadets on the Base.
I would give no orders, but no one would give me any orders.
In all other aspects, I would be treated as any other cadet.
I found a bedroom for rent in downtown Decatur in the large old two story home of Mr. and Mrs. Jackson. They were in their late sixties and they treated as if I were one of their children. As I grew to know them, we would sit on the porch in the evenings, sip ice water, and enjoy each other's company. I had a large bedroom on the second floor with a bathroom down the hall which I shared with a Pryor Field instructor. We talked a lot, and he seemed to enjoy sharing his knowledge with me. I also rode with him back and forth to work.

Pryor Field was the beginning of Primary pilot training. The airplane we would learn to fly was the Stearman PT 17. It was a big two winged airplane with two open cockpits and a 550 horsepower radial engine, and was a very safe airplane to fly. Most cadets walked away from crashes in this plane, but the second day I was there a senior cadet tried to give his girl friend a show and tried a slow roll at two hundred feet. He lost it, dived into the ground and was killed.

In the PT 17, the instructor sat in the front seat and the cadet sat in the back seat. Communication was one-way; instructor to cadet using a gosport. A gosport is simply a tube with a funnel on the instructor's end and headphones on the cadet's end. If the cadet did something wrong, the instructor would stick the funnel out into the slipstream which would almost blow your head off and then he would chew you out and you could not answer.

Starting the engine was done by two men turning a hand crank on the left side of the engine. The two cadets would crank faster and faster until the inertia starter was making a high-pitched scream. Then the cadet in front would remove the crank and quickly get out of the way of the propeller. The other cadet would check that he was out of the way and say loudly "Switch on." The cadet in the cockpit would yell, "Switch on," the cadet on the wing would pull the handle to engage the starter, and get off the wing very quickly before he was blown off. The engine would then roar to life.

The training began with learning to taxi, takeoff, and land. On the ground, the engine blocked the view so we always taxied in a zig zag line. Take off was simple: line up with the runway, advance the throttle to max, keep a little back pressure on the stick, and the plane would take off by itself. After takeoff, climb to 300 feet straight ahead. Then, still climbing with reduced power, do two separate 90 degree turns, levelling off at 500 feet. Now you would be flying downwind parallel to the runway. When you reached the end of the runway, close the throttle and make a 180 degree turn to the left. At this point, your wings would be level, the nose beginning to come up for a three point landing and quickly you were rolling. Then the instructor would push the throttle forward as and indicator not to stop. Then he would say," touch and go" and you would take off and...
repeat the process. The third day I had completed six hours of flight instruction and after one takeoff and landing the instructor did not push the throttle. I let the plane roll to a stop and waited. The instructor slowly climbed out and said, "Take her around, Willie." I did, and walked away from the landing. Any landing you can walk away from is a good landing. From this time on, I always flew the airplane. No instructor ever took the controls away from me.

Next was learning to fly the airplane. The initial training was in recovery from stalls. A stall is when the airplane stops flying and begins to fall toward the ground. Stalls are still a problem today but the emphasis is avoiding stalls by techniques that alarm the pilot that the airplane is approaching a stall. And today, warning devices include lights, horns, a piccolo sound, a girl's shrill scream blasting in your ears, and a stick shaker. All of these require fast and dramatic action. A jet will lose 10000 feet in a stall.

In training we went beyond approaches to stalls and did full stalls including power on and power off, straight ahead, turns to the right and turns to the left. These practices continued but added spin to the left and spins to the right including one, two and three turns. We then added precision spins and forced landings. Immediately after spin recovery, the instructor would hold the throttle back and say, "Forced landing." Looking around and finding a suitable landing spot—usually a cotton field—I would almost land, but the instructor would push the throttle forward and say, "Take her home, Willie." Once he told me I was too nervous and to fly back to the field inverted. It didn't help my nervousness one bit. I had negative feelings about spins but my friend at the Jackson's told me, "A spin is the easiest maneuver. It's all automatic. Neutralize the rudders and pop the stick forward." And it was. Being able to handle a spin easily gave me a lot of confidence.

Somehow, in the midst of this, Margaret and I decided to get married. She talked with her parents and set a date of July 15, 1944, in Atlanta, Georgia, and made a lot of plans for that date. I was scheduled to fly that day and could not avoid it. The invitations were recalled, but on Friday of the next week I visited the Flight Surgeon. I told him, "Doc, I'm sick, I can't fly tomorrow." He looked me over and said, "Son, there's nothing wrong with you. What's going on?" I replied, "Doc, I want to get married tomorrow." He said, "That's no problem. Why didn't you just say so?" and wrote me out an excuse. So Saturday, July 22, 1944, Margaret and I were married at her grandparents house at 733 north 43rd Street in Birmingham. The following Monday we returned to Decatur and happily started our long and tumultuous life together in a two room apartment in downtown Decatur.

I graduated from Primary with no demerits, nor did I have to take a check ride which was the usual practice, and was transferred to Courtland Air Force Base at Courtland, Alabama, for basic training in a more complex airplane—the BT13. The BT-13 was all metal, had an electric starter, a high pitch and low pitch propeller and flaps. It also sported a plexiglass canopy and a radio. Take off was with the propeller in low pitch, and the ready room displayed a slogan:

"A simple slow leak was a fellow named Mitch. He tried to take off with his prop in high pitch, He ran out of runway before his wheels left the ground. A little smoked bridgework was all that they found."

The training in the BT13 was similar to the training in Primary, but the BT13 was twice as fast as the PT17. Spins were wicked, and more than three turns was almost a prelude to a bailout. Two spins required a difficult and heart-wrenching recovery. My instructor and another cadet were practicing spins, got in one and could not recover. With the ground rapidly approaching, the instructor told the cadet to bail out. The instructor bailed out and the plane came out of the spin but the cadet, for some reason did not bail out, and flew back to the field with no problem. The instructor gently floated down and landed in a cotton field, and the farmer brought him back in his fertilizer truck.
We were doing more precise flying- hitting altitudes within ten feet, turns were three degrees per second. and on landing, turn off the runway at the first turn off. We also began night flying. One night sixteen of us made a night cross country flight and all were caught in a bad storm cloud. I was the only one that managed to land at the Air Base, and all were frantic that no one else showed that night. The others landed in fields, on roads, in trees. There was significant damage to planes to planes and some injuries. The only reason I managed to get back was that as I was flying on a heading of 90 degrees at 3000 feet when I realized I could not see any ground lights. I was in a deep dark cloud. Next I encountered significant turbulence and the instruments were needle, ball, and airspeed with no artificial horizon or gyro compass. I immediately did a 180 degree turn and flew out of the cloud. I then called the tower and told them the situation and they put me in a holding pattern. In about ten minutes they called and told me to return to the field. I think in flying you need to do the safe procedure rather than following instructions.

They were still washing out students and at this stage forty percent of the original class had gone to the Infantry. I managed to get through Basic with no problems. I think most of the failures were due to fear of the instructor and or fear of the airplane.

I moved on to Shaw Field at Sumpter, South Carolina for the advanced class. I started out in the AT6, a very fine airplane. In addition to all the features that the BT13 had the AT6 had retractable landing gear with an associate horn. If you made an approach to landing with the wheels up, the horn would blow loudly. One day (I saw this from right behind him) a cadet forgot to lower his wheels and he was on final approach (wheels come down on the downwind leg). The Officer in the tower told him," Pull up! Pull up! your wheels are up! Go around!" The cadet never changed course and pancaked in wheels up and went sliding down the runway with parts coming off. I pulled my wheels up and went around.

At the inquiry, the tower officer asked the cadet, " I told you your wheels were up and to go around. Why didn't you?" The cadet replied," I couldn't" hear you That damn horn was making too much noise." Don't laugh. Just a few years ago an airline L-1011, a sweet airplane, with three pilots in the cockpit couldn't decide whether the wheels were up or down and managed, with altitude hold, to crash the airliner in the swamps at the Miami Airport. All were killed. All the pilot had to do was pull back one throttle. If the horn didn't blow, the wheels were down and locked.

I did a lot of night flying. Night flying is much more difficult than day flying- you can't see the horizon or the ground, so you naturally use the instruments almost continually, and you are constantly concerned about vertigo. It only happened once to me. I was flying night formation when I saw the moon below me. This meant I was upside down. I broke out of the formation and got straight. One night I was in a holding pattern at 4000 feet on the north leg and there were eleven other planes practicing descents and landings from a holding position. When the tower cleared you to land, the procedure was to reduce power, drop the wheels and partial flaps, descend at 500 feet per minute to the pattern. This was slow, and the tower officer wanted to go home, and got on me twice for being so slow. On my third and last try, I was thinking of Margaret sitting in the Officers Club and eating a hot fudge sundae. When I received the last call, I put the nose down and pointed at the end of the runway. When the airspeed hit 300 MPH I closed the throttle, dropped the wheels and full flaps. and made a nice landing.

I apparently had passed the initial phase of advanced flying because I was assigned to multi-engine training as opposed to single engine training. I was glad - I did not want to be a fighter pilot. Fighter cockpits were too small and crowded for me. The training plane was the AT10, a spin off of the Lockheed Electra. The cockpit, instruments, and procedures were more complex than the AT6. For instance, the AT10 had a fuel crossfeed which was open on take off but closed in flight. The checklist was read by the co-pilot and the pilot replied to every item as opposed to the simple GUMP (gas, undercarriage, mixture, prop of the AT6). Visibility forward was excellent, and it was simple to taxi straight ahead as opposed to the zig-zag taxi of the single engine.
Initial training was basically day and night takeoffs and landings on fully lighted runways and dimly lighted grass fields. The grass field lights was a flare pot at each end of the field and the landing lights on the plane. The best way to land was to be very close to the ground at the first flare pot, close the throttles, and use the light from the backfiring engine to see the ground. Ground loops were common. There were always about six planes taking off and landing at the same so there was a lot of radio talk, and the temporary wooden tower kept up with the positions of the planes. One night the tower Officer said "Air Force 270, where are you?" The reply, "In a tree." Tower "270, Cut out that ----! where are you?" The reply " I really am in a tree." And he was. He had gotten too low on final approach. That ended the flying for the night.

Next we trained in single engine procedures. Because the AT10 did not have the power to maintain a given flight altitude or critical single flight speed, all single engine procedures were done with the "bad" engine at idle power so we could increase power quickly if we got into trouble. However, I quickly learned if you could make the pattern you could safely land. I think I flew over all of South Carolina with one engine at idle. The big problem was to feather the bad engine, never feather the good engine. A cadet by the name of Tyrone Philnik was learning single engine procedures. When the instructor feathered the right engine, Tyrone quickly feathered the left engine. The instructor looked Tyrone straight in the eye for a minute and said, " Quiet, isn't it?"

The next training was navigation and cross country flying. This included getting weather reports and preparing a flight plan. I quickly got into trouble on this one. The flight was from Shaw Field to Charleston and back over the swamps of South Carolina. All was fine for the first thirty minutes when BAM - it sounded like an explosion- the plane yawed to the right and a bad vibration started. I had a strong feeling a cylinder had been blown off the right engine. If so, there was a strong possibility of fire from a broken gasoline line. I immediately did a single engine procedure, feathered the right engine, turned off the gas to that engine, and went to maximum except take off on the left engine. The vibration stopped and I headed back to Shaw Field- about an hour away. All was going well with no vibration except I was loosing about fifty feet every five minutes. At this rate, I could not make it back to Shaw. This was the nearest airfield, and there was nothing but trees and swamp below. The trees were getting closer and closer. I had to do something or crash in the trees. Maybe I could get some power out of the right engine. So I restarted the right engine at idle. I had stopped the altitude loss. I increased the power and the vibration started again but I could climb. I reduced power to a respectable vibration, flew back to Shaw, landed, and parked the airplane. When I got out, I saw the problem was not in the engine but the right bottom surface had blown off. The turbulence was making the vibration. The mechanics and several instructors crowded around to look at the airplane.

I had passed again, and was transferred to Moody Field at Valdosta, Georgia for Advanced Transition. The plane to fly was the B25, the best twin ever built. It had twin Wright 2800 cubic inch supercharged engines which was tremendous power. It had power assisted controls which made it very light on the controls and a joy to fly. It landed beautifully because of the control stall wing design. I think it would take off and land in 600 feet. I practiced carrier take offs and landings and I think that was what we used. On a carrier takeoff the procedure was brakes on, full flaps, full power and release the brakes. When the air speed reached 75 MPH, stick full back and it would be airborne and climbing as the wheels retracted. On the landing approach, cross the fence at 75 MPH and 95 % power. At the end of the runway, cut the power and you are on the ground and rolling. On a normal landing you cross the fence at 120 MPH and touched down at 90MPH. It taxied about 40 MPH with engines idling.

Training was take offs and landings night and day, approaches to stalls, much single engine flight, day and night cross country, day and night formation flying, low visibility take offs and landings and radio navigation. On a low visibility departure we wore yellow goggles and used a green temporary windshield. This permitted you to read the instruments but not see out. The procedure was to place the nosewheel on the center line, go to full power and release the brakes, keeping straight with the aid of the gyro
compass. At 100MPH lift the nose to 15 degrees above the horizon. When there was a positive rise of the altimeter start the wheels up.

The three runways were doubled so we had side by side takeoffs and landings. One cold and misty day I was walking to my airplane with my chute slung over my shoulder and watching a B25 cross the hot runway. Suddenly another B25 doing about 120MPH materialized out of the mist and hit the crossing plane in the middle. There was a tremendous crash, both tanks exploded and the 3400 gallons of gas made a huge fireball. I stopped a jeep and asked the driver to take me to the crash. I quickly realized I could do nothing. Even a wheel away from the crash was burning.

The next day we assembled and were told "Do not cross the hot runway without tower permission!" We all knew the six cadets who were killed and the crash and assembly made a big impression. I think we all resolved to follow this rule. About a week later I was flying copilot for a cadet I didn't know and the protocol was that the copilot did not interfere with the pilot. The cadet was taxiing to cross the hot runway and called the tower for permission. The tower was busy and did not answer, and there was a B25 landing on this runway. There was no way he could miss us. I reached over, grabbed the throttles and pushed them to maximum but the engines did not respond. I had pushed too fast so I had to go back to idle and push the throttles up slowly and the engines responded beautifully. The incoming B25 missed us by about one second. I pulled the throttles back and slowly taxied to the ramp where the tower officer was waiting. I was still shaking, but I told the tower officer what had happened. The cadet argued that he was following the rules. He apparently was the type that would march into a whirling propeller. I heard nothing further from this but the cadet was off the field in an hour.

A Lt. Vernon was my instructor and was the only instructor that ever invited me to his home for dinner. He was super nice to me. To give you an example, our squadron (all cadets and instructors) were standing attention in the ready room getting instructions from Captain Herdrich, the squadron commander. The minute he left I went to the latrine and vomited for about thirty minutes and they took me to the hospital in an ambulance. I ended up in a bed in the base hospital and after examination the Flight Surgeon decided I had appendicitis and they would operate the next morning. I had tenderness at Mc Burney's Point and everywhere else. However, about midnight, a young doctor came in and asked some questions such as, "Are you married? Is your wife here? Is your wife pregnant? Is she nauseated?" All the answers were yes, and he told me that I almost certainly had "Sympathetic Sickness" but he wanted me to stay in the hospital one more day and see how I was then. The next morning I was weakened hungry, but all right. Lt. Vernon came by to see me and told me I had missed eight hours of night formation and eight hours of night cross country. If I could fly tonight and tomorrow night he would fly with me and I would graduate with my class. Of course I said yes and he sat down with me and we planned the two flights. The first night was cross country and I flew the light line to Miami and landed. I parked the airplane, and we went inside and had a cup of coffee in the pilots lounge. The next leg was to Nashville, Tennessee thence back to Valdosta. I took a shower and flew my day scheduled flight. It was easy- I was flying copilot for a cadet.

Tonight we would fly formation and I would fly on Lt Vernon's wing. He took off first with his navigation lights on and. I was on his right wing in three minutes and he was moving out. As soon as I locked on, he turned off his lights His lights would be off and I would light up his plane with my navigation lights. We would go to Columbia, North Carolina , where we landed and visited a pilot friend of his. We went thence to Jackson, Mississippi, thence to Tampa, Florida, and thence back to Valdosta, Georgia. Lt. Vernon asked me for an ETA (Estimated Time of Arrival) and I gave it to him. He told me we would beat that by fifteen minutes. He was right. We had a south wind that helped and we did a 360 degree approach to landing. When over the end of the runway at cruise, roll into a 60 degree bank to the left and at the same time pull the power to 15 inches of mercury, wheels and flaps full down, gas on mains, wheels green, mixture rich., roll out aligned with runway, ease it down to touchdown, keep the nose up to kill the speed, then lower the nose and release the wheel to taxi. But I could not release the wheel. I had to
use my other hand and pull my hand off. I enjoyed doing this because this was the
standard landing procedure for the 381st Bomb Group and I was feeling good and this
was probably the last landing before graduation. I taxied the B25 to its parking place, got
out and walked around the B25 with affection. The eight hours of formation was tough but
it was made easier by the sweet flying qualities of the B25. I went to the barracks, took a
shower, then slept a few hours.

I was awakened at nine and asked to report to my instructor in clean clothes and
shined shoes. I did, and he told me that all the instructors had nominated me to fly with
Captain Herdrich. With every graduating class some cadet is nominated to fly with him.
This was a real honor. I thought about it and told Lt. Vernon, "I don't want to fly with
Captain Herdrich. He doesn't like me." I had never even seen him close up, but there
many stories of his toughness. My instructor said, "He doesn't like anybody but I want you
to fly with him. Do it for me." I nodded, picked up my parachute and walked out to the
airplane. The flight, after Lt. Vernon's good teaching, was routine. I only had one single
engine trial and that went down smoothly. At this stage I was lost, found the beam, rode
the beam to 2000 feet to the high cone, turned outbound for two minutes, made a 180
degree turn and descended to 1200 feet, hit the low cone, and descended to 400 feet. At
this point, I took my goggles off and there was the runway and I was aligned with the
centerline of the runway. I was prepared for landing, reduced power, and touched down
like kissing the back of a pretty girl's hand.

I taxied to the tarmac and shut down the engines. Captain Herdrich got out and
walked over to Lt. Vernon. When Lt. Vernon smiled big, I knew I had passed.

I then received orders to report to Ellington Field, and the orders contained a
provision that I would not be assigned combat duty.