

feet long and boasting a gas capacity of 1,100,000 cubic feet, and a full length external keel with a built in cabin and a box like arrangement of elevators and rudders. The ship had originally been powered by 6 Italian Ansaldo engines, which the Air Service found unserviceable. Six American Liberty engines were substituted, an operation which kept the Roma on the ground until early the following year. On February 21, 1922, the Roma met with an unfortunate accident at Norfolk, Virginia. The airship was flying at an altitude of approximately 600 feet when suddenly it dived earthward, struck a high tension line and exploded in flame. Thirteen officers, 16 enlisted men, and 5 civilians were killed and 11 survivors injured. An important result of the Roma's ill fated crash was the almost universal substitution of helium for hydrogen in lighter-than-air craft.

In January, 1921, the Air Service asked for an appropriation of \$60,000,000, only a little more than the cost of a new battleship at that time. Back in 1919, General Mitchell had made a statement that the battleship was obsolete, and highly vulnerable to air attack. The Navy took the stand that air power could not inflict permanent damage on warships. To settle the controversy a test was arranged, whereby Army and Navy aircraft were given the opportunity to demonstrate their effectiveness against naval men-of-war.

In June and July, about 60 miles off the Virginia coast, the tests were carried out. First, on June 21, naval aircraft proved their worth by sinking a captured German U boat, in 16 minutes by dropping a dozen bombs from an altitude of approximately 1000 feet. Later on the 29th of June, Navy and Marine pilots conducted a successful sea search, to prove the aircraft could seek out enemy battleships. They located the U S battleship Iowa in a sea area of 25,000 miles in one hour and 57 minutes.

On July 13, the Air Service came into the picture. With General Mitchell personally directing the operations, a group of 11 pursuit planes dropped 300 pounders from 1500 feet, and sank the German destroyer G-102 in 19 minutes. Five days later a group of Martin bombers sank a German light cruiser in 35 minutes.

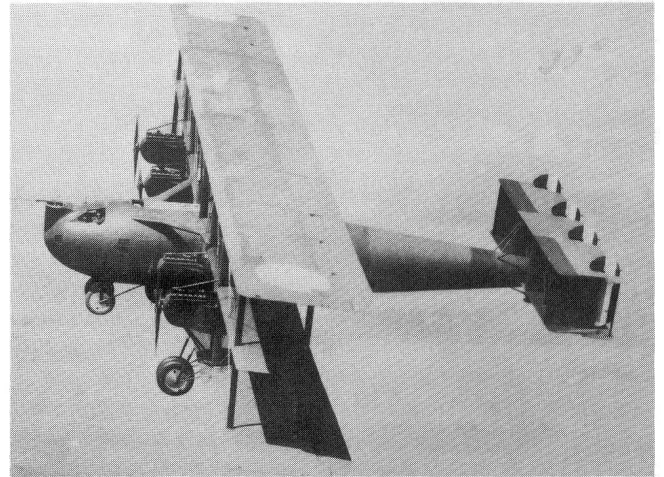
On July 21 the Air Service participated in the most important of the tests. The target this time was the giant German battleship, the heavily armed Ostfriesland. Seven Martin bombers each carrying one 2000 pound bomb, sank her in 7 minutes from the first firing designed to be effective. General Mitchell had proved his point.

The year 1921 also saw experiments in radio direction finding and spraying insecticide by air. The first paratroop demonstration was accomplished and a school for flight surgeons was inaugurated.

In June 1922, formal flight training was resumed after a lapse following the armistice. Kelly Field, Texas was selected as the site for the school for heavier-than-air training, while Scott Field, Belleville, Illinois, was employed as the lighter-than-air instruction center. The mechanics school had been previously moved to Chanute Field, Rantoul, Illinois.

In May, 1923, Lt Oakley G Kelly and Lt John A Macready made the first non stop flight from coast to coast, leaving Roosevelt Field, New York at about noon of May 2, the two Army flyers flew 2,520 miles across the continent to Rockwell Field, San Diego, California, in 26 hours and 50 minutes. Their plane was a Fokker T-2 a monoplane with a wingspan of 75 feet, which carried 725 gallons of fuel for the trip. It was the third try for the two pilots, the first two having been unsuccessful.

August of that year saw the maiden flight of the largest U S airplane built up to that time. It was the Giant Barling tri plane, a six engine bomber with a span of 120 feet across the wing with a length of 65 feet. The Barling was supposed to have an operating speed of 61 miles per hour and a range of 335 miles, but even these modest expectations were never realized. Two years later the project was abandoned.



**The Barling Bomber**

The flight of Kelly and Macready had touched off a succession of record flights by Air Service pilots, On August 27, 1923, Captain Lowell H Smith and Lieutenant John P Richter commenced an endurance flight that was to last over 37 hours. Flying a De Havilland 4B, the two pilots managed to stay aloft 37 and 1/4 hours, a new world record, by means of a refueling plane, another De Havilland, which serviced them while in flight.

The following year, on June 23, 1924, Lt Russell Maughan flew from New York to San Francisco in five hours less than that made by Kelly and Macready, despite five refueling stops. flying a Curtiss PW-8, Maughan covered the 2,570 miles in 21:48:30, only 18 hours and 36 minutes of which were spent in the air.

On the 28th of September, 1924, Air Service flyers successfully completed the first round the world flight in aviation history. Earlier in the year, on April 6, four Douglas bi-planes had taken off for a lake near Seattle, Washington on the flight of over 26,000 miles. Just 175 days later returned triumphantly to their starting point. They had circled the globe in 363 hours actual flying time. For this achievement the Air Service was awarded the Collier trophy.

In 1925, competing with the US Navy and foreign contenders,