Experimental Airmail and the *S. S. Leviathan*¹

by Roger A. Baldwin

**Introduction**

Transatlantic mail service was chaotic until the American Black Ball Line established scheduled service between New York, London, and Liverpool in 1818.² With improved ship designs and the advent of stream power, mail delivery time steadily shortened. In the 1920s, the exciting but dangerous aeroplane provided another means to shorten transatlantic mail delivery.

In the late 1920s, three proposals were promoted for flying mail, and even passengers, to and from the United States Lines *S. S. Leviathan*. These flights were said to be able to cut up to two days off the transatlantic mail delivery time.

**S. S. Leviathan**

The *Leviathan* began its transatlantic service as Germany's Hamburg-American Line’s *S. S. Vaterland*. At the time she was launched on April 3, 1914, the Vaterland was advertised as the world’s finest and largest passenger ship at about 60,000 tons, 960 feet long and 100 feet wide. In 1931 to cut port fees, her weight was reported to be only about 49,000 tons³. I wonder what all had to be tossed over board to achieve this weight reduction? Some post cards show her weight as high as 69,000 tons. Perhaps some of these differences were simply typos or were due to the differences between the U. S. and metric tons (about 10 percent). Pictures of its first class accommodations are much like the scenes in the movie *Titanic*.

![Vaterland in dry dock](image)

Figure 1. The *Vaterland* in dry dock before its first voyage on May 14, 1914.

After only its seventh crossing, when ready to return to Europe on July 31, 1914, the *Vaterland* remained tied up at Hoboken, N. J. With war looming, the line’s officials feared the British or French navies might capture her if war did break out and she tried to
make a dash back to Germany. Germany declared war on France on August 3 and Great Britain declared war on Germany on August 4.

When the United States entered World War I, the *Vaterland* was seized on April 6, 1917. Reportedly, it was President Woodrow Wilson who renamed her the *S. S. Leviathan*. Conversion to a troopship required only seven months and she sailed on November 17, 1917. The elegant state rooms had been replaced by compartments crammed with three level bunks and the dining rooms with mess halls. During the war, the *Leviathan* carried some 200,000 troops to and from Europe. The *Leviathan* was the largest ship operated by the United States Navy until the aircraft carrier *Midway* was launched on March 20, 1945. The *Midway* was 18 feet longer and 13 feet wider, but weighed only 45,000 tons.

After the end of World War I on November 11, 1918, the *Leviathan* was idled by federal indecision and red tape. She finally was returned to her former glory and transferred to the United States Lines. Her third “maiden” voyage began on July 4, 1923. The *Leviathan* was very expensive to operate even after being converted to use oil and was difficult to maneuver. She was then slower than the newer German passenger ships, the *Bremen* and the *Europa*, built to replace her after World War I. The lack of a companion ship for opposite direction sailings adversely impacted passenger loads. Although the luxurious accommodations attracted the rich and famous, the third and fourth class immigrant passengers were needed for profitability. Once the ventilation system was operated in reverse, and nearly asphyxiated some of the crew. One of the crew was a young seaman named Humphrey Bogart who later became the famous movie actor. Another time, a huge wave caused a one-inch crack in the hull. As a result of all these problems, the *Leviathan* was soon was losing money.

Concurrently with the declining passenger loads in the late 1920s came three proposals to fly mail, and even passengers, to and from the *Leviathan*. The goal was to reach the ship when it as far out from New York as 500 miles!
Interestingly, U. S. Navy pilots were used on two of the experimental airmail flights. Were these flights actually public relations efforts to advertise the *Leviathan* and to call attention to the U. S. Navy skills and/or needs? Were they efforts to compete with on going French and German catapult airmail projects? Such flights certainly would draw attention to the *Leviathan*. Looking back at the airplanes, proposed distances, and navigational aids then available as well as the United States Lines balance sheet, I suspect that these proposals were mostly exciting public relations efforts. Perhaps, they were a little of all of these.

**The Characters**

The three main, I add fearless, individuals/characters involved in these experimental flights were:

- Clarence D. Chamberlin, pilot
- Lt. Clarence H. Schildhauer, U. S. N., pilot

**The Experimental Flights**

1. **Chamberlin Flight**

The first of the three experimental airmail flights was made on July 31, 1927 by Clarence D. Chamberlin, the famous transatlantic and endurance flier. Famous transatlantic flier and famous ship would have been an excellent public relations combination.

A special deck, about 100 feet long and 30 feet wide, was built diagonally across the bow of the *Leviathan*. Chamberlin flew a small, open cockpit Fokker biplane assembled by some friends. It had only enough gasoline for a two hour flight and could only carry a few hundred pounds of cargo. He took off between rain showers when the *Leviathan* was about 80 miles east of the Ambrose Lightship located off Sandy Hook at the mouth of Lower New York Harbor. He flew about 100 miles to the Curtiss Field on Long Island where he landed and then flew on to Teterboro, NJ. In a post flight interview, Chamberlin reportedly said that use of a catapult to launch a larger airplane was the better technique.
Figure 3. Chamberlin waiting to take off from the *Leviathan*.

Chamberlin is credited with being the first pilot to carry mail from a passenger ship to shore. Naval ship to shore mail flights have been discounted in this respect. Chamberlin’s flight was about 13 months before the first catapult launch from the French liner *Ile de France* on August 23, 1928. Chamberlin is said to have carried some 900 letters. However, many of these letters are reported to have been destroyed.

Figure 4. This is the only cachet style I have found. Note that it is addressed to Chamberlin.

Now for the “Other half of the story” as Paul Harvey would say. Chamberlin also is credited with being the first pilot to fly a paying passenger across the Atlantic. Along with Charles Lindbergh, Charles Levine, with Chamberlin as his possible pilot, and Admiral Byrd also had
planes waiting at the Curtiss and nearby Roosevelt air fields, Garden City, Long Island for the attempt to be the first to fly solo across the Atlantic.

Upset at Lindbergh’s take off earlier (May 20, 1927), Levine, a bit of a loose canon, offered Chamberlin $10,000 to fly him to Berlin, Germany. On June 6, 1927, they took off and ran out of gas about 45 miles from Berlin. On their flight over, they flew over the U. S. S. Memphis returning Lindbergh to the United States. After a brief time in the spotlight in Europe and the United States, being second did not fully register in the United States or in the history books even though they had flown further and longer (3,800 versus 3,370 miles) than had Lindbergh.

2. Schildhauer Flight

The second experimental flight was made three weeks later on August 21, 1927 by Lt. Clarence H. Schildhauer, U. S. Navy, in a Navy PN-10 amphibian. His flight plan was much simpler than had been Chamberlin’s. Schildhauer would simply drop mail to the Leviathan. Unfortunately, fog prevented him from finding the ship. The PN-10 carried a crew of five. It could carry about 7,000 pounds of cargo, had a maximum speed of 114 mph and a maximum range of 1,400 miles.

Figure 5. One of two Navy PN-10 amphibians built.

Schildhauer also briefly held an endurance record in a Navy seaplane. Later, he was a temporary co-pilot on the initial legs of the extended, 1930 – 1931 transatlantic flight of the giant, 12-engine German DOX seaplane.
Souvenir letters (covers) are back stamped AIR MAIL FLIGHT FAILED TO S. S. LEVIATHAN. Most souvenir covers generally were returned to the sender (see Figure 6).

Figure 6. Unfortunately this cover did not reach the on board Mail Clerk.

There must have been more publicity for this second flight, as I have found several different, colorfully cacheted and stamped covers. This suggests that indeed many of the Chamberlin covers were destroyed. In addition, some of these covers eventually made their way across Europe to their destinations.

Figure 7. This cover is signed by Lt. Schildhauer. Note the auxiliary markings on this cover:

   Red hand written “Air Flight Failed” across the address lines. It also has the black “FAILED” hand stamp on the back side.
Figure 8. This cover reached Bad Pyrmont, Germany on September 3, 1927.

Figure 9. After three stops, this cover reached Romania on September 8, 1927.

3. Adams Pickup and Delivery Flights

The most successful of the Experimental Airmail flights were those made in June, 1929 to demonstrate the Adams combined non-stop delivery and pickup. Adams employed a low flying airplane trailing a long cable to deliver and pickup mail bags. Dr. Lytle S. Adams, “Doc” to most,
an oral surgeon by training, was an inventor, entrepreneur, and, most importantly, a skillful promoter.

Adams, with the help of fledgling Boeing Aircraft Company engineers in the mid-1920s, developed equipment for both (1) a ground station/trap to capture and release an incoming mail bag attached to the long cable, (2) to attach a new mail bag to the cable, and (3) to catapult the new bag into the air and (4) equipment for the plane to haul in the cable and to keep the plane from being jerked from the air.

With the support of Clifford Ball of Ball Airlines and Paul Chapman, president of the United States Lines, a 28 by 39 foot steel tubing and canvas trap/catapult (Figure 10) built on the deck of the Leviathan. A flight was scheduled for June 6 or 7, 1929 as the ship was inbound to Newark, NJ.

Figure 10. First page of U. S. Patent issued to Lytle S. Adams showing the cone-shaped trap with the release mechanism and catapult.

A series of mishaps did not deter Adams:
- On June 5, a plane piloted by Lt. Commander George R. Pond, U. S. navy pilot, crashed during a test flight,
- on June 6, a hastily outfitted Loening amphibian (see Figure 11) was struck by lightening and turned back as the Leviathan approaching Newark, NJ., and
- on June 7 fog prevented finding the Leviathan.
Figure 11. Loening amphibian of the type outfitted for the first Adams attempted flight.

The Loening amphibian used was of the type used by Schildhauer for his attempted flight.

Figure 11. Souvenir envelopes for the June 6 and 7 attempted flights. Souvenir envelopes given to the in-bound passengers are back-stamped:

Delivery and Pick-up POSTPONED
Adams promptly made plans for a flight to the outbound *Leviathan* on June 12. After several attempts, reportedly 12, mail was successfully delivered to and picked up. Can’t you imagine the mail bag dangling from the cable as pilot Pond tried to guide the cable into the trap while not getting tangled with the *Leviathan*?

![Figure 12. Souvenir envelope from the June 12 successful delivery.](image)

Adams and friend George Wild had 2,000 souvenir envelopes each made for the June 12 flight. The Adams envelopes addressed to him on-board were printed in red and Wild’s were addressed to him in New York City were in blue⁴.
Figure 13. This is a Fairchild plane of the type Adams used in the successful delivery and pick up on June 12. It looks a bit rickety.

Figure 14. The envelope contained a letter to the *Leviathan*’s Commodore Cunningham explaining the benefits of Adams’ system.

A second flight on June 25 successfully delivered mail to the in-bound *Leviathan*, but there was no pick up. Details for this flight are lacking.

Figure 15. Successful delivery of mail, but no pick up was made.

Souvenir envelopes from the June 25 flight are back stamped:
WEST BOUND/PICK UP Deferred.

Experimental Air Mail and the S. S. Leviathan

The S. S. Leviathan, the largest and finest passenger ship of her age, was the platform for three air mail experimental flights to further shorten transatlantic mail service:

- Chamberlin successfully flew mail from its deck,
- Schildhauer could not find the ship in the fog, and
- Adams successfully demonstrated both mail delivery and pick up using a low flying airplane.

Although two of these experiments successfully carried the mail, no immediate interest in additional demonstrations developed.

None the less, Adams continued to promote, demonstrate, improve his equipment, and seek financial backings throughout the 1930s. Even a hugely successful six week, three times a day pick up and delivery demonstration at the 1934 Century of Progress grounds failed to attract contracts or funding. Running out of funds, Adams entered into a rocky joint venture with Richard C. du Pont, of the Wilmington, Delaware du Pont family, in 1938. This lead to further equipment improvements and to two one year Experimental Pick Up routes in 1939, mostly in Pennsylvania and West Virginia. Unfortunately, Adams left/resigned/ was bought out in June, 1940. After some delay in the summer of 1940, Congress approved the commercial route AM-49 and All American Aviation started service on August 12, 1940. Ultimately, some 228 small town and villages had this unique air mail service. State College and Bellefonte, PA, the former and current locations of the American Philatelic Center, were pick up sites. The pick up service was replaced by conventional passenger mail service using sleek World War II surplus DC-3s in the spring of 1949. All American’s name was changed to All American Airways, then to Allegheny Airlines, and more recently to U.S. Airlines.

Endnotes

3 The Chenango Telegraph, June 7, 1927, page 1.

Photo Credits

Figure 3, Courtesy Time-Life Books, The Great Liners, 1978, page 77.
Figure 5, Courtesy the Glenn H. Curtiss Museum, Hammondsport, NY.
Figure 11, ibid.
Figure 13, *ibid.*