



THE LAST FLIGHT OF LAWRENCE B. SPERRY

by Victor N. Smith

Lawrence Burst Sperry was born in Chicago on December 22, 1892, the third child of Elmer A. and Zula Goodman Sperry.¹ With his father, he worked on the development of an autopilot,² and on the aerial torpedo for the U.S. Navy.³ He was described by Colonel (later General) William Mitchell as one of aviation's "most brilliant minds, one of its greatest developers and a splendid pilot and airman."⁷ He left New York on October 30, 1923, on board the Cunard Line's MAURETANIA, taking with him his Sperry Messenger aircraft, c/n 12, fitted with a 60-hp Lawrence 3-cylinder radial engine (No. 48).

On his arrival in Southampton on November 5, Sperry was met by the British Director of Civil Aviation, Sir William Sefton Brancker, and Mr. Parrott of A.V. Roe's works at Hamble. They dissuaded Sperry from flying the aircraft direct from the road on the dockside to Croydon Airport near London. The aircraft was moved by road to Hamble, where it was officially registered G-EBIJ to the Sperry Gyroscope Co., Ltd., on November 9. A special permit was issued to allow it to be flown in Britain until December 31, as there was no official U.S. Certificate of Airworthiness available. Sperry was also issued with a British Civil License Class A, No. 778A.⁵

Sperry based the aircraft at Cricklewood in North London—at that time the home of Handley-Page Aircraft—and made some 10 flights

around the country. He flew into Cricklewood for the last time on December 9 and asked for the oil pressure release valve to be modified by drilling a 1/16-inch hole through the ball, and by adjusting the spring to give 48 pounds/square inch oil pressure. The mechanics did not like this idea and only carried out the work under protest. At the same time a check on the starboard magneto showed it to be shorted out by a broken-off fragment of aluminum.

On Thursday, December 13, 1923, Sperry arrived at Cricklewood and tested his engine on each magneto separately, getting 1,500 rpm in each case, and expressed himself as satisfied. He then took off at about 10:30 A.M. and flew across London to Croydon Airport where he cleared Customs for Amsterdam. He had the fuel tank topped off and took off at 11:49 A.M., filmed by a Universal Newsreel camera.⁷

The course he flew is not known for certain, but the normal route was to follow the railway to Ashford in Kent, and then on to Folkestone, before crossing the English Channel to Calais, France. However, at Ashford a second railway diverged southward and then westward to Hastings, 30 miles west of Folkestone, and it seems that Sperry may have followed this line by mistake, for he was next seen flying towards the coast from the northwest near Pett, about five miles east of Hastings.

At Pett, a number of people watched as Sperry circled with the

engine apparently misfiring and thought that he was about to land, but he gained height again with the engine seeming to run smoothly as he crossed the coast and headed southeast towards France. However, minutes later the engine lost power and Sperry found himself losing height. He closed the throttle and turned left towards the coast and into the light westerly wind. The aircraft gently touched down on the surface and settled until it floated with the top wing awash and the tail unit out of the water. How long Sperry waited is not certain, but at some point he pulled off his flying boots, struggled out of his leather suit and struck out towards the shore some three miles away. Later evidence suggested that he covered quite a long distance before being overcome by the cold waters of the English Channel.

On shore, the aircraft had been seen to come down in the sea, and the Pett Coast Guard Station immediately telephoned Rye Harbour, where the nearest lifeboat was based. At 12:36 P.M. the gun to summon the volunteer lifeboat crew was fired, and at the same time a motor boat put out of harbor to start the search.

Many of the inhabitants of the small village of Rye Harbour hurried to the lifeboat house, for not only were 17 men required to pull the oars of the rowing and sailing lifeboat MARY STANFORD, but a large team of men and women would be needed to haul the boat down the shingle beach to the water. Once launched the crew pulled strongly out into the Channel, but it was not until 2:30 P.M. that they found the aircraft, still afloat. They searched methodically for any sign of the pilot but as the short December afternoon grew dark they sadly returned to the aircraft, took it in tow and rowed back to the shore, to drag both the boat and the aircraft up the beach.⁷ On the following day, as the press was reporting hopes that Sperry might have been picked up by some passing ship, the Inspector of Accidents arrived at Rye Harbour to begin his investigation. His report detailed the events leading up to the accident, before continuing with the results of his examination of the aircraft:

"... it was found that except for a slight buckling of the top starboard wingtip and the tail unit, which occurred during salvage operations, the aeroplane was intact. It had alighted on the water without structural damage. All controls were in working order. A tappet rod and sparking plug wire were accidentally pulled off the starboard cylinder of the engine after the accident.

"The petrol tank contained about 14 gallons of fuel and the oil tank was about three-quarters full. The petrol tap was open and both magnetos were 'on'. The throttle lever was in a closed position.

"The propeller was intact and the engine turned freely, but there was no compression in the top cylinder [3-cylinder radial engine]. The exhaust valve of this cylinder could not be moved by hand and the inlet valve worked stiffly in its guide. The valves of the port and starboard cylinders operated freely.

"Both the tappet rods of the top cylinder were disconnected from the valve rockers. The exhaust tappet rod was completely dislodged and was jammed between the induction pipe and the inlet rod which remained connected to the tappet. Polish on each of the rods at the point of contact, and markings on the cowling, showed that the engine was running after the exhaust tappet rod had fallen out of position. [These rods were held between cup sockets in the ends of the rockers and tappets and had nothing to prevent them from falling out in the event of the valve not seating.]

"On dismantling the top cylinder it was found that the exhaust valve was about 1/16 inch off its seat and jammed in the guide owing to a warped stem. The valve seat was scaled and rusty. The cylinder and piston were scored and bore evidence of excessive heat but all other working parts of the engine appeared to be well lubricated and the sump contained a quantity of oil.

"The sparking plugs after drying and cleaning functioned satisfactorily on test under air pressure up to about 60 pounds per square inch. No defects could be found in the port magneto other than those due to immersion in salt water.

"The starboard magneto was out of action owing to a fracture of the contact breaker spring. The fracture had occurred near the end attached to the rocker arm and at this point the spring was rusted on the inner side. Corrosion had advanced more than halfway through the thickness of the spring and it was evident that this action had been proceeding for a considerable time previous to the accident.⁸

"There were no defects in the petrol system other than those due to immersion in salt water. The filter was clean.

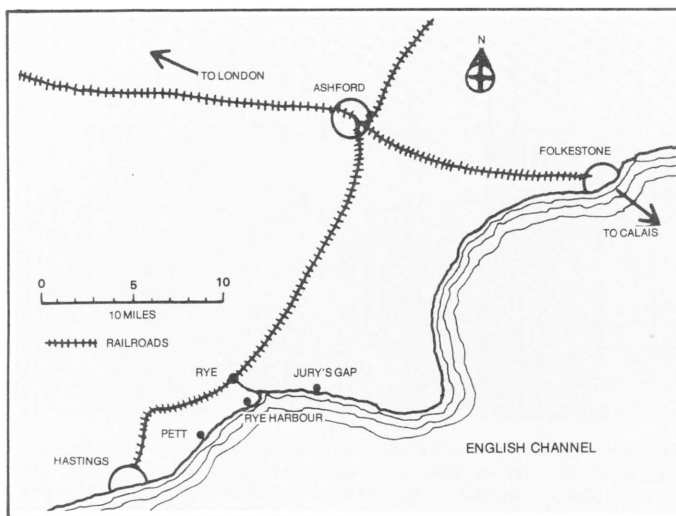
"The aeroplane compass—a type of 'Aperiodic Centesimal' specially made for the pilot and recently fitted on the underside of the center section—was undamaged and on test gave readings which compared favorably with the figures of the Deviation Card. The deviations on east and west were unduly large. The compass was not sufficiently far from the engine to be unaffected by the two magnetos and it had not been tested with the engine running."

The inspector was still working on his report when, on Friday, January 11, 1924, a body was found on the shore at Jury's Gap, about three miles east of Rye Harbour. New York labels were found on the clothing and a message to the London headquarters of the Sperry Gyroscope Co. brought the Managing Director, Percy R. Jackson, to the scene. He could only identify the body by the build and color of the hair, but dental records and laundry marks confirmed that this was Lawrence Sperry. A coroner's jury recorded a simple verdict of "Found Drowned." Sperry's body was taken back to New York where he was buried on February 16, 1924, in Brookville Cemetery, Garden City, L.I., as 10 aircraft from Mitchell Field flew overhead.

Although the Sperry family was supplied with a copy of the British report on the accident, no information was made public and on April 5, the press section of the Air Ministry wrote to the Inspector of Accidents: "The American newspapers in London continue to ask regularly whether a report on the Sperry accident will be issued. Can you please tell me whether a decision has yet been made or what the position is?" The request was passed to the Director of Civil Aviation, Sir Sefton Brancker, who replied sharply: "Isn't it sufficient to tell them that we have informed Mr. Elmer Sperry and the Sperry Corporation very fully on the subject, or do you think that it would be politic to issue a short statement?"

The press section was certain that a statement was needed: "The American press is well aware that we have published reports of all recent fatal accidents and I think that they are beginning to take the view that there is some reason for hushing the matter up. They are all greatly impressed with the care that we take to prevent accidents and to investigate cases that do occur and nearly everyone has been carrying on a campaign to try to get America to follow suit by instituting proper air laws and regulations. Publication would probably in the circumstances be helpful to that end."

And so on April 15, 1924, the press was told of the Inspector of Accidents' conclusions: "That the pilot was forced to alight in the





Reporters examine the Sperry Messenger, which has no markings except the maker's name.
(E.M.I. Pathe Library, film still)



"I have trained myself to read books and eat my meals when flying. If one did not concentrate thus on something one would get tired." Sperry talks to the press on his arrival in England. His remarks were quoted in the *London Daily Mirror*.
(E.M.I. Pathe Library, film still)



The Sperry Messenger beached after the accident. Full British markings are seen, including the national G on both the rudder and horizontal tail surfaces. The photographer has dressed a group of local workmen in the lifeboatmen's oilskins and life jackets.
(Photopress, via the author)

sea owing to a complete failure of the engine and he was subsequently drowned in an attempt to swim ashore. That the engine failure was due to warping, and consequent seizure, of the valves of the top cylinder followed by a displacement of the tappet rods."

It was the last entry in the file on Lawrence B. Sperry.

NOTES

1. *Gyro! The Life and Times of Lawrence Sperry* by William Wyatt Davenport. Charles Scribner's Sons, New York 1978.
2. *Automatic Pilot*, 1913 version, AAHS Journal, Vol. 20 No. 2 (Summer 1975).
3. *The Aerial Torpedo*, AAHS Journal, Vol. 20 No. 4 (Winter 1975).
4. *Lawrence Sperry and the Aerial Torpedo*, U.S. Air Services, Jan. 1926, p. 16 (quoted in [1] above).
5. Details of the licensing and subsequent accident (from which much of this account has been taken) are in the Public Records Office, Kew, London, in File AVIA 2, Piece 211.
6. Universal Newsreel did not have a British edition before about 1930, so this film was presumably shown in the U.S.A. Is there perhaps a surviving copy?
7. Some of the crew of the lifeboat were themselves to die in the same waters. On Nov. 15, 1928, the *Mary Stanford* capsized a mile off Rye Harbour when returning from an abortive rescue mission in a gale. All 17 crew were drowned, including Coxswain Herbert Head, 2nd Coxswain Joseph Stonehaven, and Bowman Henry Cutting, who had all taken part in the search for Lawrence Sperry.
8. Although the Inspector does not draw attention to the fact, this was the magneto which had been worked on at Cricklewood after the flight on Dec. 9.

ABOUT THE AUTHOR

Victor N. Smith became interested in aviation just after WWII, but only started serious research when he joined Air-Britain in 1966. He specializes in the British civil scene up to 1950, but is also a keen photographer of all aircraft types. He obtained a pilot's license in 1973 and joined AAHS in 1979.

