The Ogden Osprey Trimotor

Even three engines could not get this one off the ground.

BY PETER M. BOWERS

Small multi-engine designs, all twins, abound today and make up a relatively large percentage of the propeller-driven general aviation fleet. Back in the 1929 to 1930 period, small multis were extremely rare, and what few there were followed the prevailing airliner trend and used three engines.

Most of the business aircraft and short-haul airliners of the time were four-to-eight-place single-engine cabin monoplanes in the 220- to 420-hp range and were typified by the various Ryan, Bellanca, Stinson, Lockheed and Travel Air models, to mention the Big Five producers of the type.

Originally, multiple engines were used to get bigger airplanes into the air, and, in general, the bigger they were, the slower they were. In the middle 1920s, some single-engine airliners were converted to trimotors with no increase in capacity but a major increase in reliability. The prime example is the 10-place Fokker F-VIIA, which started with a 450-hp engine in the nose. When this was replaced with three 200-hp engines, the payload did not increase, but the improved reliability did wonders for passenger confidence in air travel. Replacing the 450 with two 250s or even 300s would not have been effective in case of one engine failure; the airplane could not keep going safely on only 50 percent power with the engines of the time. The chance of losing two engines on the same flight was very remote, so having two still operative left a satisfactory power reserve.

This airline philosophy did not filter down significantly to the general aviation level at that time. Only one small trimotor, the Kreutzer "Air Coach," appeared in 1928 to 1929. In spite of being certificated in three different versions, it did not enjoy significant sales.

In spite of the Kreutzer's poor sales record, one of the individuals associated with it had enough confidence in the utility of the small trimotor to quit and form a new company of his own to manufacture another. He was Henry H. Ogden, famous as one of the U.S. Army around-the-world flyers of 1924. After he left the Army, his last civilian position was as chief test pilot for Kreutzer.

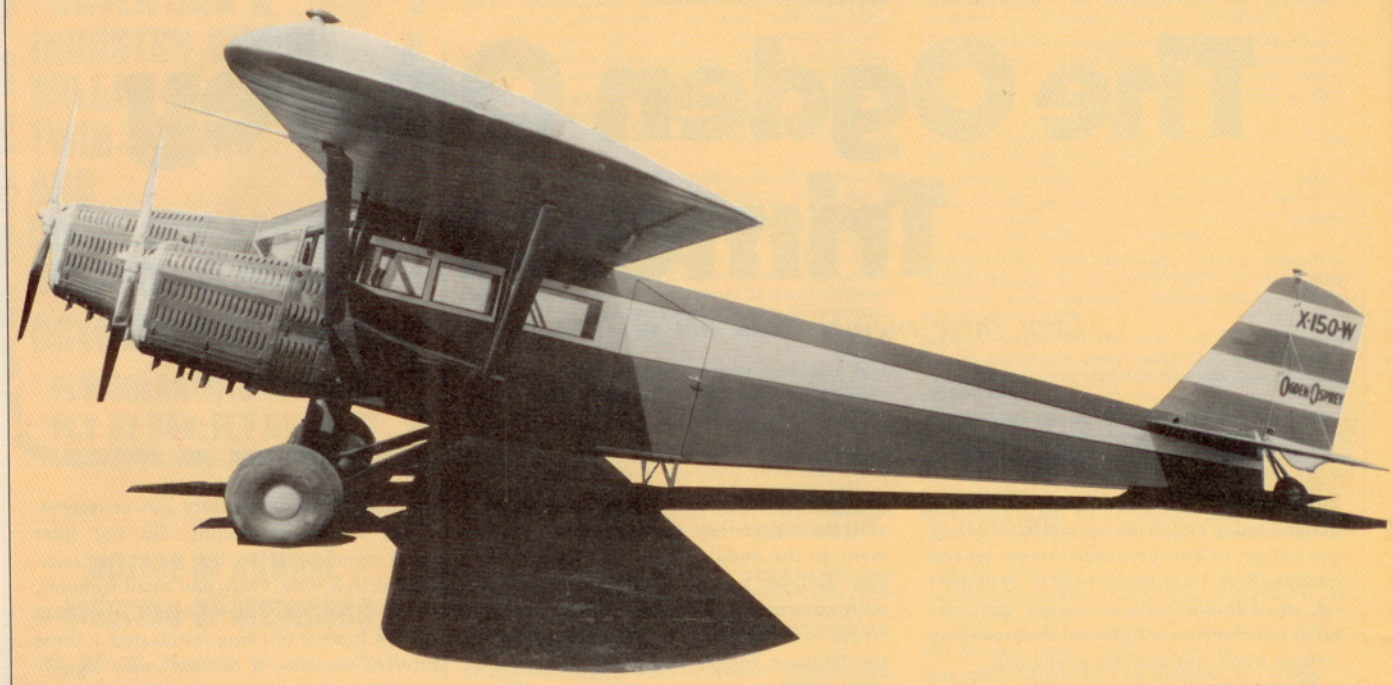
Ogden Aeronautical Corporation was formed at Inglewood, California, in May

Peter Bowers, AOPA 54408, is a CFI and a glider flight examiner and has logged 4,200 hours as a single- and multi-engine pilot.

The Ogden Osprey was similar to the structure of single-engine cabin designs of the time. Pilots sat side-by-side and shared a throw-over control column, ahead of a four-seat cabin with a narrow aisle between two rows of seats. A lavatory and baggage compartment were standard features. Aimed at the business aircraft and small airline markets, the Osprey was relegated to other lines of work.

PHOTOGRAPHY FROM THE COLLECTION OF THE AUTHOR

continued



Providing only 270 hp among three Cirrus engines proved to be rather marginal for the Osprey's size and weight. A Model PB conversion was made using 90-hp-plus inverted Menasco engines. Although it received Memo approval, it remained a one-only.

1929. As was quite common with small aircraft companies founded by individuals, the founder was not necessarily the president. Ogden left that job to another and gave himself the jobs of vice president, general manager and chief test pilot. The actual designer of the new airplane, called the Ogden "Osprey," was Frederick G. Therle.

The Osprey was aimed at the business aircraft and small airline markets and was very similar in layout and general structure to the single-engine cabin designs of the time. Two pilots sat side-by-side and shared a throw-over control column, ahead of a four-seat passenger cabin with a narrow aisle between two rows of seats. Various luxury features were optional, but a lavatory and small (50 pounds capacity) baggage compartment were standard.

Structure was thoroughly conventional. The fuselage and tail were welded-steel tubing, fabric covered, and the wings used wooden box spars and wood-truss ribs for the high-lift Gottingen 398 airfoil. In the interest of lightness, structural simplicity and minimum cost, the wing was built in two halves and was braced with steel-tube struts. The use of a strut-braced wing made it easy to integrate the wide-track landing gear and the side engine mounts.

The choice of powerplant was rather surprising, yet logical. It was the 90-hp A.C.E. (for American Cirrus Engines)—the Americanized version of the very popular British lightplane engine, an upright, air-cooled inline four that was new to American experience at the time. It would see its widest use in the Great Lakes sport trainers.

Its supposed advantage over the small

In size and useful load, the Osprey was similar to its contemporaries—the 300-hp high-wing monoplanes then in production. This one, if you can exert a little imagination, almost looks like a cross between a Curtiss "Thrush" and a Travel Air 6000.

American radials of equivalent power, as used by the Kreutzer, was the greatly reduced drag. In small sportplanes and trainers, these engines were not equipped with starters; hand-propping was a normal part of such operations. For the trimotor, however, starters were installed that were operated by a hand crank. Total fuel capacity was 96 gallons, carried in two wing tanks.

The size of the Osprey was very close to that of the contemporary 300-hp Travel Air 6000-B, which seated six, had only 15 inches less wingspan, weighed 230 pounds more, had only 18 pounds less useful load and cruised eight mph faster.

The first Osprey was test flown by Henry Ogden late in 1929. Initial certification came on March 26, 1930, but not a full Approved Type Certificate (ATC). The second and third Ospreys built, designated Model PC, qualified only for the lesser Memo Approval (2-197), which still permitted NC licensing and commercial operations. However, after the two were brought up to full approval standards, Certificate 2-197 was canceled and replaced by full ATC A-332 on June 5, 1930. This also applied to the remaining two Osprey PCs that were built. The prototype never was certificated.

With only 270 hp among them, the three Cirrus engines proved to be marginal for the airplane. A Model PB conversion, using 90-hp-plus Menasco B-4 engines, was tried. These were in-line fours like the Cirrus, but were inverted, a feature that Cirrus was to adopt later. The PB model received Memo Approval 2-295 on October 30, 1930, but remained a one-only. In the meantime, ATC 332 was amended to allow the use of improved 100-hp Cirrus engines.

In spite of the reasonable price tag of $18,000, later dropped to $16,000, the Osprey did not sell—at all. The calendar pretty well tells why; the market for airplanes in

OGDEN OSPREY PC

Specifications

Powerplant	Three A.C.E. Cirrus 90 hp @ 2,100 rpm
Wing span	50 ft 0 in
Length	34 ft 6 in
Wing area	312 sq ft
Wing loading	14.58 lb/sq ft
Power loading	16.84 lb/hp
Empty weight	2,898 lb
Gross weight	4,548 lb

Performance

High speed	128 mph
Cruising speed	102 mph
Initial climb	650 fpm
Ceiling	15,000 ft
Range	450 sm @ 18 gph

Based on manufacturer's figures.

the Osprey's weight and cost range, regardless of improved reliability, almost totally was wiped out by the Depression. Four Ospreys still were not sold late in 1932. They finally were marked down to virtually scrap prices—$5,000 for one in almost-new condition, or all four for the grand total of $10,000. They eventually found buyers and were used for such operations as aerial advertising and passenger-hopping on barnstorming tours.

Old-time barnstorming operations, traditionally using obsolete or highly depreciated airplanes, demonstrated many examples of making-do with minimum maintenance and a chronic shortage of spare parts. One interesting event was related by Thomas E. Givens, AOPA 122039, in the letter that inspired this article.

Back in 1936, the barnstorming owner of an Osprey came to Givens's hometown in Texas, and he had an opportunity to go on a short tour in it. In that hot country, the center engine had a tendency to overheat; so the pilot would shut it down and cruise on the outboards. Also, either the hand-crank starters were inoperable or had been removed to save weight, for starting was done the old way, by hand-swinging the propellers. This was easy on the low-slung side engines, but the center one was a little too high for convenience. The solution was to have several people lift the tail, in order to lower the nose and bring the center propeller into easy reach of the prop-swinger.

Such operations were the Last Hurrah of the distinctive little trimotor. None of the four certificated examples even survived into the 1940s. □