Yesterday's Wings

The Laird Swallow

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■■ Among the big names of aviation's past, there has always been a bit of confusion between the famous line of "Swallow" airplanes built in Wichita, Kan., between 1924 and 1930 and the Laird Swallow airplane that was also built in Wichita. There was a connection, but it wasn't a simple case of companies naming airplanes after themselves; rather, a new company took the name of an existing airplane.

Emil Matthew "Matty" Laird, a self-taught pilot and airplane designer, founded the Laird Aviation Co. in Chicago for the purpose of building and exhibiting airplanes. The year was 1915 and Laird was all of 19 years old. He turned out several planes on a one-at-a-time basis and did exhibition flying until U.S. entry into World War I ended civil flying. Laird then became a civilian instructor for the military.

After the armistice he started building again under the firm name of the E. M. Laird Co. and produced a little two-seat, sport-and-trainer type identified as the Laird Model S. This was powered with a prewar 50-hp Gnome rotary engine. It soon became apparent that the inherent problems of the rotary, and that orphan model in particular, made it unsuitable for the potential customers of the Model S. An improved three-seater version powered with the war-surplus 90-hp Curtiss OX-5 engine was then designed.

At this time, late 1919, an old friend of Laird's came to Chicago from Wichita, Kan., to take in an air show. He was Billy Burke (not to be confused with the famous Follies girl Billie Burke), fellow barnstormer, instructor, and buyer of Laird's first Model S. Instead of buying an available new plane, he liked the looks of the new Laird that was still on paper so well that he invited Laird to move his company to Wichita to build it and others there. Laird was sold on the idea after a quick survey trip to Wichita, where he met Burke's partner, oil tycoon Jacob M. Mollendick. The two partners matched their money with Laird's know-how and the refinanced E. M. Laird Co. set up shop in Wichita.

The new airplane performed beauti-

Stock Laird Swallow, evaluated by Army Air Service at McCook Field, Dayton, Ohio, outperformed the contemporary Curtiss Jenny, but was not accepted; the military surplussed 90-hp trainers and went to 150-hp models. Note the large windshield for the side-by-side, two-seat front cockpit.

LAIRD SWALLOW

Basic price $4,500

Specifications

Engine	Curtiss Ox-5 90-hp, 1,400 rpm
Wing span	36 ft
Length	23 ft 4 in
Wing area	324 sq ft
Passengers and crew	3
Empty weight	1,075 lb
Gross weight	1,750 lb

Performance

Rate of climb	400 fpm
Maximum level speed	85 mph
Range at normal cruise (with 45-min reserve)	440 sm
Landing speed	38 mph

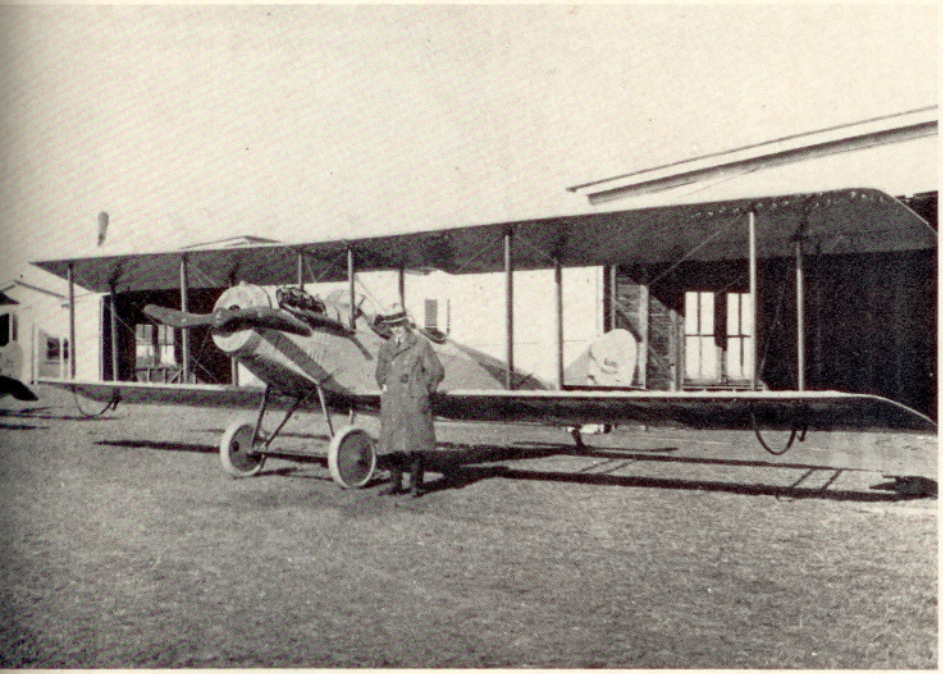
Three stock Laird Swallows fresh from the Wichita factory. Other than shorter equal-span wings, the principal distinction between the Swallow and the contemporary Jenny was the use of a circular nose radiator on the Laird.

fully on its first flight in April, 1920, causing an onlooker to exclaim that it was "just like a swallow!" Since the bird's name seemed suitable, it was given to the airplane, which was thereafter marketed as the Laird Swallow.

In appearance, the Swallow was hardly memorable. At only a casual glance, most people knowing contemporary airplanes would pass it off as a clipped-wing Curtiss JN-4 "Jenny," which was the most plentiful design around at the time. The Swallow did owe much to the Jenny, differing most notably in having a round instead of straight-side nose radiator, equal-span wings, and a side-by-side, two-seat cockpit.

Construction was all wood with fabric covering, struts were wood, and the wing bracing was stranded wire. The airfoil section was the old R.A.F. 15, which was hardly distinguishable in looks or performance from the Eiffel 36 used on the Jenny. The Swallow was a little smaller than the Jenny all

A Swallow, modified for cross-country racing in the 1920s, has streamlined wires replacing stranded wires a fuel tank built into the center section, and the drag-producing front cockpit windshield deleted.



around; however, it picked up a little speed as a result and had a larger payload.

The purpose of the design was not to make a great leap forward, but to get the best possible performance for three people behind the economical OX-5 engine. The structure was kept simple, almost crude, in the interest of low cost. The anticipated postwar flood of new private-owner designs never materialized and Laird realized why. The few that had appeared in 1919 soon went out of production because of competition from the cheap war-surplus Jenny.

Under the circumstances, even mighty Curtiss gave up. It had introduced the three-seat OX-5 powered "Oriole" early in 1919 and it was selling well until the Army unloaded the Jennies. Laird, the late starter with his Swallow that looked like a Jenny with Oriole wings, was able to keep costs down to the point where the customers would willingly pay the difference to get the improved performance and a new air-

plane. Curtiss dropped the OX-5 version of the heavier and more expensive ($8,000) Oriole and went to longer wings and a 150-hp engine, but even that was driven off the market by the 150-hp "Hisso" conversion of another war-surplus trainer, the Standard Model J. Then Laird had the three-seat OX-5 field practically to himself.

The Swallow was kept in the headlines and sales were stimulated by good showings in the numerous air shows and races held in the early 1920s. There were closed-course races for OX-5 powered planes, where the principal competition was the clumsy Jenny, but there were also inter-city races in which the Swallow made consistently good showings. Approximately 40 Swallows were produced from 1920 into 1923, a respectable figure for costly new production in direct competition with cheap war-surplus.

By 1923, relations between Laird and Mollendick were no longer harmonious. The two agreed to a parting of their ways with Laird releasing his equity in the company for $1,500 in cash and two Swallows. He returned to Chicago, formed the E. M. Laird Airplane Co. and was back in business on his own.

The old Wichita company, meanwhile, was reorganized as the Swallow Airplane Manufacturing Co. with Mollendick as president. Chief Engineer Lloyd Stearman, who was then 25 years old, designed a new three-seater that owed much to the Laird Swallow, particularly its wooden fuselage, but featured new wings with a more up-to-date airfoil. Stearman also developed a new nose cowling for the trusty OX-5 that was to become the industry standard for most subsequent OX-5 and Hisso-powered designs.

This new design didn't have a formal model number; it was marketed simply as "The New Swallow." Thanks to its being just the right airplane at the right time, business was good. The surplus sources were exhausted and the ageing cheapies were rapidly wearing out and opening up a replacement market that could only be filled from new production. Stearman didn't like the idea of the old wood-frame fuselage for new airplanes but Mollendick insisted on it. Stearman and Vice-President/General Manager Walter Beech emphasized their dissatisfaction with that policy by quitting Swallow in late 1924, taking in Clyde Cessna as a partner, and forming the competing Travel Air Manufacturing Co. across town.

Mollendick stuck stubbornly to wood through 1926 but eventually surrendered to progress and allowed Lloyd Stearman's brother, Waverly, who was now chief engineer, to produce a steel-tube fuselage for the 1927 three-seat OX-5 market. This kept Swallow competitive with the other major producers in that field until the depression and the end of the cheap OX-5 supply arrived almost simultaneously. □