

■ For a model that saw such wide use, the Standard Model J is truly one of history's forgotten airplanes. Plagued initially by a poor powerplant, it lost its chance to earn a reputation in the gigantic World War I primary training program. In postwar civil use, it suffered from a similarity of appearance and designation to the better-known Curtiss JN-4 series—the immortal *Jenny*. The *Jenny* gave its name to the barnstorming era of 1920-26, and all too often any biplane of that period is now referred to as a *Jenny*.

Even its name worked against it. Since the manufacturer, Standard Aircraft Corporation, with plants at Elizabeth and Plainfield, N.J., folded up immediately after World War I and reappeared only briefly as New Standard in 1928-29, later generations who have had no direct contact with the airplanes have tended to regard the word "Standard" as an adjective, as in "standard equipment," rather than as a proper noun, the name of the manufacturer. Curtiss didn't help the situation here, either. In its advertising and on the cover of the JN handbook, Curtiss called the *Jenny* the "Curtiss Standard JN-4D Military Tractor." The *Jenny* was therefore a "Standard," while the real Standard was perpetually in the shadow of its famous contemporary.

The origins of the Standard J series predate the formation of the company of that name. Charles Healey Day, the designer, had worked with Glenn Martin in Southern California and had been instrumental in getting Martin to develop tractor-type airplanes rather than the contemporary pushers. Martin prospered when the Army decided to replace its rickety pusher-type trainers with the safer and more efficient tractors. With this experience behind him, Day left Martin to work with other firms. By May 1916, when Standard was formed, Day was chief designer for the Sloan Aircraft Company of New York City. The Standard J began with the Sloan Model H, a conventional two-seat trainer. Since Day elected to locate the front cockpit behind the center section struts instead of between them, it was necessary to sweep the wings back to balance the airplane properly. (This was the principal reason for sweep in the old days; its reappearance on jets since World War II is associated with airflow characteristics at near-sonic speeds and above.)

When it became evident that the United States would soon become involved in what was then called the European War, Standard was formed to cash in on anticipated military business. (It is not generally known that the major backer was a large Japanese firm.) With no designs of its own, Standard took over Sloan, thereby acquiring an established design that it was able to put into production for the U.S. Army and also acquiring the services of Day, who became a vice presi-

dent and chief engineer for the new firm.

The Sloan/Standard H was quickly followed by an improved model, the Standard J, initially identified as the SJ-1. This retained some of the sweepback of the H (which proved to be the principal point of distinction from the *Jenny*), but instead of having equal-span wings, it had more span on the upper, thereby increasing its resemblance to the *Jenny*. More distinctive features were the extra wheel, located ahead of the main wheels for the purpose of preventing student-pilot nose-overs, and the high column radiator instead of the nose or side radiators used by most contemporaries.

Actually, the SJ-1 was designed two and a half years after the first JN and is regarded by many as a superior airplane. Unfortunately, it didn't get a chance to prove it. The powerplant chosen was the four-cylinder Hall-Scott A-7A, which produced between 100 and 125 questionable horsepower. It was known that the 90 h.p. Curtiss OX-5 was a better engine, but, being built by Curtiss and used mainly in Curtiss airplanes, it was not available to Standard in practical quantities.

After the United States declared war in April 1917, Standard got more orders for the SJ-1 than it could handle, since it had other designs going by that time. Standard built 750, with initial deliveries to the Army starting in August 1917. Three other firms were given Army contracts to build SJs under license. Dayton-Wright built 400, Wright-Martin built 51, and the Fisher Body Division of General Motors built 400 of an initial order for 1,600. The total of SJs built, excluding a few minor variants for advanced training and airmail work, was 1,601, at costs ranging from \$6,000 to \$8,000.

The SJ-1 was a good airplane, but the Hall-Scott engine was the millstone that sank its military career. This powerplant was so troublesome, even catching fire in the air on occasion, that the Army grounded the Standards in 1918. The Army then tried other engines in the SJ-1, including the OX-5 and the 150 h.p., American-built Hispano-Suiza, or "Hisso" as it came to be called. However, since the demand for trainers could be met easily by speeding up the production of the Curtiss JNs, the Army decided that the task of converting the SJ-1 fleet to other powerplants was not worth the cost. As a result, many brand-new Standards sat out the rest of the war in their original shipping crates.

The direct postwar sale of large quantities of surplus airplanes to the public did not begin immediately after the Armistice, as it did after World War II. The situation was quite involved, but in general it seems that the Government was concerned about the harm that would befall the infant civil aircraft operations, then starting up, if



# Forgotten Fighters:

## The Standard J-1

J-1 role in World War I was clouded by an erratic engine, but as reconditioned surplus aircraft, with either OX-5 or Hisso engine substituted for the original Hall-Scott powerplant, the Standard became popular on the barnstorming circuit

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### SPECIFICATIONS AND PERFORMANCE (1919 Curtiss OX-5 conversion)

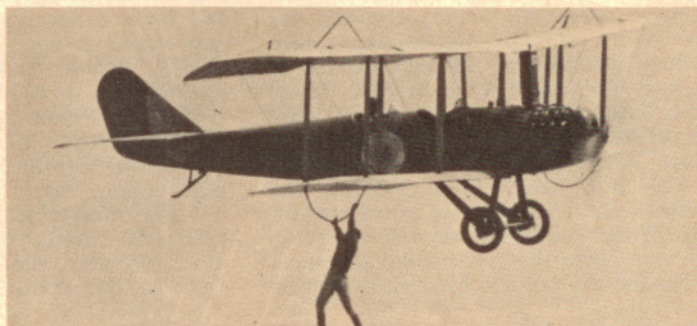
|                 |   |
|-----------------|---|
| Span            | 43 ft. 10 in. (upper)<br>31 ft. (lower) |
| Length          | 26 ft. 7 in.                            |
| Height          | 10 ft. 10 in.                           |
| Area            | 429 sq. ft.                             |
| Powerplant      | Curtiss OX-5,<br>90 h.p. @ 1400 r.p.m.  |
| Empty Weight    | 1,557 pounds                            |
| Gross Weight    | 2,070 lbs.                              |
| High Speed      | 69.5 m.p.h.                             |
| Landing Speed   | 39 m.p.h.                               |
| Climb           | 6,500 ft. in 38 min.<br>30 sec.         |
| Service Ceiling | 5,800 ft.                               |
| Range           | 235 miles                               |



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1. Standard SJ-1 primary trainer for the U.S. Army, photographed in 1917. Note the nose wheel and the vertical radiator above the four-cylinder, in-line, Hall-Scott A-7A engine.

U.S. Signal Corps Photo

2. Curtiss-Standard J-1 as rebuilt by Curtiss from World War I surplus. Note revised landing gear, Curtiss OX-5 engine, and Jenny nose radiator. This plane was assembled from parts as indicated by Army serial number 22677 on rudder and 22693 on fuselage.

Curtiss Photo

3. An OX-5 Standard, still with the vertical radiator, carrying aerialist Danny Grecco over Portland, Ore., in the early 1920s. Plenty of struts, the top-wing king posts and the lower wing skids made Standards and Jennies good planes for this sort of work. Note the amount of "down" right aileron necessary to balance the ship laterally. Danny, incidentally, is still active in aviation in the Portland area. Photo courtesy of Danny Grecco

4. Two-seat Lincoln-Standard with OX-5 engine, but original radiator, operating at Lambert Field, Mo., in 1927. Note absence of C or NC prefix to tail numbers, indicating an identified but unlicensed airplane.

Truman C. Weaver Collection

4.



come until 1920, when European governments tried to dump their own surplus models in the United States.

The identity problem of the Standard wasn't helped a bit by the fact that Curtiss bought quite a few SJ-1s from surplus along with its own *Jennies* and put them on the market as "Curtiss-Standards," complete with Curtiss trademark. These were fitted with new landing gear and new or rebuilt Curtiss OX-5 engines which Curtiss acquired by the thousands for approximately 13 cents on the dollar. Curtiss marketed the refurbished Standard, now called J-1, for prices starting at \$3,500. These soon started down, and then skidded dramatically. Fortunately, by being one of the first in the market, Curtiss was able to sell most of its reconditioned surplus planes before the prices dropped.

About the first thing the new civilian owner of a surplus Standard did, if it still had the Hall-Scott in it, was to pull that powerplant out and put in an OX-5 or Hisso. The name of the engine, then, became so important to the identification and worth of the airplane that it often became part of the name, as OX-5 Standard, Hisso Standard, etc. Some new owners retained the original tower-like radiator while others adopted *Jenny*-type nose radiators or even belly radiators.

One of the best known refurbishers of Standards, which became famous for that job alone, was the Lincoln Aircraft Corporation of Lincoln, Neb. Lincoln cleaned up the basic SJ, put in a 150 or 180 h.p. Hisso behind a new nose radiator, and expanded the front cockpit to four seats. These five-seaters were marketed as the Lincoln-Standard 5, or LS-5. Another refurbisher was Ryan Airlines of San Diego, Calif., which went Lincoln's four-passenger front cockpit one better by making it into an enclosed cabin. Some of the Ryan conversions, made primarily for use on its own Los Angeles-San Diego airline, gained extra lifting capacity by having the original short-span lower wing replaced by a longer upper wing to produce an equal-span biplane with three bays of interplane struts.

The Standards did everything the *Jennies* did on the postwar barnstorming circuit and did it as well or better. In addition to the spectacular air circus work and the famous passenger-hopping

out of pastures, the Standards were widely used in the established flying schools of the early and mid-1920s and were used to a degree by business firms. Curtiss even fitted a few with wings of entirely new design and new Curtiss C-6 engines and sold them to the Post Office Department as night mailplanes.

Standards also formed the principal equipment of the famous Gates Flying Circus. Incidentally, Ivan Gates teamed with Charles Healey Day in 1927 to form the Gates-Day Aircraft Corporation. This firm was soon renamed New Standard Aircraft Corporation, with plant at Paterson, N.J., but proved to be short-lived and an early victim of the depression.

The Standards, along with the *Jennies*, were still around in significant numbers at the start of the Lindbergh Boom. However, enforcement of the new airworthiness regulations, which became effective in January 1927, soon put the skids under those that were not already worn out. Some hung on for several more years, operating without licenses as "identified" aircraft (distinguished from the licensed types by the absence of the letters NC or C in front of their registration numbers). Since they were then available at junk prices, quite a few left the scene via the rather spectacular movie-crash route.

The movies and the postwar antique airplane boom have combined to bring a few of the Standards back. Dedicated antiquers have restored a few salvaged from old barns and are working on others. Two that have had wide public exposure through movies and TV are a pair built up in 1956 by old-timer Otto Timm for the late Paul Mantz to use in the barnstorming sequences in the movie "Spirit of St. Louis." Although regarded as new exhibition types by the FAA, these contain just enough original hardware for the antiquers to call them restorations. They have been seen again in such films as "Wings of Eagles," where they appeared as seaplanes; "It's a Mad, Mad, Mad, Mad World"; and, most recently, "Thoroughly Modern Millie."

With no identification in the films to guide them, many viewers commented on the funny-looking old airplanes, generally calling them *Jennies*. Even after 50 years, the poor Standard SJ-1 can't get out of the Curtiss shadow. □