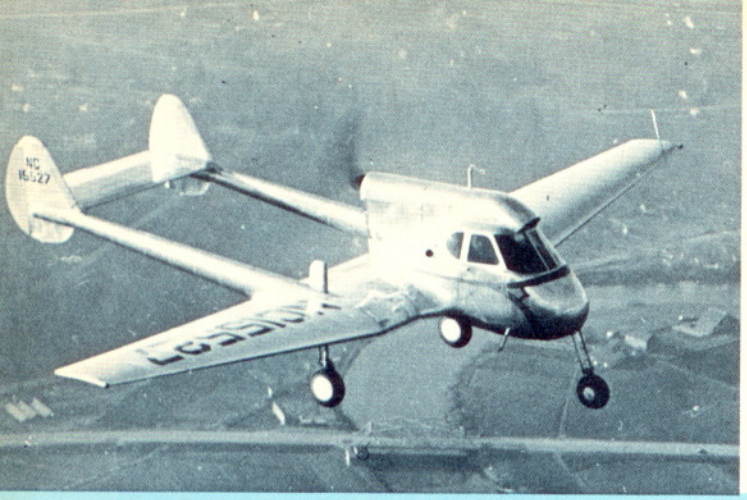

In-flight view of Stearman-Hammond shows twin tailbooms and housings for long-stroke oleos projecting above the wing


Stearman-Hammond Y-1S, with air scoop for inverted Menasco engine above windshield. Its advanced structural features included crimp-corrugated control surface skins which are the standard today

**YESTERDAY'S WINGS:**

# The Stearman-Hammond Y

*by PETER M. BOWERS • AOPA 55408*

*The Stearman-Hammond was a freak. Although it looked like a pre-World War I pusher, its tricycle landing gear and advanced structural features were years ahead of its time*

The Stearman-Hammond is one of those distinctive aircraft that didn't quite accomplish what it set out to do but still exerted a strong influence on subsequent designs.

The prototype, then known as the Hammond Y, was designed in 1934 for a U. S. Government program whose aim was to bring flying to everyone by developing a low-cost "foolproof" airplane for mass production. Target price was $700, low even at depression prices, but the only manufacturers that came at all close to this goal (double to triple) used converted automobile engines.

Although a completely new airplane, the Hammond went a long way back into aviation history to pick up safety features and other characteristics that had been common before World War I but which had been replaced when military requirements emphasized all-out performance over safety and easy flying. The military concepts got such a stranglehold on the industry that the monoplane almost disappeared and was able to begin a comeback only after six years of peace allowed some thinking along purely civil lines to have an effect on the industry.

Except for the modern equipment and the latest in all-metal cantilever construction, the production Hammond could have been something straight from 1912. It was a pusher, with a 125 h.p. Menasco C-4 engine replacing the original 95 h.p. model in a quiet location behind the two side-by-side occupants, which resulted in excellent visibility over the short nose. It had nicely streamlined twin tailbooms, and reintroduced the ground-stable tricycle landing gear.

The pusher and tailboom features did not catch on with the industry because of the fabrication problems of what were effectively two fuselages and some loss of propeller efficiency by cabin blanketing. The tricycle landing gear, however, a freak feature at the time to all but those who were up on their history, eventually became the world standard while the conventional wheels-in-front configuration became a relative rarity for new design.

One of the disadvantages of tailboom pushers in the old days had been damage to the propeller from gravel kicked up by the wheels. The Hammond solved this problem neatly by keeping the prop entirely above the wing and well forward of the trailing edge. In addition, the tricycle gear was fitted with extra-long-stroke oleos that allowed inexperienced pilots to drop the ship in from heights that would collapse ordinary undercarriages.

The Hammond was awarded approved type certificate 599 in 1936 and was put into production at the new Stearman-Hammond plant established in South San Francisco by Lloyd Stearman and Dean B. Hammond. The designation was now Stearman-Hammond Y-1 but was advertised as Y-125 and Y-150 when an improved 150 h.p. supercharged Menasco C-4S engine became available as an optional installation. When production standardized on the 150 h.p. version, it became Y-1S.

The advanced structural features, some of which like crimp-corrugated control surface skins are the standard today, combined with small-scale production to drive the cost far above that of contemporary two-seaters. A starting price of $5,500 just wasn't compatible with everyman's airplane. As a result, the pusher went out of production in 1938 after relatively few, including two JH-1 utility/target drones for the Navy, were built. The factory built sub-assemblies for other manufacturers during the Second World War.

It looked as though the design would get a new lease on life at the end of the war when Henry Kaiser stepped in and put a redesigned pod and more powerful engine on one of the prewar airframes. Nothing came of the venture, however, so the Y remained merely an interesting but significant memory. ●