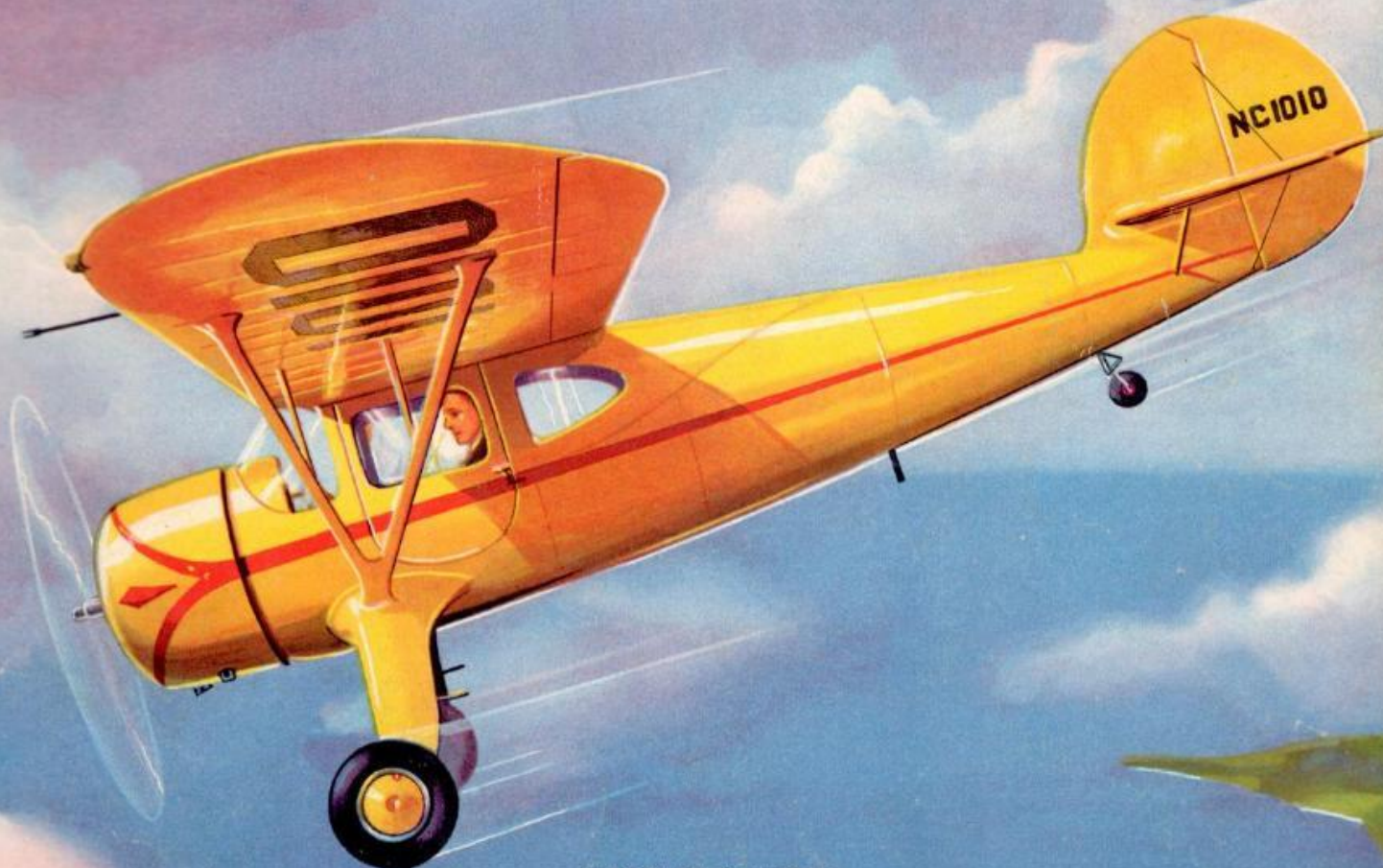


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POPULAR AVIATION

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LUSCOMBE PHANTOM

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HERMAN R.
Bollin

which, although cumbersome, awkward, space-filling and weight, is a very valuable safety aid.

A small, two-foot-square tunnel has been left open through the length of the fuselage and runs along the upper starboard side to the rear. Here we find Hank Jones, attired in much the same way as Jimmy, as far as outward appearance. However, Hank's conservatism will probably express itself in a dark blue serge suit, tie of dark hue, dark socks and black oxfords.

In his tiny office situated just to the rear of the cabin door he will have about two inches all over in which to move around. Hank stood nervously by the cabin door during the final installations at Grand Central Air Terminal in Glendale and groaned aloud as each item was carried through it. Each piece of equipment meant less comfort for him. As a matter of fact, his seat is the toilet cover which gives you a graphic conception of the crampedness of his quarters.

To his right is the sending key and radio telephone with which he will spend much of his time letting an anxious world know of their progress. On his left is the trailing antenna reel and direction finding loop rotating handle. Up above is the automatic course plotter recently developed. A small panel folds down from against the huge gas tank in front of him and on it are pasted his valuable maps and plotted courses with which he plans to hit Moscow with a fraction of an error.

Above his head is a hatch. This opens down and inward into his compartment, a precaution realized necessary after hatches have blown off, crashed into tail surfaces and ruined many a record breaking flight. A small, retractable wind shield is just forward of this hatch. This can be raised and locked to protect him from the biting winds of the Polar areas.

To his right are the refueling ports with a small locking plate protecting them. Through this opening he will take his sights and obtain bearings. Of interest is the fact that he will use the same sextant Harold Gatty used so successfully on the famous Post-Gatty round-the-world flight. He will have the sun throughout the trip, our night being broad daylight near the Arctic regions at this time of the year.

Also through this hatch he will grasp the refueling hose lowered to him, place it in the tank lines and signal for the transfer. During this operation he will wear a large rubber covering on both his body and face to prevent painful burns from the high-octane gas should it blow on him either during or after the contact. Through this port, every one of the ten tanks throughout the ship can be filled at once. All radio receiving and sending antennas as well as the direction finding loop are located below the ship to prevent their being knocked off by the swinging refueling hose. There are no masts or projections of any type on the top of the ship.

This will be routine operation for Jimmie Mattern and Hank Jones for both

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Our Front Cover: The Luscombe Phantom



Though not so widely known as many other American aircraft, the Luscombe Phantom is one of the outstanding sport planes today. With a Warner engine, this ship sells for \$5,500.

HAVING devised a new system of economical construction for airplanes, Don Luscombe left the Monocoupe company where he was president and chief engineer, and formed the Luscombe Airplane Corporation at West Trenton, New Jersey. Since that time, the Luscombe company has produced several versions of Mr. Luscombe's original design, the Phantom.

Though not so widely popular in American aviation circles as other sport aircraft, the Luscombe Phantom is one of the most outstanding ships in its field today. All metal and extremely rugged, the Phantom is powered with a 145 h.p. Warner engine that gives it a top speed of 160 m.p.h. at sea level. Possibly if an adjustable-pitch propeller were used (standard Luscombe practice is to install a one-piece fixed-pitch metal propeller) that performance probably could be increased.

With the exception of a somewhat novel tail assembly, the Phantom very closely resembles the Monocoupe. However, the new Luscombe system of construction consists of that company's restricting itself to the assembling of parts manufactured by outside firms that specialize in their manufacture. The company prepares the original design, then the dies, moulds and formers are then built up for the stamping companies to make the necessary parts

from. These stampings then are returned to the Luscombe factory, where they are heat treated and assembled. According to Mr. Luscombe, this system keeps production costs down to a minimum.

The Phantom is a conventional two-place (side-by-side) high-winged cabin monoplane. The wings are all metal with fabric coverings as are the tail surfaces. The remainder of the ship is covered with metal. The fuselage is monocoque, somewhat like Lockheed design.

Cruising range of the Phantom is 560 miles. The Warner engine burns nine gallons per hour; total gas capacity of the ship is 33 gals. Cruising speed at sea level is 144 m.p.h., while stalling speed is 45 m.p.h. Also at sea level, the ship's rate of climb is 1,400 f.p.m. The service ceiling is 19,500 ft. With a payload of 630 lbs., the Phantom fully loaded weighs 1,950 lbs.

Wing span is 31 ft., overall length is 21 ft. and the height is 8 ft. 6 in. Total wing area, including the ailerons, is 143 sq. ft. The ship's 72 in. landing gear tread gives it excellent stability on the ground. This ship is also equipped with flaps. The Phantom also is licensed as a seaplane.

Meanwhile, it is reported that the Luscombe company soon will turn out a 90 h.p. ship much like the Phantom.



It is quite evident from the general design of the Phantom that Don Luscombe once was a Monocoupe designer and official. The Phantom, however, is bigger and also is all-metal.