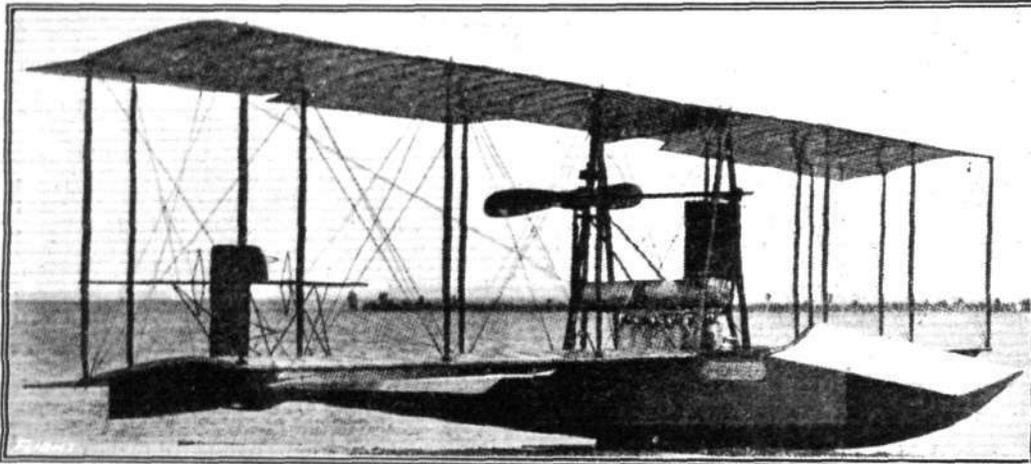


## THE 1915 BENOIST FLYING BOATS.

THE flying boats manufactured by the Benoist Aeroplane Co. of Chicago, Ill., are among the few—at one time the only—craft of this type in which the motor is mounted in the hull. A low centre of gravity is thus obtained, and the craft is thereby made as seaworthy as is possible, and good stability in the water is as essential as good stability in the air. It is generally accepted, however,

bottom, as before, it is now half way up in the hull, so that it is almost level with the lower plane. Here is, therefore, a compromise between the engine-in-the-hull type and the engine-between-planes type, and the arrangement appears to have given very good results. Another modification is to be found in the boat, which now has a roomier cockpit, and in place of the



Three-quarter front view of the 75 h.p. Benoist flying boat.

that a low centre of gravity in an aeroplane is not always a desirable factor where stability in the air is concerned, so it will be seen that it is a somewhat difficult proposition to so design the craft that the advantage of one condition is not to be outweighed by the disadvantage of the other. That the designer of the Benoist flying boat succeeded in surmounting this difficulty is borne out by the fact that the first machines to be built at once made a name for themselves on the score of good stability, both in the water and in the air. Many notable performances are to their credit, especially the first regular daily passenger air service between St. Petersburg and Tampa, Fla., a distance of

canvas hood over the latter there is an inverted V-shaped deck. The boat is of the single step type, very wide and deep forward, tapering to a point at the stern. The bottom is perfectly flat laterally throughout, and curves up from the step to the bow. Aft of the planes the boat has an inverted V deck, which has the advantage of allowing the water to flow off easily in the event of the waves breaking over the hull. This, and the ample free-board forward, renders the boat exceptionally seaworthy. The step is 5 ins. deep, and is situated some distance behind the centre of pressure, 10 ft. 6 ins. from the bow. From the nose to the step the hull is built up of two layers of  $\frac{1}{4}$  in. spruce planks, having a



Three-quarter rear view of the 1915 75 h.p. Benoist flying boat.

about 20 miles across Old Tampa Bay, which was started on January 1st last year.

The 1915 Benoist machines differ from the previous models only in a few details, the most important of which is the location of the engine. This is still placed in the hull, but instead of being mounted on the

layer of canvas set in between, whilst aft of the step it is constructed of single  $\frac{3}{8}$  in. spruce planks, which are reinforced inside at the seams with spruce battens. Spruce planking  $\frac{3}{8}$  in. thick, laid in the same manner, forms the sides, and the upper portions are covered with mahogany. The framework consists of spruce longitudinals and ribs,