

Changes of Apparatus.

1. The outrigger-floats used in experiments Aug. 19, and in the earlier trials were 108 cm long, 10.5 wide, and 21 deep. Each weighed 2 1/2 lbs., and had an estimated maximum displacement of about 30 lbs. It was thought that the resistance to upsetting could be improved, without detriment to speed, by lengthening the floats without materially increasing their width or depth.

New floats were therefore made, which were 183 cm long, 13 wide, and 20 deep. Each weighs 6 lbs., and has a maximum displacement estimated at about 64 lbs. Both the new and the old pairs of floats are shown in a photograph in this Bulletin.

2. The upsetting tendency has been favored by the high position of the center of gravity, resulting from the necessity of placing the engine at a considerable elevation above the boat hull in order to allow the propeller to clear the hull, the propeller being driven directly from the engine-shaft.

It is hoped to diminish this tendency by lowering the position of the engine and using an indirect drive. The engine will be placed as near the hull as practicable and will work the propeller indirectly by a chain and sprocket wheel. The chain and sprocket wheels to be used arrived from Hammondsport Aug. 27.

3. In the earlier experiments with the Dhenas Beag the outrigger-truss was placed in front of the engine-bed, and Mr. Baldwin used it as a seat.

Thinking, however, that the weak hull might be subjected to twisting strains by swinging motions of the elevated engine,