

W. H. WOLCOTT.
MOTOR BOAT.
APPLICATION FILED SEPT. 30, 1914.

1,154,471.

Patented Sept. 21, 1915.

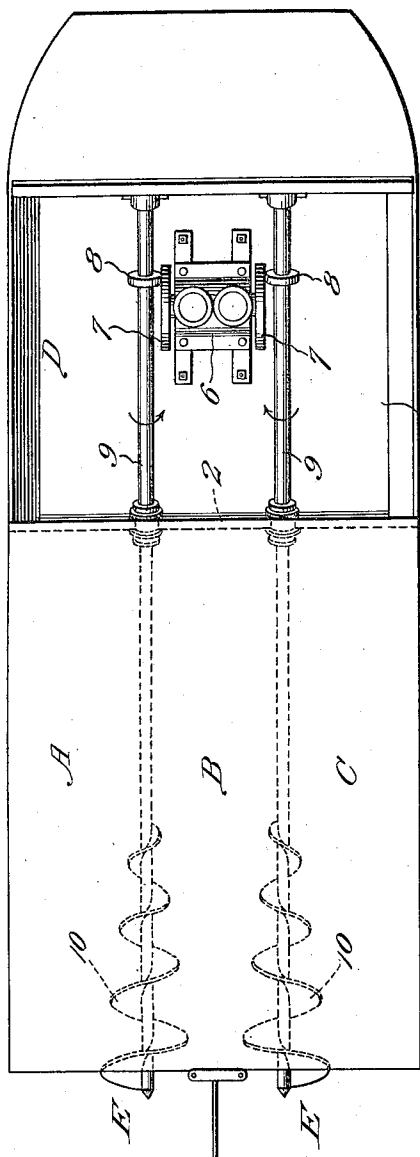


Fig. 1.

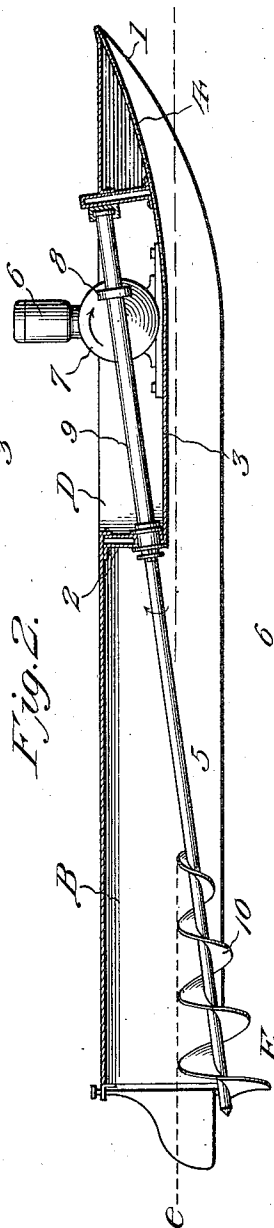


Fig. 2.

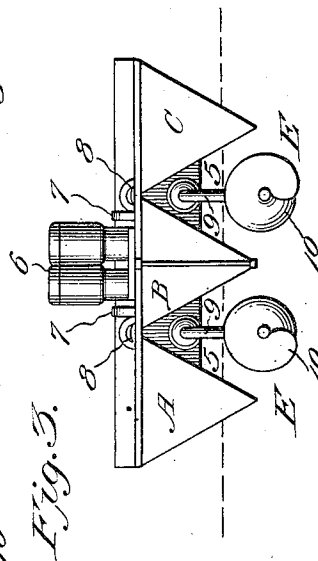


Fig. 3.

Witnesses

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MOTOR-BOAT.

1,154,471.

Specification of Letters Patent.

Patented Sept. 21, 1915.

Application filed September 30, 1914. Serial No. 864,305.

To all whom it may concern:

Be it known that I, WILLIAM H. WOLCOTT, a citizen of the United States, residing at Heisson, in the county of Clarke and State of Washington, have invented new and useful Improvements in Motor-Boats, of which the following is a specification.

This invention relates to motor boats and particularly to the propelling mechanism thereof, the object in view being to produce a special combination of hull and propeller whereby an unusually speedy water craft is obtained and a greater purchase or hold on the water is effected, at the same time reducing the strain on the blade or blades of the propeller or propellers.

With the above and other objects in view, the invention consists in the novel construction, combination and arrangements of parts, as herein described, illustrated and claimed.

In the accompanying drawings, Figure 1 is a plan view of a motor boat embodying the present invention. Fig. 2 is a vertical longitudinal section through the same. Fig. 3 is a rear elevation of the boat.

In carrying out the present invention, I produce a hull which as illustrated in the drawings, and in the preferred embodiment thereof, comprises a plurality of water-tight floats A, B and C arranged in parallel relation to each other as shown in Fig. 1 and substantially V-shaped in cross section as indicated in Fig. 3, each of said floats sloping upwardly toward the bow as indicated at 1 in Fig. 2, thereby enabling the said floats to cut their way through the water with a minimum resistance, this being particularly effective when rough water or waves are encountered.

The floats A, B and C are connected at their forward extremities by an engine cock pit D embodying a rear bulk head 2 and a bottom or floor 3 the forward portion 4 of which slopes upwardly toward the bow and together with the remainder of the floor constitutes a hydroplane surface which adapts the boat to mount the water and skim along the surface thereof when the craft as a whole is driven ahead at high speed, in which case the forward upwardly sloping portions of the floats A, B and C assist in such operation, the tendency being to still further reduce the displacement of the craft as the speed thereof is increased.

The cock pit D extends across between

and connects the floats A, B and C as indicated in Fig. 3 and leaves parallel tunnels 5 for twin screw propellers one of which is indicated generally at E. In the cock pit D is mounted an engine 6 which is shown as of the ordinary internal combustion type, the shaft thereof being provided with a friction disk 7 which drives against the periphery of another friction disk 8 fast on the propeller shaft 9 of one of the propellers. It will be understood that the friction driving members hereinabove referred to are duplicated for each of the shafts 9, two of such shafts and propellers being illustrated in the drawings.

On each of the propeller shafts 9 is mounted one of the propellers E which it will be observed gradually increases in diameter from its forward to its rear end. Each propeller embodies one or more spiral blades or fins 10 extending around the same, the convolutions of said blade progressively increasing in diameter from front to rear. Furthermore, under the preferred embodiment of this invention, the increasing diameter of the convolutions of the propelling blade are so proportioned to the inclination of the propeller shaft 9 that the extreme top points of said convolutions lie in a substantially horizontal plane indicated by the dotted line *e* in Fig. 2, said plane being substantially parallel to the surface of the water when the craft is traveling at full speed. By reason of the inclination of the propeller shafts 9 and the specified arrangement of the convolutions of the spiral blades of the propellers, there is a constant tendency on the part of the propellers to lift the stern of the water craft and prevent squatting thereof as is now common in almost all types of motor boats, detracting materially from the speed thereof. It is also preferred to construct the blades 10 of the propellers with concaved rear faces. Traveling at a high rate of speed, the V-shaped floats slide easily through the water after the manner of sleigh runners and easily cut through small waves where a flat bottom float or hull would tend to rise from the water and interfere seriously with the controls. The propeller is so designed that instead of throwing the water off in every direction by centrifugal action, it tends to hold the water within itself and force the same rearwardly, the spiral convolutions at the forward or smaller end of the propeller acting to catch

only a small portion of water initially and each succeeding spiral convolution engaging more and more water, thereby reducing the strain on the larger or rear end of the propeller, the strain being equally borne and distributed along the entire length of the propeller.

What I claim is:—

In a motor boat, the combination of a boat hull shaped to form a plurality of tunnels extending in a fore and aft direction, steps at the forward ends of said tunnels,

propelling means comprising an engine located forward of said steps, a plurality of rearwardly sloping propeller shafts passing through said steps, and a propeller working in each of said tunnels. 15

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. WOLCOTT.

Witnesses:

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