H. B. PROSSER.

BOAT.

APPLICATION FILED JULY 22, 1912.

1,075,726.

Patented Oct. 14, 1913.

2 SHEETS—SHEET 1.

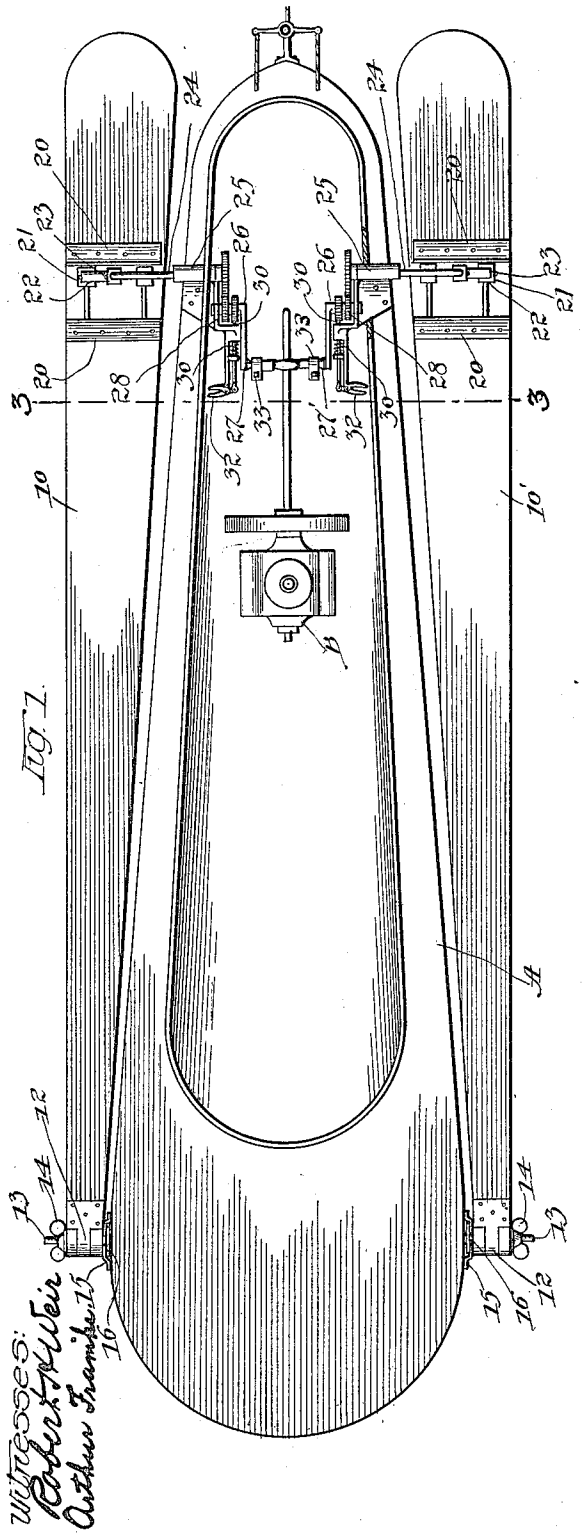


Fig. 1.

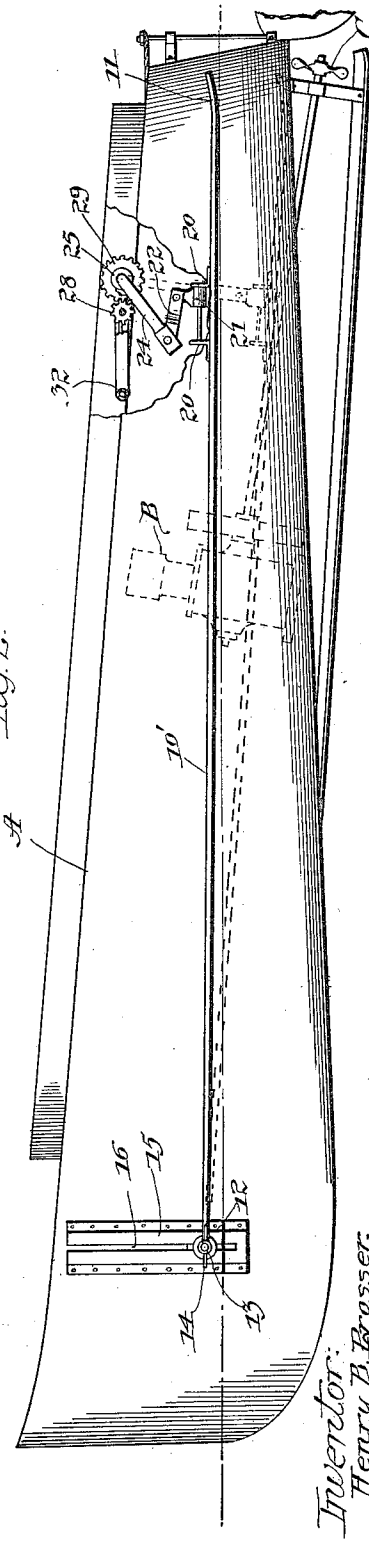


Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 3.

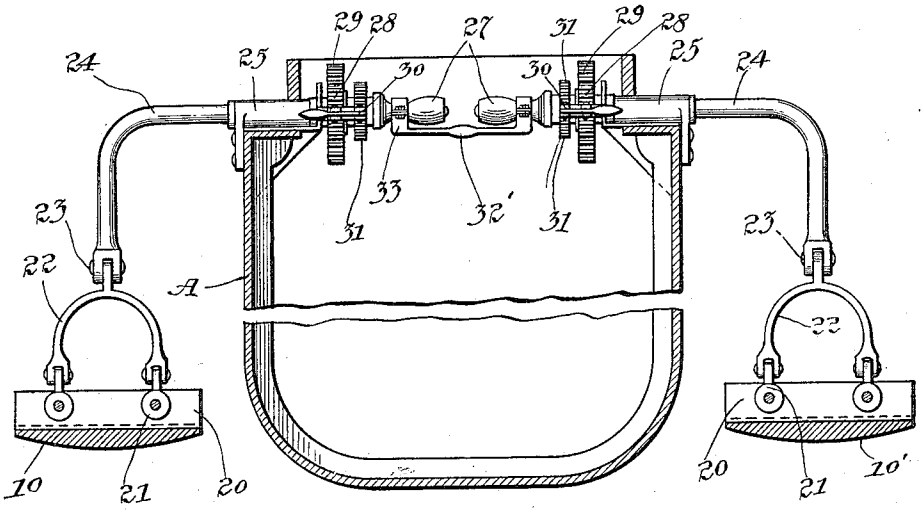


Fig. 4.

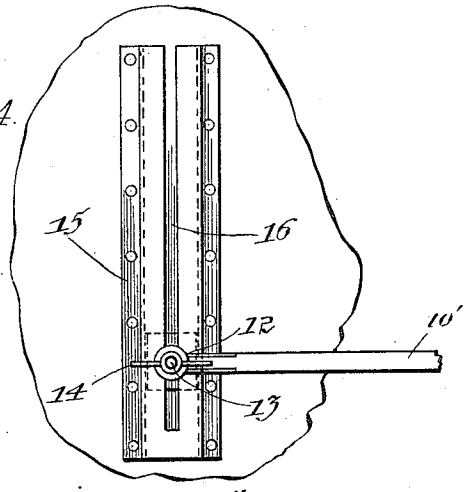
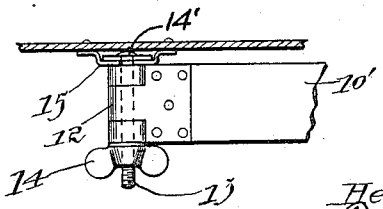


Fig. 5.



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HENRY B. PROSSER, OF CHICAGO, ILLINOIS.

BOAT.

1,075,726. Specification of Letters Patent. Patented Oct. 14, 1913.

Application filed July 22, 1912. Serial No. 710,373.

To all whom it may concern:

Be it known that I, HENRY B. PROSSER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Boats, of which the following is a specification.

My invention relates to improvements in boats and has for its general object to provide a hydroplane attachment for power boats which is of simple, cheap construction, readily applied, easily manipulated, and effective in increasing the speed and stability of the craft.

In the drawings I have shown my invention embodied in connection with a small power boat, with the planes arranged for hand operation in an organization available for control by a single occupant of the boat.

Figure 1 is a plan view of a boat so equipped with my invention; Fig. 2 is a side elevation thereof; Fig. 3 is a transverse section on line 3—3 of Fig. 1; and Figs. 4 and 5 are details of the bow-end attaching device.

In the embodiment of my invention shown A indicates in general the hull of a power boat provided with the engine B and the propeller C, the latter located, as is customary practice, well below the water line at the stern of the boat.

On opposite sides of the boat I provide planes 10—10′ which are preferably exact duplicates in construction, so that I will describe but one of them.

The plane 10 is preferably tapered, increasing gradually in width from its bow-end to its stern end, and it extends, preferably, from a point near the bow of the boat to a point about in lateral alinement with the stern, the plane being preferably slightly convexed transversely on its under surface and slightly upturned as at 11 at its stern end, where it terminates in a suitable curve, preferably, approximating a semi-circle in plan.

The front end of the plane is adapted for pivotal attachment to the bow portion of the boat, and is preferably vertically adjustable as to its point of attachment. For this reason I preferably provide the forward extremity of the plane with a hinge member 12 mounted on a pintle 13, bearing on one end a head 14′ and on its other end an adjustable wing-nut 14. The head 14′ is slidably mounted in the guide way 15 secured to the bow of the boat and having an open slot 16 through which the pintle 13 extends, so that the pintle may be preliminarily adjusted to any desired height and then the device may be clamped in place by the tightening of the nut 14 as shown in Figs. 4 and 5 of the drawings.

At its rear end each plane is connected with the stern portion of the boat for working adjustment to different vertical positions, means preferably being provided whereby both planes may be simultaneously adjusted or either thereof may independently be adjusted. In the construction shown as a simple means for providing such vertical displacement of the rear end of each plane I provide on the plane a transverse block 20 having secured thereto a pair of shackles 21 to which is pivotally connected a yoke 22 pivoted as at 23 to the depending arm of a rock shaft 24 which extends inboard and is mounted in a suitable bearing 25 attached to the side of the boat near its stern. The bracket 25 bears at its inboard end a stub-shaft 26 to which is secured a hand crank 27 and a pinion 28 meshing with the gear 29 mounted on the horizontal arm of rock shaft 24 so that obviously by rotating the crank 27 the gear 29 may be oscillated and shaft 24 rocked. A spring pressed pawl 30 coacts with a toothed plate 31 secured to bracket 25, to hold the crank in any adjusted position except when released by a trigger 32 which is associated with the crank handle 27, so that the trigger may readily be operated when the crank handle is grasped. In order that the two cranks may be easily operated in unison I provide a detachable member 32′ provided at opposite extremities with clamps 33 for embracing the crank handles 27, 27′, thereby to connect them together.

In the operation of the device the bow-end of each plane should preliminarily be adjusted to a suitable elevation slightly above the water line of the craft, and when the boat is at rest the stern end of the planes should be given such working adjustment as just to rest upon the surface of the water. When the boat is started the action of the propeller driving the water from beneath the stern of the boat causes the stern to tend to settle, which action is resisted by the planes. The planes may be given such manual adjustment at their stern ends as is just sufficient to overcome, at the speed at-

tained the tendency of the boat stern to settle, thereby enabling such balance of the craft to be maintained as will secure its propulsion at highest speed attainable under the working conditions of the engine. Obviously the planes give stability to the craft but may be lifted to clear the water when their use is deemed undesirable. Also, by working the two planes individually the boat may be kept on even keel, or listed to starboard or port as occasion may require.

What I claim is:

1. The combination with a power boat hull, of hydroplanes generally parallel with said hull and on opposite sides thereof, pivotally connected at their front ends at points on the bow-end of the hull above the water-line thereof, and means for vertically adjusting the rear ends of said planes with respect to the hull varying distances below or above said water-line.

2. The combination with a power boat hull of a pair of longitudinal hydroplanes each pivotally connected with the hull above the water line at its bow-end, independently movable members connected with the hull acting on the rear ends of the plates to depress either of them below the water line, and a part associated therewith movable to depress both in unison.

3. The combination with a power boat hull of a pair of hydroplanes pivotally secured to the sides of the hull at their front ends and having their rear ends free for vertical displacement, a bracket for each hydroplane adapted to be carried by the adjacent edge of the hull and adapted to carry an operating means for the respective hydroplane, and a manually operable means carried by each of said two brackets for operation of that hydroplane which is associated with the respective bracket.

4. The combination with a power boat hull of a pair of hydroplanes, one on each side of said hull extending from near the bow of the boat to approximately the stern of the hull each said plane being arranged for vertical displacement of the rear end, means to move each plane for vertically displacing its stern end, and means for effecting preliminary adjustment of the front ends of the planes to different heights with respect to the hull.

5. The combination of a power boat hull tapering from its bow to its stern, hydroplanes pivoted to the sides of said hull near its bow at points above the water-line thereof, the inner edges of said hydroplanes inclining inwardly similarly to the taper of the hull, and the outer edges being substantially parallel, and means near the rear ends of said planes for varying the inclination thereof with respect to the hull.

6. The combination of a hull, a hydroplane for each side thereof, pivoted thereto near its bow, and means to vary the inclination of either or of both of said hydroplanes including a bracket on the edge of each side of the hull, a ratchet and pawl carried by each bracket, and means to disengage and engage each ratchet and pawl for movement of each hydroplane to any position determined by the teeth of the ratchet, and means for connection of said disengaging and engaging means for the two ratchets and pawls for movement thereof in unison to move both hydroplanes to any position determined by the teeth of their ratchets.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

HENRY B. PROSSER.

In the presence of—
FORÉE BAIN,
MARY F. ALLEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."