

(No Model.)

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VESSEL.

No. 551,843.

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Fig. 1.

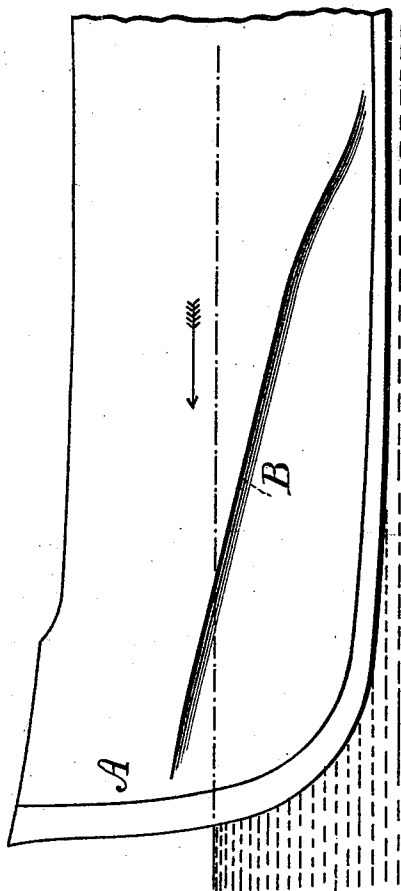


Fig. 2.

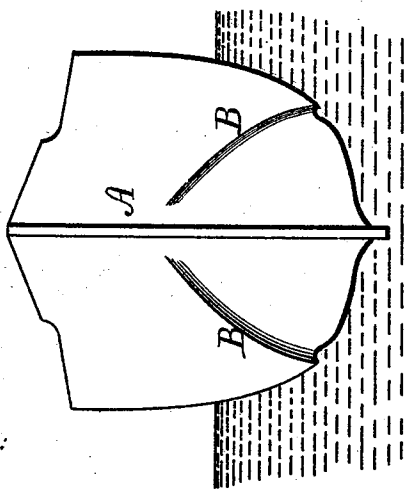


Fig. 4.

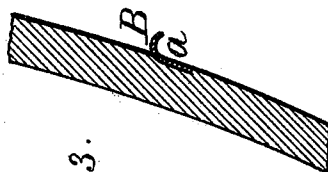
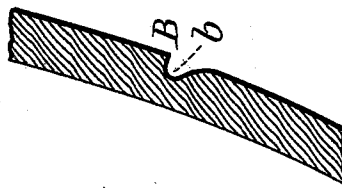


Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

HERBERT WYCHERLEY, OF PARKVILLE, AND JOHN W. BARLOW, OF
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SPECIFICATION forming part of Letters Patent No. 551,843, dated December 24, 1895.

Application filed June 14, 1894. Renewed May 17, 1895. Serial No. 549,707. (No model.)

To all whom it may concern:

Be it known that we, HERBERT WYCHERLEY, residing at Parkville, and JOHN WILTON BARLOW, residing at Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Vessels, of which the following is a specification.

In the propulsion of vessels the power is usually exerted horizontally and hence the bow of the vessel only rises upon the water according to the contour or lines of the vessel, and in many instances the accumulation of water at the bow seriously impedes the progress of the vessel.

The object of our present improvement is to cause the propelling power of the vessel to lessen the draft at the bow as much as possible, so that the vessel's bow tends to rise in the water instead of simply plowing through it. With this object in view we provide at the bow of the vessel downwardly-inclined lifters either in the form of channels in the vessel itself or flanges projecting from the surface, such downwardly-inclined lifters being preferably increasing curves and dying away below the body of the vessel so as to cause the forward propelling movement of the vessel to lift the bow to a greater or less extent so that the vessel rides more easily over the waves and at the same time a downward pressure is exerted upon the water, causing the same to pass under the vessel and tend to lift the same, thereby lessening the displacement or increasing the buoyancy of the vessel.

In the drawings, Figure 1 is a side view illustrating the present improvement, and Fig. 2 is an elevation of the bow. Figs. 3 and 4 are cross-sections through the inclined lifters.

The vessel may be of any desired contour, and commencing at the bow A and running backwardly at each side thereof are the inclined lifters B, which may be curved downwardly at an increasing curvature. These inclined lifters may be in the form of flanges projecting from and riveted to the vessel, as

at a, where the vessel is of iron, or they may be in the form of channels b cut in the surface of the vessel and dying away gradually downwardly. In either instance the horizontal and forward propulsion of the vessel causes the flanges or lifters to press against and tend to ride over the water, thereby exerting a lifting action upon the bow of the vessel, and the water is pressed downwardly by the lifters and the quantity passing below the bottom of the vessel is increased, and there is a tendency to lessen the displacement of the vessel according to the extent of surface presented by the lifting-flanges to the water as the vessel passes along through the water, and such flanges come in contact with the water in its stationary condition, and the inertia of the water is availed of in tending to elevate the bow of the vessel, as aforesaid.

We are aware that grooves have been provided for the surface of the boat and that in clinker-built vessels there are edges or shoulders running from end to end of the boat and inclined. In these cases however the grooves or shoulders at the back of the boat act in the reverse manner to those at the front and neutralize any lifting effect that might be produced at the bow.

We claim as our invention—

1. The vessel having downwardly inclined lifters at each side of the bow only to act only upon the water as it is parted by the bow to elevate said bow, as set forth.

2. The vessel having channels in its surface forming downwardly inclined and curved lifters at each side of the bow only to act only on the water as it is parted by the bow to elevate the bow of the vessel by the movement through the water, as set forth.

Signed by us this 11th day of June, 1894.

HERBERT WYCHERLEY.

J. W. BARLOW.

Witnesses:

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