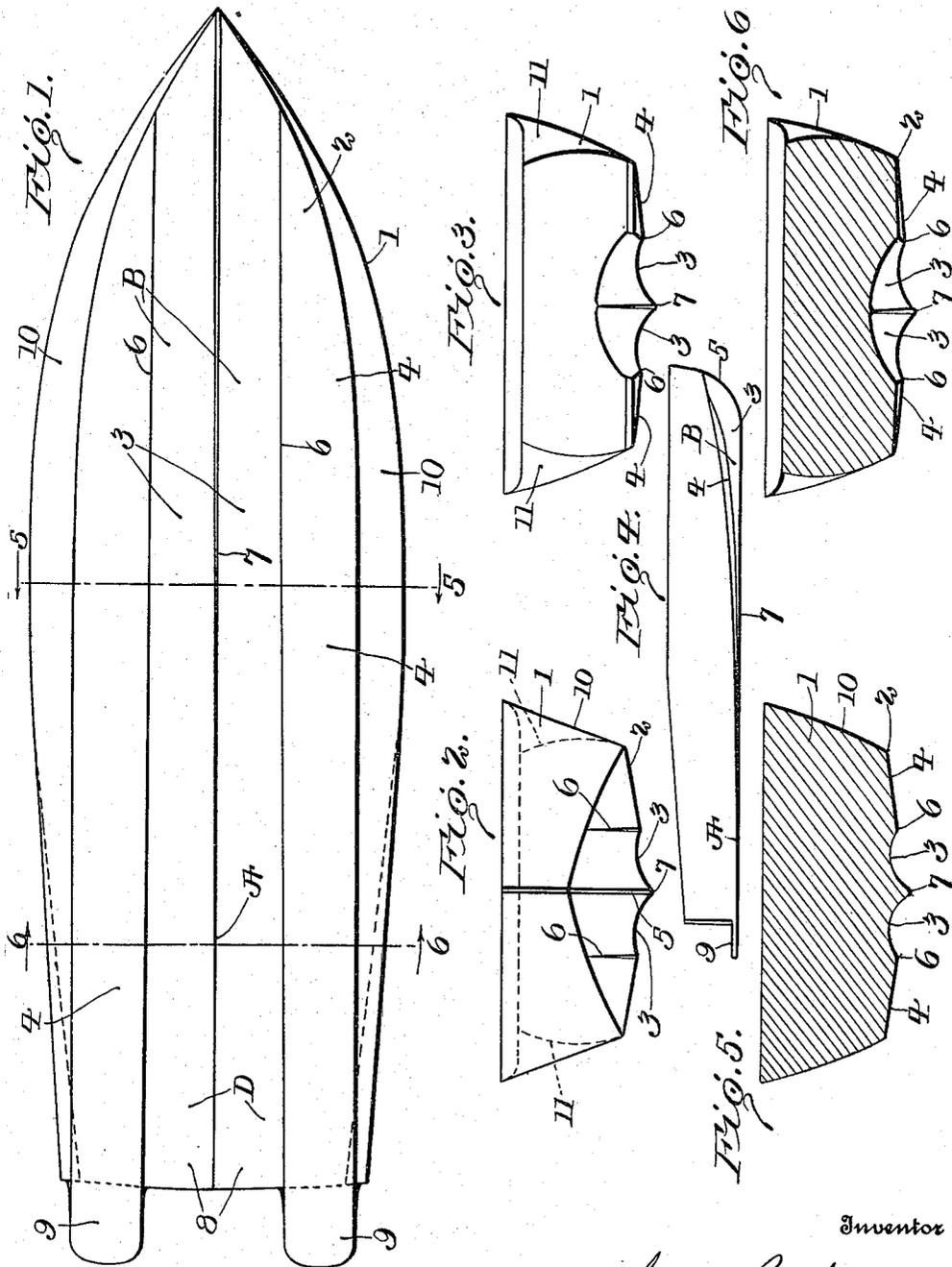


1,176,446.

Patented Mar. 21, 1916.



Witnesses  
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384

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# UNITED STATES PATENT OFFICE.

THOMAS B. HAYMAN, OF ELIZABETH CITY, NORTH CAROLINA.

## MOTOR-BOAT.

1,176,446.

Specification of Letters Patent.

Patented Mar. 21, 1916.

Application filed September 10, 1915. Serial No. 49,893.

*To all whom it may concern:*

Be it known that I, THOMAS B. HAYMAN, a citizen of the United States, residing at Elizabeth City, Pasquotank county, and State of North Carolina, have invented and discovered certain new and useful Improvements in Motor-Boats, of which the following is a specification.

The present invention relates to water craft of the motor boat type and consists in the combinations and arrangements of parts hereinafter described and particularly set forth in the accompanying claims.

The invention has for its purpose to provide a high speed motor boat constructed in a manner which will insure its running on an even keel at all times, thereby avoiding the pronounced and undesirable feature of sinking or settling at the stern which is characteristic of present known motor boats. And it further includes features which will minimize all tendency to listing or capsizing and which will reduce vibration from the shock of the water when running at high speed.

The invention is shown by way of illustration in the accompanying drawings, wherein—

Figure 1 is a plan view of the bottom of the boat, Fig. 2 a front end elevation thereof, Fig. 3 an elevation at the stern, Fig. 4 a side elevational view, Fig. 5 a transverse sectional view taken on the line 5—5 of Fig. 1, and looking toward the stern, and Fig. 6 a similar view taken on the line 6—6 of Fig. 1, and looking toward the bow.

Referring to the construction in further detail, the hull 1 has the bottom 2 thereof divided longitudinally into four divisions of equal width and which extend for the full length of the boat, as shown in Fig. 1; and said divisions form channel-ways 3 of varying depth and flat surfaces 4 of changing pitch or angularity.

The channel-ways 3 begin at the bow 5 forming an acute V and running toward the stern the marginal edges 6 thereof are gradually lowered and the inner or dividing edge 7 is gradually raised until at the point A, or substantially a distance of five-sixths of the boat's length, where the two channels merge into a single channel-way 8 that extends to the stern. The dividing edge 7 thus forms a keel of decreasing depth toward the stern and thereby serves to keep the boat on an even bottom when running at high speed.

The arc of the channel 8 (see Fig. 3) at the stern is in area the same as the combined areas in cross-section of the two channel-ways 3 up to substantially the point B, and thus the two columns or pillows of water, over which the two channels 3 travel, merge into a single column or pillow at the stern, and inasmuch as this volume of water is constant for all running speeds of the boat, the tendency to drag, due to excessive friction, is avoided, and there is, further, no creation of a vacuum or cavitation at the stern.

The two bottom and side surfaces 4 are each disposed at an angle of approximately seventeen and one-half degrees adjacent the bow 5, *i. e.* at about the position B, where they gradually merge into the contour of the channel-ways 3, thus giving a rounded or symmetrical prow. From the point B toward the stern, the two surfaces 4 gradually approach the horizontal and, at the point D just in advance of the stern, are both truly horizontal and terminate with a pair of rearwardly projecting blades 9. Said blades, together with the horizontal portions of the surfaces 4, exert a buoyant or lifting effect on the hull of a high degree and this tendency to keep the stern elevated or normal, *i. e.* against settling, is directly proportional to the running speed of the boat. The forward or upwardly inclined portions of the two surfaces 4 tend to keep the boat from listing when running at high speed or when the ballast is uneven. And these elements, together with the channels or trough features already referred to, cooperate to maintain the boat on an even keel at all times and thereby minimize the tendency to capsizing when turning at high speed.

The sides 10 of the hull are outwardly inclined toward the bow end and at the stern are rounded inwardly as at 11, but no particular claim is made to these details since the novel features reside wholly in the construction of the bottom as herein disclosed.

It is obvious that those skilled in the art may vary the details of construction and arrangement of parts without departing from the spirit of the invention, and therefore I do not wish to be limited to such features except as may be required by the claims.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent is:

1. A water craft, the bottom of which is formed with a pair of channel-ways extend-

ing from the bow to the stern and merging into a single channel-way at the stern and a pair of buoyant surfaces disposed on either side of said channel-ways, said buoyant surfaces being equal in width to said channel-ways for substantially the full length of the boat, substantially as set forth.

2. A water craft, the bottom of which is formed with a pair of channel-ways extending from the bow to the stern and merging into a single channel-way at the stern and with a pair of buoyant surfaces disposed to either side of said channel-ways, said buoyant surfaces being of variable angularity and disposed truly horizontal at the stern, substantially as set forth.

3. A water craft, the bottom of which is formed with a pair of channel-ways extending from the bow to the stern and merging into a single channel-way at the stern and with a pair of buoyant surfaces disposed to either side of said channel-ways, said buoyant surfaces being of variable angularity and disposed truly horizontal at the stern, and said horizontal portions terminating with a pair of blades projecting horizontally and rearwardly of the stern to prevent settling of the stern when running at high speed, substantially as set forth.

4. A water craft, the bottom of which is divided longitudinally into four divisions running the length of the craft, the inner pair of said divisions being channel-ways whose respective outer edges are of increasing depth toward the stern and whose inner

or dividing edge is of decreasing depth to a point near the stern where both channel-ways merge into a single channel; and the outer pair of said divisions being flat buoyant surfaces disposed in relative angular relation from the bow to a point near the stern where both surfaces are horizontal and in the same plane, substantially as set forth.

5. A water craft, the bottom of which is divided longitudinally into four divisions running the length of the craft, the inner pair of said divisions being channel-ways whose respective outer edges are of increasing depth toward the stern and whose inner or dividing edge is of decreasing depth to a point near the stern where both channel-ways merge into a single channel; and the outer pair of said divisions being flat buoyant surfaces disposed in relative angular relation from the bow to a point near the stern where both surfaces are horizontal and in the same plane, and said horizontal surfaces terminating with a pair of blades projecting horizontally and rearwardly of the stern to prevent settling of the stern when running at high speed, substantially as set forth.

In witness whereof, I have hereunto set my hand and seal at Elizabeth City, North Carolina this 26th day of August, A. D. nineteen hundred and fifteen.

THOMAS B. HAYMAN. [L. s.]

Witnesses:

W. A. WORTH,  
ANN LEE CAHOON.

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