G. W. BEESON.

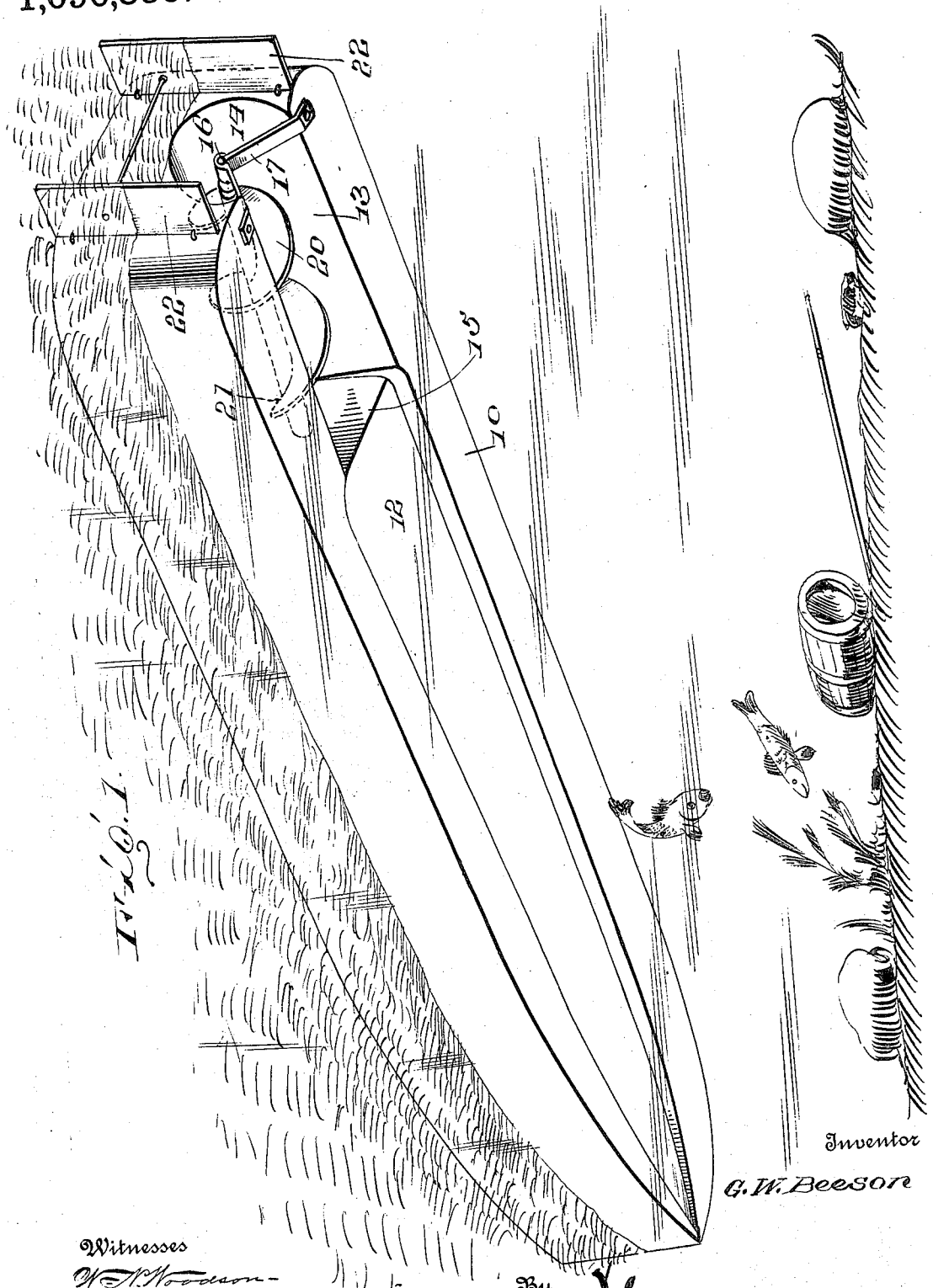
MARINE PROPULSION.

APPLICATION FILED FEB. 11, 1911.

Patented Mar. 24, 1914.

1,090,830.

2 SHEETS—SHEET 1.



Inventor

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Witnesses

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Juana M. Fallin

By Dean Dacey, Attorneys.

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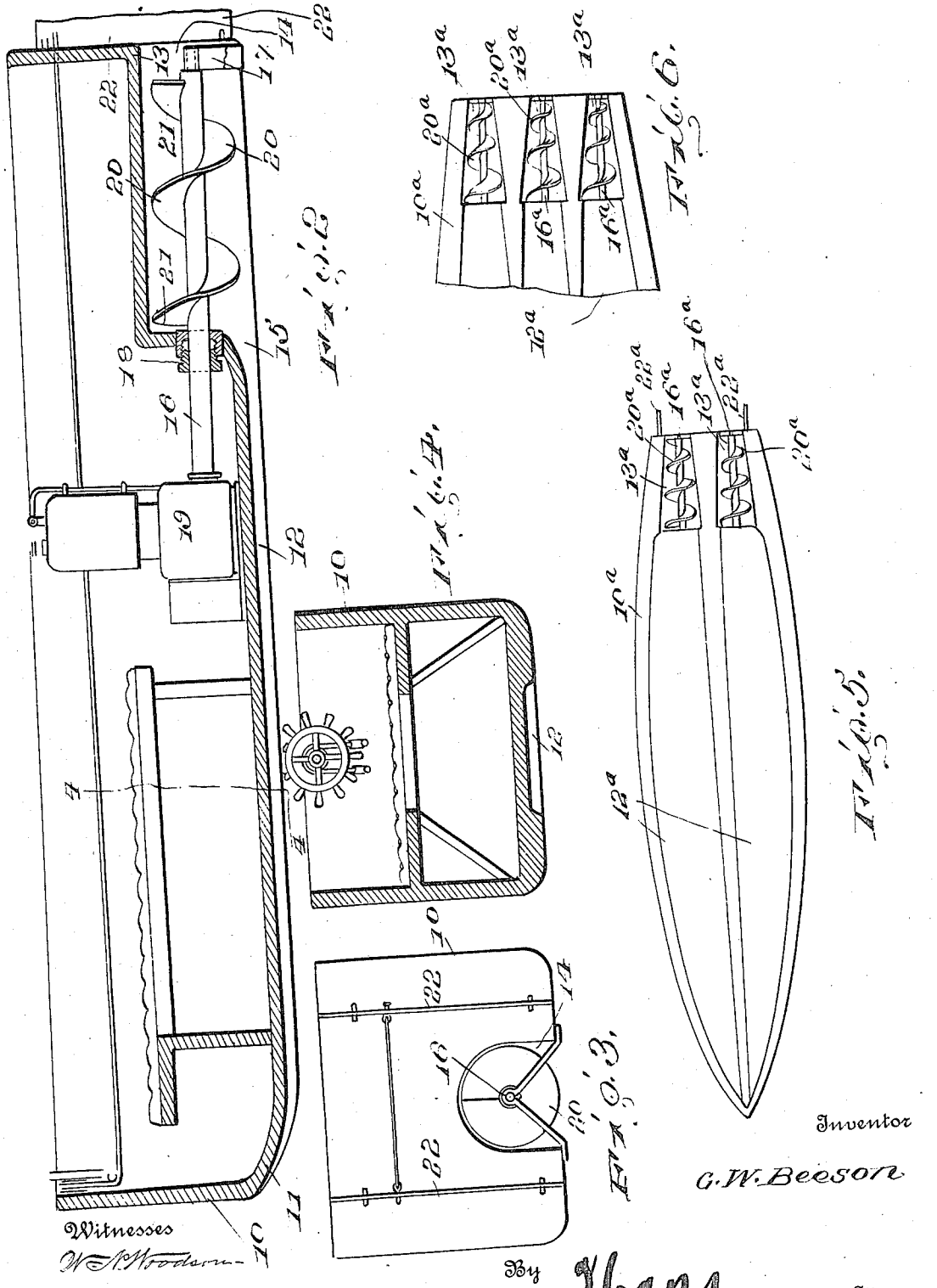
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UNITED STATES PATENT OFFICE.

GEORGE W. BEESON, OF EAGLE PASS, TEXAS.

MARINE PROPULSION.

1,090,830.

Specification of Letters Patent. Patented Mar. 24, 1914.

Application filed February 11, 1911. Serial No 608,069.

To all whom it may concern:

Be it known that I, GEORGE W. BEESON, citizen of the United States, residing at Eagle Pass, in the county of Maverick and State of Texas, have invented certain new and useful Improvements in Marine Propulsion, of which the following is a specification.

This invention relates to marine propelling devices, and refers particularly to a propelling device in which the hull of the boat is given a peculiar shape to co-act therewith.

The object of this invention is to form a hull with a propeller chamber in the stern thereof and a passage, or passages, in the under side of the hull extending the entire length thereof and communicating with the propeller casing to feed, or to direct, the water into the forward end of the propeller chamber and into the path of the propeller.

The invention has for another object to provide a peculiar form of propeller chamber, and propeller mounted in the chamber. The peculiarity of the chamber and the propeller resides in the gradual reduction or the tapering of the chamber and the propeller so as to admit of the fluid entering the forward end of the chamber with the least possible friction and of the forcing of the fluid from the rear end of the chamber under considerable pressure.

The invention has for a still further object to arrange the propeller chamber in the stern of the hull so that it supports the propeller above the bottom line of the hull to prevent the catching of the blade of the propeller against sand, weeds or the like, should the hull run aground, and whereby the propeller can operate independently to force a stream of water through the channel in the bottom of the hull to gradually work the hull loose from the sand. This latter feature is deemed important for heavy craft which is operated in shallow rivers, and the like where it is not infrequent that the craft is run aground and wherein it is desired to free the hull without the employment of tugs or such devices for drawing the hull back into deep water.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a bottom perspective view of a boat having the improved mechanism applied thereto; Fig. 2 is a longitudinal central section taken through the same; Fig. 3 is a rear elevation of the boat having the mechanism applied thereto; Fig. 4 is a section taken on the line 4—4 of Fig. 2; and, in Figs. 5 and 6 are disclosed slightly modified forms of the boat and the mechanism applied thereto.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawing, and particularly to Figs. 1 and 2, the numeral 10 designates the hull of the boat which is of any adaptable form having an upwardly curved bow 11 and a central longitudinal channel in its under side, as at 12. The channel at its rear end, at the stern of the boat, is abruptly deepened to form a propeller chamber 13 in the bottom of the hull and opening through the rear end thereof, as at 14. The chamber 13 is of circular form, is open at its bottom throughout its entire length, and tapers or is reduced at its rear end. The lower edges of the chamber 13 are flush with the bottom of the hull 10, positioning the entire chamber within the stern of the hull. The forward, or enlarged, end of the chamber 13 communicates with the channel 12, the latter merging into the chamber by the formation of an enlargement or duct 15.

A propeller shaft 16 is disposed longitudinally in the chamber 13 and has its rear end journaled upon a hanger 17 carried by the hull 10 across the rear end of the chamber 13. The forward end of the shaft 16 projects through a stuffing box 18 carried in the forward wall of the chamber 13 and has connection to a suitable motor 19 carried within the hull 10. The shaft 16 is provided with a screw propeller 20, the same comprising a worm having, preferably, two convolutions extending throughout the entire length of the shaft 16 within the chamber 13. The forward and rear edges of the propeller 20 terminate in cutting blades 21 radiating from the shaft 16, and are adapted for cutting weeds, and other growth coming into contact with the propeller.

The hull 10 is provided with a pair of rudders 22 located at the sides of the chamber 13 and adapted to operate in parallelism to effect the steering of the hull 10. In

positioning the rudders 22 at the sides of the chamber 13 the volume of water passing through the chamber 13 flows uninterruptedly from the rear end of the hull and is not broken up by the positioning of the rudder within the issuing stream.

From Figs. 5 and 6 it will be noted that the hull 10^a may be formed with a plurality of channels 12^a arranged in parallelism and communicating at their rear ends in a corresponding number of propeller chambers 13^a. In this instance the propeller chambers 13^a are arranged in transverse registering relation in the stern of the hull and open through the rear end of the hull as in the above noted preferred form. Any number of propellers 20^a may be employed proportionately to the size of the craft and the speed and power desired. The propeller shafts 16^a may be connected together and driven from a single source of power, or may be separately driven by independent motors, such as turbines or the like.

A screw propeller of this peculiar form, having but two complete convolutions throughout its entire length is particularly adapted to high speed engines, as steam turbines, wherein the rapid motion of the propeller will not churn up the water without effecting an impact against the same, as the spiral blade, in conjunction with the tapering chamber, draws in and retains in the forward ends of the chamber the body of water which it afterward ejects with considerable force from the rear tapering end of the chamber. The propeller and the chamber are further adapted for high speed in that they are enlarged at their forward ends so as to receive a considerable amount of the fluid with the least frictional resistance from the longitudinal water ways or channels formed in the bottom of the hull. It will be noted that in combining these features which involve the peculiar construction of the hull and of the propeller chamber as well as the propeller itself, that a marine device is effected with which increased speed and power is had as well as a substantially simple construction.

Having thus described the invention, what is claimed is:

A vessel construction including a hull provided on its bottom with a longitudinally and centrally extending channel which tapers toward the bow of the vessel, there being an enlarged chamber formed in the hull at the stern end thereof, and an enlarged duct merging into the chamber and channel and providing communication therebetween, said chamber being tapered toward the stern of the hull, the greatest width of the chamber being adjacent the point where the duct and channel merge.

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

GEORGE W. BEESON. [L. S.]

Witnesses:
F. A. BONNET,
CHAS. FESSMANN.