H. L. BOWERS.

MOTOR BOAT.

APPLICATION FILED MAY 14, 1914.

1,123,230.

Patented Jan. 5, 1915.

2 SHEETS—SHEET 1.

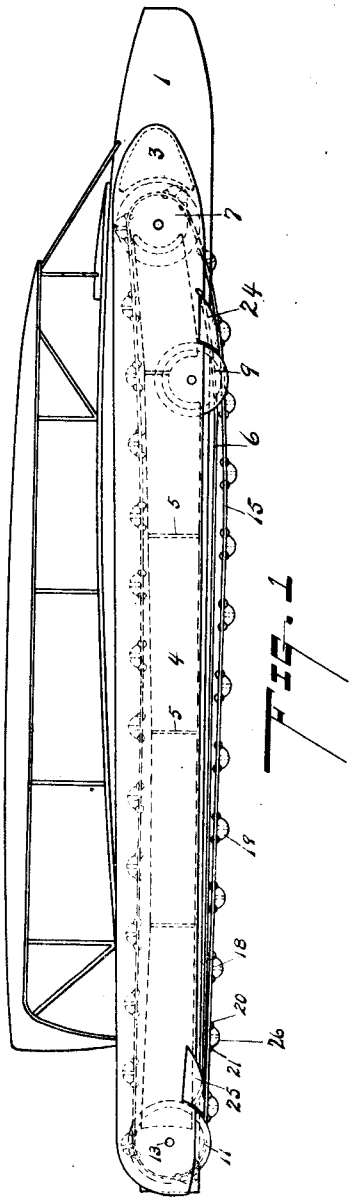


FIG. 1

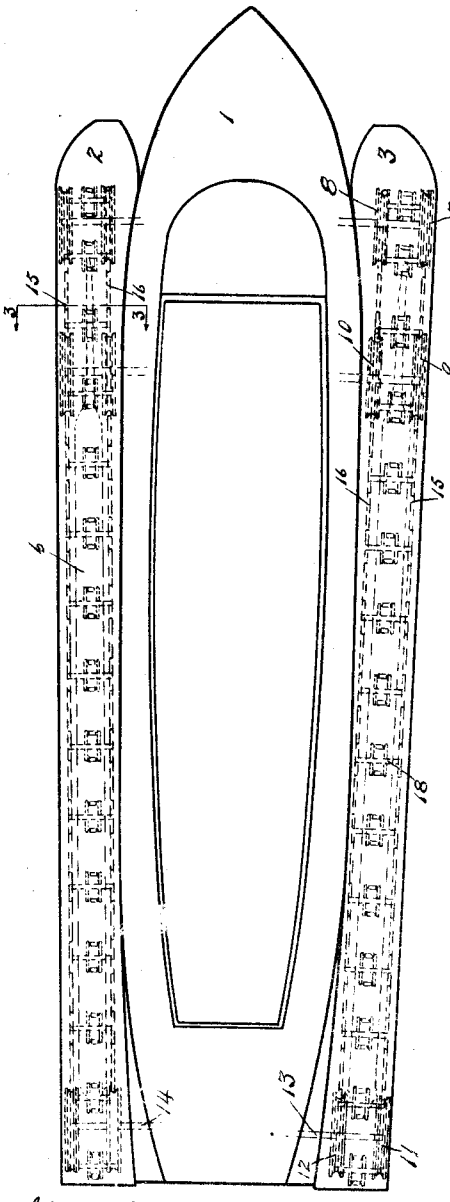


FIG. 2

WITNESSES:

Roy Wallis

Frank L. Martindale

Harry L. Bowers

INVENTOR

BY

Geo. B. Willcox

ATTORNEYS

H. L. BOWERS.

MOTOR BOAT.

APPLICATION FILED MAY 14, 1914.

1,123,230.

Patented Jan. 5, 1915.

2 SHEETS—SHEET 2

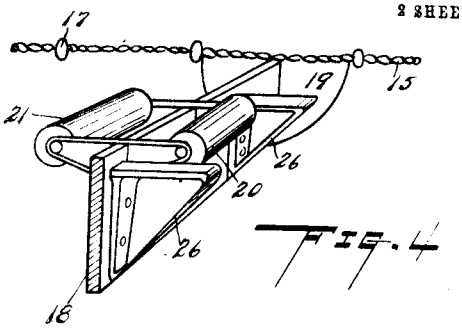


FIG. 4

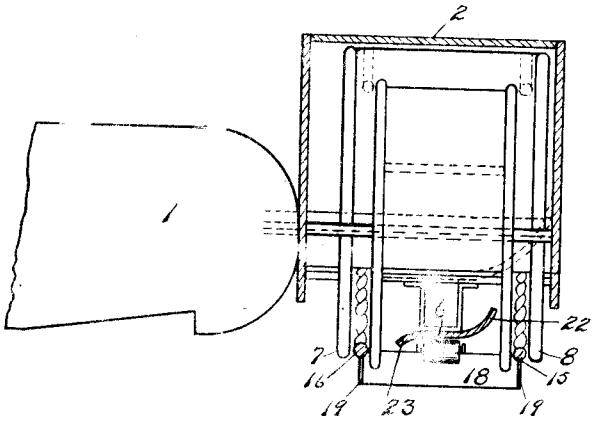


FIG. 3

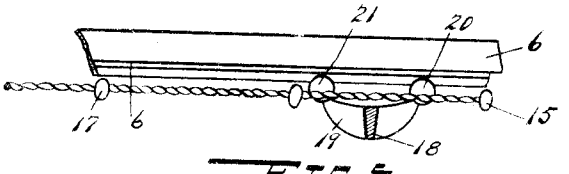


FIG. 5

WITNESSES:

Roy Wallis

Frank L. Martindale

Harry L. Bowers INVENTOR

BY

Geo. B. Willcox ATTORNEYS

UNITED STATES PATENT OFFICE.

HARRY L. BOWERS, OF BAY CITY, MICHIGAN.

MOTOR-BOAT.

1,123,230. Specification of Letters Patent. Patented Jan. 5, 1915.

Application filed May 14, 1914. Serial No. 838,472.

To all whom it may concern:

Be it known that I, HARRY L. BOWERS, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Motor-Boats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to motor boats and the improvements pertain more particularly to motor boats comprising a hull and side pontoons, on which are mounted chain or cable flights having paddles adapted to traverse the length of the pontoons to propel the vessel.

My improvement relates more particularly to an improved construction and arrangement of the paddles and their supports, whereby the paddles are adapted not only to propel the vessel through water, but also to propel it on land.

My invention also comprises an improved track support for the paddles, adapted not only to guide the paddles while in the water and to support the weight of the boat on the paddles while on land, but also adapted to prevent sidewise skidding of the boat and to facilitate guiding it.

With these and certain other objects in view, which will appear later in the specification, my invention comprises the devices described and claimed and the equivalents thereof.

In the drawings forming a part of this specification, Figure 1 is a part sectional side elevation of a motor boat with my improvement attached. Fig. 2 is a top plan view broken away in part. Fig. 3 is a transverse section on line 3—3 of Fig. 2. Fig. 4 is a perspective detail, broken away in part, showing the construction of the paddles and the rollers. Fig. 5 is an enlarged detail of the track that supports the rollers of the paddles.

As is clearly shown in the drawings, the device consists of the hull 1, which may be of any suitable or usual form, carrying at its sides pontoons 2 and 3 that extend lengthwise the hull. Each of these pontoons is divided into a number of water-tight compartments 4 by means of partitions 5. Fixed to the bottom of each pontoon is a track 6 comprising a suitable bearing plate or rail adapted to support the paddles, as will be presently described.

7 and 8 are a pair of sprocket wheels mounted in each pontoon near the bow of the boat. 9 and 10 are a pair of idler sprockets also mounted in the pontoon and having their lower peripheries projecting below the keel of the boat. 11 and 12 are a similarly mounted pair of rear sprockets located in the pontoon near the stern of the boat.

13 and 14 are the two drive shafts of the rear sprockets in the two pontoons. Mounted on each set of sprockets is a cable, as 15, 16, the two cables lying parallel, having flights 17 secured to them at intervals, to engage the pockets (not shown) of the drive sprockets 11 and 12. Paddles 18 are secured to the cables 15 and 16 and extend between them, the paddles being spaced at suitable distances along the cables. Each paddle is preferably provided with end plates 19 adapted to stiffen and support the paddle and also to prevent too rapid side flow of the water as the paddle is driven through it. Near the top of the paddle 18 and carried by suitable brackets is a pair of rollers 20 and 21 adapted to bear upwardly against the bottom face of the lower track 6 when the paddle is in its operating or propelling submerged position. The edges of the track 6 are preferably warped or bent, as shown in Fig. 3, one of the edges 22 being warped upwardly and the other edge 23 being warped downwardly. The purpose of this warping of the edges of the track is to provide a resistance or banking plane to reduce as much as possible the tendency of the boat to slew or skid. A further and important advantage of the track, formed as shown in Fig. 3, with one edge inclined upwardly and the other edge downwardly is that the middle part of the width of the track forms a flat thread on which the rollers of the blades roll, while the outer upwardly inclined edge of the track forms a wing or plane that tends to ride toward the surface when the boat skids, thus raising that side of the boat which ordinarily would heel when rounding a curve at high speed. Similarly the downwardly inclined edge of the track on the opposite pontoon is tending to draw that side of the boat down, thereby exerting a further tendency to right the boat and prevent heeling.

To prevent the carrying up of weeds, etc.,

by the paddles as they pass up and out of the water at the rear sprockets, I prefer to secure to each paddle a pair of angularly shaped brackets, as 26, adapted to throw weeds or other obstructions off from the paddles and to prevent such substances accumulating around the rollers 20 and 21. The bottoms of the pontoons and the tracks 6 are preferably above the level of the water when the boat is not in motion, the buoyancy of the hull of the boat being sufficient to sustain the pontoons out of contact with the water. But when the boat is in motion in rough water, the waves are overridden by the pontoons, which on account of their buoyancy tend to keep the bow elevated. The spray from the prow is also intercepted by the pontoons and prevented from entering the boat.

By the means above described, I have produced a propelling device for motor boats, that is simple in construction, not liable to get out of order and highly efficient in operation. The construction of the paddles is such as to enable them to support the load of the boat when the boat is being run on the beach, and the construction of the track not only is adapted for properly taking upward thrust of the paddles, but also acts as a guide or keel to assist in producing steadiness and ease of the steering control.

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

1. In a motor boat, the combination of the hull and longitudinally placed pontoons secured to the sides of the hull, a track fixed to the bottom of each pontoon, sprockets revolubly mounted in said pontoons and carrying cables, means for revolving said sprockets, blades carried by said cables, said blades having end plates secured thereto and carrying rollers adapted to engage said track, and brackets secured to said blades.

2. In a motor boat, the combination of the hull and longitudinally disposed pontoons secured to the sides of the hull, a track fixed to the bottom of each pontoon, one edge of said track being inclined upwardly and the opposite edge inclined downwardly, sprockets revolubly mounted in said pontoons and carrying cables, means for revolving said sprockets, blades carried by said cables, said blades having end plates and carrying rollers adapted to engage said track.

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

HARRY L. BOWERS.

Witnesses:
FRANK L. MARTINDALE,
NELLIE M. ANGUS.