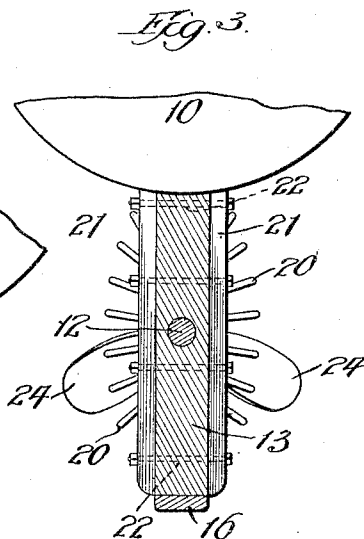
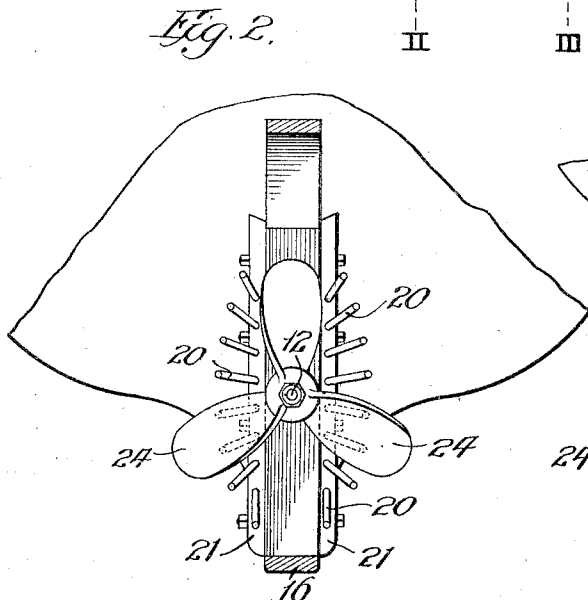
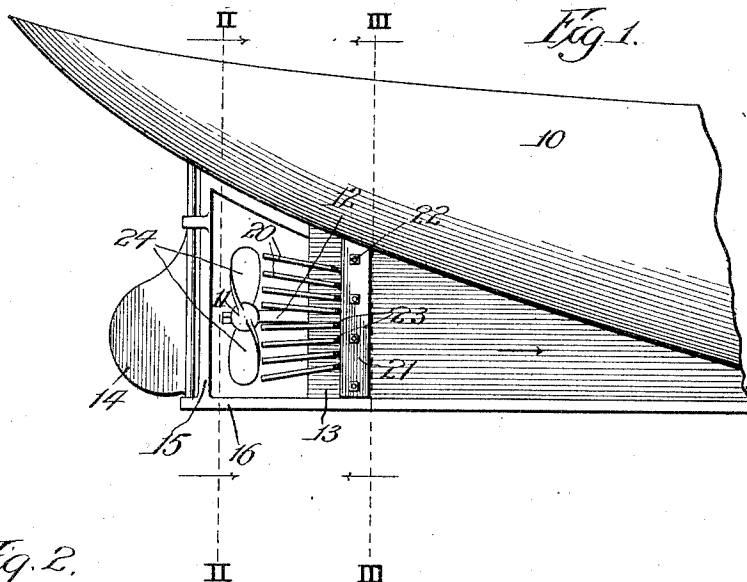


G. W. BENSON.
PROPELLER GUARD.
APPLICATION FILED AUG. 29, 1910.

1,009,635.

Patented Nov. 21, 1911.



WITNESSES

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UNITED STATES PATENT OFFICE.

GUST W. BENSON, OF CHICAGO, ILLINOIS.

PROPELLER-GUARD.

1,009,635.

Specification of Letters Patent. Patented Nov. 21, 1911.

Application filed August 29, 1910. Serial No. 579,486.

To all whom it may concern:

Be it known that I, GUST W. BENSON, a citizen of the United States, and a resident of Chicago, in the State of Illinois, have invented certain new and useful Improvements in Propeller-Guards, of which the following is a specification.

My present invention relates in general to guards for the means of propulsion for boats, and more particularly the revolving screw propellers and paddle wheels thereof, and has special reference to the provision of improved means for the prevention of fouling, bending or fracture thereof by weeds, grasses or floating objects becoming entangled with or striking blades or shafts of such propelling devices.

The principal objects of my present invention are the provision of an improved device characterized as above noted which while fully guarding the shaft and in a large measure protecting the blades will not only not interfere with the operation of the propeller but in the event of any weeds, grasses or other object becoming entangled therewith will not have a tendency to hold such foreign material in contact with the screw, blades, or shaft; the provision of an improved mounting for such guards which will allow ready access to the propeller blades and fastening devices without requiring removal of the guard, and one which in turn is readily removable both as a whole and as to its parts for replacement or repair or to allow access to the propeller well or stuffing box; to provide a guard of the character indicated wherein the several elements are supported at one end only to the ends that they may be easily removed without interference with other parts or mechanism, and that any material becoming engaged therewith may readily be removed and not tend to become entangled therewith; together with such other objects as may hereinafter appear.

I am aware that various means have heretofore been proposed for guarding screw propellers and paddle wheels but those known to me are inefficient in my experience in the following principal respects, viz: They prevent ready access to the several parts of the mechanism of propulsion and the various mountings therefor; in the event of part of the device becoming damaged through collision with ponderable objects, removal of the device as a whole is required; and they

have marked tendency to hold and wedge tightly against the moving parts of the propeller any objects or masses of weeds or grasses by which they may become fouled or clogged, as well as other undesirable features known to those who are skilled in the art.

In overcoming the objections referred to, and attaining the objects stated, as well as certain further benefits to be below disclosed, I have provided a construction illustrated in preferred form in the accompanying drawings, wherein—

Figure 1 is an elevational view of the stern of a boat having my improved guard applied thereto; Fig. 2 is an elevational view, somewhat enlarged and partly in section, taken on the line II—II of Fig. 1; and Fig. 3 is a similar view taken on the line III—III of Fig. 1, looking toward the stern instead of the bow of the boat.

Referring first to Fig. 1 of the drawings it will be noted that I have for purposes of illustration shown the hull, 10, of a boat, provided with a screw propeller, 11, carried on a propeller shaft, 12, supported at one end in a suitable bearing (not shown) in a stern post 13, the rudder, 14, being supported by a rudder-post, 15, and a longitudinal member, 16, which serves as a bottom guard iron to assist in preventing injury to the propeller upon grounding or in the event of other accident, and is suitably attached to the keel of the boat, such construction being here shown diagrammatically.

On viewing Figs. 2 and 3, it will be observed that for the purpose of fending weeds, grasses, etc., from contact with the shaft, 12, I have provided a number of substantially horizontal rod-like members, 20, supported at one of their ends in a plate, 21, here illustrated as made in two parts for the sake of convenience and to allow removal of the iron shoe, 16, when desirable, without necessarily disturbing said parts which are bolted in place upon the stern post, 13, as indicated at 22, 22. To the end that each of the members, 20, may be readily removed for repair or replacement in the event of its becoming bent or fractured in use, I preferably give each of such members threaded connection with the plate 21 by which it is supported, as is plainly indicated at 23 (Fig. 1).

Referring again to Fig. 1, it will be seen

that the outer ends of the several rods 20 are left free and unsupported, the purpose of such construction being three-fold: first, that any object or material that may become engaged with such rods may slide off the ends thereof and free itself of such engagement and not be stopped and held in contact with the blades, 24, 24, of the propeller, as would be the case were such outer ends supported, since the boat moves in the direction indicated by the arrow; second; that each of such rods, 20, may be more readily removable than would be the case were it supported; and third, that a minimum of interference may be presented to the free movement of the water.

It will thus be seen that my improved guard may be readily removed as a whole, or as to any part thereof, without removal of adjacent mechanism, and that it may therefore be inexpensively maintained in operative condition.

In view of the foregoing specification, it is believed that further description will be unnecessary to those who are skilled in the art to which my invention pertains.

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

1. A propeller guard comprising a plurality of substantially horizontal spaced members supported at one end only and substantially free throughout their length, said members being movable throughout their unattached portions.

2. A propeller guard comprising the combination with a movable propeller, of a supporting member and a plurality of substantially horizontal spaced guard members carried by said supporting member at one end, the opposite ends of such guard members being directed toward the plane of movement of said propeller and unsupported.

3. A propeller guard comprising the combination with a movable propeller, of a supporting member and a plurality of substantially horizontal spaced guard members removably mounted in said supporting member at one end, the opposite ends of such guard members being directed toward the plane of movement of said propeller and unsupported.

4. A propeller guard comprising the combination with a propeller having a shaft and a stern post for supporting said shaft, of a plate 21 carried by said stern post and

a plurality of fender members 20 carried by said plate.

5. A propeller guard comprising the combination with a propeller having a shaft and a stern post for supporting said shaft, of a plate 21 carried by said stern post and a plurality of fender members 20 carried by said plate, said fender members having their free ends directed toward said propeller.

6. A propeller guard comprising the combination with a propeller having a shaft and a stern post for supporting said shaft, of a plate 21 carried by said stern post and a plurality of fender members carried by said plate, one of their ends having removable engagement with said plate.

7. The combination with a boat having a stern post, a rudder, a support for said rudder, a propeller shaft passing through said stern post, and a propeller on said shaft between said stern post and rudder, of a guard for said shaft and propeller comprising a plurality of spaced members having their forward ends supported by said stern post and their rearward ends directed toward said propeller, but free from engagement or support.

8. The combination with a boat having a stern post, a rudder, a support for said rudder, a propeller shaft passing through said stern post, a propeller on said shaft between said stern post and rudder and a guard iron below said shaft, of a guard for said shaft and propeller comprising a plurality of spaced members having their forward ends supported by said stern post and their rearward ends directed toward said propeller but free from engagement or support, the said spaced members being severally removable from said stern post.

9. A propeller guard comprising a plurality of spaced members supported at one end only, the opposite end of each being free and adjacent the plane of movement of said propeller.

10. A propeller guard comprising a plurality of spaced members supported at one end only, the opposite portion of each terminating adjacent to the plane of movement of the propeller.

In testimony whereof, I have hereunto signed my name in the presence of the two subscribed witnesses.

GUST W. BENSON.

Witnesses:

PAUL CARPENTER,
EVELYN C. NAYLOR.