No. 662,522. Patented Nov. 27, 1900.

S. H. BUTTERWORTH.

PROPELLER FOR BOATS.

(Application filed Dec. 13, 1899.)

(No Model.)

Fig. 1.

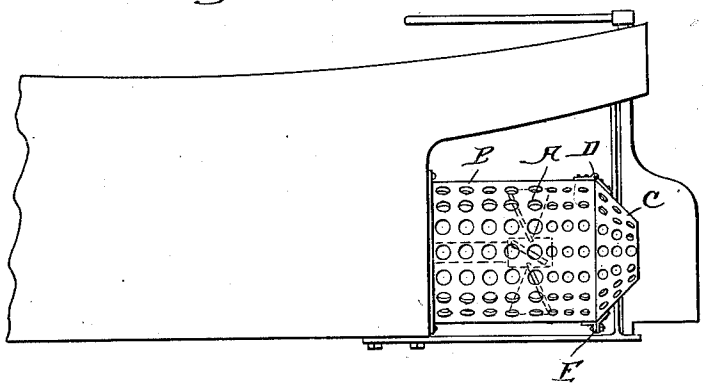


Fig. 2.

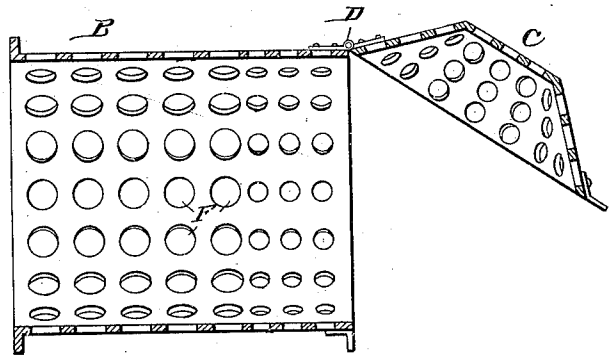
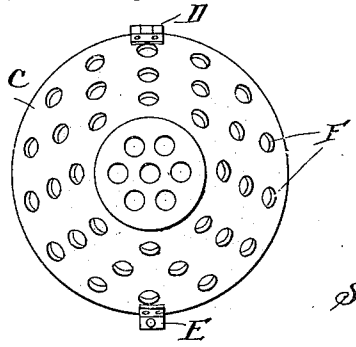


Fig. 3.



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UNITED STATES PATENT OFFICE.

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PROPELLER FOR BOATS.

SPECIFICATION forming part of Letters Patent No. 662,522, dated November 27, 1900.

Application filed December 13, 1899. Serial No. 740,223. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL H. BUTTERWORTH, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Propellers for Boats, of which the following is a specification.

My invention relates to a new and useful improvement in propellers for boats, and is especially adapted for canal-boats and the like, and has for one object to so inclose a propeller with a perforated casing as to prevent the action thereof from washing the banks of the canal or watercourse through which the boat is passing, while at the same time not reducing the efficiency of said propeller.

A further object of my invention is to so construct the casing as to provide for convenient access thereto for the removal of obstructions which may accumulate therein.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of a portion of a boat having my improvement applied thereto; Fig. 2, an enlarged section of the casing, and Fig. 3 an end view of Fig. 2.

In carrying out my invention as here embodied, A represents the propeller, which may be of the usual construction, and around this propeller is placed the casing B, which is secured to the stern of the vessel in any convenient manner.

C represents the hinged section of the casing, which is in the form of a truncated cone and is hinged at D and provided with the fastener E at the opposite side in order that it may be secured in its closed position.

Both the casing and section C are perforated, as indicated by F, and when the propeller is operated to force the vessel forward its action will draw in water at the rear thereof through the perforations nearest the bow of the boat and expel this water through the perforations in the section C, and the water thus expelled will be projected in streams, which, acting upon the surrounding water, will force the vessel forward. This action will be so directed by the perforations as to prevent the side lash or flow which is occasioned by the action of an ordinary propeller when not incased, and thus avoid the washing of the banks of the waterway through which the boat is passing.

A decided advantage gained by the incasing of the propeller is that it is protected from injury by coming in contact with surrounding objects, such as drift-wood and the like. By the hinging of the section C should the casing become fouled by the accumulation of weeds or small objects these may be readily removed by swinging the section to the position shown in dotted lines in Fig. 2, and after the casing has been cleaned this section is again returned to its normally-closed position and secured by the fastener E.

The cost of my improvement is comparatively small, and it may be attached to any boat without the alteration of the propeller, and thus accomplish the results intended.

Having thus fully described my invention, what I claim as new and useful is—

1. In combination with a boat and a propeller journaled at the stern thereof, a perforated casing inclosing said propeller, and a section of truncated-cone shape so attached to the casing as to be swung open, said section also being perforated, as and for the purpose set forth.

2. A propeller-casing consisting of a cylindrical section adapted to inclose the propeller, and a hinged section of truncated-cone shape, both sections being perforated, as specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

SAMUEL H. BUTTERWORTH.

Witnesses:
CHARLES H. HUSTED,
K. C. MCMICHAEL.