

A. MARSCHALL.

ADJUSTABLE GUARDS FOR SCREW-PROPELLERS.

No. 191,007.

Patented May 22, 1877.

Fig: 1

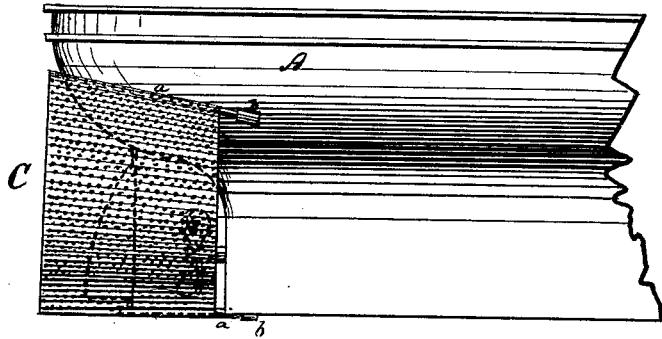
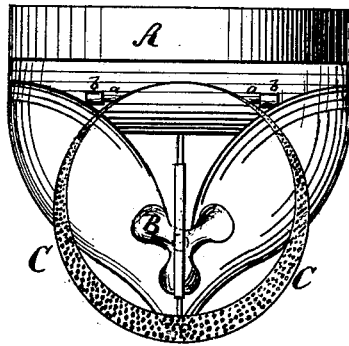


Fig: 2



Witnesses:

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UNITED STATES PATENT OFFICE.

AUGUST MARSCHALL, OF NEW YORK, N. Y.

IMPROVEMENT IN ADJUSTABLE GUARDS FOR SCREW-PROPELLERS.

Specification forming part of Letters Patent No. **191,007**, dated May 22, 1877; application filed March 10, 1877.

To all whom it may concern:

Be it known that I, AUGUST MARSCHALL, of the city of New York, county and State of New York, have invented an Improvement in Screw-Propellers, of which the following is a specification:

This invention relates to an improvement on boats which are driven by means of screw-propellers and travel through narrow or shallow water-courses, such as canals or the like.

The invention has for its object to prevent the swell of the water created by the revolution of the propeller from washing and injuring the banks of the canal or stream; and consists in placing at each side of the propeller a shield, which is attached to the hull of the vessel, and which, while allowing free access of the water to the propeller, will practically prevent the formation of any lateral swell or wave.

The invention also consists in the details of construction hereinafter more fully pointed out.

In the accompanying drawing, Figure 1 is a side view of the stern part of a boat provided with my improvement. Fig. 2 is a stern view of the same.

Similar letters of reference indicate corresponding parts in both figures.

The letter A represents the hull of a canal or other boat, of suitable construction. B is the screw-propeller thereof. C is a shield, of tubular or other form, and provided with a large number of small perforations, and made of metal or other proper material. This shield C, if made tubular, as in Fig. 2, encircles the propeller B, and is fastened to the stern of the boat A in suitable manner. I prefer to fasten it, however, in the manner indicated in the drawing—that is to say, by rods *a a*, attached to, and projecting forward from, the shield, and passing through corresponding eyes *b b*, that are applied to the hull of the boat near the stern thereof. By using this mode of at-

tachment the shield C can be adjusted lengthwise on the boat to regulate its effect; but other suitable fastenings may be employed.

The shield C should be of such interior diameter that it allows free revolution of the screw-propeller, and is open at both ends, so that the water may freely reach the propeller through the front and be discharged at the rear of the shield. In this way the efficiency of the propelling mechanism is in no wise diminished; but the shield, though allowing the water to pass through its perforations, will break up and destroy any lateral swell created by the propeller, and prevent, in consequence, all injury to the banks of the canal or other water-passages through which the boat passes. If the shield is not perforated, it will also destroy the lateral swell; but it is then not as efficient as a perforated shield.

Instead of making the shield tubular, it may be made of other suitable form, as the essential feature of this invention consists in the application of a shield to each side of the screw-propeller of a vessel.

I am aware that previous to my invention cylindrical shields having inner projections or blades have already been placed around propellers; but the vanes served, by damming the water, to retard the action of the propeller, and to render, therefore, the entire attachment useless.

I claim as my invention—

1. The combination of a propeller, B, with the perforated encircling shield C, which is entirely smooth on its inner side, substantially as and for the purpose herein shown and described.

2. The adjustable shield C, herein described, fastened to the body of a vessel, A, by means of rods *a* and eyes *b*, substantially as specified.

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Witnesses:

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