

S. Curtis,
Marine Drag.
No. 94402. *Patented. Aug. 31. 1869*

Fig 1.

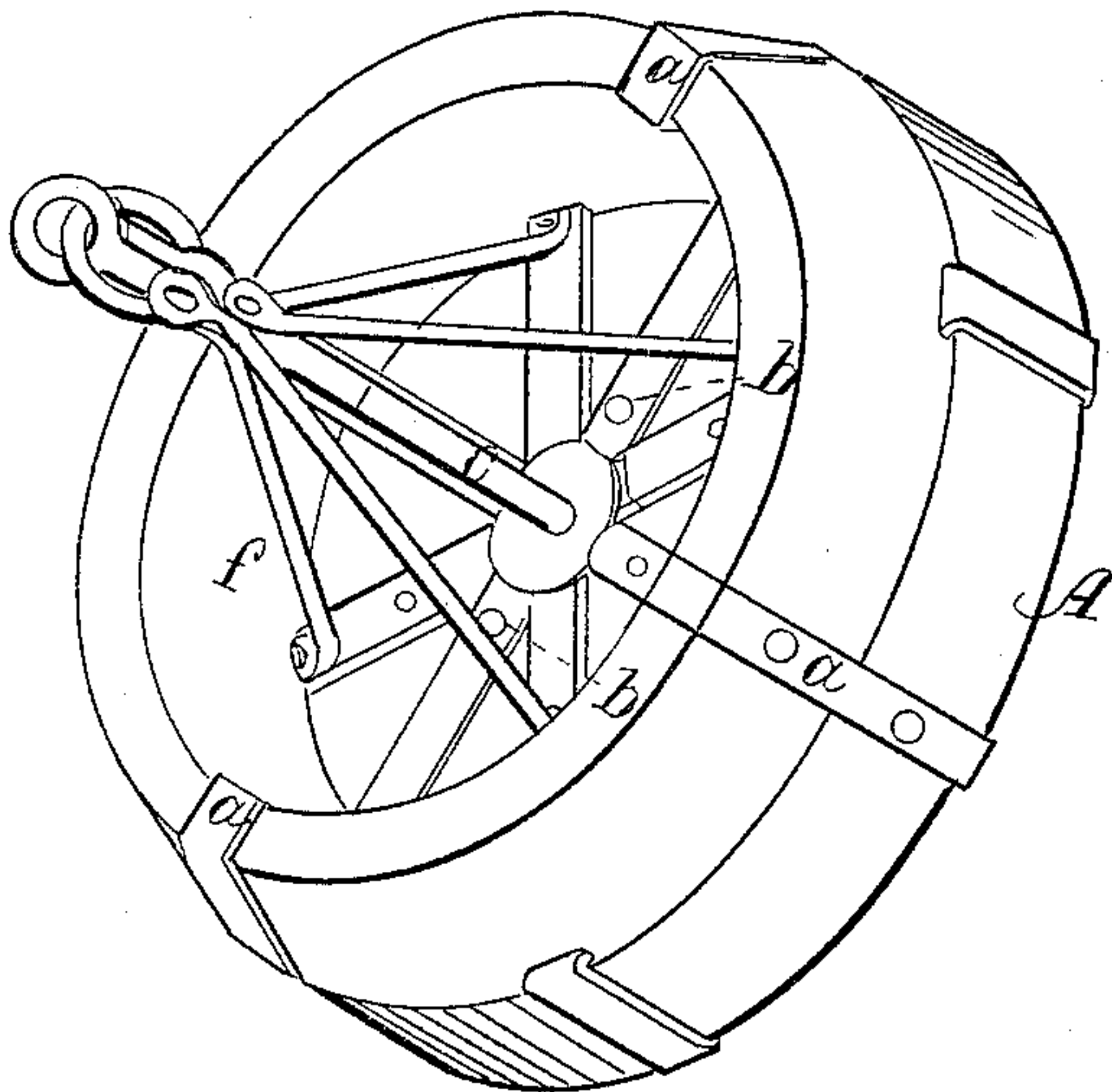
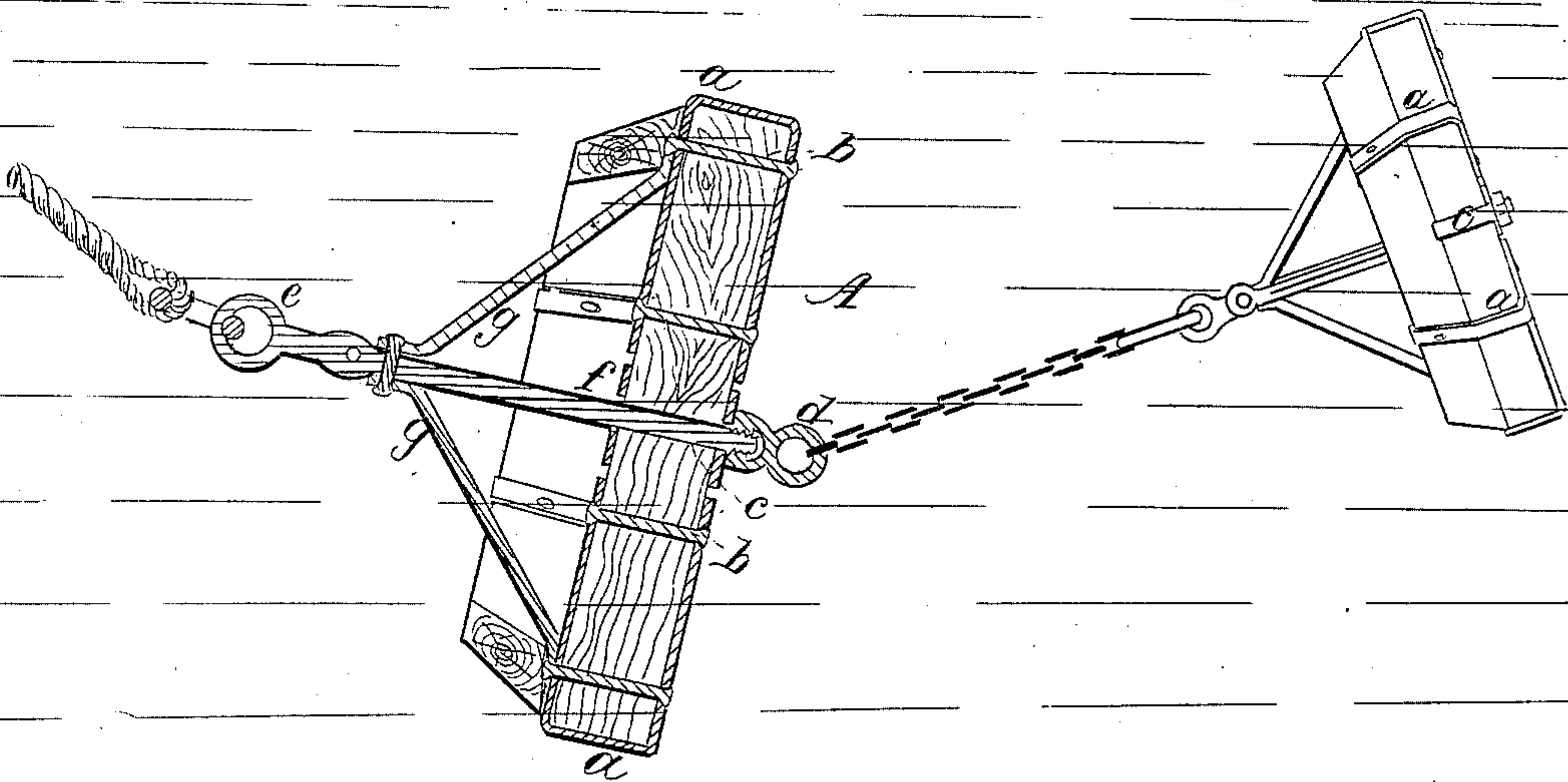


Fig 2.



Witnesses
Edward Griffith.
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by his Attorney.
Frederick Curtis.

United States Patent Office.

SAMUEL CURTIS, OF LYNN, MASSACHUSETTS.

Letters Patent No. 94,402, dated August 31, 1869.

IMPROVEMENT IN SEA-DRAGS.

The Schedule referred to in these Letters Patent and making part of the same.

To all to whom these presents shall come:

Be it known that I, SAMUEL CURTIS, of Lynn, in the county of Essex, and State of Massachusetts, have made an invention of a new and useful device for use in navigable vessels, and which I term a Sea-Anchor-Dredge; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawings, and in which—

Figure 1 is a perspective view, and

Figure 2, a sectional representation of my invention.

The want of some efficient, reliable, and ready means of keeping a navigable vessel head to wind in a heavy gale or storm, and when an ordinary anchor is not available, and when it is necessary or desirable to put a drag upon her progress as she is driving helpless before the wind and sea, out of her course, at a rapid rate, has long been known and appreciated by sea-faring men.

This invention is intended to provide a means for accomplishing the above-mentioned object, by producing a device which may be stowed away upon deck when not in use, and when wanted, is to be attached to the cable or hawser, and thrown overboard, the device being of such form and material that when drawn upon by the vessel's movements, it shall take a firm hold of the surrounding water, and be forced to keep under its surface some distance, by this means creating a powerful drag upon the vessel's movements, to retard her progress.

In the drawings before mentioned as accompanying this specification, and which illustrate my invention—

A denotes a drag or mass of wood, composed of a number of pieces, connected together, and stayed and strengthened by metallic straps *a a*, &c., and bolts, *b b*, &c., the central bolt *c*, having an eye, *d*, affixed to its outer extremity, for the purpose as hereinafter explained.

The central bolt *c* is extended some distance beyond the wooden mass or block, and is provided with an eye or ring, *e*, to which a cable or hawser is to be attached, when the device is to be thrown overboard.

The bolt passes through the bottom of the drag and is there secured, and it is maintained and steadied in its position by means of the diagonal braces *g*, which at their outer ends are held by the same bolts, *b*, which bind the straps *a*, which, like the braces, radiate from the centre of the drag.

The front end of the drag *A* is made concave or hollow, as shown at *f*, in order to take a firm hold upon the body of water in which it is submerged, and is to be provided with sufficient metal to cause it to keep below the surface of the water, although its exterior form may be such as to produce that effect, as shown in the drawing, the outer portion of the raised

part *f* being bevelled or made slanting for the purpose.

The system of straps, in connection with the wood which is thereby secured, makes a strong and efficient drag, while the form of the device admirably adapts it to take firm hold of the water. The central bolt, to which the cable is secured, is thoroughly braced and stiffened, as above described, and its central position tends to hold the drag at all times in the proper place to offer the greatest resistance to the motion of the vessel.

A drag made substantially as before described, is to be stowed away upon the deck when leaving port, in such a situation as to be readily reached and thrown overboard, should contrary head-winds or a gale or storm prevent her from keeping her course, the drag, as before observed, answering a valuable and important purpose in retarding, to a great extent, the vessel's motion, and in keeping her head to wind.

It may, in practice, be found desirable to reproduce the drag on a smaller scale, and to carry a number of such diminutive articles, so that in case of emergency, one or more of their number may be connected to the eye *d*, of the main drag, and thrown overboard, and aid in deadening the vessel's motion.

My invention will be found valuable as a warp in hauling off a vessel, or taking her out of harbor.

In this case, one of the lesser drags will probably be found of sufficient capacity to effect the object.

If a vessel, in a gale or storm, is made to stand head to sea, the waves are divided, to a great extent, upon her bows, and pass by her, which would sweep her decks were she exposed broadside to the waves, and the force of the wind also has much less effect upon her hull when head to wind.

The use of my invention retards the vessel's motion, both by keeping her head to wind, and by its peculiar shape taking a powerful hold upon the water.

The drag, as I construct it, is always ready for use, and may be brought into requisition much quicker than a spar can be lashed and used. It has, also, vastly more hold upon the water to deaden the vessel's way than a spar, or other extemporaneous means.

What I claim, and desire to secure by Letters Patent, is—

A sea-drag, composed of the wooden base and raised portion *f*, constructed and united together by a system of metallic straps, radiating from the centre of the drag, as described, in combination with the central eye-bolt, *c*, for receiving the end of the cable, said bolt being connected with the other parts of the drag, and stiffened in the manner shown and specified.

Witnesses:

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