

Murray & Borst
Port Stopper

N^o 42,215.

Patented Apr. 5, 1864.

Fig. 2.

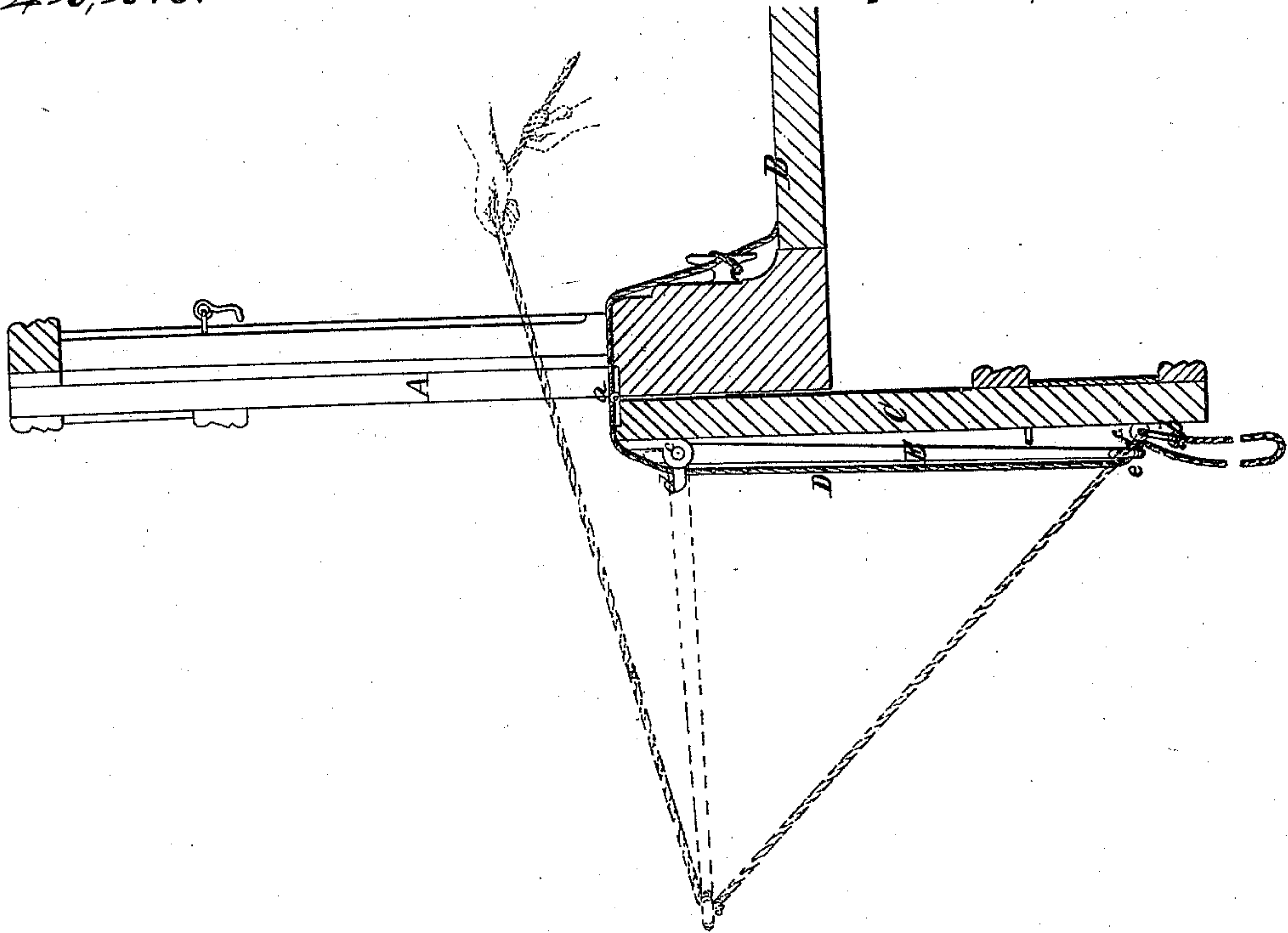
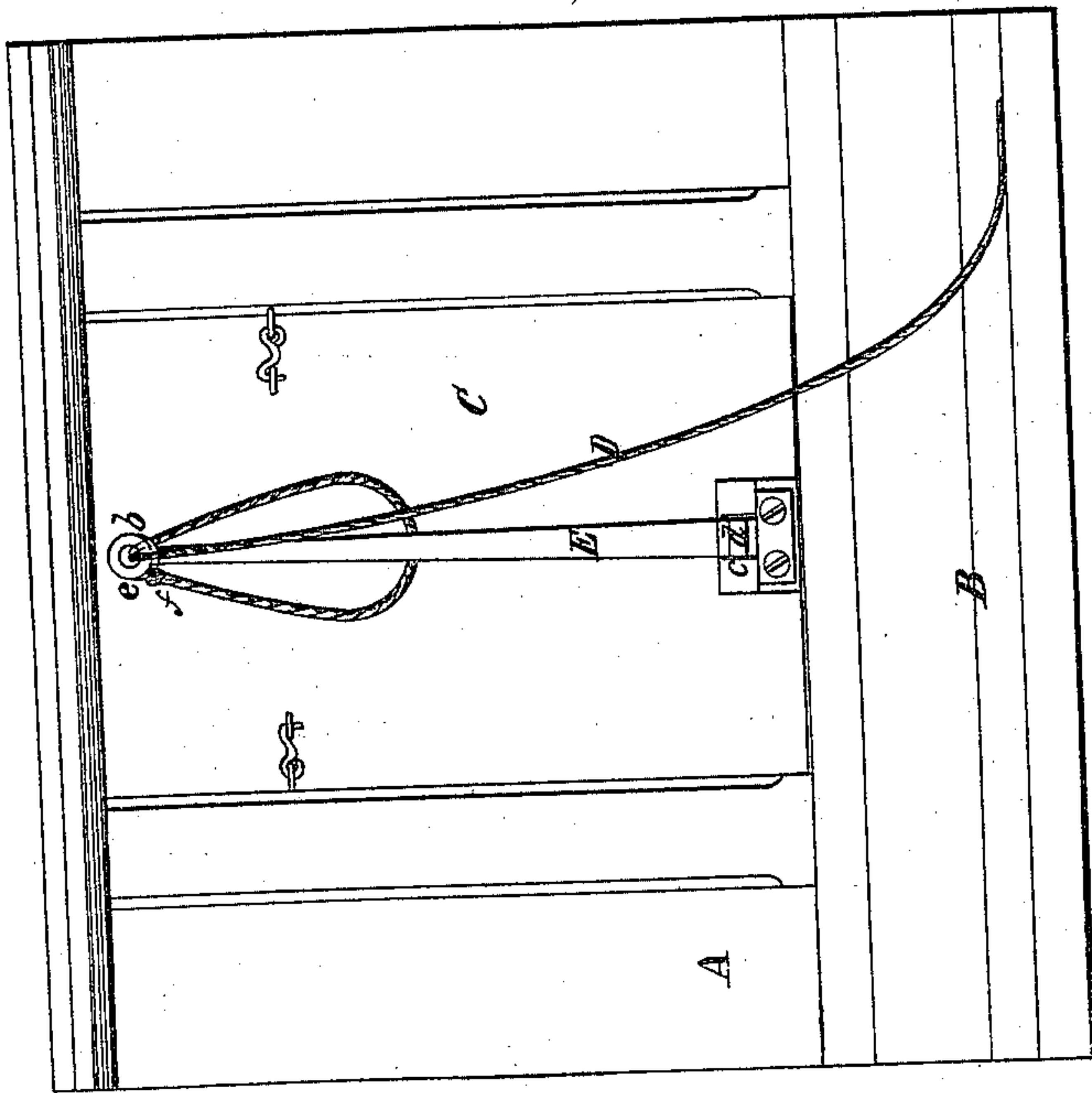


Fig. 1.



Witnesses:
Joshua Hall
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Inventors:
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UNITED STATES PATENT OFFICE.

JAMES V. MURRAY, OF BROOKLYN, AND CHARLES BORST, OF NEW YORK, N. Y.

IMPROVED PORT-HOLE CLOSER.

Specification forming part of Letters Patent No. 42,215, dated April 5, 1864.

To all whom it may concern:

Be it known that we, J. V. MURRAY, of Brooklyn, E. D., in the county of Kings and State of New York, and CHARLES BORST, of the city and county of New York, and State aforesaid, have invented a new and Improved Port-Hole Closer; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents an inside view of the port-hole shutter, arranged according to our invention. Fig. 2 is a transverse vertical section of the same, showing its operation.

Similar letters of reference indicate corresponding parts in both views.

This invention consists in the application to a port-hole shutter of a hinged lever, provided with a lip or stop to retain it in a position at right angles with the surface of the shutter, in combination with the rope which serves to raise the shutter in such a manner that by pulling said rope the lever is first raised to a position at right angles with the surface of the shutter and a purchase is obtained whereby the shutter can easily be started from the vertical position and brought up and closed with much less exertion or power than it requires to start and raise the same when the rope extends from the edge of the port-hole directly to the end of said shutter.

To enable others skilled in the art to make and use our invention, we will proceed to describe it.

A represents a portion of the side or bulwark of a vessel, which may be made of wood or iron, and B shows a portion of the upper deck, but our invention is applicable to port-hole shutters in the lower parts of the vessel, though it is particularly intended for those on the upper deck, which are usually made out of one piece, and therefore more difficult to raise than those of the lower decks, which are generally made in two parts. The port-hole shutter C is connected to the outside of the vessel's side by means of a hinge, *a*, or in any other convenient manner, and when closed it is retained by hooks or bolts or other suitable fastenings. When said shutter is open, it hangs down in a vertical or nearly vertical position on the outside of the vessel, and in order to raise it a rope,

D, is secured to its outer end by means of a ring, *b*, or other suitable contrivance. If the shutter is operated in the usual manner, this rope extends from the edge of the port-hole straight down on the outside of the shutter, and it requires great exertion and much power to raise the shutter, or rather to start it from its vertical position, for if it is once started the work becomes easier and easier until the same is closed. This difficulty we have overcome by the attachment to the shutter C of a lever, E, which is connected to the same by means of a hinge, *c*, near to that edge which is secured to the vessel by the hinges *a*. Said lever is provided with a lip, *d*, which projects from it at right angles, as clearly shown in Fig. 2 of the drawings, and the rope D, which serves to raise the shutter, passes through a loop, *e*, at the outer end of said lever and a knot, *f*, prevents the same from slipping through said loop beyond the desired distance. This knot is so situated that on pulling the rope the lever E is first raised to a position at right angles with the surface of the shutter, as shown in red outlines in Fig. 2 of the drawings, and not until the lever has arrived in this position the strain begins to take effect on the shutter. After the lever has been brought in this position, the rope has a certain purchase, determined by the length of the lever, and the shutter can be readily started from its vertical position and closed with much less exertion or power than with the usual arrangement.

It is obvious that our invention is equally applicable to wooden or to iron vessels, and to wooden or iron port-hole shutters, and it can be readily attached to the shutters of any vessel, new or old.

What we claim as new, and desire to secure by Letters Patent, is—

The application of the lever E, provided with a lip, *d*, and loop *e*, or their equivalents, to operate in combination with the rope D and shutter C, in the manner and for the purpose substantially as herein shown and described.

JAMES V. MURRAY.
CHARLES BORST.

Witnesses:

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