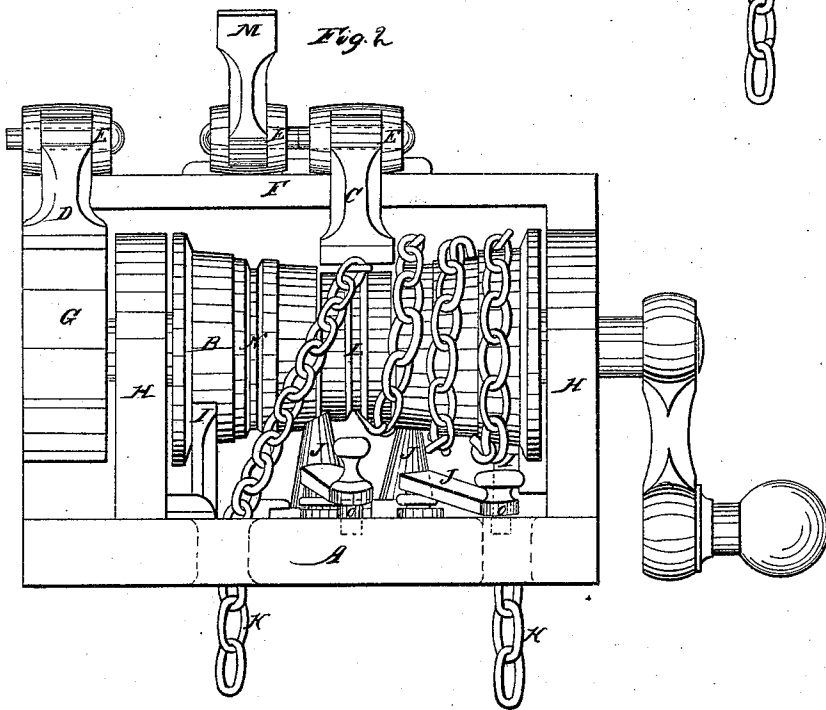
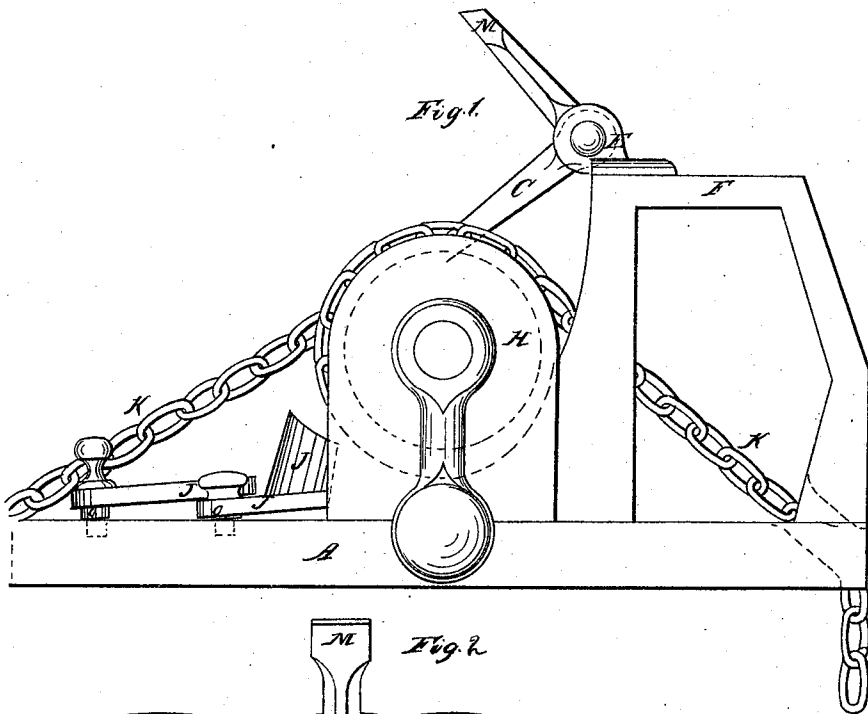


O. Nichols,

Windlass.

N^o 12,214.

Patented Jan. 9, 1855.



UNITED STATES PATENT OFFICE.

OLDIN NICHOLS, OF LOWELL, MASSACHUSETTS.

WINDLASS.

Specification of Letters Patent No. 12,214, dated January 9, 1855.

To all whom it may concern:

Be it known that I, OLDIN NICHOLS, of Lowell, county of Middlesex, and State of Massachusetts, have invented a novel and useful Self-Fleeting Windlass and Self-Acting Chain-Cable Stopper Combined; and I truly declare that the following description and annexed drawings constitute a full, thorough, and exact description of the making and of the manner of constructing the same in general and in detail and the manner of using them for the purposes above mentioned.

In referring to the drawings Figure 1, denotes a side elevation and Fig. 2, denotes a front elevation of the same device.

The nature of my invention consists of casting out and raising the anchor or chain cable, and fleeting and stopping the said chain by means of a conical grooved cylinder, over which, is placed a pawl or pawls, for the purpose of stopping the chain cable by preventing its slipping around the windlass. The said conical cylinder effectually constituting the windlass for letting out and taking in the cable, and the pawl combined with the said cylinder for stopping the cable. And also of the other parts of my devices, detailed and fully explained in this specification and the drawings attached to it, and this device or invention, will dispense with the labor of four men in raising anchors; by the chain passing directly from the hawse hole to the windlass and thereby supersede the dragging of the chain up an inclined plane and then over the windlass roll or cylinder, as in other arrangements of windlass and stoppers.

To enable competent workmen; thoroughly skilled in the art of making, constructing and using windlasses and chain stoppers, to carry out my invention I will describe the same as follows: I construct a cylinder of wood and iron substantially as seen at B, Fig. 2, of the drawing which must be properly fitted to good substantial bearings as seen at H, Figs. 1, and 2, and they the said bearings, must be firmly secured to the deck and timbers of vessels as seen at A, Figs. 1, and 2. At one end of the cylinder is attached an iron ratchet gear, above and into which plays an iron pawl or dog D, hanging freely in the stand E, as seen at Fig. 2, for the purpose of stopping any turning of the before-mentioned cylinder or windlass as is generally used, I further construct and at-

tach by means of the stands E, to the quarter deck or other substantial support, two pawls as seen at C, Figs. 1 and 2, and at M, Fig. 2, and under them in the surface of the cylinder, I place two iron rings in which are turned grooves as seen at L, and N, Fig. 2. These grooves bring every other link of the chain perpendicular with the axis of the cylinder, as it passes under the pawl C, Figs. 1 and 2, and M, Figs. 1 and 2. The surfaces of the conical cylinder are reduced from each of the ends to the central groove by a series of gradations, which can be varied according to the weight of the anchor, and size of the chain, which are plainly shown at Fig. 2. These are for the perfect and free working of the chain. Under the cylinder B, I place two stationary guiding arms I, I, Fig. 2, and firmly secure them to the deck, for the purpose of properly guiding the chain as it passes on, or off from, the cylinder. The right hand one brings the chain partly off the edge of the first gradation of the cylinder and consequently, the rest of the chain coil follows a similar course on the other gradations. And I also construct two movable adjustable arms, as seen at J J, Fig. 2, held in their working positions by the stops o, Fig. 2, the one at the right hand is for the purpose of effectually guiding the chain, into the groove L, continually, as it is drawn into the vessel. And the left hand one effectually throws the chain out of the groove N, as it passes around the cylinder so as not to ride or come in contact with itself, when it passes out of the ships or vessels. These movable adjustable guides, should both be made of iron, and freely slide between two strong ways, or tracks, as seen at Fig. 2.

I design to make two holes in the deck or other equivalent devices for the purposes of keeping the guide J J, close to the surface of the cylinder, and guiding the chain into and out of these grooves as required, and at the same time to keep the left hand guide from the surface of the cylinder. And when the chain is to be let out, the right hand adjustable guide is moved from the cylinder and thus held fast by the stop o, and the left hand adjustable guide is moved to the surface of the cylinder and held fast in that position by the other stop o. It must be understood by this contrivance that the top part of the said guides J, keep the chain in the proper position so as to be stopped by

the pawls, when it is let out or drawn in. It will be further understood that the chain winding several times around the cylinder can be stopped much easier by the pawl M, 5 than it could by the letting the pawl C, drop on to the said chain which would bring the whole strain upon it and the cylinder. And my invention supersedes the necessity of strengthening the vessels at an outlay of 10 from one to two hundred dollars which is necessary in all other stoppers placed upon the bows of the vessels. And having thus described the making and construction of them I will describe the operation as fol- 15 lows:

The chain K, and all the other parts as shown in the drawing are in the position as when the chain is being drawn in by the turning of the windlass B and if the chain 20 is let out from the vessel the right hand sliding guide must be removed from the surface of the cylinder and the pawl C, must be raised from the chain which immediately changes its positions from the right end to 25 the left end of the cylinder B, by the revolving of the same, which is effected by the weight of the chain and anchor, by turning the said cylinder, and when thus changed to the left end of the cylinder B, the left hand 30 sliding guide J, is moved up to the surface of the cylinder, and secured in that position by the stop o. Then the chain can be let

out its whole length without its being possible for any part of the chain to come in contact with itself when passing out of the 35 ships or vessel as set forth and also when the chain is being drawn in. All essentially as set forth and specified.

Having thus described my invention, what I claim as my original discovery and desire 40 to secure by Letters Patent is—

1. The cylinder B made substantially, and operated essentially and for the purpose as set forth.

2. I claim the action and coöperation of 45 one or more pawls with the cylinder B, so arranged with this cylinder as to come in contact with and firmly hold the chain, when passing either way over the top of this cylinder which constitutes, with the pawls 50 C and M, both the windlass and stopper when constructed and operated essentially as set forth.

3. I claim the combination of the cylinder B, the pawls C and M, and the adjustable 55 guides J, all or either two of them, for raising, stopping, and fleeting chain cables, they being constructed and operated essentially and for the purposes set forth.

OLDIN NICHOLS.

Witnesses:

S. S. PARKHURST,
G. C. ABBOTT.