(No Model.)

J. J. EMERY.

MECHANISM RELATING TO CHAIN STOPPERS AND WINDLASSES OF NAVIGABLE VESSELS.

No. 311,573. Patented Feb. 3, 1885.

Fig. 1.

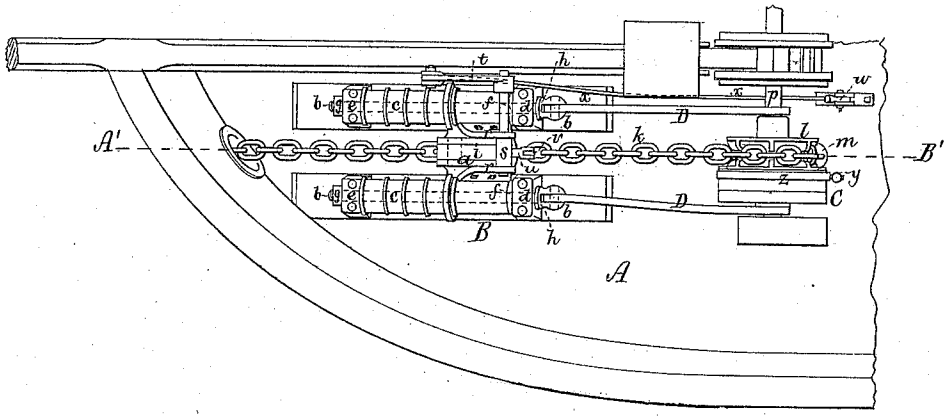


Fig. 2.

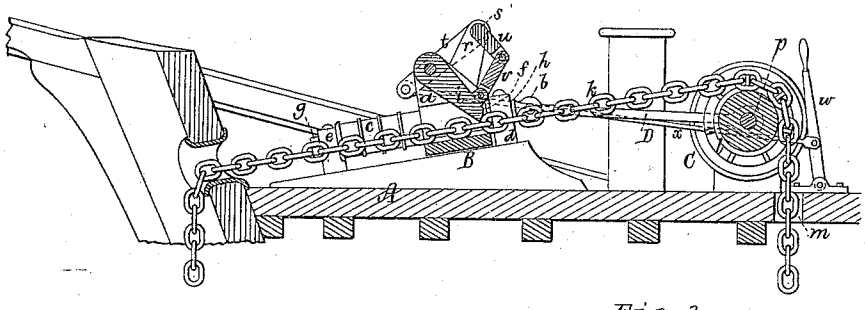
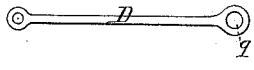


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN JOHN EMERY, OF SOUTH THOMASTON, MAINE.

MECHANISM RELATING TO CHAIN-STOPPERS AND WINDLASSES OF NAVIGABLE VESSELS.

SPECIFICATION forming part of Letters Patent No. 311,573, dated February 3, 1885.

Application filed October 8, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN JOHN EMERY, of South Thomaston, in the county of Knox, of the State of Maine, have invented a new and useful Improvement in Mechanism Relating to Chain-Stoppers and Windlasses of Navigable Vessels; and I do hereby declare the same to be described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view, and Fig. 2 a longitudinal section, of a chain-stopper and windlass provided with my invention, the nature of which is defined in the claims hereinafter presented. The plan of section of Fig. 2 is on the dotted line A′ B′ of Fig. 1. Fig. 3 is a side view of one of the rods D, hereinafter described.

In the drawings, a part of a vessel's bow is shown at A as provided with a chain-stopper, B, and a windlass, C, each being such as in common use. The pawl-carrier of the chain-stopper is shown at *a* as supported by and adapted to slide on two shouldered screw-bolts, *b*, and to bear against sets of springs *c*, encompassing the said bolts, each of which goes through two standards, *d e*, and has on it, in advance of the pawl-carrier, a set of springs, *f*. Nuts *g*, screwed on the forward ends of the bolts, serve to confine the said bolts in the standards. Each of the bolts is provided with a shoulder, *h*, to rest against the rear or after standards. The pawl-carrier slides freely on the bolts and against the two sets of springs, and carries or has pivoted to it a pawl, *i*, to engage with the anchor-chain, *k*, which goes through and rests in the pawl-carrier. When the pawl is down in engagement with the chain, such chain is prevented from being drawn through the carrier. From such pawl-carrier the chain, as usual, goes around the barrel or sprocket-wheel *l* of the windlass, and thence down through a hole, *m*, in the deck. The great strains to which the aforesaid standards are subjected while the chain-stopper may be in use have a tendency to break away or loosen them. In order to prevent such, I combine each of the bolts *b* of the chain-stopper with the shaft *p* of the windlass by means of a rod, D, connecting them, such rod at its front end being pivoted or fastened to the bolt, and at its rear end provided with an eye, *q*, for the shaft to extend through. By thus connecting the windlass and the chain-stopper the latter becomes supported by the former and its bits in addition to the standards *d d* and *e e*, from which it will be seen that the said liability of the chain-stopper standards to become loosened or broken away from the deck or the chucks supporting them is greatly lessened, if not entirely prevented. Furthermore, two standards, *r r*, extend upward from the pawl-carrier and support a horizontal rock-shaft, *s*, that turns in bearings in the standards, and has two arms, *t* and *u*, projecting from it downward in manner as represented. The shorter of these arms is connected with the pawl by a link or rod, *v*, jointed to them. The longer arm is connected to a lever, *w*, by a rod, *x*, jointed to them, such lever being arranged just abaft of the windlass and fulcrumed to the deck. By means of the lever, connecting-rod, shaft, and its arms, and the link *v* the pawl may be either raised out of or held down firmly into engagement with the chain by a person hold of the lever and stationed at the windlass. It sometimes happens that the brake of the windlass is insufficient to keep the chain from running out too fast, in which case the brakeman, with one hand hold of the lever *y* of the brake *z* and the other hold of the lever *w*, can bring the pawl into or out of action on the chain, as may be required, to aid in checking the chain.

I do not herein claim the combination of each of the bolts of the chain-stopper with a stay-rod extending from it obliquely through the deck and one of the supporting-timbers thereof and held in place by a nut, as represented in the British Patent No. 3,006 of 1869, for when the stay-rod is carried through the deck the latter is rendered liable to leak and the stay-rod to corrode in the hole, and it becomes very difficult to remove the stay-rod from the deck when such may be required. With my improvement the stay-rods are entirely disconnected from and are above the deck, and serve to connect the windlass and chain-stoppers, and in case of breakage of one of them it can be easily removed and another substituted without extracting it from the deck.

I claim—

1. The combination of the chain-stopper B

and the windlass C with the rods D, connecting the bolts of the stopper with the shaft of the windlass, all being substantially as set forth.

2. The combination of the lever *w*, arranged at or abaft of and close to the windlass and fulcrumed to the deck, with the pawl of the chain-stopper by mechanism whereby by the movement of the said lever in one direction the pawl may be lifted out of engagement with and by an opposite movement of the lever forced down upon the chain, such mechanism, as described, being the connecting-rod *x*, shaft *s*, arms *t* and *u*, and the link or rod *v*, arranged and applied as set forth.

JOHN JOHN EMERY.

Witnesses:
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