2 Sheets—Sheet 1.

P. C. St. MARIE.

HAWSE-PIPE.

No. 176,562. Patented April 25, 1876.

Fig. 1.

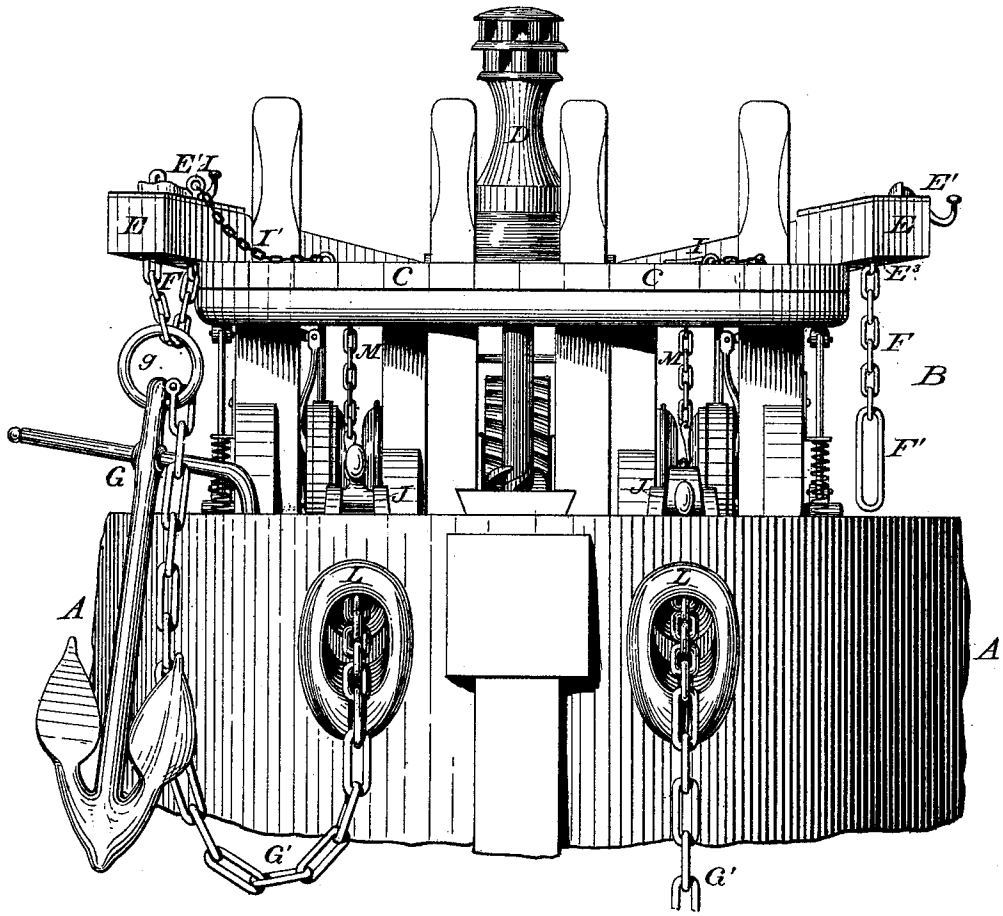


Fig. 2.

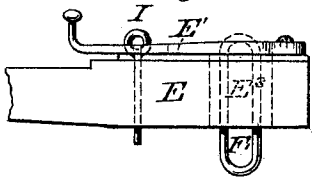
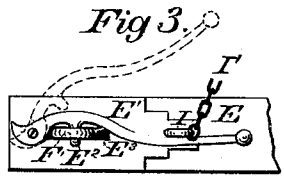


Fig 3.



Attest:

C. J. Crile
Edith Brookes

Inventor:

Pierre Celestin St. Marie
by Colborne Brookes
Att'y.

2 Sheets—Sheet 2.

P. C. St. MARIE.

HAWSE-PIPE.

No. 176,562. Patented April 25, 1876.

Fig. 4.

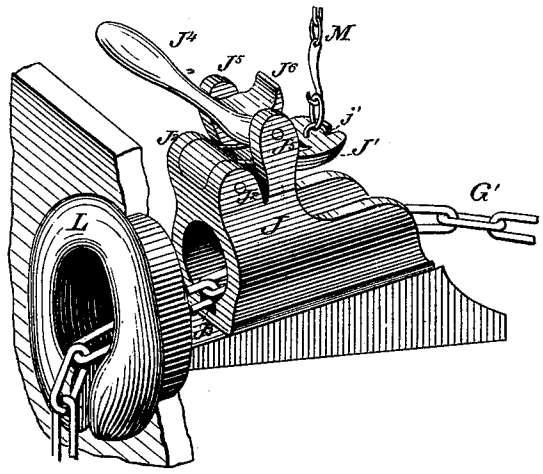


Fig. 7.

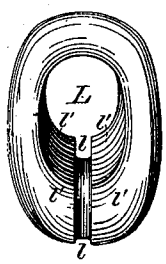


Fig. 5.

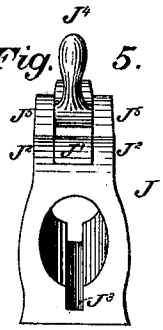


Fig. 8.

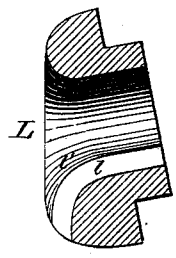
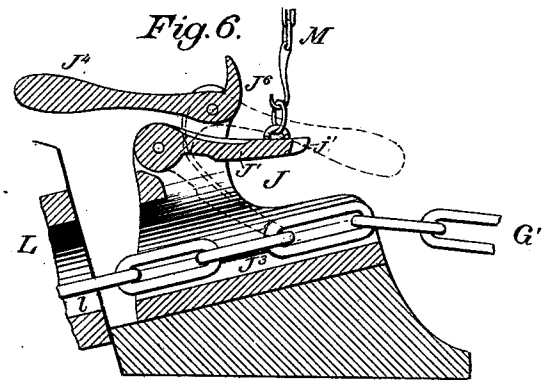


Fig. 6.



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UNITED STATES PATENT OFFICE.

PIERRE CELESTIN ST. MARIE, OF MONTREAL, CANADA.

IMPROVEMENT IN HAWSE-PIPES.

Specification formir g part of Letters Patent No. **176,562**, dated April 25, 1876; application filed April 17, 1876.

To all whom it may concern:

Be it known that I, PIERRE CELESTIN ST. MARIE, of the city and district of Montreal, in the province of Quebec and Dominion of Canada, engineer, have invented certain new and useful Improvements in Ships and Vessels; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in ships and vessels, the nature of which will be fully understood by reference to the accompanying drawings, in which—

Figure 1 represents a front view of so much of a vessel as will illustrate my invention. Figs. 2, 3, 4, 5, 6, 7, and 8 show detail views of parts separately.

In each of the views similar letters of reference are employed to denote corresponding parts wherever they occur.

A represents a portion of the main deck of a ship or vessel, upon which is erected a windlass, B, and the various devices for controlling and operating the same, and the necessary chains, cables, or ropes, as will be well understood by persons acquainted with nautical matters. C represents part of the forecastle-deck, upon which is mounted the capstan D, and also the davits E, which are provided with anchor-hanger chain-levers E^1, pivoted to their heads. (Shown in detail by Figs. 2 and 3.) These levers E^1 are formed with lugs or catches E^2, adapted to pass through the end link F^1 of the anchor-hanging chains F, when such chains F are passed through the ring *g* of the anchor G and inserted in the hole or aperture E^3, as shown at Fig. 1, and also shown by Figs. 2 and 3. The levers E are held in position and prevented from accidentally letting go of the anchor G by means of safety-pins I, which are connected to the deck B by chains I′, as shown.

J J represent the chain-stoppers, which are provided with hinged plates J^1 J^1, pivoted to the bearings J^2, formed on each side of the front end of the stoppers J. The stoppers J are provided with grooves or channels J^3, for the reception of the alternate links of the chain G^1, for the purpose of keeping the same in a vertical position, and preventing the kinking or twisting of the same. In the front end of the plates J^1 a notch or recess, *j′*, is formed, for the reception of the cross-links of the chain G^1 when sliding in the groove J^3.

L L are the chain hawser-pipes, which are formed with grooves or channels *l*, corresponding with the grooves J^3 in the chain-stoppers J, for the purpose of guiding the chains through the hawser-pipes and preventing twisting of the same. The hawser-pipes L are also provided with guiding-faces *l′*, for the purpose of keeping the alternate links of the chain K perfectly flat or horizontal, while the grooves *l* serve to keep the alternate links vertical, thereby avoiding all possibility of twisting or kinking in passing through the chain-stopper when heaving the anchor.

J^4 are levers, pivoted to lugs J^5, and provided with cam-surfaces J^6, adapted to press the plates J^1 of the chain-stoppers J upon the anchor-chains, in order more effectually to stop the same.

When the chains are being paid out, the plates J^1 are held up out of position by means of chains M, attached to the forecastle-deck C, or any other suitable point.

The operation of my invention will be so readily understood it will be unnecessary for me further to describe the same.

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

1. The combination, with a chain-stopper, J, of the plate J^1, provided with a notch or recess, *j′*, and a pivoted lever, J^4, provided with a cam-surface, J^6, substantially as and for the purpose described.

2. The combination, with a chain-stopper, J, provided with a groove or channel, J^3, and a pivoted locking-plate, J^1, formed with a notch or recess, *j′*, in its forward end, of the pivoted lever J^4, provided with a cam-surface, J^6, substantially as and for the purpose specified.

3. A chain hawser-pipe, L, having a groove or channel, *l*, for the purpose of guiding the

alternate links of the chain, substantially as and for the purpose described.

4. The combination, with the anchor G and chain G′, of the anchor-hanger chain-lever E^1, having lugs or catches E^2, and the hanging-chain F, substantially as shown and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

PIERRE C. ST. MARIE.

Witnesses:

COLBORNE BROOKES,

F. W. FARLEIGH.