

P. H. Jackson,

Windlass.

Patented Dec. 16, 1856.

N^o 16,238.

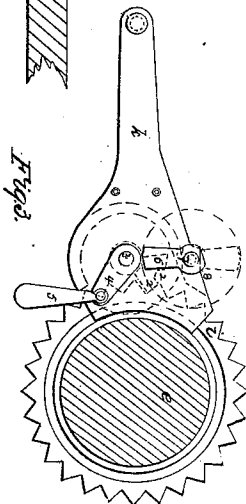


Fig. 2.

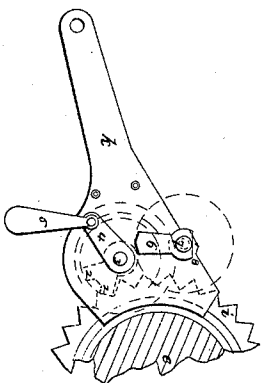


Fig. 3.

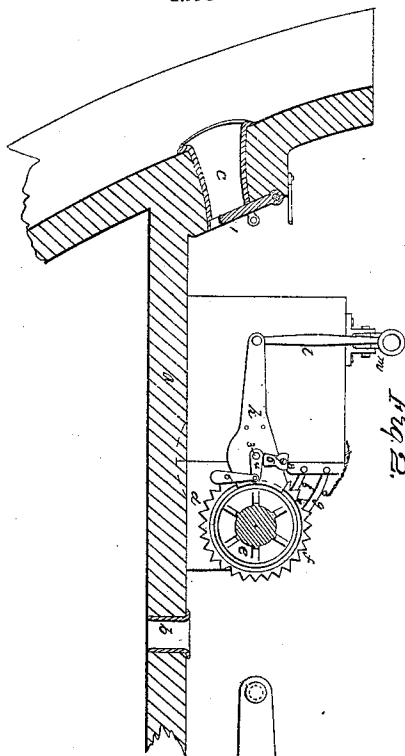


Fig. 1.

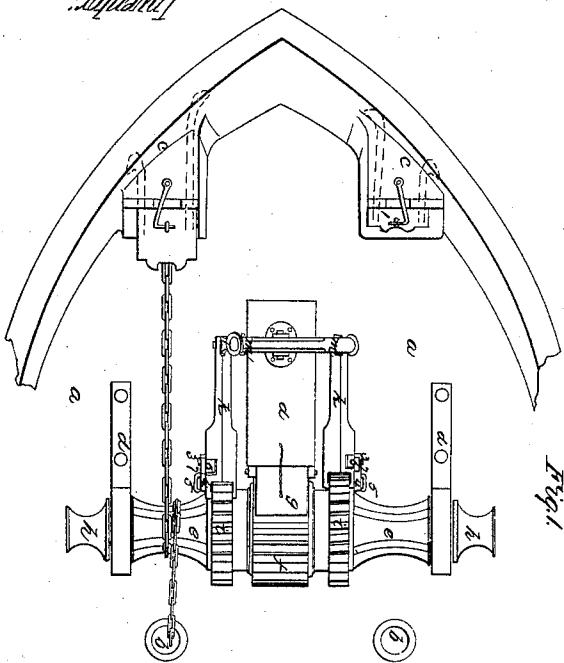


Fig. 4.

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UNITED STATES PATENT OFFICE.

PETER H. JACKSON, OF NEW YORK, N. Y.

SHIP'S WINDLASS.

Specification of Letters Patent No. 16,238, dated December 16, 1856.

To all whom it may concern:

Be it known that I, PETER H. JACKSON, of the city and State of New York, have invented, made, and applied to use a new and useful Improvement in Windlasses for Ships and Vessels; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1, is a plan of my improved windlass. Fig. 2, is a vertical section at the line A, A, and Fig. 3, represents my improved pawl to which my invention relates, as in larger size and detached.

Similar marks of reference denote corresponding parts.

The nature of my said invention consists in the arrangement of a double acting pawl in connection with a counterweight so that it shall cause the heaver of the windlass to rotate said windlass in either direction while said heaver occupies the same position and is actuated by the same means regardless of the direction in which the windlass is being moved.

In the drawing *a* is the deck with the locker pipe *b*, hawser pipe *c*, and cable stopper 1, of any desired construction.

d, d, are the windlass bits, *e, e*, the windlass barrels. *h, h*, are winches on the ends of the windlass shaft.

f is the ratchet wheel, and *g, g* the pawls taking said ratchet wheel. These pawls may be lifted out of use by a chain or other means as usual.

i, i, are the ratchet wheels, *k, k*, the heavers attached by the circular groove to the wheels *i, i*, and moved by the connecting rods *l, l*, and pump brakes *m*. These parts thus far are of any usual and desired construction and do not therefore need any further description, except to say that the heavers *k, k*, are adapted to receive my improved pawl as hereafter described instead of the ordinary single pawl.

My pawl 2, is formed with two projections to take the teeth of the wheel *i*, and rotate the same in either direction according as one projection may act above the center or axis 3, or the pawl be thrown over so that

the other projection acts below the center (3). This center or axis 3, passes through the plates of the heaver *k*, and is fitted at one end with a crank arm 4, and both the crank arm 4 and pawl 2, being firmly fixed to the axis 3, they move together and said crank 4 is nearly at right angles to the projections of the pawl 2. 5, is a counterweight on the pin of the crank 4. By reference to the positions shown in Fig. 3, it will be seen that this counterweight tends to keep either projection of the pawl 2, into the teeth (*i*) when on either side of the axis (3) and the windlass is being rotated in either direction, and that by lifting the counterweight 5, and throwing the crank and pawl over the other side of the center (3) the motion of the windlass is reversed. This arrangement of counterweight might answer alone if the windlass were not subject to sudden jerks and strain that might (together with the motion of the heaver) throw the pawl onto the wrong side of the center and block the rotation of the windlass; to avoid this difficulty I make use of a chock or hanging stop 6 on a center 7, above the axis 3, the length of which is such as just to swing clear of the round part of the crank 4, at the axis 3, consequently as this locking piece hangs down as the heaver is depressed it swings out over the crank 4, to prevent the same being thrown over as the pawl passes out and overrides the teeth *i*, on taking up preparatory to another downward heave, and this stop 6, acts in the same manner when the windlass is being rotated in the opposite direction. And the hub or center of this blocking piece 6, is of a size to prevent the crank 4 turning over except when the said blocking piece is turned up vertically as seen by dotted lines and then the flat part 8, allows the crank arm 4, and pawl to be thrown over in the opposite direction.

It will now be apparent that the two lifters or heavers *k, k*, being constructed similarly and one rising as the other is depressed and vice versa the pawls *g* can be used or not as desired and that the chain can be drawn in or given out with the greatest ease, and the windlass becomes a cable lifter to draw the chain up on deck from the chain locker, and the anchor can if de-

sired be dropped while the chain is around the windlass allowing it to rotate as the chain runs out; and no sudden jerk or lurching of the chain, ship, or heavers can
5 derange the pawls in the heavers.

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

The double acting pawl 2, crank arm 4, and counterweight 5, applied to the heaver
10 or heavers of the windlass arranged and op-

erated substantially as and for the purposes specified.

In witness whereof I have hereunto set my signature this seventh day of November 1856.

PETER H. JACKSON.

Witnesses:

LEMUEL W. TERRELL,

THOMAS G. HAROLD.