J. Reed,

Windlass.

No 22,978. Patented Feb. 15, 1859.

Fig. 1.

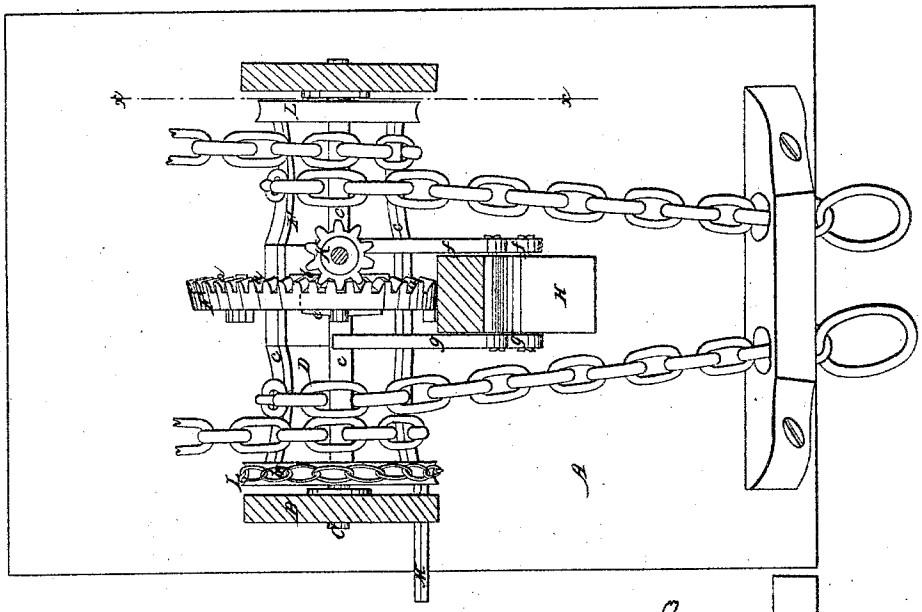
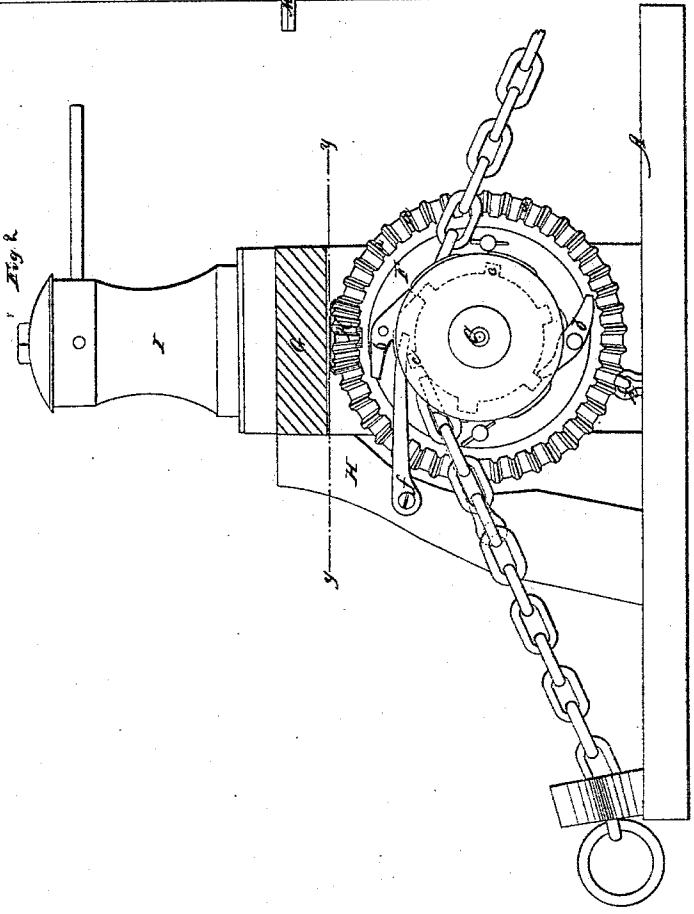


Fig. 2.



UNITED STATES PATENT OFFICE.

J. REED, OF MARSHFIELD, MASSACHUSETTS.

WINDLASS.

Specification of Letters Patent No. 22,978, dated February 15, 1859.

To all whom it may concern:

Be it known that I, JESSE REED, of Marshfield, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Ships' Windlasses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan below the line *y y* of Fig. 2. Fig. 2 a vertical section through the same on the line *x*, *x*, of Fig. 1.

My invention relates to that class of ships' windlasses that are operated by a capstan placed over the windlass and geared therewith, and consists in so arranging two windlasses and a capstan, and the frame which supports them that either windlass may be operated independently of the other, or the capstan may be used in the ordinary way without operating either windlass—and that too in a simple, durable, and efficient manner.

That others skilled in the art may understand and use my invention I will proceed to describe the manner in which I have carried out the same.

In the drawings A is the deck; B the frame or windlass bits, in which are supported in suitable bearings the axle C, which carries the two windlasses D and E, these run loosely on the axle.

A large disk or wheel F having on its periphery a series of beveled cogs *a*, is supported on the axle C, in the middle of its length and revolves loosely on the axle between the two windlasses independently of them, except when connected therewith in a manner which will be presently explained.

A platform G connects the tops of the frame B, and is braced by a knee or samson post H, extending from the front side of it down to the deck A. On this platform is placed the capstan I, the spindle of which passes down through the platform and carries on its lower end a beveled pinion K, which engages with the teeth *a*, on the disk F. In practice this capstan would generally be placed on a top gallant forecastle on which the men would walk when operating the capstan or windlasses, or in some cases it would be placed on the spar deck and the windlasses on the deck immediately beneath it.

The disk F has attached to its face two dogs *b*, (Fig. 2) which are pivoted at the middle of their length to the disk, so that they may be thrown over toward either side and by engaging with the lags *c*, of the windlass F, communicate motion to it from the capstan in either direction as may be required. A similar pair of dogs *e* are attached to the other face of the disk and engage with the lags *c*, on the windlass D (any suitable number of these dogs may be employed). A pair of holding pawls *f* are pivoted to one side of the post H and engage with the lags *c* on the windlass E and a similar pair *g* on the other side of the post engage with the windlass D. Each windlass has attached to its outer end a grooved wheel L over which is laid a small chain *h* attached to a brake lever M which is used for checking the windlass when paying out the cable.

With the windlass and capstan arranged and operating substantially as above described it will be seen that the windlasses may both be disconnected from the disk F, and the capstan be used in the ordinary way—or either or both windlasses may be operated by it in either direction—or the ship may ride by one windlass while the other one is used for other purposes—and these ends I attain without the use of complicated gearing or machinery that is liable to get out of order. It will thus be seen that by my arrangement of parts, the windlasses D and E, are made to support the central disk or wheel F, on its sides and near its cogs. In practice, this is an important feature, since if the gear F, is allowed any or much play or spring, the teeth or gearing is liable to slip, and thus endanger the lives of those who are working the windlass as well as the breaking of the gearing and other working parts of the windlass. It will also be seen that the knee or samson post H, is so arranged that it answers a double purpose, that of bracing the windlass and a support for the pawls which hold the wheels or windlasses D, and E. This arrangement is also an important one, when considered in a practical point of view, since it leaves more room for operating the windlass than if the pawls were supported by side posts. Again, the general arrangement of the various parts is such, that when the windlass is in use, the tendency of the strain on the cable is to hold

the parts close together, and thus render the action more sure and certain—see Fig. 1, in the drawings.

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

The combination of the windlass drums D, E, pawls *f*, *g*, with the wheel F and knee or samson post H, whereby the central wheel F, is supported on both sides and the windlass rendered more simple and sure in its action, substantially as described.

JESSE REED.

Witnesses:
THOS. R. ROACH,
P. E. TESCHEMACHER.