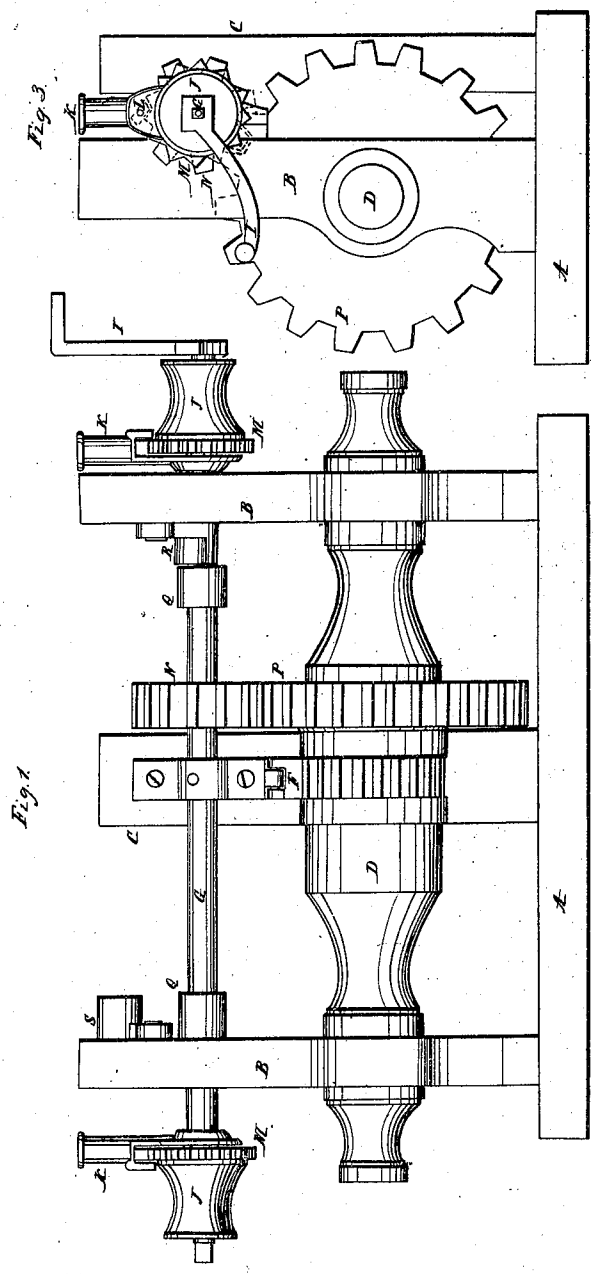
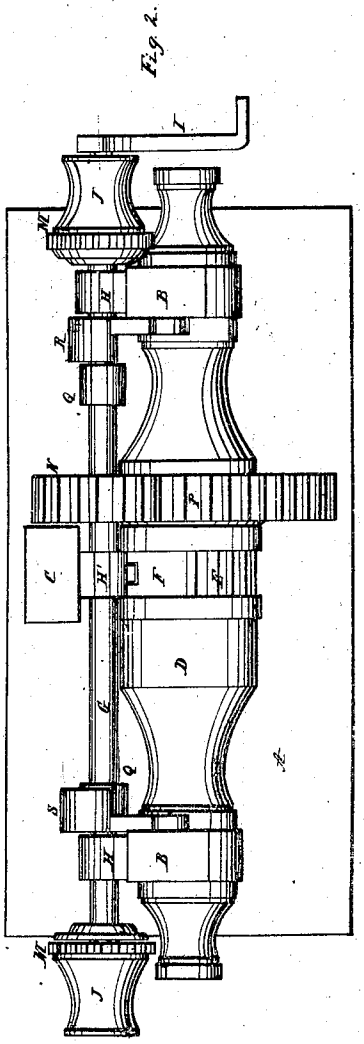
D. Knowlton,

Windlass.

No. 23,847. Patented May 3, 1859.





Witnesses:
J. Dennis Jr
Edw. F. Brown

Inventor:
Durie Knowlton

UNITED STATES PATENT OFFICE.

DAVID KNOWLTON, OF CAMDEN, MAINE.

WINDLASS.

Specification of Letters Patent No. 23,847, dated May 3, 1859.

To all whom it may concern:

Be it known that I, DAVID KNOWLTON, of Camden, in the county of Waldo and State of Maine, have invented certain new and useful Improvements in Windlasses and Winches; and I do hereby declare that the same are described and represented in the following specifications and drawings.

To enable others skilled in the art to make and use my improvements I will proceed to describe their construction and operation referring to the drawings in which the same letters indicate like parts in each of the figures.

Figure 1, is an elevation of my improved windlass and winch. Fig. 2, is a plan or top view of the same. Fig. 3, is an elevation of one end.

The nature of my invention and improvement consists in a winch shaft provided with barrels and connected to the windlass by gears so arranged that the windlass may be worked by the winch shaft, or the winch shaft and barrel may be worked independent of the windlass.

In the accompanying drawings A, represents a portion of the deck of a vessel, and B, B, the windlass bitts, and C, the pawl bitt; the whole being arranged in the usual position. The windlass barrel D, may be made in the form shown in the drawing, or in such other form as may be preferred, and fitted to turn in the bitts B, B, and provided with ratchet teeth E, for the pawl F, which is hinged to the bitt C, so as to fall into the ratchet teeth, and prevent the windlass barrel from turning back. The winch shaft G, is arranged parallel to the windlass and above it, as shown in Fig. 1, and is fitted to turn in the boxes H, H, fastened to the windlass bitts, and in the box H′, fastened to the pawl bitt. The ends of the shaft G, are made square to receive cranks like the one shown at I, by which the shaft may be turned to pull chains or ropes applied to the winch barrels J, J, which are fastened to the shaft G, near each end.

The sockets K, K, are fitted to receive hand spikes or levers to turn the winch, either alone, or to operate the windlass as may be desired. These sockets are arranged to turn freely on the winch shaft G, and are provided with pawls one of which is shown by dotted lines at L, Fig. 3. These pawls are arranged to catch the teeth of the ratchet wheels M, M, when the sockets are moved in the direction of the arrow to turn the shaft G, and so as to slip over the teeth of the wheels, when moved in the opposite direction. The ratchet wheels M, M, are firmly fastened to the shaft G, and winch barrels J, J, so as to turn them. The winch shaft G, has the pinion N, fastened to it near the pawl bitt C, which pinion turns the gear P, fastened to the windlass barrel, to operate it and haul in the cable. The shaft G, is arranged to traverse endwise in its boxes, so as to move the pinion N, in, and out of gear endwise, by traversing the shaft G, which has two collars Q, Q, fastened to it, so that when the pinion N, is put in gear with the gear P, it may be held there by the latch R, and when it is put out of gear, it may be held out, by the latch S; both of which latches are fastened to the bitts B, B.

When the pinion N, is out of gear the winch may be turned either by cranks or hand spikes, or both, entirely independent of the windlass which remains stationary. And when it is desirable to use the windlass, the pinion N, may be put into gear with the gear wheel P, so as to turn the windlass either by the winch cranks or hand spikes, or both as may be desired, and according to the power to be exerted.

By arranging the winch upon the windlass bitts it is more out of the way, than if it was applied to any other part of the vessel; besides it costs far less to apply it to the bitts than it would to erect standards on purpose to support it. And by arranging it on the bitts above the windlass, it is so near the windlass, that I am enabled to connect the winch to the windlass, by a pinion and gear wheel, thereby making a geared windlass of great power, at a very small expense. And at the same time have a windlass that can be operated slowly with great power by applying hand spikes to the sockets; or operated quickly with less power by turning the cranks: being admirably adapted to get an anchor up quick, so as to enable a vessel to escape squalls or bad weather.

I believe I have described and represented my improvements in windlass and winch so

as to enable any person skilled in the art to make and use them. I will now state what I desire to secure by Letters Patent to wit:

I claim the winch shaft G, provided with barrels J, J, and connected to the windlass by gears as described, and so arranged that the windlass may be worked by the winch shaft, or the winch shaft and barrels, may be worked independent of the windlass, substantially as and for the purpose described.

DAVID KNOWLTON.

Witnesses:
I. DENNIS, Jr.,
EDW. F. BROWN.