T. F. SHAW.

WINDLASSES.

No. 175,842. Patented April 11, 1876.

Fig: 1.

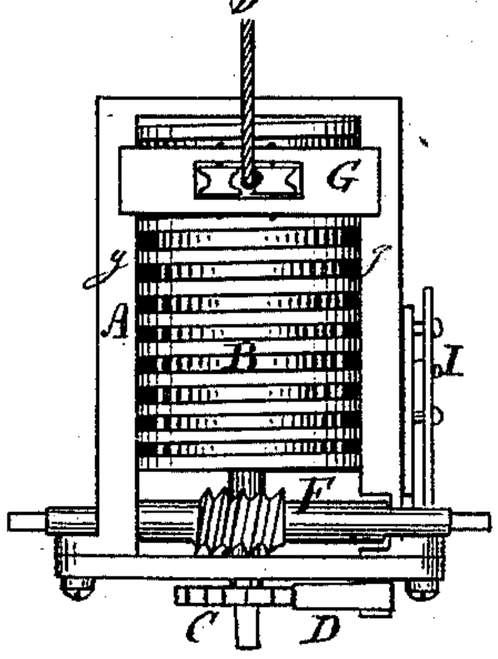


Fig: 2.

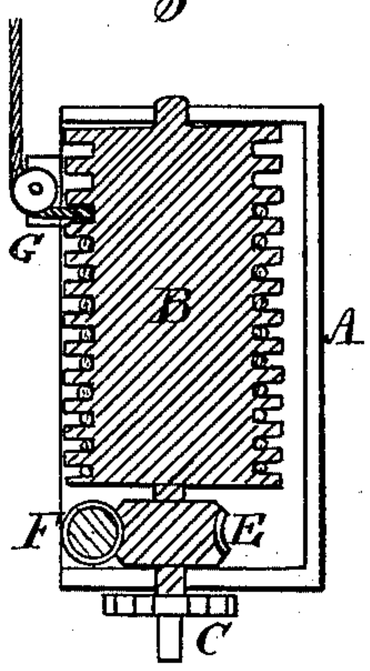


Fig: 3.

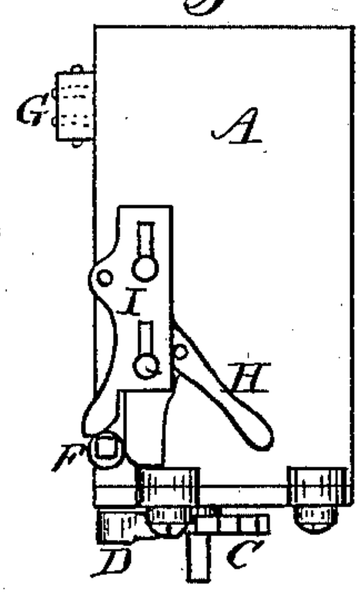
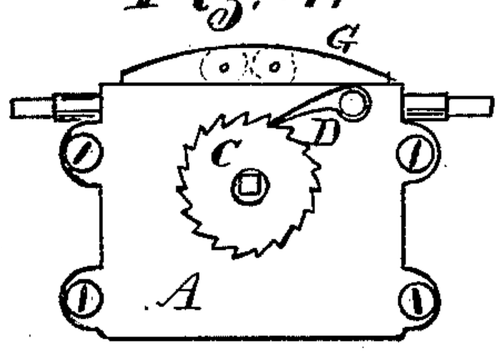


Fig: 4.



Witnesses.

Geo. W. Tibbitts

Frank R. Tibbitts

Inventor.

Thomas F. Shaw

UNITED STATES PATENT OFFICE.

THOMAS F. SHAW, OF CLEVELAND, OHIO, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO GEORGE WARNER AND JOHN F. TOWNSEND, OF SAME PLACE.

IMPROVEMENT IN WINDLASSES.

Specification forming part of Letters Patent No. **175,842**, dated April 11, 1876; application filed February 11, 1876.

To all whom it may concern:

Be it known that I, THOMAS F. SHAW, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new Purchase-Windlass to be used on Sailing-Vessels, of which the following is a specification:

This invention relates to a new construction of a windlass to be used on sailing-vessels as a purchase for hauling of ropes in setting or taking in sail, and the like labor, whereby the labor is lessened and the hauling and paying out of ropes or halyards are greatly facilitated, as hereinafter fully explained.

In the accompanying drawing, Figure 1 is a front elevation. Fig. 2 is a vertical section in line *x x* of Fig. 1. Fig. 3 is a side elevation, and Fig. 4 is an end elevation.

A is a case, in which is journaled a drum, B, the lower end of said drum-journal passing out through the case, and is arranged to receive a crank, the said journal also being provided with a ratchet, C, and dog D. Upon the journal, inside of the case A, is also placed a worm-gear wheel, E, lying crosswise of which, and journaled in the sides of the case A, is a worm-screw shaft, F, upon the ends of which are attached cranks for operating the same. The surface of the drum B is cut with a deep screw-thread, which receives the rope as it is wound upon the drum. G is a traveling guide, provided with a sheave roller or rollers, over or between which the rope passes as it is hauled in or paid out, said guide having on its inside face projections which fit into the thread-grooves of the drum, the revolutions of the drum causing the guide to traverse back and forth, thus guiding the rope into the spiral groove on the drum. The guide G also slides on ways *g* at the sides of the case A. At the side of the case is pivoted a lever, H, operating two sliding arms, I I, for throwing the worm-shaft into and out of gear, as may be required for operating the drum. When less power is required the worm-screw shaft is thrown out of gear with the wheel E, and the crank may then be applied to the drum-shaft; but when greater power is required the worm-gear shaft is thrown into gear with the wheel, and the cranks applied to the worm-shaft, whereby greater purchase is obtained.

This device is to be placed either in an upright or a horizontal position at the base of a mast, or at any other suitable place for working, and is found to be of great advantage for the purpose for which it is designed.

Having described my invention, I claim as follows:

The combination of the case A, screw-threaded drum B, ratchet C, dog D, worm-gear wheel E, worm-screw shaft F, guide G, lever H, and arms I I, when arranged to operate, substantially as and for the purpose specified.

THOMAS F. SHAW.

Witnesses:

GEO. W. TIBBITTS,

F. W. CADWELL.