E. SORRINSON.

WINCH.

No. 180,668. Patented Aug. 1, 1876.

Fig: 1.

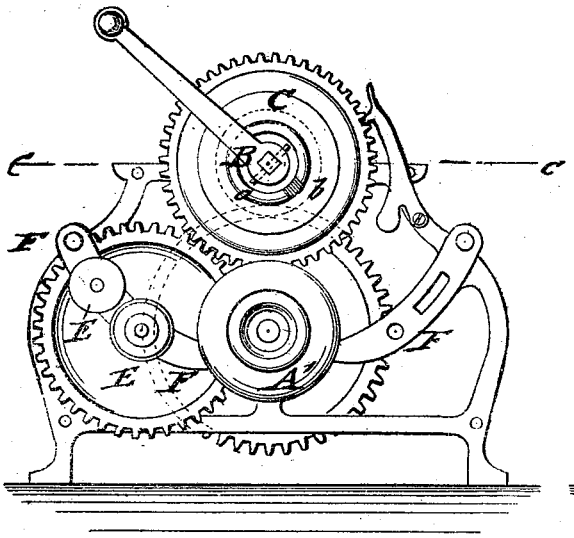


Fig: 2.

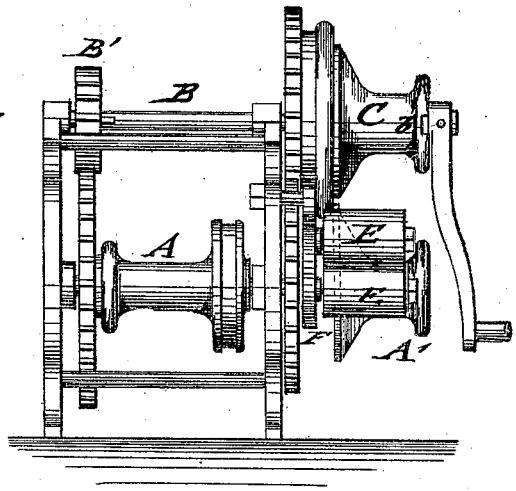


Fig: 3.

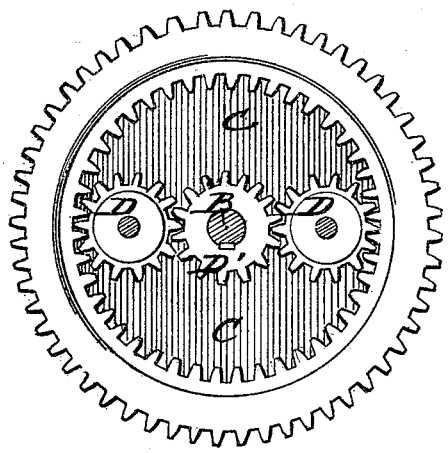
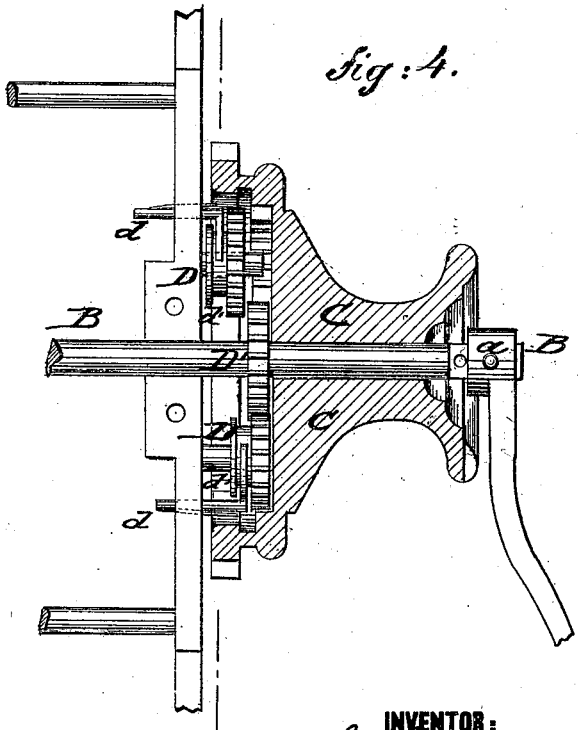


Fig: 4.



WITNESSES:

Chas. Nidd.
John Goethals

INVENTOR:

E. Sorrinson

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ELIAS SORRINSON, OF WEST DE PERE, WISCONSIN.

IMPROVEMENT IN WINCHES.

Specification forming part of Letters Patent No. **180,668**, dated August 1, 1876; application filed May 29, 1876.

To all whom it may concern:

Be it known that I, ELIAS SORRINSON, of West de Pere, county of Brown, and State of Wisconsin, have invented a new and Improved Winch, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation, and Fig. 2 a front elevation, of my improved winch, and Figs. 3 and 4 are respectively a detail side view, and a horizontal section on line *c c*, Fig. 1, of the double-transmitting gearing of the winch.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide for hoisting sails on board of ships, and for other purposes, an improved winch that may be used for the purpose of hoisting two or more halyards at the same time, but at different speed; providing also for the slack ropes without requiring extra hands.

The invention consists of a common winch, whose crank-shaft is placed by sliding pinions in connection with a second hoisting-drum; and with rubber rollers for taking up the slack.

In the drawing, A represents the drum of a winch or windlass of the usual construction, with a brake device and an outside barrel, A′. The drum A is rotated by a crank-shaft, B, and pinion, B′, like a common winch, by fastening the handle by means of a key, *a*, and recess, *b*, to the outer barrel C of the crank-shaft. By detaching the pinions from the barrel C, the barrel remains loose on the shaft until engaged by two said sliding pinions, D, that are pushed in by means of fork-shaped handles *d*, engaging collars *d′* of pinions D, so as to gear with a pinion, D′, of the crank-shaft and an encircling gear of the barrel. The barrel C is thereby revolved simultaneously with the drum, but at different speed, so that it may be applied to hoist sails, one halyard running up faster, the other slower, as required by the number of sheaves of the same.

One person may run the winch and hoist conveniently two halyards at once. The sliding pinions, barrel, and crank device may be duplicated at the other side, and thereby the winch used for hoisting a third sail, or other object, if desired.

The slack of the ropes is taken up by two rubber rollers, E, of which one is revolved by a gear-wheel, intermeshing with an outer gear of the barrel C. The other roller turns on a fixed shaft that is applied in adjustable manner to the slotted supporting-piece F of the winch-frame to admit the setting of the slack-rollers to the thickness of ropes, and to greater or lesser friction on the same. The arrangement of the rubber rollers admits the taking up of the slack of the ropes, and the hoisting of sails by one person, dispensing thereby with separate hands for holding the slack-ropes. Two sets of slack-rollers are arranged at each side of the winch for the different ropes. The pinion B′ of the crank-shaft is is also made to slide on the shaft to be withdrawn or pushed into gear like the pinions D for the purpose of running the drum alone, or the barrel, or both together, as required by the work to be done.

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

1. The combination of windlass A, having crank-shaft B, with pinion D′, the barrel C, and the pinions D, all arranged substantially as shown and described.

2. The two rubber rolls E E, one connecting with gear of barrel C, and the other attached adjustably to support F, substantially as and for the purpose specified.

ELIAS SORRINSON.

Witnesses:

CHAS. LAWTON,

EUGENE SMITH.