

Oliver P. Hix's Impt. in Windlasses for Vessels.

PATENTED JUL 18 1871

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Fig. 1.

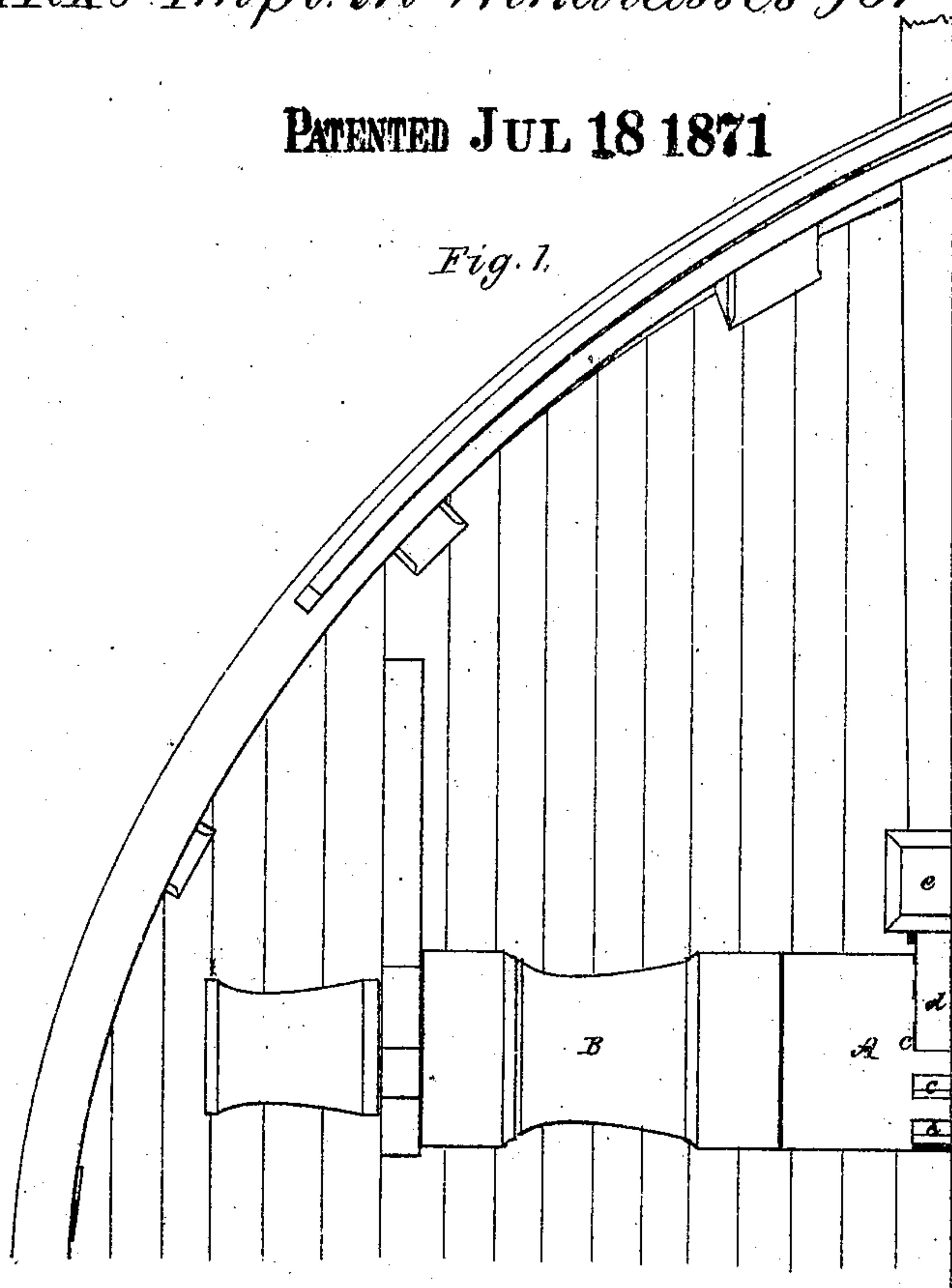


Fig. 2.

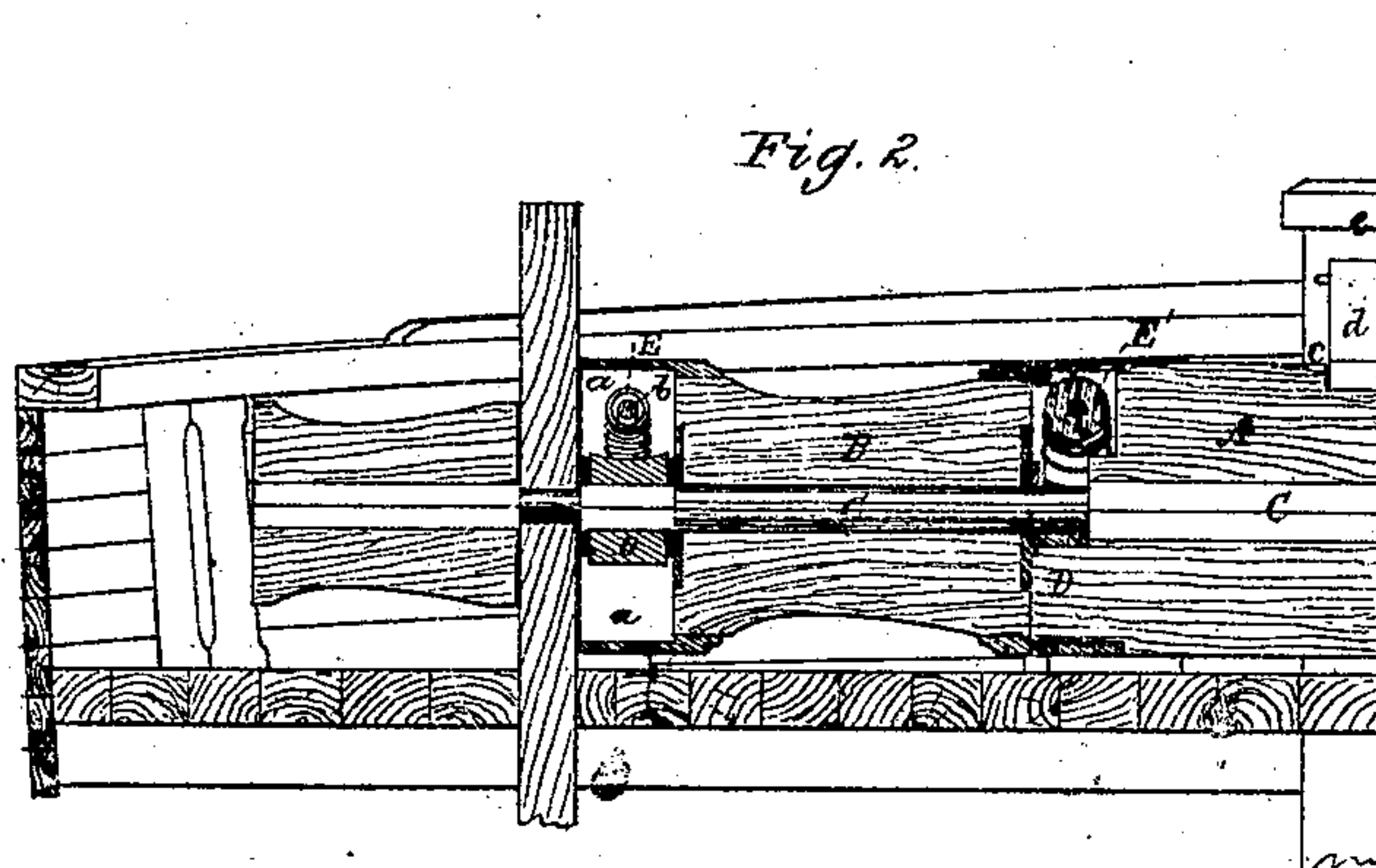


Fig. 3.

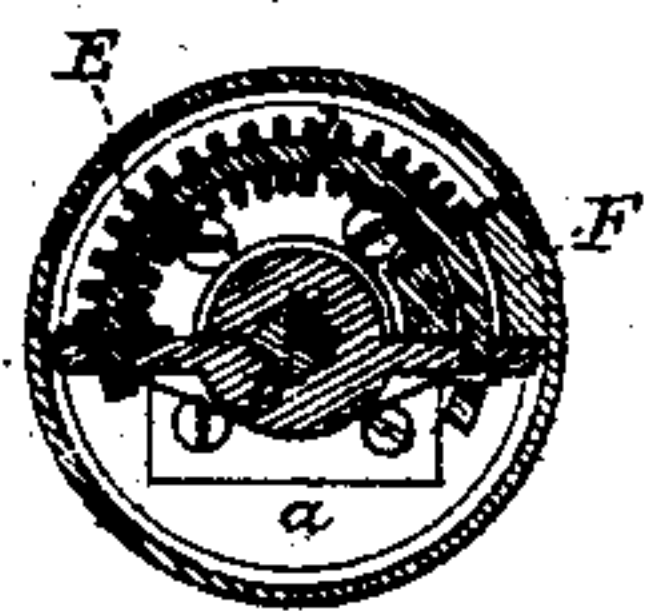


Fig. 4.



Witnesses

S. N. Piper

J. R. Brown

Oliver P. Hix.

by his attorney

H. W. Eddy

UNITED STATES PATENT OFFICE.

OLIVER P. HIX, OF ROCKLAND, MAINE.

IMPROVEMENT IN WINDLASSES.

Specification forming part of Letters Patent No. 117,073, dated July 18, 1871.

To all whom it may concern:

Be it known that I, OLIVER P. HIX, of Rockland, of the county of Knox, of the State of Maine, have invented a new and useful Improvement in Windlass for Navigable Vessels; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a top view, and Fig. 2 a longitudinal section of a windlass provided with my invention. Figs. 3 and 4 are sectional views of the two ends of the windlass-barrel, showing the springs and their appurtenances, to be hereinafter described.

In carrying out my invention I make the barrel of the windlass in two parts, A B, one of which, viz., A, I fix to the shaft C, so as to revolve with but not on it. The other portion B—that on which the cable or rope is to wind—I apply to the shaft so as to be capable of revolving on it, and I so connect the part B with the shaft by means of one or more springs that the latter will resist an effort to revolve or turn the part B on the shaft. The springs I prefer to arrange within circular chambers, *a a*, made within or at the ends of the part B. In each of such chambers there is a diametric head or bar, D, fixed on the shaft, such head serving to support a rod, *b*, bent in the arc of a circle, and fixed at or near its two ends on the said bar D. Encompassing the curved rod is a helical spring, E, or a series of rubber or elastic springs, E'. The spring bears at one end against the bar and at the other against an abutment, F, projecting from the part B, as shown. The abutment serves, with the diametric bar, to estop the part B from being turned in one direction on the shaft, while the spring or springs admit of it being revolved or turned in the opposite direction, and resist such by their elastic force. The power to revolve the windlass for the purpose of winding a chain or cable on it may be

applied to the part A, in which may be a series of notches, *c*, to operate with a stop-pawl, *d*, extended from a post, *e*, as shown.

The drawing shows one-half of an ordinary windlass with its supporting-post or bit, the other half being constructed in a similar manner.

The windlass so made operates or will act as a "surge-reliever," the strain on the cable being resisted by the springs, especially when the vessel may be riding at anchor. A windlass constructed as described can be worked much easier than one without springs or one having its barrel fastened firmly to its shaft. My improvement may be applied in like manner to a capstan.

My improved windlass saves the necessity of a surge-reliever, as usually made and applied outside of the windlass or between it and the hawse-hole of the bow of a vessel.

I claim—

1. As an improvement in a windlass or capstan, the combination of its rope or chain-barrel with its shaft by one or more springs arranged to resist an effort to turn the barrel on the shaft, as and for the purpose set forth.

2. The windlass, as composed of the part A, fixed upon and so as to revolve with the shaft C, and the part B arranged to revolve on such shaft and provided with one or more springs applied to such part B and shaft C, so as to resist, by the elastic force of such spring or springs, an effort to turn the part B on the shaft.

3. The windlass-barrel or part B, as chambered at either or each of its ends, and provided with the diametric bar D, the abutment E, the curved rod *b*, and the spring or springs E or E', arranged as set forth, the whole being applied to a shaft, as represented.

OLIVER P. HIX.

Witnesses:

R. H. EDDY,
S. N. PIPER.