

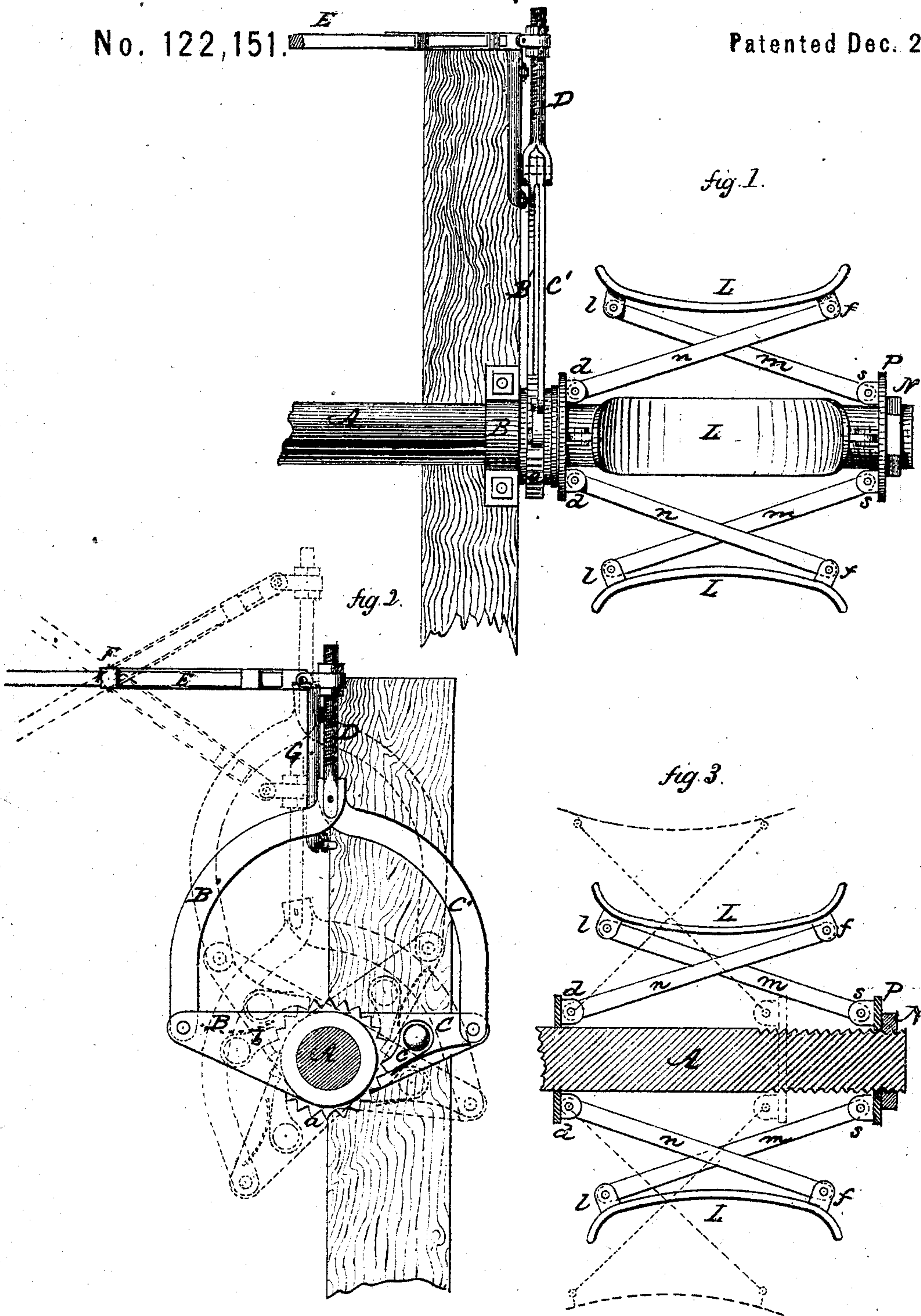
EDGAR BUELL.

Improvement in Windlasses.

2 Sheets--Sheet 1.

No. 122,151.

Patented Dec. 26, 1871.



Witnesses

John F. Shumway

A. J. Tibbitts

Edgar Buell

Inventor

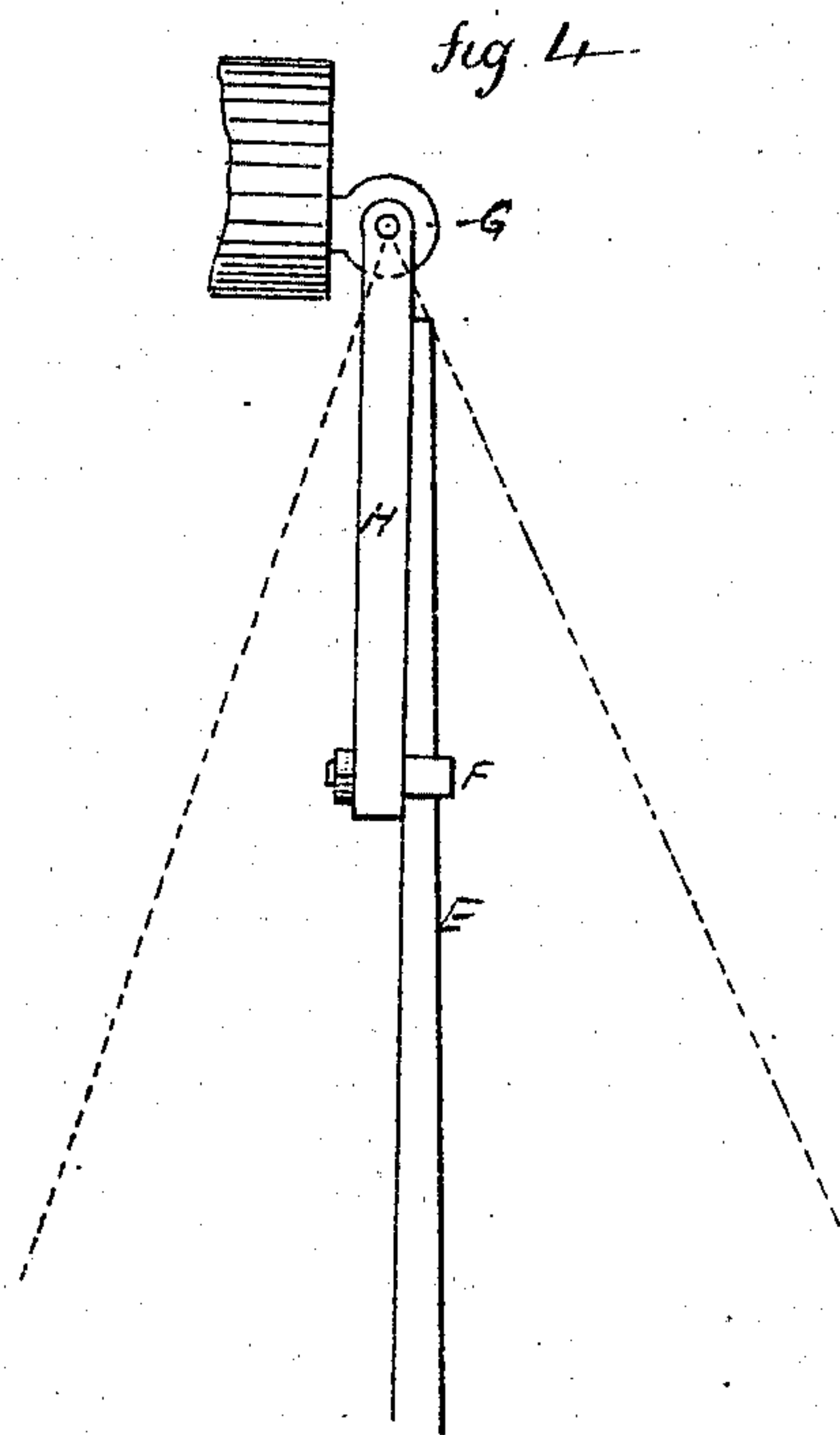
By his Atty.

John E. Earle

EDGAR BUELL. Improvement in Windlasses.

No. 122,151.

Patented Dec. 26, 1871.



Witnesses

J. W. Shumway
A. J. Libbitts

Edgar Buell
Inventor

By his Atty.

John E. Enoch

UNITED STATES PATENT OFFICE.

EDGAR BUELL, OF CLINTON, CONNECTICUT.

IMPROVEMENT IN WINDLASSES.

Specification forming part of Letters Patent No. 122,151, dated December 26, 1871.

To all whom it may concern:

Be it known that I, EDGAR BUELL, of Clinton, in the county of Middlesex and State of Connecticut, have invented a new Improvement in Windlass; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification and represents, in—

Figure 1, a front view; Fig. 2, an end view, the drum removed; and in Fig. 3, a central section through the drum; Fig. 4, a top view of the lever attachment.

This invention relates to an improvement in the windlass commonly used on shipboard, but applicable to other purposes; and consists, First, in the peculiar arrangement of the lever which operates the pawls upon a movable fulcrum, whereby the lever may be turned to the right or left, as more fully hereinafter described. Second, in constructing the drum in lags, each lag connected to the shaft by one of a pair of parallel rods, and by the other rod of the pair to an adjustable head on the shaft, whereby the diameter of the drum is increased or diminished.

A is the shaft of the windlass, arranged in a suitable bearing, B, and on the said shaft is formed or fixed a toothed or ratchet-wheel, *a*. In the said shaft are arranged two levers, B C, upon opposite sides, to turn freely on the said shaft independent of each other, and each provided with a pawl, *b c*, respectively, to set into the teeth of the wheel *a*. From the end of the levers B C connecting-rods B' C' extend to a vertical rod, D, which said rod D is fixed to the end of a lever, E, the said lever E arranged upon a fulcrum, F, so as to be vibrated up and down, as in Fig. 2, carrying the rod D from one position to the other, as denoted in broken lines, Fig. 2; and in their descent both the levers B C are carried down, and in their ascent carried up, as also denoted in

broken lines, Fig. 2. Going down, the pawl *c* catches into a tooth of the wheel *a* and causes the shaft to turn with the lever C, the pawl *b* skipping the teeth; but on the return the pawl *b* takes hold on the wheel *a*, and, in the ascent of the lever, continues the revolution of the shaft in the same direction as by the descent of the lever C.

In order to operate the lever E from any desired position I arrange an arm, H, swinging upon a vertical bearing, G, so that it may be turned to the right or left without interfering with its operation, as denoted in broken lines, Fig. 4.

I construct the drum in several detached lags, more or less in number, arranged as in Fig. 3, with two connecting-rods, *n m*, the one *n* pivoted to the lag at *f*, and the other end of the said rod firmly connected to the shaft at *d*; the other rod *m* pivoted at *l* to the other end of the lag, and the other end of the rod pivoted at S to a head, P, which is arranged to slide longitudinally on the shaft; and as this head is forced inward the lags are expanded, as denoted in Fig. 3, increasing the diameter of the drum, or returned to decrease the diameter. A convenient manner to govern the expansion or contraction of the drum is by a nut, N, working in a thread on the shaft.

I claim as my invention—

1. The arrangement of the fulcrum F, which supports the lever E, upon an arm, H, the said arm being pivoted so as to swing to the right and left, substantially in the manner described.

2. A windlass-drum constructed of several lags L, each of the said lags arranged with parallel rods *n m*, one of which is pivoted to the shaft and the other to an adjustable head on the shaft for the purpose of expanding and contracting the drum, substantially as described.

EDGAR BUELL.

Witnesses:

A. J. TIBBITS,
JOHN H. SHUMWAY.

(79)