

D. D. Hammond,

Windlass.

No 20,427.

Fig. 1.

Patented June 1, 1858.

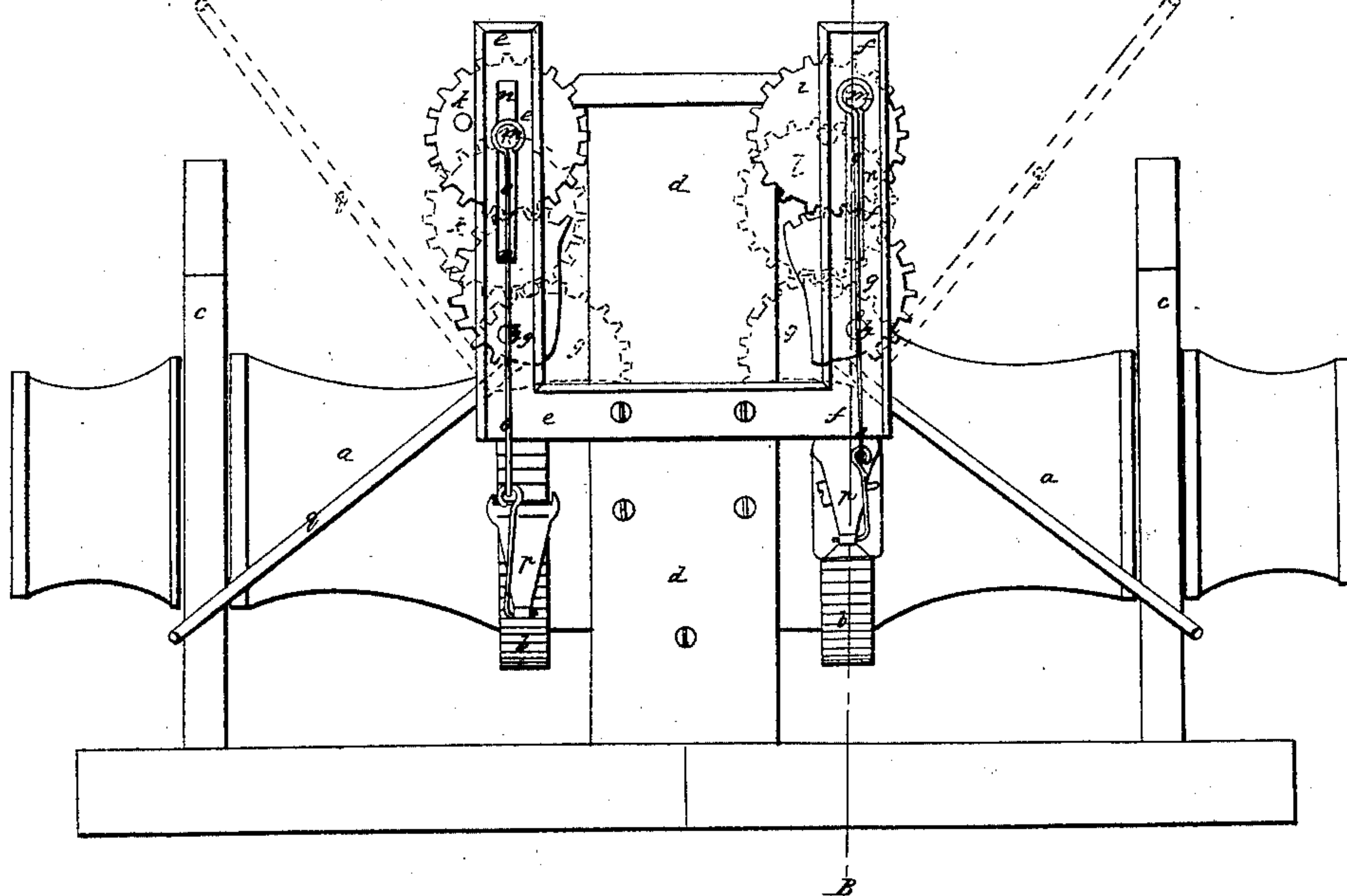
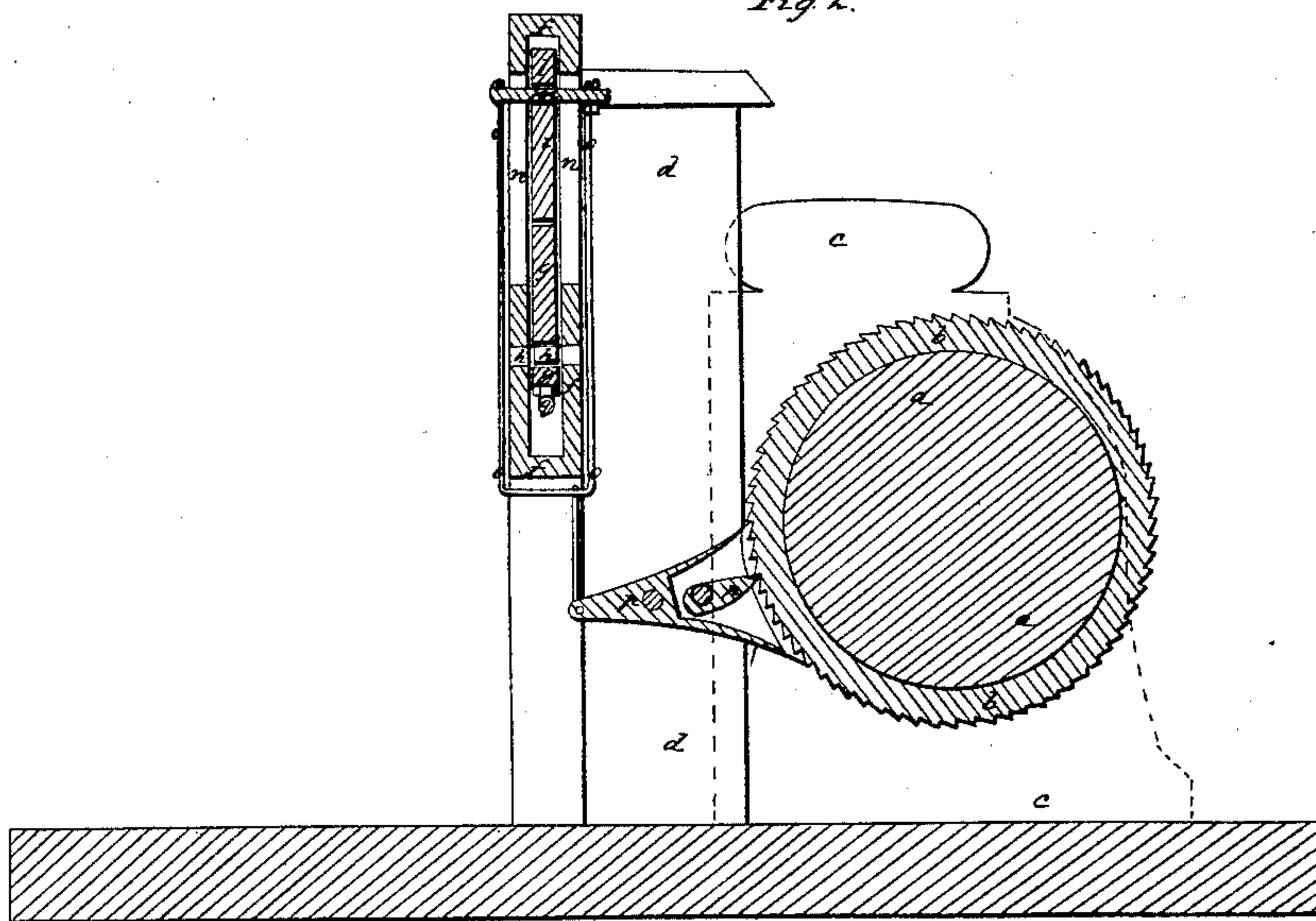


Fig. 2.



Witnesses:

Joseph Pavett
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UNITED STATES PATENT OFFICE.

D. D. HAMMOND, OF DUXBURY, MASSACHUSETTS.

WINDLASS.

Specification of Letters Patent No. 20,427, dated June 1, 1858.

To all whom it may concern:

Be it known that I, DAVID D. HAMMOND, of Duxbury, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Windlasses, and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, form a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improvements.

Figure 1 is a front elevation of my improved windlass. Fig. 2, is a transverse vertical section in the plane of the line A, B.

Ships' windlasses as usually constructed, are operated by two levers, and require the services of several men to apply the required power.

The objects of the present invention are, to so apply the power to the barrel of the windlass as to obtain over the common windlass, the advantages of a very great increase both of speed and power, so that the windlass can be worked with a much less number of men.

My improvements consist, in operating the pawl that turns the windlass ratchet wheel by means of a sector shaped cam, and traveling cogged wheels moving in suitable guides which, by the upward movement imparted to it by the cam, lifts a strap or bridle attached to the pawl of the windlass ratchet wheel and gives the windlass an intermittent rotary motion.

Having thus premised the general features of my improved windlass, I will now proceed to describe in detail its construction and operation.

a a in the drawings represent the barrel of a windlass having two ratchet wheels *b b* thereon in the usual manner.

c c are the standards in which the barrel *a a* has its bearings.

To a suitable supporting framework *d d* are attached two slotted vertical guides or standards *e, f*, constructed as shown in the drawings.

g g are sector shaped cogged cams having

their bearings or pivots at *h h* in the lower part of the guides or standards *e, f*. The cams *g g* engage with cogged or geared wheels *k, l*, the shafts or bearings *m m'* of which project through the slots *n n* of the standard *e, f*, so that the said wheels can travel between the two uprights composing each of the standards or guides *e, f*, the shafts *m m'* being attached to straps or bridles *o, o*, which are connected to the pawls *p p* that engage with the ratchet wheels *b b* before referred to on the windlass barrel. *q q* are the handles, secured to the cams *g g* by which the windlass is operated.

From the foregoing description it will be seen that the movement imparted to the cams *g g* by the men employed at the brakes or handles *q q*, will cause the cogged wheels to travel up and down in their guides *e, f*, as shown in Fig. 1 by dotted lines, &c., thereby through the straps or bridles *o o* and pawls *p p* giving an intermittent rotary motion to the barrel of the windlass in a better manner than has ever before been attained.

In Fig. 1, one of the shafts or bearings *m'* of the gear *k* is represented as passing through the center of the same and the shaft *m* as passing eccentrically through the gear *l*, the different positions of the shafts *m, m'* giving more or less lift to the gears *k, l* as may be desired, as in some cases, where a short stroke is required, the required change being readily effected by forming two holes in each of the gears to receive their shafts one hole passing through the center of the gear and the other outside of the center.

Having thus described my improvements I shall state my claim as follows:

What I claim as my invention and desire to have secured to me by Letters Patent, is—

The combination of the sector shaped cams and movable cogged wheels traveling in guides, when attached to a bridle which actuates the pawl of the ratchet wheel of a windlass as described.

D. D. HAMMOND.

Witnesses:

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