(No Model.)

T. H. BRADY.

WINDLASS.

No. 421,480. Patented Feb. 18, 1890.

Fig. 1.

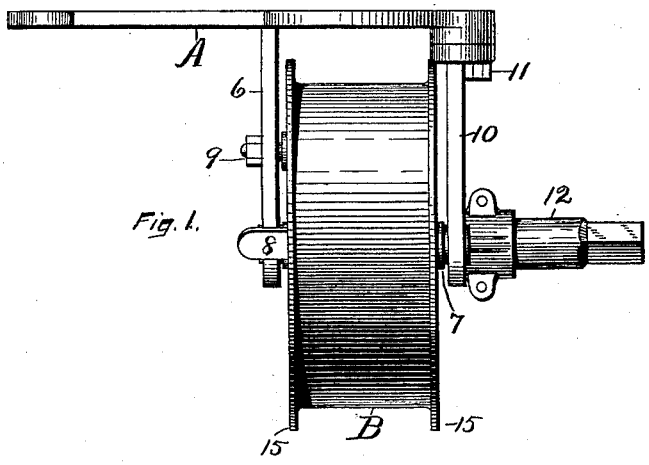


Fig. 2.

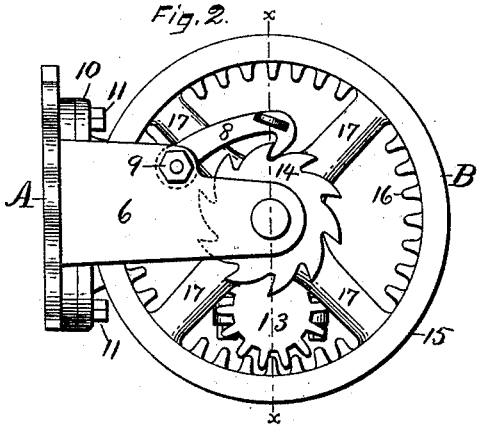


Fig. 3.

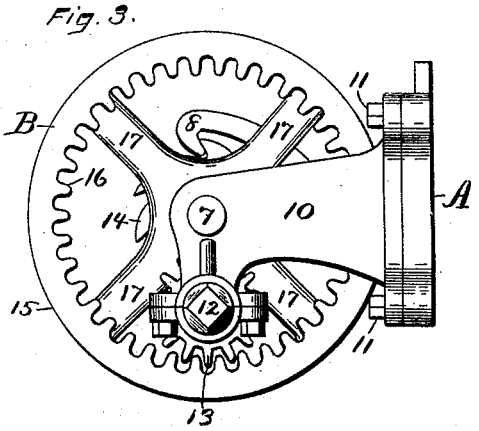
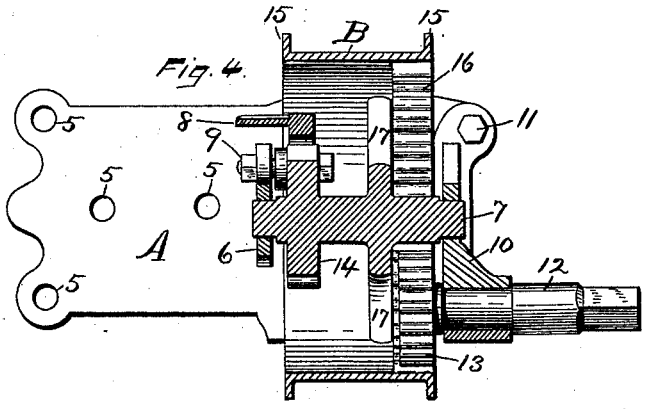


Fig. 4.



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UNITED STATES PATENT OFFICE.

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WINDLASS.

SPECIFICATION forming part of Letters Patent No. 421,480, dated February 18, 1890.

Application filed September 6, 1889. Serial No. 323,154. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. BRADY, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Windlasses, of which the following is a specification.

My invention relates to improvements in windlasses; and the object of my improvement is to produce a light, strong, cheap, and efficient windlass, and particularly one that is adapted for use on lamp-posts for raising and lowering electric lamps.

In the accompanying drawings, Figure 1 is a plan view of my windlass. Fig. 2 is a side elevation showing the left-hand side. Fig. 3 is a like view showing the right-hand side, and Fig. 4 is a vertical section on the line *x x* of Fig. 2.

A designates the base-plate, provided with bolt or screw holes 5 to adapt it to be secured upon the side of the lamp-post. It is also provided with an integral bracket 6 for supporting one end of the drum-shaft 7 and upon which to pivot the pawl or dog 8, as at 9. A separately-formed bracket 10 is attached to the base-plate by bolts 11 11, which bracket contains the bearings for the opposite end of the drum-shaft 7 and for the shaft 12 of the pinion 13. The drum-shaft 7 has a ratchet-wheel 14 near one end, preferably cast in one and the same piece with said shaft. The drum B has a smooth periphery, with side flanges 15 15, an integral gear 16, and is supported on spokes or arms 17, which extend from the inside of the drum B to the shaft 7, and are also preferably cast integral therewith. Thus the entire shaft, the ratchet-wheel, the spokes, the drum, and internal gear are all cast in one piece. The pawl 8 engages the ratchet-wheel 14 and is held in engagement therewith by gravity. The pinion-shaft 12 is squared at its outer end for the reception of a driving-crank. The pawl, ratchet-wheel, and gearing are all inside the drum and between the brackets, whereby the parts are in a very compact form and are well protected from the weather and out of the way of the operator, so as to give him no possible harm or inconvenience.

I claim as my invention—

1. In a windlass, the combination of the drum B, having the internal gear 16, the shaft 7, on which said drum is mounted, the driving-pinion 13, engaging said internal gear, and the driving-shaft 12, on which said pinion 13 is mounted within the drum, the other end of said shaft projecting at one end of said drum for the application of the driving-crank, all substantially as described, and for the purpose specified.

2. The combination of a base-plate and supporting-brackets with the shaft 7, the drum B, mounted thereon and provided with the internal gear 16, the pinion 13 and its shaft 12, the ratchet-wheel 14 on the shaft 7, and the pawl 8, said ratchet-wheel and pinion being within said drum, substantially as described, and for the purpose specified.

3. The combination of a base-plate, integral bracket 6, attached bracket 10, pawl 8, pinion 13, pinion-shaft 12, with the drum B, integral gear 16, spokes 17, shaft 7, and ratchet-wheel 14, said drum, gear, spokes, shaft, and ratchet-wheel all constituting a single piece of cast metal, substantially as described, and for the purpose specified.

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