(No Model.) 2 Sheets—Sheet 1.

J. R. FLETCHER.

WINDLASS.

No. 468,563. Patented Feb. 9, 1892.

Fig. 1.

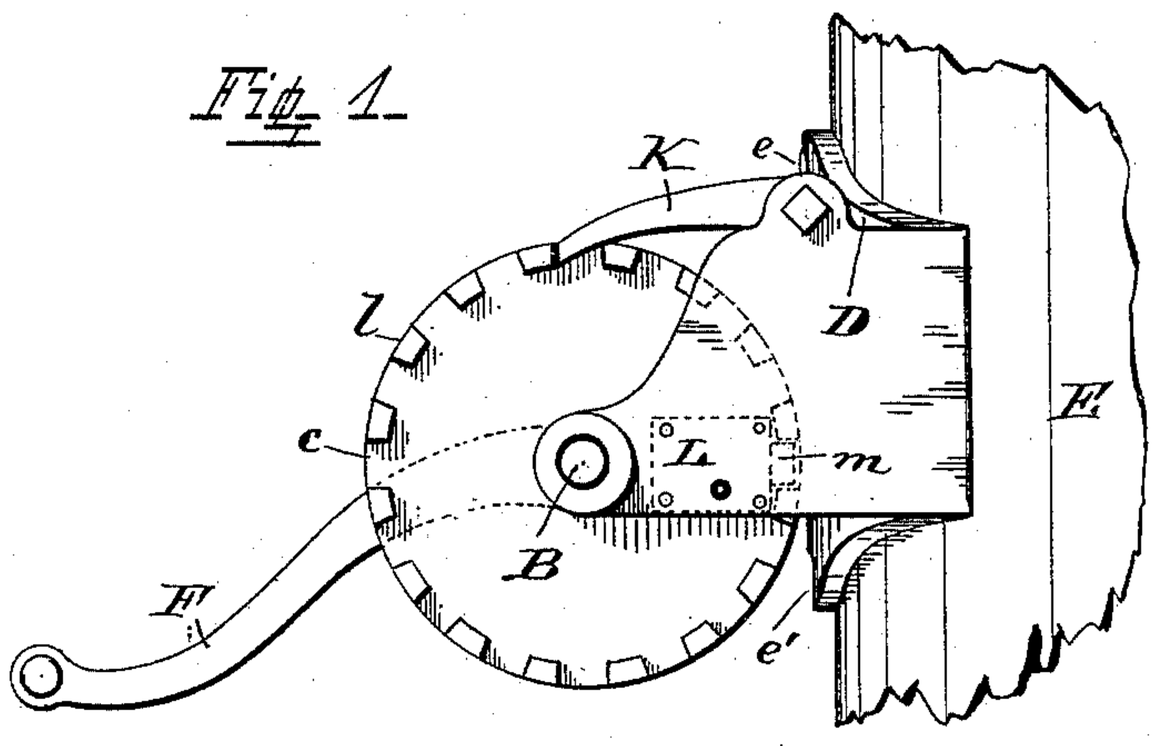


Fig. 2.

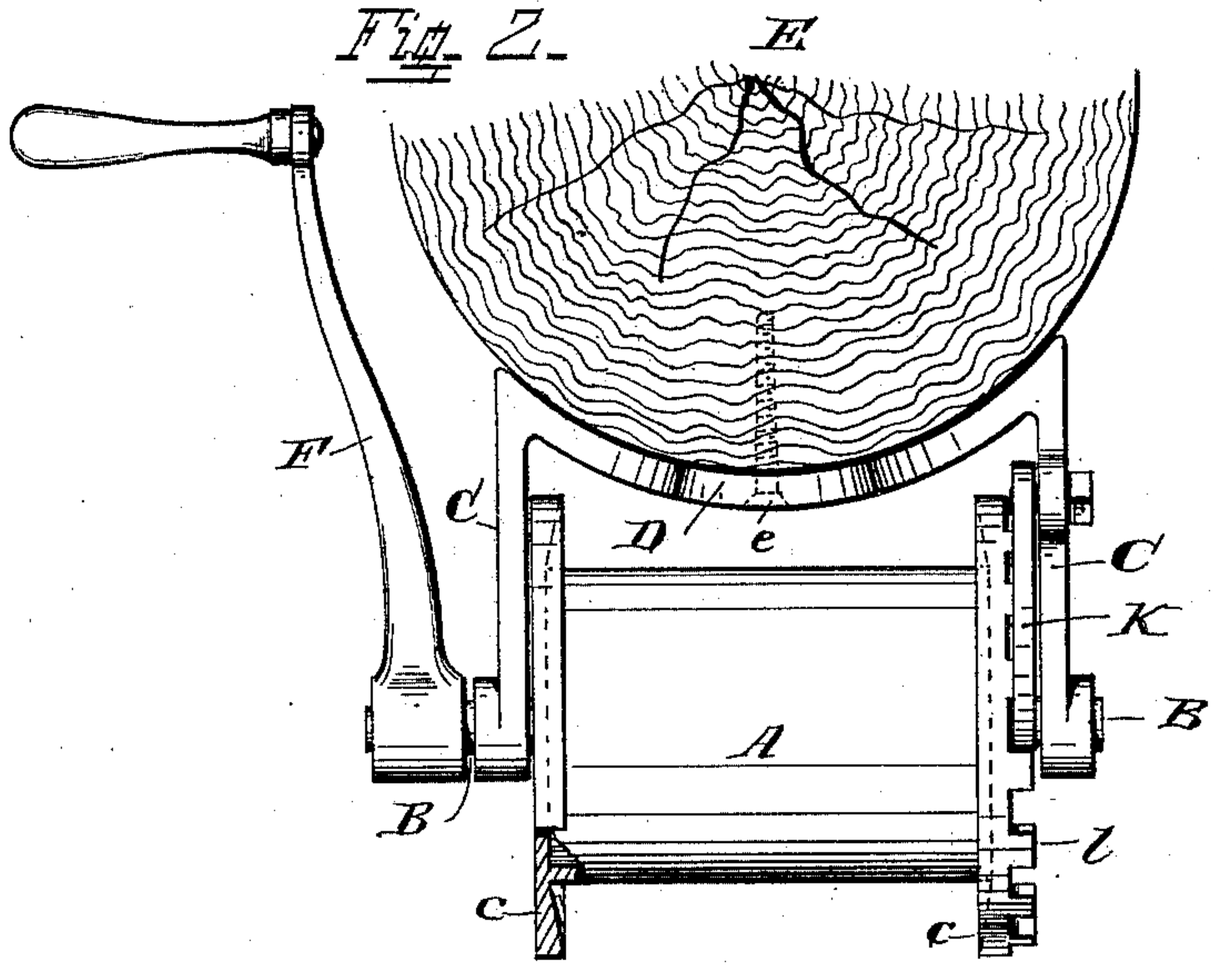


Fig. 3.

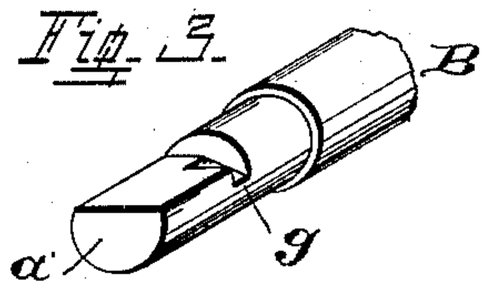


Fig. 4.

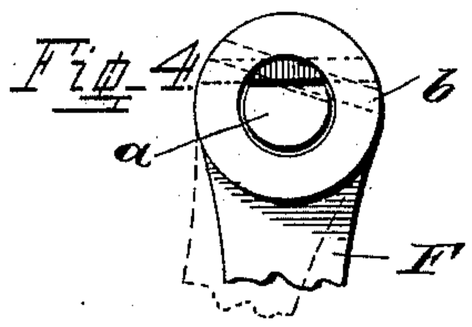


Fig. 5.

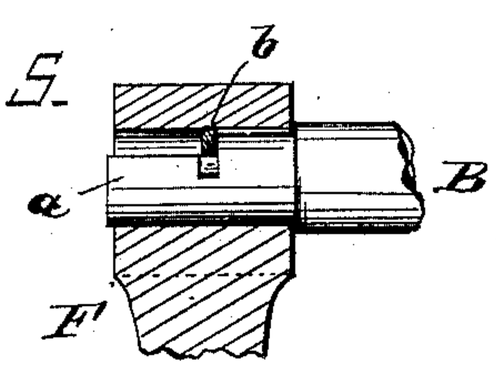
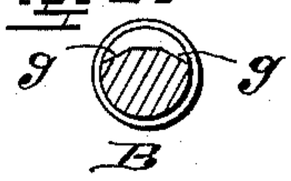


Fig. 6.



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(No Model.) 2 Sheets—Sheet 2.

J. R. FLETCHER.

WINDLASS.

No. 468,563. Patented Feb. 9, 1892.

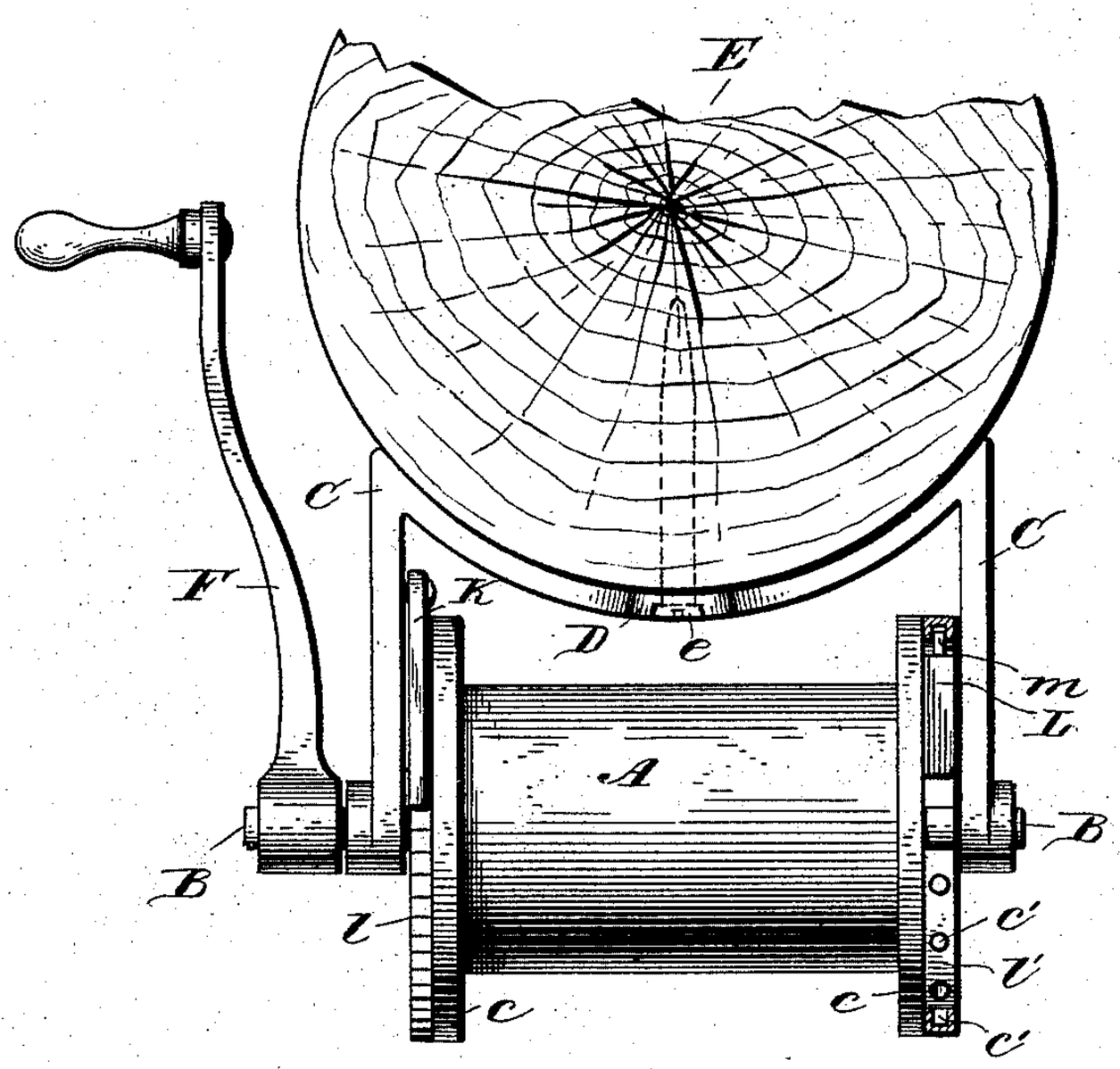

Fig. 7.

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UNITED STATES PATENT OFFICE.

JOHN R. FLETCHER, OF DAYTON, OHIO.

WINDLASS.

SPECIFICATION forming part of Letters Patent No. 468,563, dated February 9, 1892.

Application filed July 14, 1890. Renewed November 5, 1891. Serial No. 410,928. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. FLETCHER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Windlasses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a side elevation of one side of my windlass affixed to the pole ready for use. Fig. 2 is a top plan view of same. Fig. 3 is a perspective view of the end of the windlass-axle; Fig. 4, a front view of a portion of the handle and axle. Fig. 5 is a side view of same, the handle in longitudinal section. Fig. 6 is a cross-section of the axle of the windlass, showing a modified form of groove for same. Fig. 7 is a top plan view of a modified form of the windlass.

My improvements relate to windlasses for raising and lowering weights generally, but more particularly for use in electric-light work; and it consists in the construction of the windlass so that it may be securely and readily attached to the supporting-pole by shaping the back plate or standard so that it will conform to the shape of the pole or other support to which it is attached, whatever that shape may be, and also in such a construction and arrangement of parts that the handle may be readily attached and secured in place and so that when the handle is removed the windlass-drum may be locked, so that it will be impossible for any other person than the party in charge to raise or lower the lights.

A is the ordinary windlass-drum, made of wood or galvanized iron, so as not to injure the ropes to be wound thereon and having flanges *c c* to hold and guide the rope. These flanges are beveled from the top inwardly, as shown in Fig. 2, so that in winding, when the rope reaches the side, it will not climb the last coil, but will be thrown back toward the center, and in this way the rope will always wind on the drum smoothly. The drum A is provided with a suitable axle B, having one end *a* cut away or flattened on top, as shown in Fig. 3. The axle B is journaled in the side supports or standards C C, which are connected together by the curved plate D, the whole being preferably cast in one piece. This base-plate D is shaped so as to conform to the shape of the pole E, to which it is attached by the suitable bolts or screws *e e*. As it is difficult to get at the lower part of this base-plate, a trench or slot *e'* is preferably cut in the lower part of the plate instead of a bolt-hole, so that the bolt or pin can first be inserted in the support and then the windlass placed down on the bolt and secured by the upper one.

In windlasses of this character as ordinarily constructed with a flat base-plate it is not easy to attach them to their supports; but with my base-plate adapted to the shape of the support the windlass can be easily and quickly adjusted, besides securing a bearing against the support throughout its entire surface, and only two small bolts or screws are needed to hold it rigidly in place.

F is the handle or crank by which the drum is revolved, having a circular opening to fit over the end of the axle *a*, within which opening a lug or projection *b* is cast, or a piece of wire is rigidly secured, extending from side to side, so as to partially close the opening and fit snugly over the flattened top of the axle. A groove *g* to conform to the shape of the projection in the handle is cut on one or both sides of the flattened top of the axle, as shown in Figs. 3 and 6, and when the handle is used to wind the windlass the projection *b* in the handle will catch in the groove, and thus lock the handle on while in use, while to remove the handle a slight reverse movement will take the projection out of the groove and the handle can be at once slipped off.

Cast integral with the outside of the flange *c* of the windlass-drum and arranged in a circle are a series of lugs *l l l*, a sufficient space being left between the face of the drum and standard C to allow the drum to revolve, and the lock L is attached to the standard C to be operated by a proper key and drive the bolt *m* between the lugs. In connection with these lugs *l l* the dog or pawl K is pivoted to the standard, so as to rest against the lugs, which thus take the place of the teeth of a ratchet-wheel, and in effect the lugs form a ratchet-wheel integral with the windlass. In Fig. 7 I show a modified form of construction, in which, instead of lugs to receive the bolt of

the lock L, and thus to lock the windlass, I use a circular band I′, with perforations *c′*, to take the place of the lugs, and in that case an independent ratchet-wheel I is supplied and placed on the opposite side of the windlass, if desired, with proper pawl K to engage the same. In this case the perforations are arranged to correspond with the teeth on the ratchet-wheel, so that whenever the dog is holding the ratchet-wheel a perforation in the band will be directly opposite the lock L, ready to receive the bolt *m*. By these arrangements when the handle is removed the windlass can be securely locked to prevent meddling with the same.

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

1. In a windlass, a windlass-drum with axle extending out beyond the point of support and having its top partly cut away and a transverse groove therein, in combination with a handle shaped to fit thereon and a transverse projection within the opening of the handle to enter said groove and lock the handle when in use, substantially as shown and described.

2. In a windlass, a windlass-drum revolving in suitable standards, with a series of lugs thereon to form a ratchet-wheel and a pawl to hold the same, in combination with a lock on the standard or support and lugs arranged to receive the bolt of the lock, so that the windlass can be locked in any position it may be held by the pawl, substantially as shown and described.

JNO. R. FLETCHER.

Witnesses:
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