No. 676,994.

Patented June 25, 1901.

M. O'KEEFE.

PORTABLE WINDLASS.

(No Model.)

(Application filed Mar. 14, 1901.)

Fig. 1.

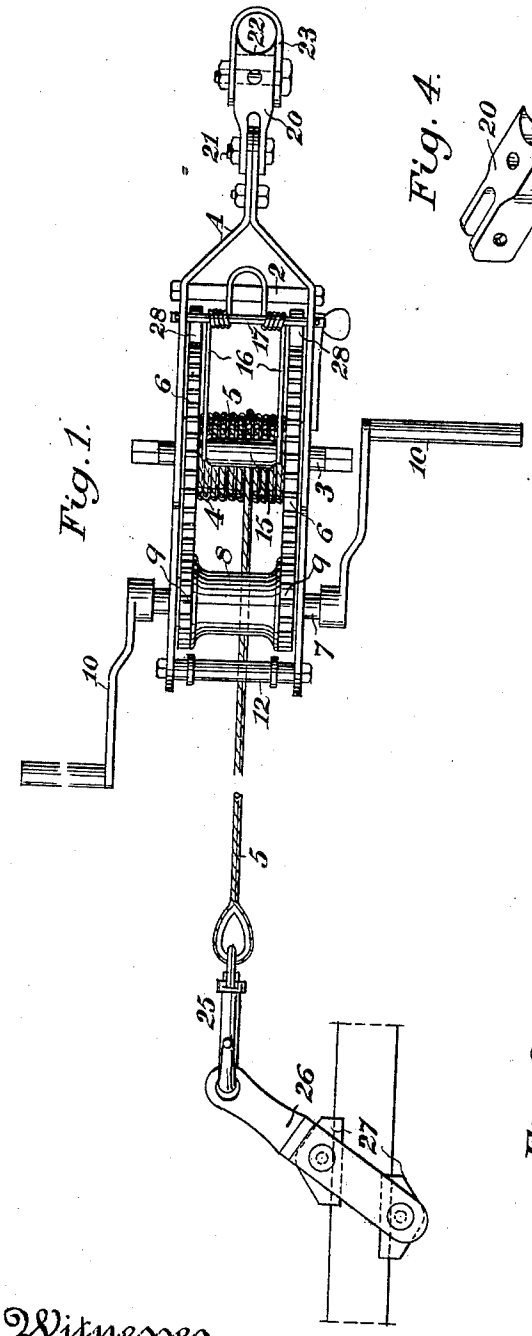


Fig. 4.

Fig. 2.

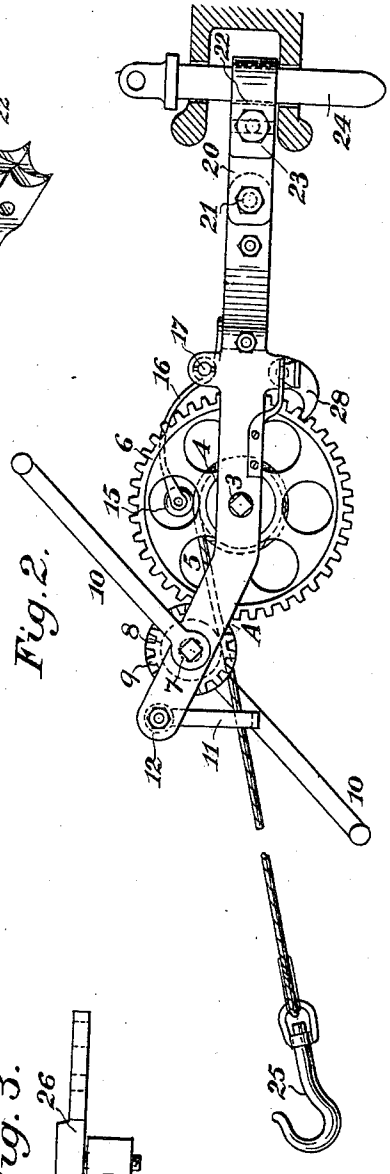
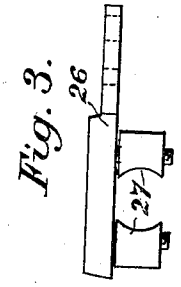


Fig. 3.



Witnesses,

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PORTABLE WINDLASS.

SPECIFICATION forming part of Letters Patent No. 676,994, dated June 25, 1901.

Application filed March 14, 1901. Serial No. 51,104. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL O'KEEFE, a citizen of the United States, residing at Vallejo, county of Solano, State of California, have invented an Improvement in Portable Windlasses; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a windlass which is adapted to be used at all points where considerable power is needed and where it is necessary to move said power and apparatus.

It consists of the parts and the constructions and combinations of parts which I will hereinafter describe and claim.

Figure 1 is a plan of my invention. Fig. 2 is a side elevation. Fig. 3 is a view of the gripper. Fig. 4 is a perspective view of the link.

The object of my invention is to provide a comparatively light powerful portable windlass which is easily adjustable temporarily with relation to an anchor or fixed point and a part which is to be moved by the operation of the windlass.

As shown in the present case, A is a light steel frame of side plates with intermediate transverse connecting-bars 2, by which they are united. Through these side plates a shaft 3 is journaled, and this carries a drum 4, suitable to receive a wire rope 5, which is attached so as to be coiled or uncoiled with relation to the drum. Upon the ends of the drum are light steel gear-wheels 6, journaled across the frame A.

Parallel with the drum-shaft is a shaft 7, carrying the sleeve 8 and pinions 9. These pinions engage the teeth of the gears on the drum-shaft, and cranks 10 or other equivalent means for applying power are carried upon the outer end of the pinion-shaft, so that two or more men may apply their power to turn these cranks and through them the pinions and gears and drum-shaft, power applied to the latter being dependent upon the relative sizes of the gears and pinions and the amount of power which can be applied to the cranks.

The rope 5 leads from the drum-shaft over the pinion-sleeve and thence through a yoke 11, which is carried upon a shaft 12, extending between the sides of the frame A. By thus passing the rope under the sleeve and through the guide the rope is prevented from uncoiling from the drum and is guided so that when it is wound upon the drum it will be alternately wound from one side to the other and make a smooth symmetrical coil. In conjunction with these guides I have shown a revoluble spool 15, journaled in the end of elastic or spring arms 16, which are supported from a transverse shaft 17, about which the spring is coiled, so that its bight rests upon one of the transverse connecting-bars 2 of the frame. This provides a sufficient tension of the spring to press the spool upon the rope where it coils around the drum, and this pressure, in connection with the guides before described, acts to keep the rope in place when not under tension and to cause it to coil smoothly upon the ground.

This device may be used for raising telegraph or other poles or for moving cars and for various similar purposes. In order to connect it with the part to be moved and with any suitable anchor, various devices may be employed. I have here shown means for connecting the apparatus with a car. It consists of a link 20, having a slot in one end, and the sides of the frame A are bent so as to come together centrally of the apparatus, where they are bolted together, forming a single flat central plate. The slot in the link 20 is pivoted to this plate by a bolt, as 21. The link is square, and its opposite end is made concave transversely in each direction, as at 22. A U-shaped strap 23 fits over this end of the link and is pivoted to the link, so as to form, with the concavities at the end, a socket, through which a pin 24 may be passed. This socket may be introducted into the coupling-head of any car and the pin 24 passed through it, thus connecting the apparatus with the car. As the link is square, the U-shaped strap may be put on either side of the link by making the pin-holes through the link transverse to each other, and by removing the pin and turning the strap it may be fitted so that the windlass will hang in any desired direction with relation to the car.

The rope is provided with a hook or attachment 25, and this may be inserted into a hole in a bar 26. This bar has pivoted to it the gripping-jaws 27, and when a railway-car is

to be moved the rope is unwound from the drum and carried out the desired distance, and these grips are attached to the rail or other suitable or convenient point, after which the rope is wound upon the drum by means of its cranks and gearings and the car will be thus pulled along the track.

28 represents pawls which are adapted to engage the teeth of the drum-gears, so as to hold the drum at any desired point.

If the device is to be used for raising telegraph-poles or other like purposes, it is anchored to some sufficiently strong fixed point and connection is made between the rope and the pole, the latter being first elevated to a small angle with the foothold in the hole, previously dug, which it is to occupy. As soon as the power is brought upon the rope the pole will be gradually raised, and guide-ropes may be held upon each side to keep it in the line of its vertical movement.

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

1. The combination in a portable windlass of a winding-drum, gears connected therewith, a crank-shaft, pinions mounted upon the crank-shaft and engaging said gears, a rope adapted to wind about said drum, and a sleeve on the crank-shaft and a guide carried by the frame whereby the rope is guided in its winding and unwinding movements.

2. The combination in a portable windlass of side plates, pinion and drum shafts journaled therein, gears turnable in unison with the drum, and pinions upon the pinion-shaft, a rope fixed to and adapted to coil upon the drum, a sleeve extending between the pinions over which the rope passes, a yoke fixed between the ends of the frame exterior to the pinion-shaft through which the rope passes and by which it is guided, and means for anchoring the framework.

3. The combination in a portable windlass of side plates, the drum and pinion shafts journaled therein, gears fixed and turnable with the drum and pinions upon the pinion-shaft engaging said gears, cranks by which power is applied to turn the pinion-shaft, a sleeve on the pinion-shaft under which the rope passes, a rectangular yoke fixed between the ends of the frame exterior to the pinion-shaft over and through which the rope is carried, fulcrumed spring-arms, and a spring-pressed roller carried by the arms and resting upon the rope-surface between the sides of the drum and a means for anchoring the frame.

4. The combination in a portable windlass of a main frame having a winding-drum with gears and a shaft with pinions engaging said gears journaled between the sides of the frame, a rope coiled upon the drum, guides and pressure-roller by which the rope is maintained in position while coiling and uncoiling, a link pivotally and centrally connected with the opposite end of the frame having transverse concavities made in its ends, a strap fitting said end forming a socket and a pin adapted to pass through said socket and connect the apparatus with the anchor or part to be moved.

5. The combination in a portable windlass of side plates, bent and united centrally at one end having a pin-hole made therethrough, drum and pinion shafts journaled in the separated wider portion of the frame with gears upon the drum and pinions engaging therewith, and cranks by which power is applied to rotate the drum, guides and an elastic pressure device by which the rope is maintained upon the drum, a rectangular link slotted at one end adapted to clasp the united and perforated ends of the frame, and a pin by which it is connected therewith, transverse concavities made across the opposite end of the link, holes made at right angles through the link, a U-shaped strap fitting the sides of the link and a pin by which it is connected therewith, said pin passing through either of said holes whereby the windlass may be adjusted with either side uppermost, and a pin passing between the strap and the concave-ended link whereby the device may be connected to the anchor or part to be moved.

In witness whereof I have hereunto set my hand.

MICHAEL O'KEEFE.

Witnesses:
W. F. STANFORD,
T. J. O'HARA.