



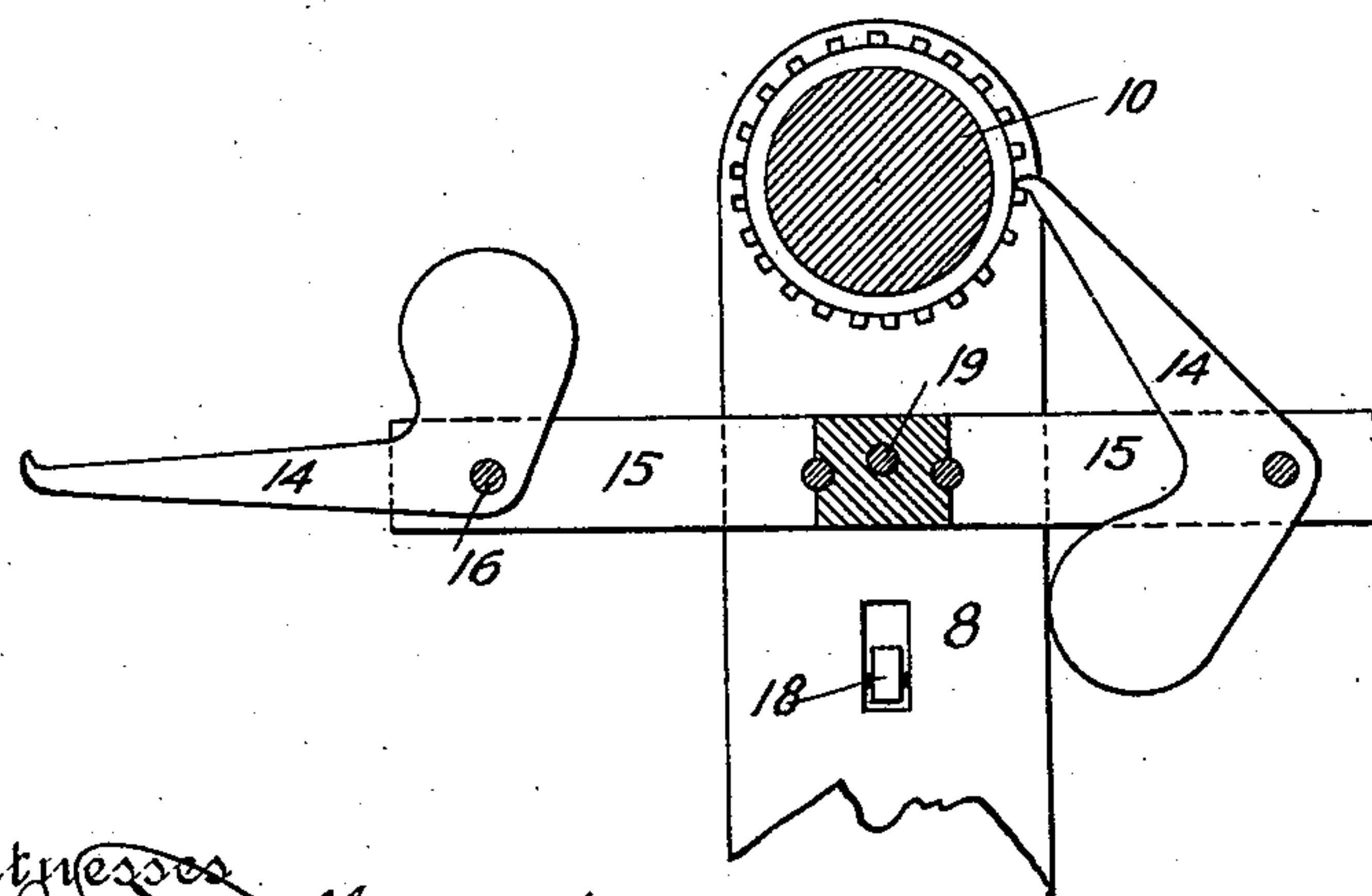
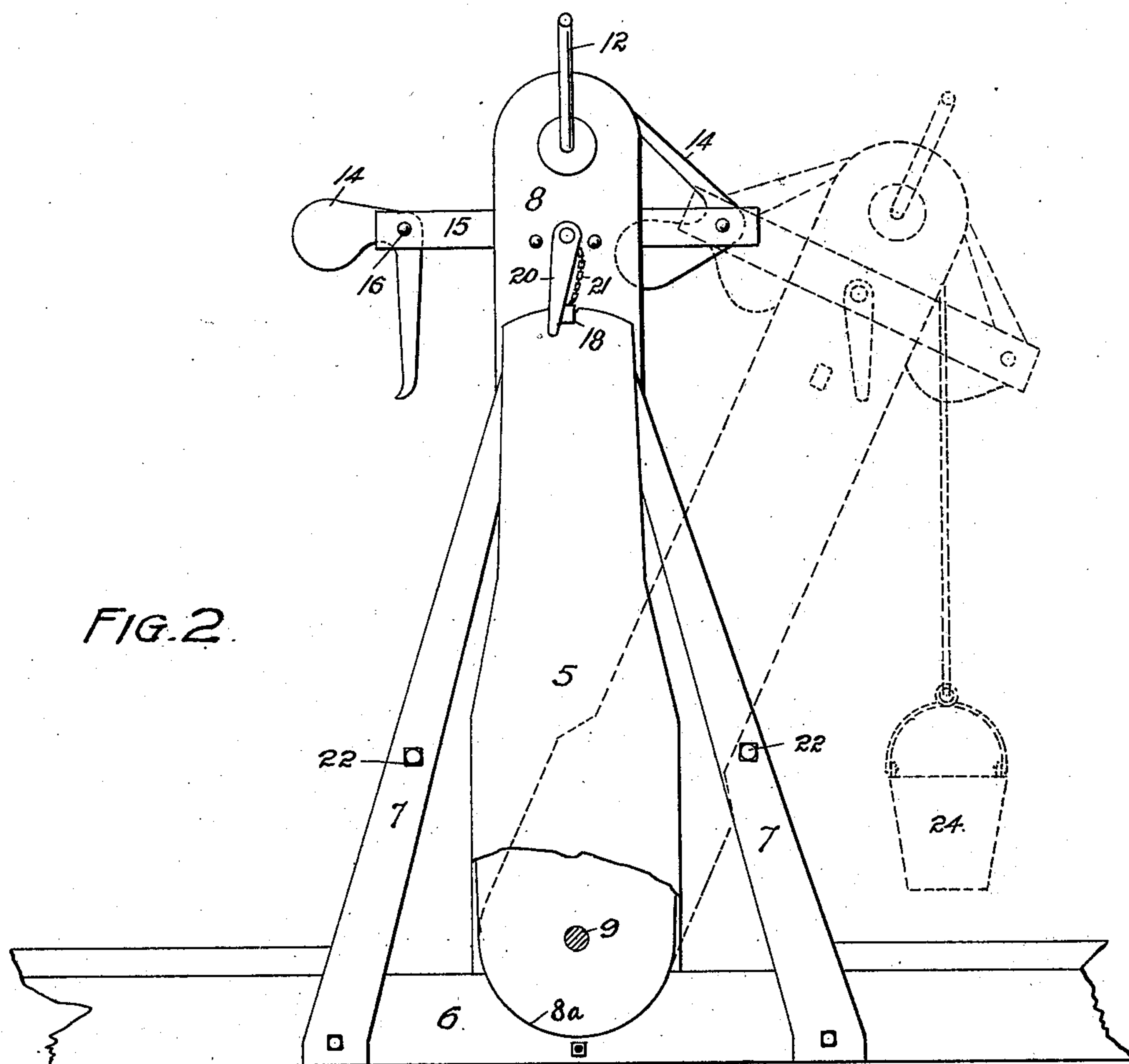
(No Model.)

2 Sheets—Sheet 2.

G. E. & E. A. TRUAX.  
HAND HOIST OR WINDLASS.

No. 600,973.

Patented Mar. 22, 1898.



Witnesses  
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# UNITED STATES PATENT OFFICE.

GEORGE E. TRUAX AND EARNEST A. TRUAX, OF DENVER, COLORADO.

## HAND-HOIST OR WINDLASS.

SPECIFICATION forming part of Letters Patent No. 600,973, dated March 22, 1898.

Application filed May 6, 1897. Serial No. 635,404. (No model.)

*To all whom it may concern:*

Be it known that we, GEORGE E. TRUAX and EARNEST A. TRUAX, citizens of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Hand-Hoists or Windlasses; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in hand-hoists or windlasses.

Our main object is to provide a device of this class which shall be capable of such adjustment that the winding-drum and its attachments may be quickly and easily swung to either side of the shaft, as circumstances may require; and to this end the invention consists of the features hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a front elevation of our improved windlass, partly in section. Fig. 2 is a side view of the same, the winding-drum and its supports being shown in two positions, one in full lines and the other in dotted lines. Fig. 3 is a section taken through the winding-drum.

Similar reference characters indicating corresponding parts in these views, let the numeral 5 designate each of two stationary upright supports attached to the base 6 and supported on opposite sides by braces 7. To the uprights 5 are respectively pivoted the movable standards 8 by means of pins 9 passing through registering apertures formed in the uprights and standards. The lower extremities of the standards 8 are round or arc-shaped, as shown at 8<sup>a</sup>, and engage sockets of corresponding shape formed in the base-beam 6. The arrangement of the parts is such that the weight of the load is borne by the beam 6 rather than by the pins 9, which serve only to keep the standards in place. In the upper extremities of the standards 8 is journaled

the winding-drum or cylindrical roller 10, having hand-cranks 12 attached to its protruding journal extremities. To each end of the drum 10 is attached a toothed wheel 13, adapted to be engaged by the locking dogs or pawls 14, pivotally mounted, as shown at 16, on projections 15, attached to either side of each standard 8.

Pivotally mounted, as shown at 17, on the respective standards 8 are two locking-arms 18, adapted to engage recesses or sockets in the upper extremities of the uprights 5. These locking-arms are inserted in openings formed in the standards, said openings being of sufficient size to permit the arms to move sufficiently to raise them out of the recesses or sockets in the upright extremities when it is desired to unlock the standards for the purpose of swinging the winding-drum to the one side or the other of its normal position directly above the shaft. The two locking-arms 18 are simultaneously lifted out of the sockets in the uprights through the instrumentality of a spindle 19, journaled in the standards 8 and having short cranks 20 attached to its protruding extremities. Each locking-arm 18 is connected with the spindle 19 by means of a short chain 21 or its equivalent. Hence by turning the spindle the chains are wound therearound and the arms 18 are thereby lifted out of their sockets in the upper extremities of the uprights 5. As soon as this is done the drum and its standards may be swung to the position shown in dotted lines in Fig. 2. Each brace 7 is provided with a pin 22, which the standards engage when moved to the inclined position. These pins support the standards and their attachments in the adjusted position. The protruding extremity of each pin is preferably surrounded by a sleeve 23, of rubber or other yielding material, to prevent the pins from marring or cutting the standards.

It will be readily understood that the winding-drum may be swung to either side of the shaft, as may be most convenient or desirable. When in the position shown in dotted lines in Fig. 2, the bucket 24 will drop to one side of the shaft without the trouble of pulling it to this position, as is required when using the windlasses of ordinary construction. This feature is a great convenience when



handling heavy buckets. When desired, the pins 22 may be removed and the winding-drum allowed to drop still lower on either side of the shaft for the purpose of moving it completely from the path of flying rocks while blasting in the shaft.

Having thus described our invention, what we claim is—

1. In a hand-hoist or windlass, the combination with the main or stationary frame and the winding drum or roller, of suitable standards forming the support for the roller, and pivot-pins connecting the standards with the stationary frame, whereby the standards are adapted to swing in either direction.

2. In a hand-hoist or windlass, the combination with the stationary frame and the winding drum or roller, of the standards forming the support for the roller, pivot-pins connecting said standards with the stationary frame, the lower extremities of the said standards being curved and resting in counterpart sockets formed in the stationary frame whereby the pivot-pins are relieved from the weight of the load.

3. In a hoist or windlass, the combination with the stationary frame and the winding drum or roller, of the standards pivoted on the stationary frame and adapted to swing in either direction whereby the winding drum or roller may be thrown to either side, and suitable means attached to the stationary frame for supporting the standards at any desired inclination.

4. In a windlass, the combination with the stationary frame and the winding drum or roller, of standards forming the support for the said roller, pivot-pins connecting the standards with the stationary frame, whereby the standards are adapted to swing in either direction, and suitable means for locking the standards upon the frame when in the upright position.

5. In a hoist or windlass, the combination with the stationary frame and the winding drum or roller, of the standards mounted on

the stationary frame and forming the support for the roller, and suitable means for locking the standards when in the upright position, said means comprising an arm movably attached to one of the standards and adapted to engage a recess or socket formed in the stationary frame.

6. In a windlass, the combination with the stationary frame and the winding drum or roller, of the roller-supporting frame, pivot-pins connecting the roller-supporting frame with the stationary frame, and means for locking the two frames together comprising an arm movably attached to one frame and adapted to engage a socket or recess in the other frame.

7. In a hoist or windlass, the combination with the stationary frame and the winding drum or roller, of the roller-supporting frame adjustably mounted on the stationary frame, two locking-arms movably attached to the adjustable frame and adapted to engage sockets in the stationary frame, a spindle journaled in the adjustable frame, and suitable means as chains for connecting the locking-arms with said spindle whereby as the latter is turned the said arms may be lifted out of the sockets in the stationary frame.

8. In a hoist or windlass, the combination with the stationary frame and the winding drum or roller, of the standards pivoted on the stationary frame and adapted to swing in either direction, and suitable means attached to the stationary frame for supporting the standards at any desired inclination, said means comprising one or more pins attached to the stationary frame and projecting into the path of the movable standards.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE E. TRUAX.  
EARNEST A. TRUAX.

Witnesses:

G. J. ROLLANDET,  
A. J. O'BRIEN.