J. A. PELPHREY.

Windlass.

No. 205,900. Patented July 9. 1878.

Fig. 3.

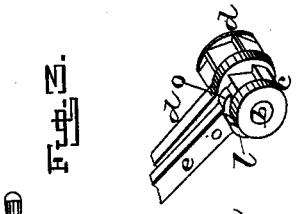


Fig. 2.

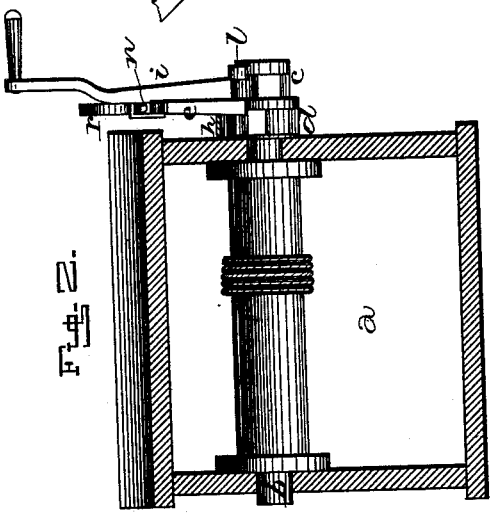
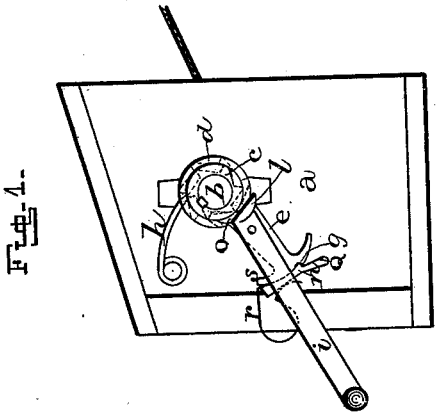


Fig. 1.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN A. PELPHREY, OF LOWMANSVILLE, KENTUCKY.

IMPROVEMENT IN WINDLASSES.

Specification forming part of Letters Patent No. **205,900**, dated July 9, 1878; application filed April 12, 1878.

To all whom it may concern:

Be it known that I, JOHN A. PELPHREY, of Lowmansville, in the county of Lawrence and State of Kentucky, have invented certain new and useful Improvements in Windlasses for Wells and other purposes; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in windlasses for wells and other purposes; and it consists in the arrangement and combination of parts, whereby the bucket may be let down into the well at any desired rate of speed without having the crank fly around to the danger of the operator, as will be more fully described hereinafter.

The accompanying drawings represent my invention.

a represents a box or cover, which may be secured to a post or any other suitable support, and which serves to protect the rope from the action of the weather. Inside of this frame is placed the drum upon which the rope is wound, and this drum is secured rigidly to the shaft *b*, passing through and journaled in each end of the frame. To one end of this shaft is secured a ratchet, *c*, which is provided with teeth on a portion of its surface, while the balance of its periphery is left perfectly smooth and plain, and serves as a friction-brake to prevent the bucket from descending too rapidly. Placed loosely upon the shaft *b*, just inside of this ratchet, is another ratchet, *d*, projecting from one side of which is the crank *e*, which has its outer end shaped as shown, and provided with the shoulder or catch *g*. Catching in the teeth of this ratchet *d* is the pawl *h*, which serves to prevent the crank from flying backward, should the handle escape from the hands of the operator at any time while the bucket is being drawn to the top of the well. This pawl allows the ratchet to be turned freely to the right, but always instantly checks its backward movement.

Pivoted to the outer side of the crank *e* is the long hand-lever *i*, the inner end of which is provided with a foot or projection, *l*, for bearing upon the smooth part of the ratchet *c*, so as by frictional contact to prevent the shaft from revolving too rapidly while the bucket is being lowered into the well, and with another foot or projection, *o*, extending in the opposite direction, to catch in the teeth of the ratchet *c*, to be used in drawing the bucket from the well.

Upon the inner side of this handle or lever *i* is formed an L-shaped catch, which projects downward just far enough to catch over the inside edge of the crank *e*, and thus prevent the lever *i* and crank from becoming separated. Between the end of the crank and this L-shaped catch is placed a catch, *n*, one end of which is provided with the handle *q*.

Bearing against the outer side of this catch *n* is the spring *r*, one end of which passes between the two catches, while the other end catches behind the projection *s* formed upon the lower side of the outer end of the crank. This spring serves to keep the catch *n* constantly pressed forward, so that it will snap in behind the shoulder *g* on the outer end of the crank *e*.

The operator takes hold of the handle or lever *i* with the right hand, and of the handle *q* of the catch *n* with the other, and pulls the catch *n* upward, so as to release it from behind the shoulder *g*. The lever *i* then moves backward sufficiently far to release the foot *o* from the teeth of the ratchet *c*, and to cause the foot *l* to bear down upon the smooth portion of the ratchet, and thus by frictional contact prevent the bucket from unwinding the shaft *b* too rapidly. By pulling backward upon this handle *i* the operator can cause the bucket to descend very slowly, stop it at any desired point, or let it descend very rapidly. The pawl *h* remains in contact with the teeth of the ratchet *d* all the time, so that the crank *e* cannot fly backward, thereby endangering the operator as he lets the bucket into the well.

As soon as the bucket is filled with water and it is desired to draw it upward, the hold is released upon the handle *q* of the catch *n*, when the crank *e* and the handle *i* revolve together for the purpose of turning the shaft, and thus drawing the bucket to the top.

Should the handle *i* escape from the hand of the operator while drawing the bucket to the top, the crank cannot fly backward more

than an inch or two before the pawl *h* catches in the teeth of the ratchet *d* and stops it.

Although my invention is here described as being applicable especially to wells, it is evident that it may be applied to other uses also.

Having thus described my invention, I claim—

1. The combination of the shaft *b*, having the ratchet *c* upon its outer end and rigidly secured thereto, ratchet *d*, moving loosely thereon, crank *e*, and handle or lever *i*, substantially as shown.

2. The crank *e*, having the shoulder *g*, in combination with the handle *i*, catch *n*, and spring *r*, substantially as described.

3. The lever or handle *i*, having the feet or catches *l o*, in combination with the ratchet *c*, having a portion of its surface made smooth and its other part provided with teeth, substantially as set forth.

4. In a windlass, the combination of a loose ratchet, a crank and a pawl, *h*, to prevent them from flying backward, with a frictional lever and cam, for the purpose of regulating the speed at which the bucket shall descend, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of April, 1878.

JOHN A. PELPHREY.

Witnesses:
ANDREW A. HINGTON,
ALBURT CASTLE.