J. E. Cronk,

Windlass Water Elevator,

No. 52,824, Patented Feb. 27, 1866.

Fig. 2

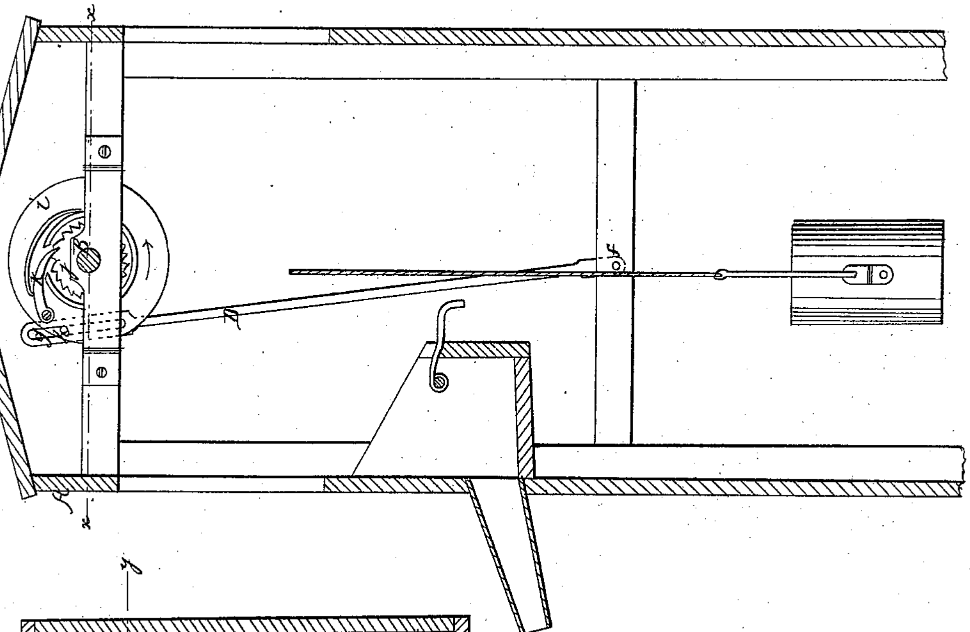


Fig. 1

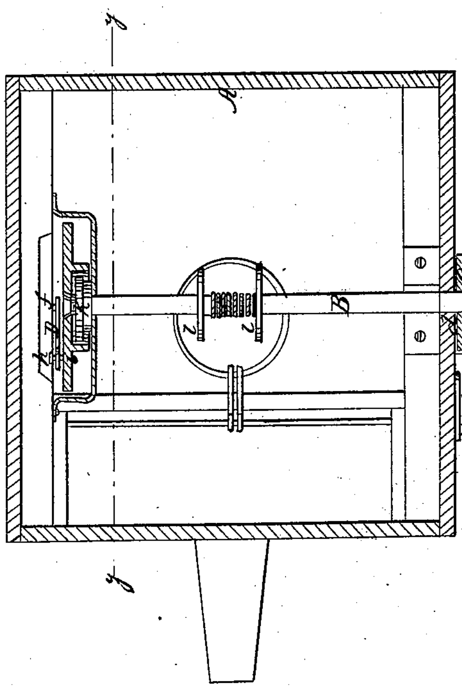
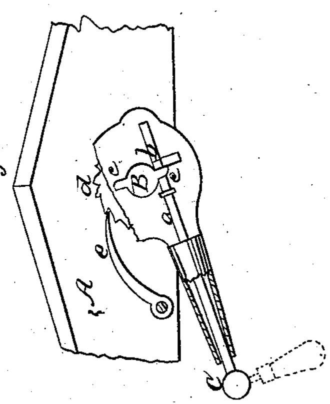


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES E. CRONK, OF POUGHKEEPSIE, NEW YORK.

IMPROVEMENT IN WATER-ELEVATORS.

Specification forming part of Letters Patent No. **52,824**, dated February 27, 1866.

To all whom it may concern:

Be it known that I, JAMES E. CRONK, of Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and Improved Well-Curb; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a horizontal section of this invention, taken in the plane indicated by the line *x x*, Fig. 2. Fig. 2 is a vertical section of the same, the line *y y*, Fig. 1, indicating the plane of section. Fig. 3 is a side elevation of the crank detached.

Similar letters of reference indicate like parts.

This invention consists in the use of an adjustable crank, the stem or shank of which is provided with a nose or projection, in combination with one or more tappets on the end of the windlass-shaft, on which said crank turns loosely in such a manner that by turning the crank in one direction the nose can be made to come in contact with one of the tappets and to impart motion to the windlass-shaft, and by turning the crank in the opposite direction the nose releases the tappet, and the windlass-shaft is free to revolve and to let the bucket or other article suspended from its rope descend by its own inherent gravity. The motion of the descending bucket or other article is checked by a slotted bar, which oscillates on a pivot and is provided with a slot that catches over an eccentric wrist-pin secured in a disk which is connected to the windlass. The connection between this disk and windlass is effected by a ratchet-wheel and pawl, so that it does not interfere with the operation of raising the bucket.

A represents a well-curb, in which the windlass B has its bearings in the ordinary manner. This windlass is turned by means of a crank, C, which is placed loosely on it, and the stem or shank *a* of which is so arranged that it allows of turning the crank or handle parallel to the axis of the windlass or at right angles to the same. The stem *a* is provided with a nose, *b*, and when the crank is turned parallel to the axis of the windlass said nose catches behind a tappet, *c*, on the end of the windlass-shaft and compels the same to revolve with the crank; but if the crank is turned at right angles to the axis of the windlass-shaft the nose releases said tappet; and the windlass is allowed to rotate independent of the crank. A ratchet-wheel, *d*, which is secured to the crank and engages with a pawl fastened to the side of the well-curb, prevents the crank being turned in the wrong direction and gives a chance to sustain the bucket at any desired point of its ascent as long as the nose of the crank is in gear with one of the tappets *c*. When the bucket or other article suspended from the rope has been raised to the desired height and emptied, it can be made to descend simply by turning the crank so as to disengage the nose *b* from the tappet *c*.

In order to check the velocity of the descending bucket a slotted bar, D, is applied. This bar oscillates on a pivot, *f*, in its lower end, (though it might be placed in any desirable position,) and its upper or loose end is provided with a slot, *g*, which straddles an eccentric wrist-pin secured in the face of a disk, *i*. This disk is mounted on the windlass-shaft, being connected to it by a ratchet-wheel, *j*, and pawl *k*, so that said disk is compelled to revolve with the windlass in the direction of the arrow marked thereon in Fig. 2; but if the windlass is turned in the opposite direction the disk may remain stationary. The weight and stroke of the bar are so gaged that by their action the motion of the descending bucket is checked and a self-acting brake is obtained, which prevents injury to the bucket even if the windlass is operated by the most careless or unskillful person. By having the disk detached from the windlass the bar is prevented from interfering in any way with the operation of winding up the bucket. The flanges *l*, between which the rope winds, are placed loose on the shaft, so that they are free to adjust themselves according to the quantity of rope to be taken between them.

It is obvious that these improvements are applicable to a windlass of any desired description, although they are particularly intended for well-curbs.

I claim as new and desire to secure by Letters Patent—

1. The revolving crank mounted on a stem which is provided with a nose, in combination with one or more tappets on the windlass or on its shaft, constructed and operating substantially as and for the purpose set forth.

2. The slotted bar D, applied in combination with a windlass which is provided with a detachable or adjustable crank, substantially as and for the purpose described.

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Witnesses:
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