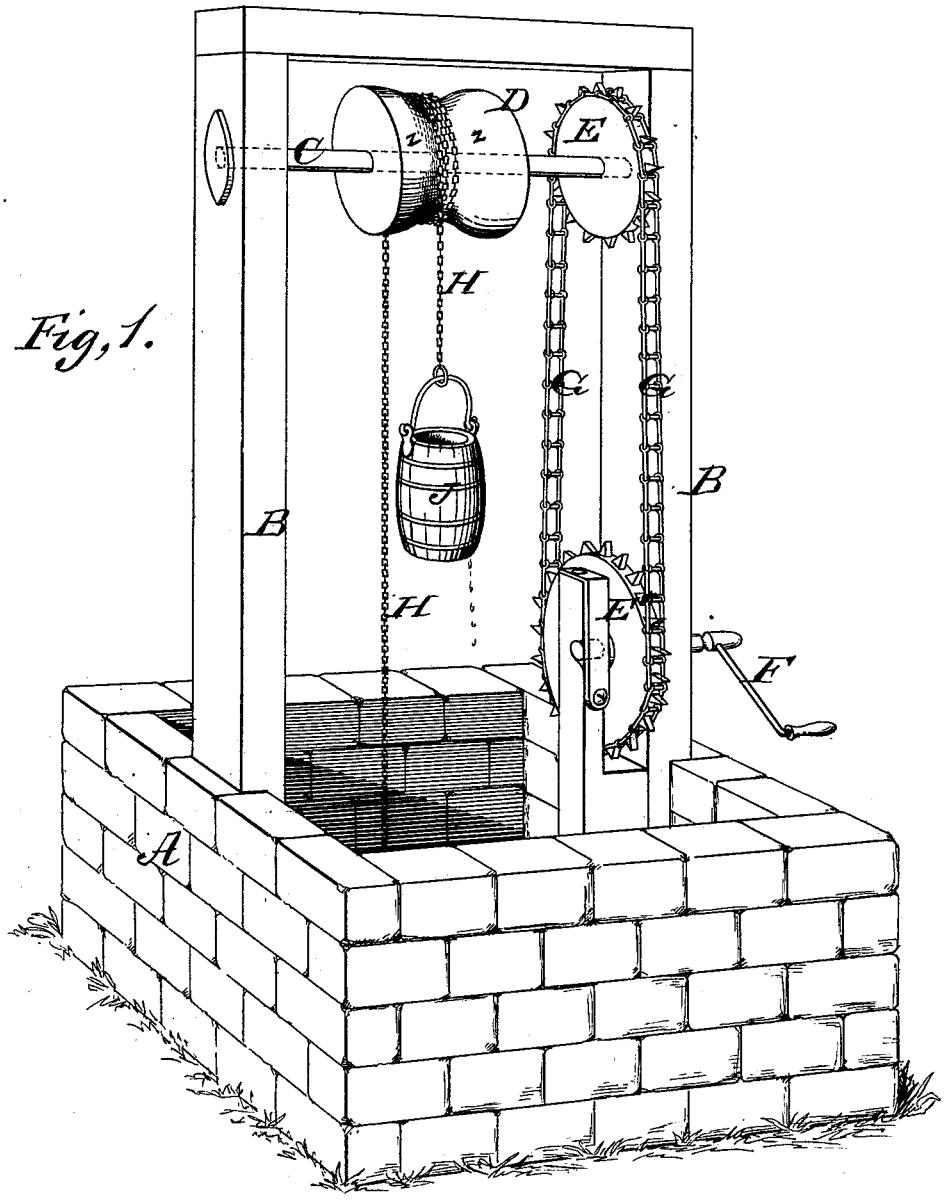
A. C. JACKMAN.
Water-Elevator.

No. 220,844. Patented Oct. 21, 1879.

Fig, 1.



WITNESSES

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UNITED STATES PATENT OFFICE.

ADAM C. JACKMAN, OF MINNEAPOLIS, KANSAS.

IMPROVEMENT IN WATER-ELEVATORS.

Specification forming part of Letters Patent No. **220,844**, dated October 21, 1879; application filed July 12, 1879.

To all whom it may concern:

Be it known that I, ADAM C. JACKMAN, of Minneapolis, in the county of Ottawa and State of Kansas, have invented a new and valuable Improvement in Water-Elevators; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters and figures of reference marked thereon.

The figure of the drawing is a representation of a perspective view of my invention.

This invention has for its object the improvement of means for raising and lowering the buckets in deep wells; and the nature of the invention consists in a certain novel arrangement and construction of the parts used, as will be hereinafter more fully set forth.

In the annexed drawing, the letter A designates the curb of the well, and B a strong upright frame erected thereon and spanning or bridging the same. This frame is of sufficient height to allow the buckets to be drawn outside of the curb and conveniently emptied, and it affords bearings at its upper end to a shaft, C. This shaft is provided at its center with a drum, D, having a peripheral concavity, *z*, to receive and prevent lateral displacement of the rope or chain.

E indicates a rag or sprocket wheel rigidly keyed upon the shaft C near one end, and E′ a second wheel of the same construction as wheel E, but of greater diameter, having its bearings at the side of the frame directly under wheel E, and actuated by means of a crank, F, applied upon the end of its spindle. Around wheels E E′ passes an endless chain, G, by means of which rotary motion is imparted to the shaft C and its drum D, and the rope or chain H, to the ends of which the buckets J are secured, wound up. The diameter of the drum D is sufficient to allow the buckets to pass each other without interfering or interlocking with each other, and the rope or chain is coiled around the concavity of the drum a sufficient number of times (two or more) to produce an amount of friction that, combined with the weight of the empty bucket, will counterbalance the weight of the full one, and prevent the said rope or chain from slipping on the said drum. Thus the buckets are raised, without handling the rope or chain, simply by working the crank; and when they have been raised as high as desired the crank may be let go and the buckets will preserve their relative positions.

It will be obvious that comparatively little labor is required to raise the buckets, and that the operator need not wet his hands—an advantage that will be readily appreciated in freezing weather. The drum, if desired, may be housed in.

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

The water-elevator consisting of the frame B, the elevated shaft C, having a central drum, D, with its periphery or face provided with a concavity, *z*, the hoisting rope or chain H, coiled in said concavity to prevent its lateral displacement, the upper sprocket-wheel, E, on said shaft, the lower sprocket-wheel, E′, having its bearings at the side of the frame, operated by a crank, F, the endless chain G, engaging wheels E E′, by means of which rotary motion is imparted to shaft C and drum D, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ADAM C. JACKMAN.

Witnesses:

ABRAHAM KLEIN,

A. W. DIRCKS.