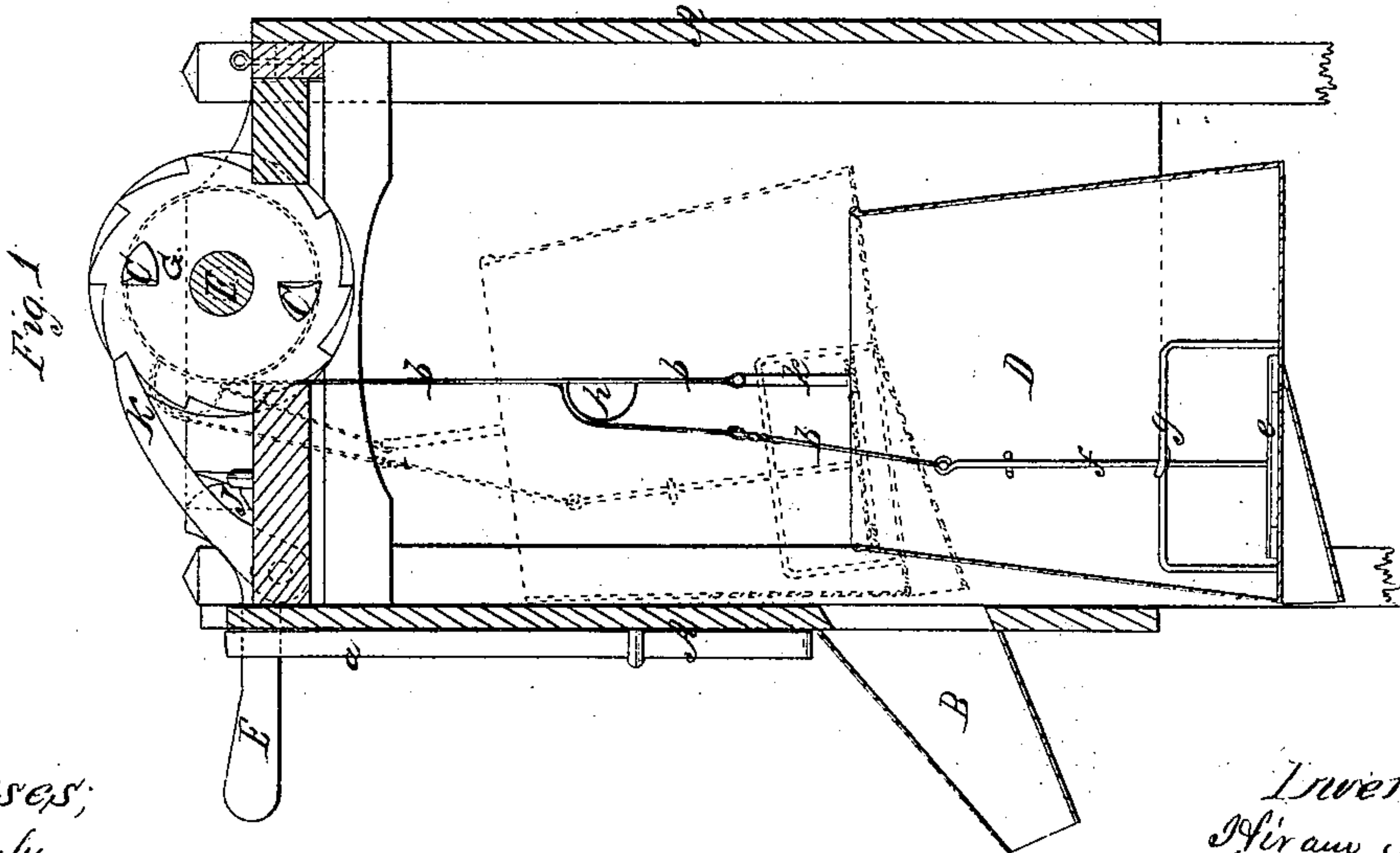
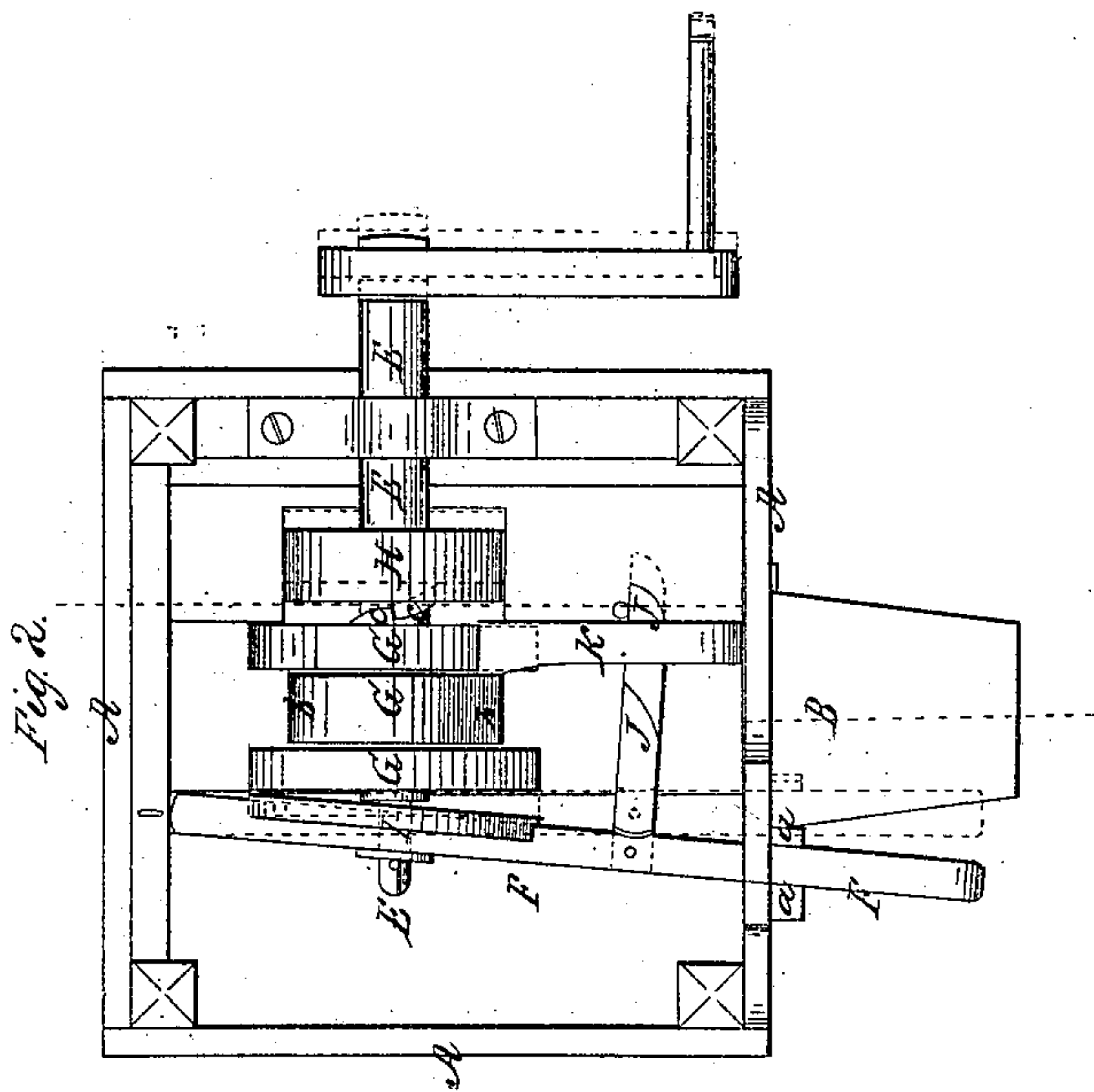


H. Nash,

Windlass Water Elevator.

Nº 29,511.

Patented Aug. 7, 1860.



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UNITED STATES PATENT OFFICE.

HIRAM NASH, OF MAYSVILLE, KENTUCKY.

WATER-ELEVATOR.

Specification of Letters Patent No. 29,511, dated August 7, 1860.

To all whom it may concern:

Be it known that I, HIRAM NASH, of Maysville, in the county of Mason and State of Kentucky, have invented certain
5 new and useful Improvements in Hanging and Operating Well-Buckets; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in
10 which—

Figure 1 represents a sectional elevation taken in a vertical plane through the curb box and bucket showing the improved
15 bucket in two positions and the method of hanging and operating it for drawing water. Fig. 2 is a top view of the mechanism for raising and lowering the bucket in the well.

Similar letters of reference indicate corresponding parts in both figures.

This invention is an improvement in hanging well buckets whereby the bucket may be raised with a crank in the usual way and then lowered into the well again
25 by its own gravity without turning the crank and by a fast or slow motion as may be desired; and it further provides for drawing the water from the bucket automatically when the bucket is brought to its
30 highest point of elevation.

My invention consists in suspending the bucket by means of a flat metal strip from a flanged metal drum that has its bearings on the crank shaft which drum is clutched
35 with the shaft, by a clutch block fixed to the crank shaft by and giving to the crank shaft a movement in the direction with its axis, and at the same time by causing a wedge to act upon a pawl that allows the
40 flanged drum to rotate freely on its shaft; a lever and brake block is employed and made to act upon the flanged drum in such a manner as to give a perfect control in the descent of the bucket.

45 To enable those skilled in the art to fully understand my invention, I will proceed to describe its construction and operation.

In the drawings A, represents a curb box that sets on top of the well, and B, is a
50 spout through which the water flows from the well bucket D, when said bucket is brought up to the spout as will be hereinafter described.

In the top of box A, is placed a crank-shaft E, that has its bearings on one side
55 of the box A, and in a lever F, respectively.

The end of the shaft resting on the lever F, is attached to this lever, so that by moving the lever to the right or to the left the shaft E, will receive an end play. The lever
60 is pivoted at one end to one side of the box, and rests on the opposite side of the box, passing through a slot made therein.

a, is a spring that forces the handle of the lever out in the position indicated in
65 Fig. 2.

G, is a flanged drum that is placed loosely on the crank shaft E, around which I run the flat metal strip b, by which the bucket D, is suspended and wound. The flanged
70 drum G, has two lugs c, c, projecting from one end which are made to engage with the lugs c', c', on the face of a disk H, that is keyed to the shaft E, by moving the drum
75 up to this disk H. In this manner the drum or windlass is clutched to and made to turn with the crank shaft E.

The lever F, which is capable of vibrating has a circular plate I, attached to it; and this plate is interposed between the lever
80 and the drum head so as to serve as a brake upon the drum when it is disengaged from the crank shaft and to give a person control over the descent of the bucket into the well. A wedge J, is also attached to lever F, and
85 moves with it. This wedge raises a pawl K, that engages with teeth on one of the flanges of the drum G, and liberates the drum from this pawl, the pawl K, is pivoted to the box A, and serves to hold the drum
90 G, and shaft E, and prevent the strip b, from unwinding after the crank shaft is released.

It will now be seen from this description that in order to elevate the bucket D, the
95 drum G, must be held by the clutch plate H, and the parts must be arranged in their relative positions shown in Fig. 2, when the bucket may be drawn up to the point represented in red lines Fig. 2, with its
100 bottom opposite the spout, B; now in order to lower the bucket again into the well the lever F is brought up to the position indicated in red lines Fig. 2, which operation moves the crank shaft disengages the clutch
105 disk H, from the drum, and also raises the pawl K, and allows the drum to rotate freely on the crank-shaft, the bucket will then descend by its own gravity, faster or slower, according to the pressure put upon the
110 lever F.

The bucket D, is made somewhat of the

shape shown in Fig. 1, with a hole through its bottom, and a spout *d*, underneath of the opening. The hole is closed by a valve *e*, to the center of which is attached a rod *f*, that
5 is kept in perpendicular position by a bridge *g*. This rod *f*, is connected, with the metal strip *b*, by a short flexible metal strip *b'*, which latter passes over a block *h*, that is also attached to the strip *b*. The bucket is
10 hung from the strip *b*, by a bail *k*. When this bucket *D*, is let down to the water in the well the water raises the valve *e*, and fills the bucket through its bottom. When the bucket is full and raised out of the water
15 the valve *e*, closes in consequence of the pressure of the water above it, and remains closed until spout *d*, is brought opposite to the spout *B*, in the box *A*, when the block *h*, will have passed partially over the drum
20 *G*, which in consequence of its extreme edge traveling faster than the strip *b*, will draw

up the valve *e*, and the water will flow from the bucket through the spouts *d*, and *B*. The bucket is then run to the bottom of the well again for another supply of water
25 when the operation of discharging it is repeated as before described.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is—
30

The loose drum *G*, its toothed flange and pawl *K*, and clutch plate *H*, with the crank shaft *E*, lever *F*, wedge *J*, and plate *I*, for giving to the shaft an end play, in combination with band *b*, and bucket *D*, when the
35 whole are arranged constructed and operated substantially in the manner and for the purposes herein set forth.

HIRAM NASH.

Witnesses:

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