A. J. Cook,

Windlass Water Elevator,

No. 55,062. Patented May 29, 1866.

Fig: 1

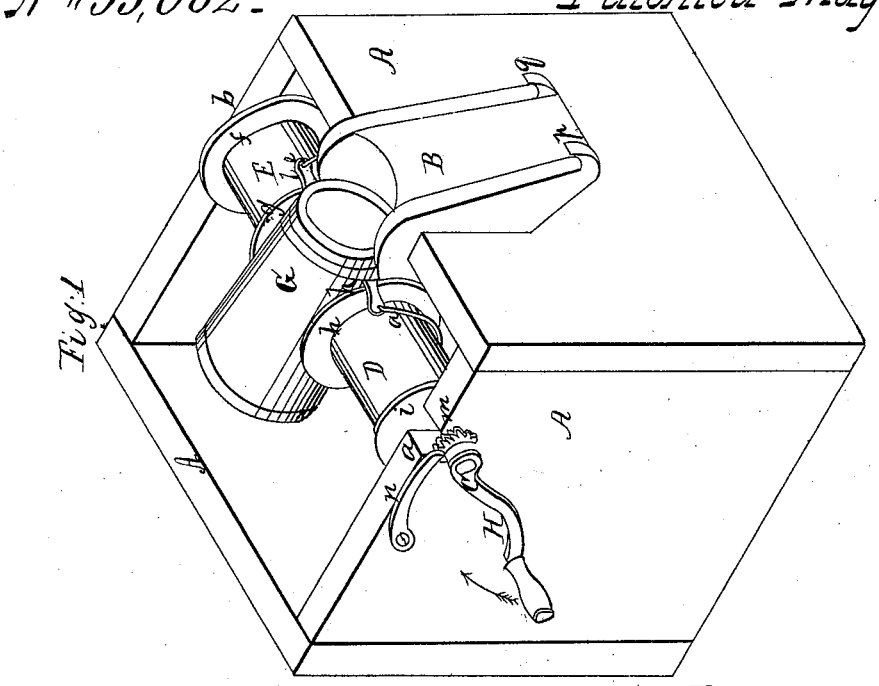
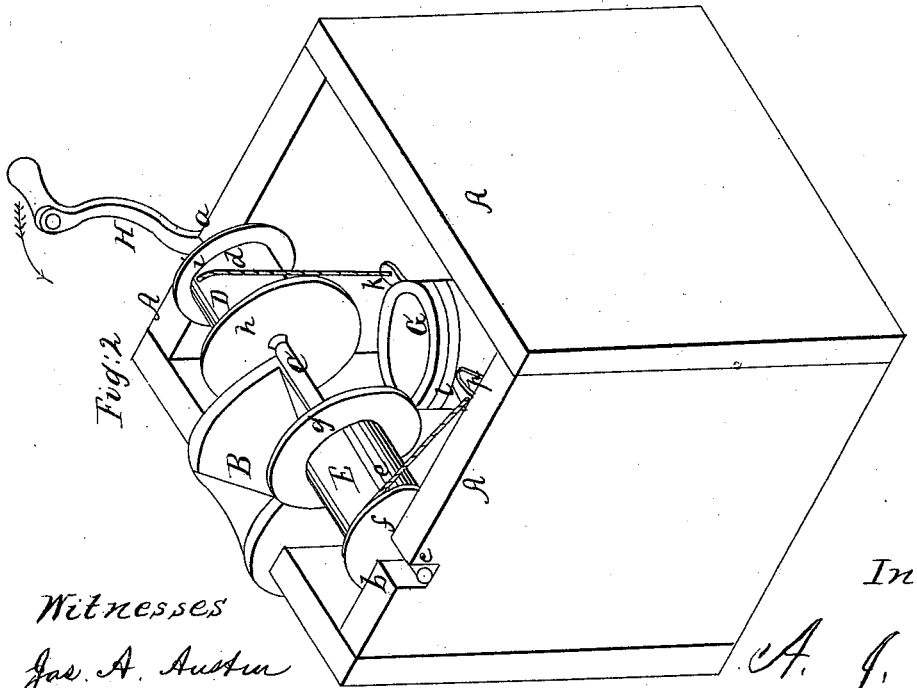


Fig: 2



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UNITED STATES PATENT OFFICE.

AARON J. COOK, OF NORTH BRANFORD, CONNECTICUT.

IMPROVEMENT IN SELF-TILTING BUCKET FOR WELLS.

Specification forming part of Letters Patent No. **55,062**, dated May 29, 1866.

To all whom it may concern:

Be it known that I, AARON J. COOK, of the town of North Branford, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Apparatus for Drawing Water or in Self-Tipping Buckets; and I do hereby declare that the following is a full, clear, and exact description of the construction, character, and operation of the same, reference being had to the accompanying drawings, which make part of this specification, in which—

Figure 1 is a perspective view of the whole apparatus as it will appear while emptying the bucket. Fig. 2 is a perspective view of the same, showing the relative positions of the parts when the bucket is ascending or descending.

My improvement consists in the two cords or chains of equal length, insuring the right position of the bucket for emptying, and the flanges of the pulleys on the shaft in such a manner that the bucket is sure to entirely discharge the water in the right direction, and at such an elevation that it will always be convenient to hang a pail upon the hooks of the spout or set an ordinary tub under the spout, notwithstanding the snow or ice which may ordinarily accumulate, without having the shaft so high as to render the use of the crank inconvenient.

I make the well-curb A A A of wood or any other suitable material, substantially in the form of the four sides of a hollow cube, as shown in Figs. 1 and 2, or of any other convenient shape, with a suitable spout, as B, Figs. 1 and 2, through which the water is to be poured into the pail or other receptacle; and on opposite sides, in proper proximity and relation to the spout B, I make two notches, as shown at *a* and *b*, or any other suitable bearings for the journals of the shaft.

I make the shaft C, Fig. 2, of iron or any other suitable material, with suitable journals, as *c*, Fig. 2. On this shaft C, I fit two pulleys, barrels, or drums, as D and E, to which I fasten the cords or chains, and on which they wind or unwind in raising or lowering the bucket; and on each of these drums I have two flanges, as *f* and *g* and *h* and *i*. Those on the two outer ends, as *f* and *i*, are designed solely to prevent the cords or chains *e* and *d* from running off, and should be made of suitable diameter for that purpose; and the two, *g* and *h*, on the two inner ends, besides keeping the cords in place, are intended to act upon the ears *k* and *l* of the bucket both to steady and guide it while being tipped directly into the spout B, as shown in Fig. 1, so that the radius of each must be somewhat greater than the semi-diameter of the bucket G, so as to carry the upper end of the bucket so far back as to pass up perfectly free behind the shaft until about one-third of the bucket G is above the shaft, when, as the ears *k* and *l* pass over, the side of the bucket G will strike the shaft C, Fig. 2, and will be tipped to the position shown in Fig. 1, to empty the water through the spout B into the pail or tub.

I make the bucket G in the usual form, but without bail, and have the ears *k* and *l* extend for a short distance horizontally from the bucket, as shown at *k* and *l* in Figs. 1 and 2. I make a crank, H, and place it on one end of the shaft C in the usual way, with a suitable ratchet-wheel, *m*, and pawl *n*, as shown in Fig. 1.

Having made the several parts, as before described, I attach the chords or chains *d* and *e* to the pulleys D and E and to the ears *k* and *l* of the bucket G, throw off the pawl *n*, and let the bucket down to fill it, and then revolve the crank H in the direction indicated by the dart until the bucket G comes up to the rear of the shaft C, as shown in Fig. 2, and as the ears *k* and *l* strike the peripheries of the disks *g* and *h* they will pass along on those peripheries until the bucket G is tipped to the position shown in Fig. 1, and its contents are poured through the spout B into the pail hanging on the hooks *p* and *q*, Fig. 1, or a tub set under that spout, when the bucket may be again let down to be again filled; and a break may be fitted to govern the descent of the bucket, if thought best at any time.

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

The combination and arrangement of the shaft C, drums D and E, and the bucket G, suspended on cords or chains of an equal length, the whole being constructed and arranged substantially as herein described and set forth.

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