

E. H. Holt,

Windlass Water Elevator.

N^o 5,805.

Patented Sep. 26, 1848.

Fig. 1.



Fig. 2.

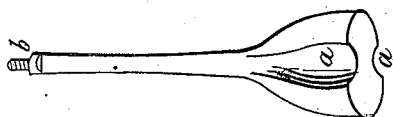


Fig. 4.

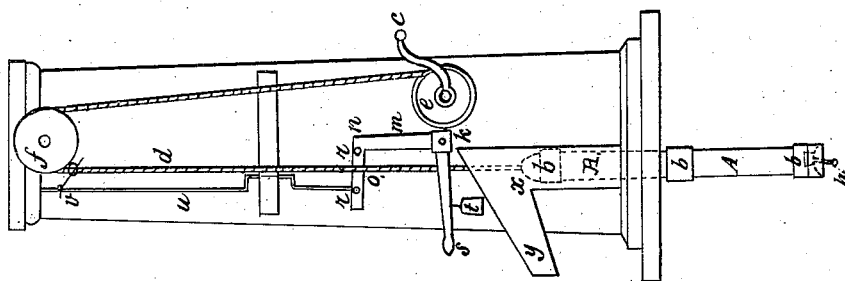
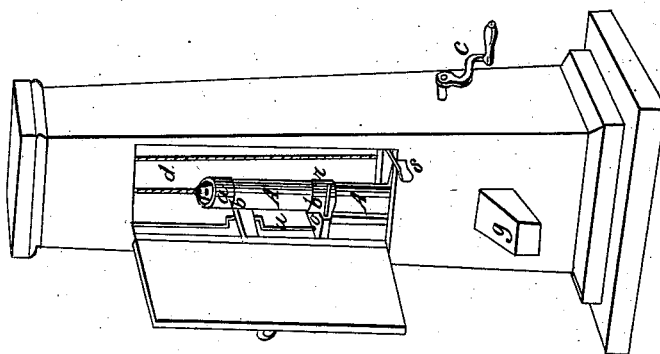


Fig. 3.



UNITED STATES PATENT OFFICE.

ELIJAH H. HOLT, OF FOWLERS MILLS, OHIO.

METHOD OF RAISING WATER.

Specification of Letters Patent No. 5,805, dated September 26, 1848.

To all whom it may concern:

Be it known that I, ELIJAH H. HOLT, of Fowlers Mills, in the county of Geauga and State of Ohio, have invented a new and Improved Mode of Drawing Water from Wells, Particularly from Bored or Artesian Wells, by Means of Peculiarly-Constructed Apparatus; and I do hereby declare that the following is a full and exact description thereof.

The nature of my invention consists in the construction of a peculiar bucket, so contrived as to fill with water when let down into an Artesian well, and emptying itself when carried to the desired height.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, reference being had to the annexed drawing making a part of this specification.

Figure 3 is a perspective view of the well curb, the door being opened to show the bucket and internal arrangement. Fig. 4 is an elevation side view, showing the general construction and arrangement of the parts.

The bucket, designated by the letters A, A, Figs. 3 and 4, I construct of metal and of sufficient length to hold about the same quantity of water as a common bucket, the length, or depth of the bucket will therefore vary according to the diameter of the boring.

The upper end of the bucket is represented by the letter *a* Fig. 3.

The bucket has three, or more metallic bands encircling it, to protect the body of the bucket from injury by coming in contact with the sides of the well in descending and ascending. These bands are represented at *b b b* Fig. 4 and two of them at *b b* Fig. 3. The bucket is lowered into the well by means of a crank and rope and windlass and raised by the same means.

The handle or crank is represented by the letter *c* Figs. 3 and 4 and the rope by the letter *d* and the drum of the windlass by the letter *e* Fig. 4. The rope passes over a pulley shown at *f* Fig. 4. For the purpose of allowing the bucket to rise high enough to be discharged into the spout *g* Figs. 3 and 4.

Since in the case of bored Artesian wells it is necessary that the bucket should nearly fill the bore of the well, it is evident it cannot fill with water in the usual way from the top I therefore insert a puppet valve in

the bottom of the bucket the stem of which projects below the bucket as shown at *h* Fig. 4, the valve itself being shown at *i* Fig. 4. When the bucket drops or descends into the water, the valve rises and the water fills the bucket the top being open for the escape of the air. When the bucket is raised by turning the crank of the windlass, the valve returns to its seat by reason of the pressure of the water and thus prevents its escape while the bucket is being drawn up from the well.

For discharging the water when the bucket is drawn up out of the well I have adopted the following arrangement. In front of the windlass I place a shaft or bar which extends across the curb parallel to the windlass, this bar which rests its ends in boxes fitted to receive it is shown endwise at *k* Fig. 4. It has extending from its upper surface an arm *m* Fig. 4, rising perpendicularly about two feet, at the point *n* Fig. 4 the arm bends at right angles and projects forward six or eight inches as at *o* Fig. 4, this horizontal portion of the arms is also shown at *o* Fig. 3. It rests against the inside of the curb so that when the bucket ascends, it will come close to the inside surface of the arm. There are two pins projecting from this arm shown at *r r*, Figs. 3 and 4 between which the bucket passes as represented in Fig. 3. From the front side of the shaft *k*, a lever shown at *s* Figs. 3 and 4 projects through an opening in the front of the curb, and near the end of this lever but within the curb is attached a weight *t* Fig. 4. By raising the lever *s* the horizontal portion of the arm *o* is thrown back so that the pins *r r* are in the proper position for the bucket to pass through them or rather between them when the bucket is let down into or raised from the well. The arm is held in this position by the rod *w* Figs. 3 and 4 the lower end of which falls into a hole made in the arm *o*. Near the highest point to which the bucket rises is a loop connected with the rod *u* through which the rope passes as at *v* Fig. 4, and when the bottom of the bucket is elevated above the bottom of the spout *x* Fig. 4 the rod *u* is raised by the top of the bucket, thus disengaging it from the arm *o*. The weight *t* depressing the lever *s* the arm *o* is brought forward and the bottom of the bucket brought into the spout *x*, and by giving the windlass a turn back the rope

is slackened and the bottom of the bucket rests in the spout *x* and the stem *h* pressing the valve upward the water is discharged. The bucket can be again lowered into the well by giving the crank and windlass one turn forward, the rod *u* is thus raised to its highest point, the lever *s* is to be then raised and on letting down the bucket the rod *u* drops into the hole made for it in the arm *o* and thus holds it in the proper position for the bucket to descend into the well, I contemplate using the method herein set forth in drawing water from Artesian wells where

the water does not rise high enough to be raised by a pump.

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

The combination of the shaft *k*, arm, *m*, pins *r*, *r*, lever, *s*, weight, *t*, and rod *w*, arranged substantially as described, with a valve bottomed bucket for the purpose of discharging the same.

ELIJAH H. HOLT.

In presence of—

JOHN HALE,
HOMER PUTNAM.