

(No Model.)

F. E. MILLER.

WELL BUCKET.

No. 295,038.

Patented Mar. 11, 1884.

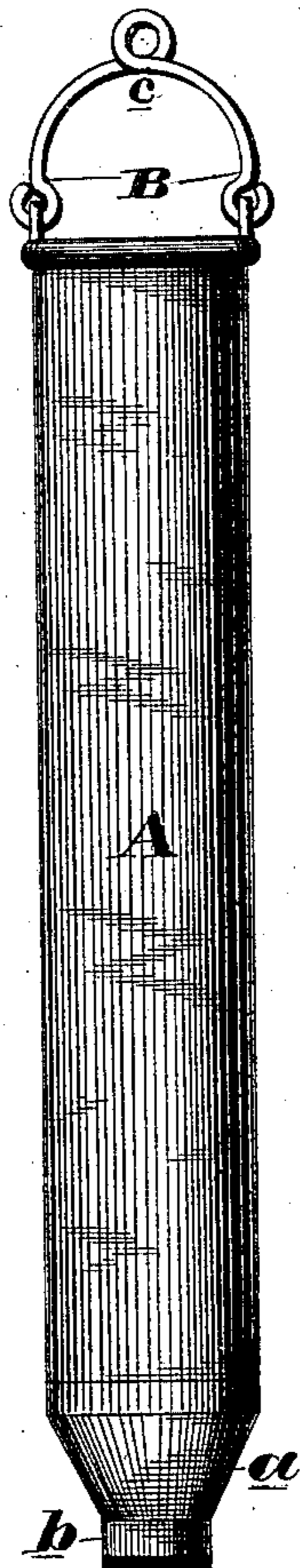
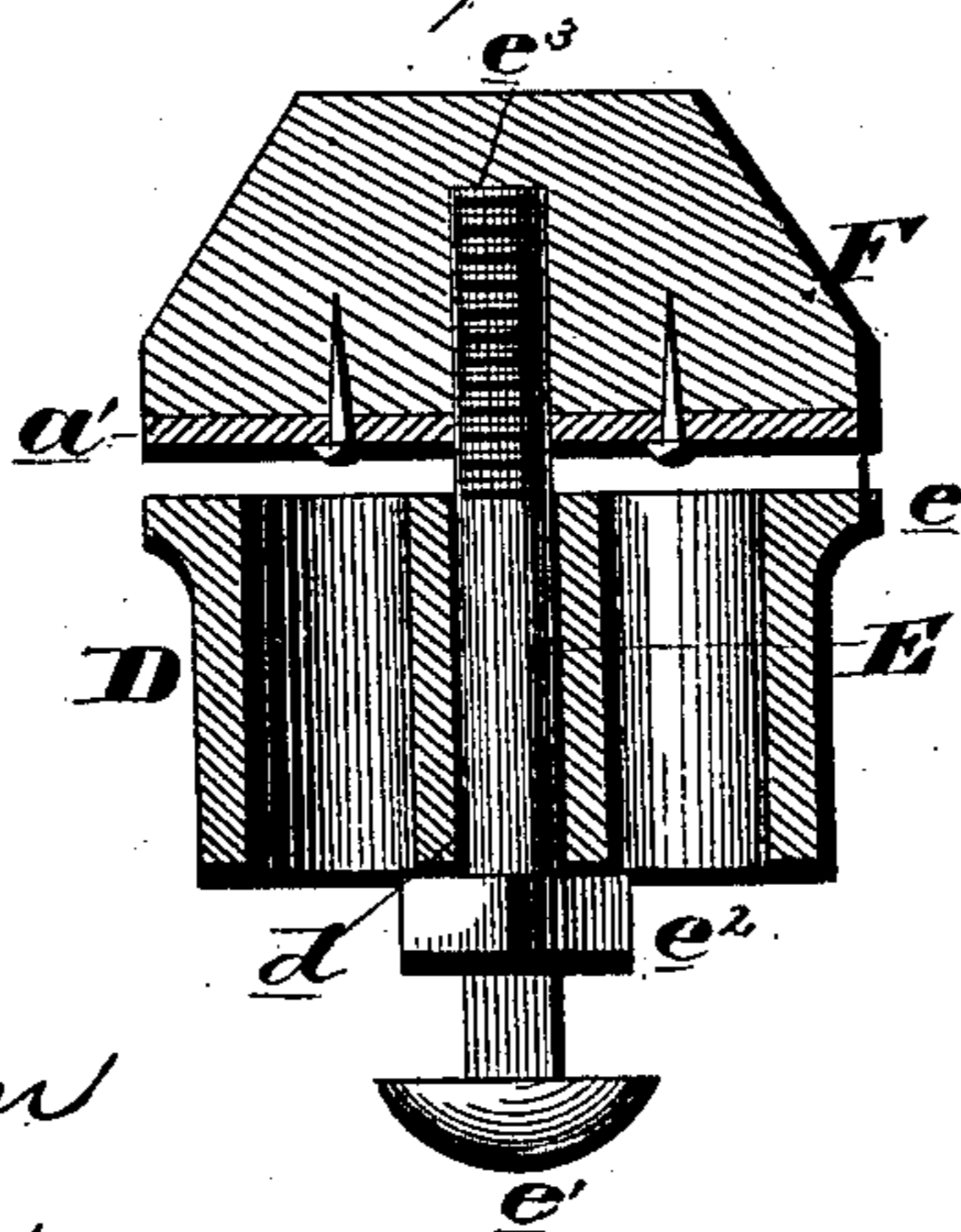


FIG. 1.

FIG. 2.



WITNESSES

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FRED E. MILLER, OF LINCOLN, NEBRASKA.

WELL-BUCKET.

SPECIFICATION forming part of Letters Patent No. 295,038, dated March 11, 1884.

Application filed October 2, 1882. Renewed January 19, 1884. (No model.)

To all whom it may concern:

Be it known that I, FRED E. MILLER, of Lincoln, in the county of Lancaster and State of Nebraska, have invented certain new and useful Improvements in Well-Buckets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to an improvement in well-buckets for bored wells, the object of the same being to provide a device of this character with a discharge-opening and regulating-valve in its bottom, by means of which the contents are discharged without tilting the bucket; and with these ends in view my invention consists in certain details in construction and combinations of parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved bucket; and Fig. 2 is a detached view in vertical section of my flanged disk, valve, and valve-rod.

A represents the elongated well-bucket, cylindrical for the greater portion of its length, and provided near its lower end with the conical portion *a*, which latter terminates in the cylindrical ring *b*.

B is the bail of the bucket, provided with the loop or ring *c*, by means of which it is secured to the well rope or chain.

D is a flanged disk perforated for the free passage of water, and provided centrally with an opening or perforation, *d*, for the passage of the valve-rod E. This disk D is preferably made of cast-iron galvanized, and is adapted to snugly fit within the ring *b*, with its flange *e* resting on the conical portion *a* slightly above the joint or juncture between the said ring *b* and conical portion. The flange *e*, resting on the conical portion of the bucket, prevents the downward displacement of the disk and valve, while the weight of the disk alone is sufficient to prevent its upward displacement. Suitable packing can, if desired, be introduced between the disk and ring *b* to prevent leakage, and also to assist in holding the disk in position, if necessary.

The valve F is made of wood suitably weighted, is provided on its lower flat face

with the rubber, leather, or other suitable packing *a'*, and is adapted to rest on the upper flat surface of the disk D, and prevent the escape of any water when the valve is in a lowered or closed position. The valve-rod E is provided with a head, *e'*, stop *e²*, and screw-threaded end *e³*. This rod is passed up through the central perforation in the disk D, and the end *e³* thereof is screwed into the lower face of the valve F and loosely secures it to the disk D. This loose connection between the parts allows the valve F to be elevated until the stop *e²* strikes the bottom of the disk D, which checks its upward movement, and forms a passage between the valve and disk sufficiently large for the discharge of the water from the bucket. By making the valve removable from the valve-rod, it can be removed at pleasure for the purpose of repair, or a new one can be substituted in its stead in a few moments without the aid of tools or skilled labor. When the bucket has been filled and elevated above the surface of the water, the valve, if it has been elevated by the pressure of water below the bucket, falls and rests on the disk D, which latter also constitutes the valve-seat, and prevents the escape of water until the valve F has been elevated by the head *e'* of the valve-rod, (which latter projects considerably below the bottom of the bucket,) resting on a platform constructed for the purpose. The bucket is elevated slightly above the platform, (not shown in the drawings,) and is then lowered therein until the head *e'* of the bolt E strikes the platform and elevates the valve. The water then passes out through the perforated disk D, which latter also constitutes the bottom of the bucket, and falls into a suitably-arranged spout situated above the well-curbing.

It is evident that slight changes in the construction and relative arrangement of the different parts might be resorted to without departing from the spirit of my invention; and hence I would have it understood that I do not limit myself to the exact construction shown and described, but consider myself at liberty to make such changes and alterations as come within the spirit and scope of my invention.

I am aware that well-buckets have been provided with valve-seats in their bottoms, and rods projecting out through said seats and having valves secured to their inner ends, and

5 I do not claim such construction, broadly.

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

1. The combination, with the well-bucket
10 having an aperture at its lower end, of the disk D, arranged in said aperture, and having the central passage and one or more intermediate water-passages, the headed rod arranged in said central passage, and the valve F, screwed
15 upon the upper end of the rod, and arranged to close and open the outer passages of the disk, substantially as described.

2. The combination, with the well-bucket having the conical lower end portion open at
20 its bottom, of the disk D, arranged within the opening at the bottom, and having the flange *c* arranged to rest by gravity on the tapering inner surface of the conical lower end portion of the bucket, said disk having central valve-rod passage, and one or more suitable water-
25 passages, the headed rod E, arranged in the central passage of the disk, and the valve F, secured to the inner end of said rod, and arranged to open and close the water-passages of
30 the disk, substantially as described.

3. The combination, with the disk D, having central valve-rod passage and water-passages at the sides thereof, of the valve-rod E, arranged through said central passage, and provided with stop *e*², and the valve F, screwed
35 upon the inner end of said rod, substantially as and for the purpose set forth.

4. The combination, with the bucket A, having the conical lower portion, *a*, terminated by the cylindrical ring *b*, of the perforated disk D,
40 arranged to fit within the said ring, and provided with the flange *c*, resting by gravity upon the inner surface of the conical portion of the bucket, the valve-rod passing loosely through the center of the disk and projecting
45 below the same, and the valve F, screwed upon the inner end of the said valve-rod, and adapted to rest upon the disk as its seat when the bucket is suspended, substantially as set
50 forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRED E. MILLER.

Witnesses:

WM. BARR,
J. S. HOAGLAND.