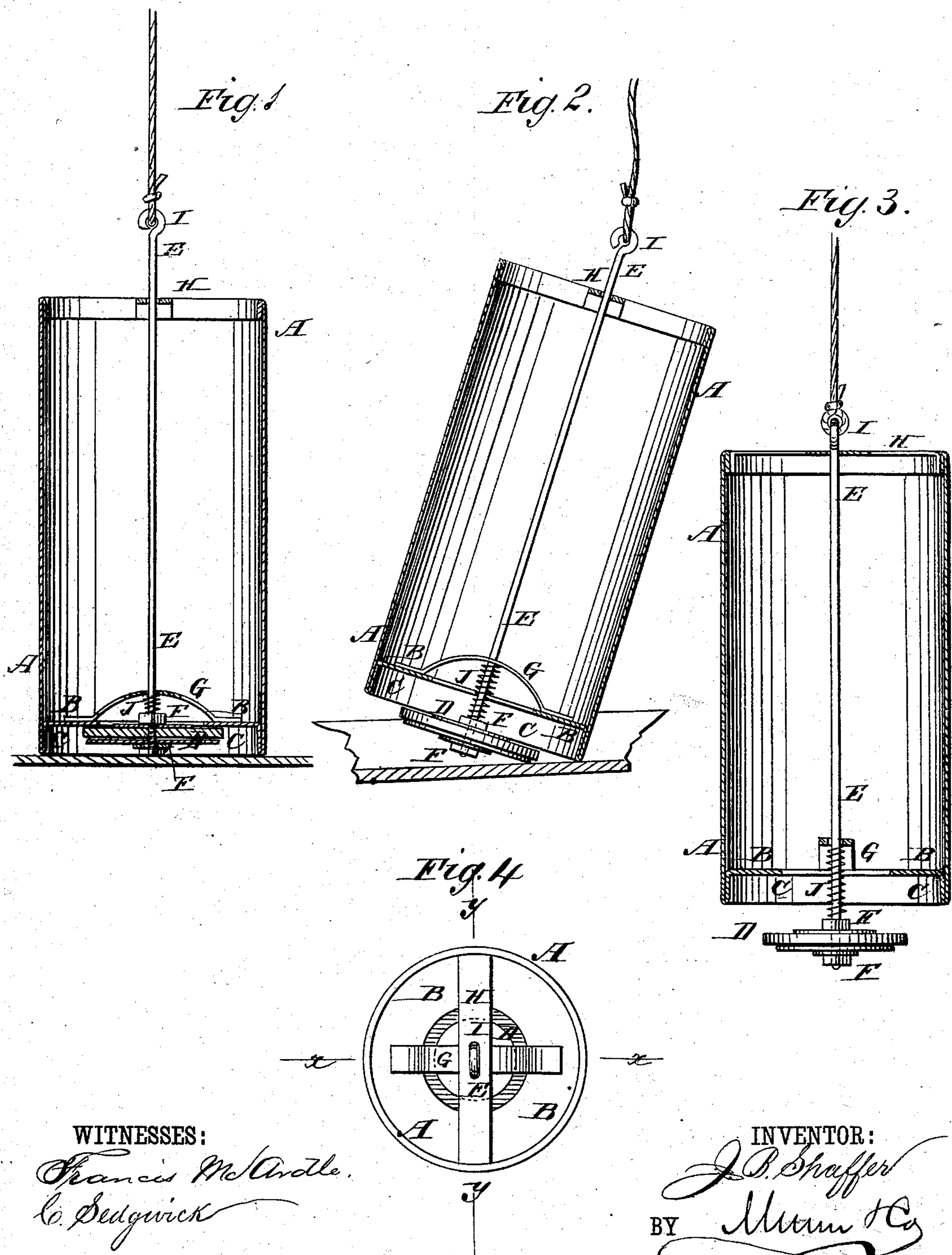


(No Model.)

J. B. SHAFFER.
Well Bucket.

No. 237,209.

Patented Feb. 1, 1881.



WITNESSES:

Francis McAnally.
C. Sedgwick

INVENTOR:

J. B. Shaffer
BY *Mum & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN B. SHAFFER, OF KEARNEY, NEBRASKA.

WELL-BUCKET.

SPECIFICATION forming part of Letters Patent No. 237,209, dated February 1, 1881.

Application filed October 20, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. SHAFFER, of Kearney, in the county of Buffalo and State of Nebraska, have invented a new and useful Improvement in Well-Buckets, of which the following is a specification.

Figure 1 is a sectional side elevation of the improvement, taken through the line *xx*, Fig. 4, and shown as standing in a spout. Fig. 2 is the same section as Fig. 1, but showing the bucket inclined to discharge the water. Fig. 3 is a sectional side elevation taken through the line *yy*, Fig. 4, and shown as entering the water to be filled. Fig. 4 is a plan view.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish well-buckets so constructed that they will readily fill when lowered into the water, which will hold the water securely while being raised and when standing in a spout, which can be readily emptied, in part or wholly, and which shall be simple in construction and easily repaired.

A represents the bucket, which may be of cylindrical form, as shown in the drawings, or made with a bilge, or of any other desired form, and of any desired size. The bottom B of the bucket A is placed at a little distance above its lower edge to form a chamber, C, to receive the valve, and to form an air-chamber to give an increased buoyancy to the bucket when lowered into the water. In the middle part of the bottom B is formed an aperture equal in diameter to about one-third the diameter of the bucket A, which aperture is closed by a valve, D, closing against the lower side of the said bottom.

E is the valve-rod, which passes through the center of the valve D, and has a screw-thread cut upon its lower end to receive the nuts F, placed one above and one below the valve D, to fasten the said valve rigidly to the said valve-rod E.

If desired, the valve D may be connected loosely with the valve-rod E. The valve-rod E passes up through a guide-hole in the center of the arched bar G, the ends of which are attached to the bottom B at the opposite sides

of its aperture. The valve-rod E also passes through a guide-hole in the center of the bar H, the ends of which are attached to the opposite sides of the top of the bucket A, to center the valve D and keep the valve-rod E in the center of the said bucket.

Upon the upper end of the valve-rod E is formed an eye, I, to receive the rope, chain, or rod by means of which the bucket is lowered and raised, which eye, by striking against the guide-bar H, serves as a stop to limit the downward movement of the valve D.

Upon the valve-rod E, between the valve D and the guide-bar G, is placed a spiral spring, J, to assist in opening the said valve D. With this construction, when the bucket is lowered into the water the buoyancy of the bucket A, assisted by the air in the chamber C, detains the said bucket sufficiently to allow the valve D to drop away from the bottom B, or open, as shown in Fig. 3, allowing the water to enter the bucket and fill it. When draft is applied to the valve-rod E to raise the bucket, the strain closes the valve D, and the weight of the bucket and the water contained in it resting upon the valve D holds the said valve closed. The lower end of the valve-rod E projects so far below the lower edge of the bucket A that when the said bucket is set in the spout the weight of the said bucket and of the water contained in it will rest upon the end of the said valve-rod, and thus hold the valve closed, as shown in Fig. 1. The water is discharged, in whole or in part, by inclining the bucket to rest upon one side of its lower edge and allow the valve to be opened by the weight of the water, as shown in Fig. 2.

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

The piston-valve of a bottom-apertured bucket arranged on the lower side of the bottom, in combination with a spring and rod connecting with the windlass rope or chain, as and for the purpose specified.

JOHN B. SHAFFER.

Witnesses:

ALBERT MORE,
J. W. PARKER.