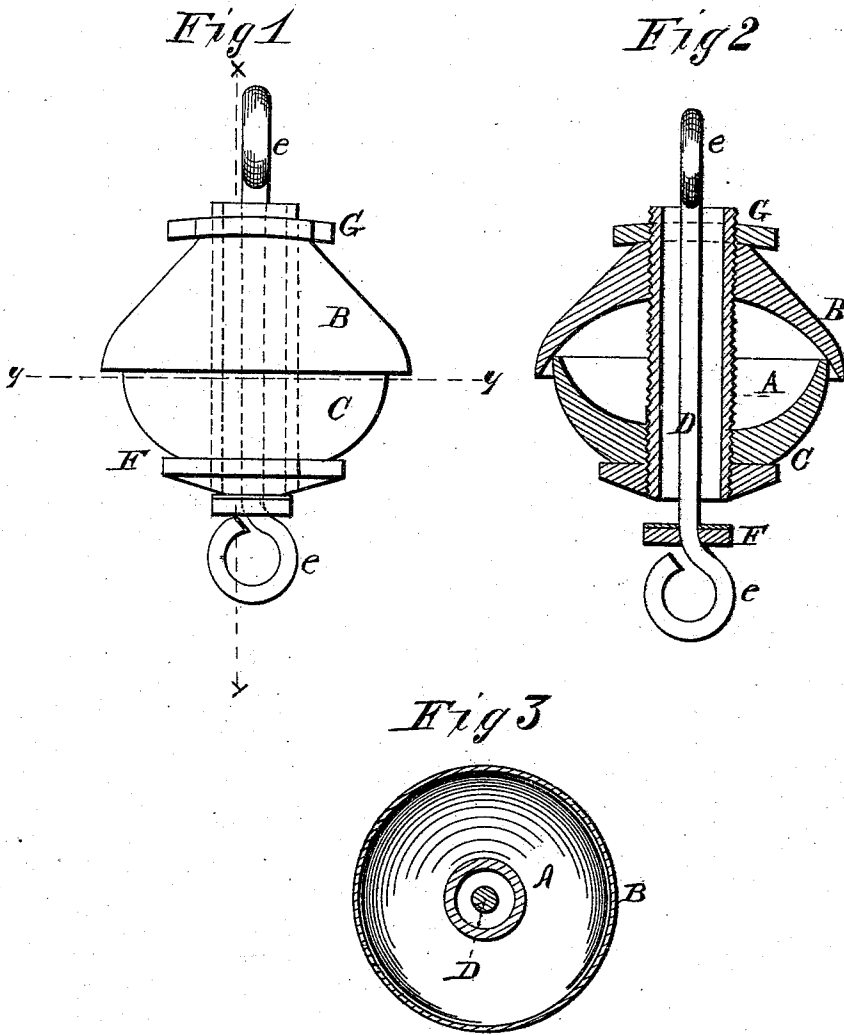


J. A. CHURCHILL.
CHAIN-PUMP BUCKET.

No. 174,196

Patented Feb. 29, 1876.



WITNESSES
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UNITED STATES PATENT OFFICE.

JOHN A. CHURCHILL, OF COUNCIL BLUFFS, IOWA.

IMPROVEMENT IN CHAIN-PUMP BUCKETS.

Specification forming part of Letters Patent No. **174,196**, dated February 29, 1876; application filed February 5, 1876.

To all whom it may concern:

Be it known that I, J. A. CHURCHILL, of Council Bluffs, in the county of Pottawatomie and in the State of Iowa, have invented certain new and useful Improvements in Chain-Pump Buckets; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction of the several parts of a pump-bucket for chain-pumps, the peculiarities of which will be hereinafter fully set forth.

In the accompanying drawings, making part of this specification—

Figure 1 represents a side view, and Fig. 2 a section, of my pump-bucket. Fig. 3 represents a top view of one portion of the bucket.

In the figures, A represents a hollow tube, which has a screw-thread cut upon its outside. B and C represent two rubber half globes or hollow balls, of equal diameter, which are passed over this tube, their convex surfaces being outward. B is the upper half globe, and C the under one, the under being smaller in diameter than the upper, so that the rim or edges of the upper half globe or ball projects over the rim or edges of the lower one. F and G represent disks of metal, which have holes through them to receive the tube A. One of these disks passes over the lower end of the tube, and the other over the upper end, both being provided with screw-threads to fit the thread upon the tube A. When one or both are screwed up, the two rubber half balls or globes are forced together, and the larger or outer one is made to swell or expand to fit the tube of the pump. The bucket thus formed, it will be seen, will readily pass up

the tube of the pump, but the edges of the upper rubber will catch against the sides of the tube to prevent the buckets from passing downward. A metal rod, D, with loops or hooks *e e* on each end, passes through the tube A. The diameter of the rod D is smaller than the inner diameter of the tube, and it has upon its lower end, just above the hook, a plate or disk or valve, which closes the opening through the tube while the bucket is passing up. The moment the chain stops the weight below draws the rods D downward, thus freeing the passage in the tube by dropping the valve F, so that the water from the pump-tube is allowed to escape back into the well or cistern.

The two features of this chain-pump bucket consist in the two half balls, one made larger than the other, and in the tube having a rod passed through it with a valve on its lower end, the rod being made smaller in diameter than the inner diameter of the tube.

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

1. A pump-bucket composed of two half globes or balls, one being larger in diameter than the other, and secured together in the manner and for the purpose set forth.

2. The hollow shaft or tube A, in combination with the rubber bucket and the rod D, with its valve F, constructed and operating as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 11th day of January, 1876.

JOHN A. CHURCHILL. [L. S.]

Witnesses:

JNO. H. KEATLY,
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