

J. S. WILCOX.

Improvement in Buckets for Chain Pumps.

No. 119,679.

Patented Oct. 3, 1871.

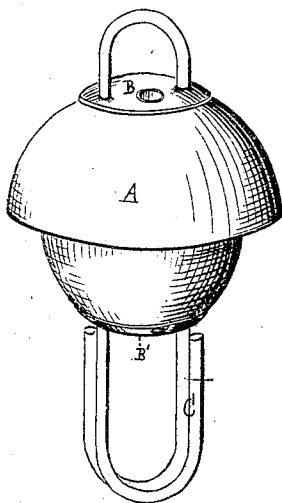


Fig. 1

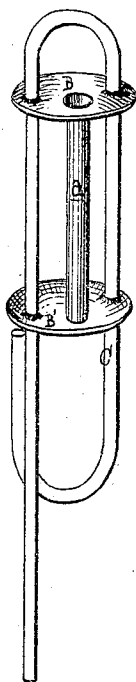


Fig. 2

ATTEST:
Harry S. Sprague
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INVENTOR:
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per attorney
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UNITED STATES PATENT OFFICE.

JOSEPH S. WILCOX, OF YPSILANTI, MICHIGAN.

IMPROVEMENT IN BUCKETS FOR CHAIN-PUMPS.

Specification forming part of Letters Patent No. 119,679, dated October 3, 1871.

To all whom it may concern:

Be it known that I, JOSEPH S. WILCOX, of Ypsilanti, in the county of Washtenaw and State of Michigan, have invented a new and useful Improvement in a Bucket for Chain-Pumps; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is a perspective view of my improved chain-pump bucket. Fig. 2 is the same, but without the rubber bucket, with the lower end of one of the links extended as before, bending up to complete the link.

Like letters refer to like parts in each figure.

The nature of this invention relates to an improvement in the construction of chain-pump buckets of that class where the bucket proper is a piece of India rubber or other elastic material; and it consists in the peculiar construction and arrangement of its various parts, as more fully hereinafter set forth.

In the drawing, A represents my pump-bucket, which is composed of elastic rubber or other similar material, in the form of two hemispheres of unequal size joined together at their bases. The larger one is uppermost when drawing water. B B' are two cup-shaped plates of zinc or galvanized sheet metal. The former is placed on the apex of the larger or top half of the bucket and the latter under the bottom, and are connected by a tube, *a*, extending through both, passing, of course, through the rubber bucket. C is the link, made in the shape of a long staple, and is inserted through proper holes made in the top plate, passing through the rubber and suitable holes in the bottom plate, after which its ends are bent up, as shown, to form a link. The link

is firmly soldered to the plates where it passes through them, as are also the ends of the tube *a*.

I am aware of the pump-bucket patented June 20, 1871, by William C. Barker, in which a drip-hole is made through the rubber hemisphere which forms his buckets, which drip-hole is inoperative, for the reason that the rubber is compressed the moment it enters the pump-tube and this drip-hole is thereby closed until the bucket passes out of the tube, whereby the water which is in the tube when the pump is stopped remains there, acquiring the flavor of the wood, and liable to freeze in cold weather. These objections I fully overcome by employing the metallic tube *d* running through the bucket, which cannot collapse it, and insuring at all times a quick discharge of the water from the tubing.

It frequently happens that the pawl does not engage with the ratchet on the wheel-shaft when ceasing to pump, in which case the buckets are apt to be torn off the links by the weight of the column of water reversing suddenly the motion of the chain. This cannot happen under such circumstances with my improved bucket, as the upper plate fully supports the rubber. The form of the bucket is such that the periphery is expanded with more certainty against the walls of the tube than if the bucket were a plain hemisphere.

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

The construction and arrangement of the plates B B', tube *d*, and link C with the elastic bucket A, of the form shown, as and for the purpose set forth.

JOSEPH S. WILCOX.

Witnesses:

MYRON H. CHURCH,
H. F. EBERTS.

1
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