

E. HOYT.
Chain-Pump Bucket.

No. 163,013.

Patented May 11, 1875.

Fig. 1.

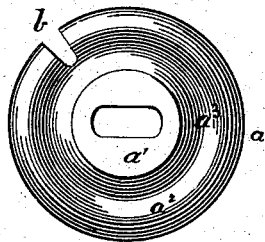


Fig. 2.

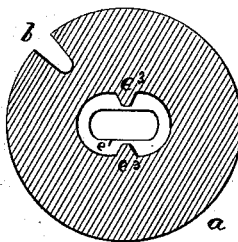


Fig. 3.

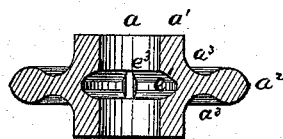
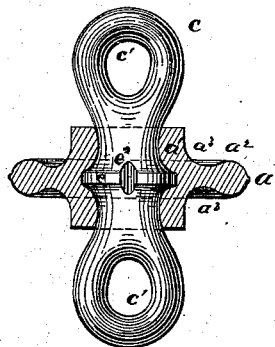


Fig. 4.



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IMPROVEMENT IN CHAIN-PUMP BUCKETS.

Specification forming part of Letters Patent No. **163,013**, dated May 11, 1875; application filed March 29, 1875.

To all whom it may concern:

Be it known that I, EDWIN HOYT, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Buckets for Chain-Pumps; and do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in chain-pumps, in which rubber buckets are employed; and it consists in the construction of the links, whereby the buckets may be more readily retained in their proper position, and in the construction and formation of the buckets.

In the drawings, Figure 1 is a plan view, Fig. 2 a horizontal section, Fig. 3 a vertical section, of one of my improved buckets; and Fig. 4 is a vertical section of a bucket applied to a link.

a is the bucket, made of india-rubber. It is formed with a central hub, *a*¹, around which is formed a flange or rim, *a*², having annular indentations *a*³ on the upper and under sides thereof, thereby giving the same form to both sides of the bucket, so that it is immaterial which side is placed uppermost in the pump. These annular indentations *a*³ increase the lifting capacity of the bucket, and, without weakening the latter, give a flexibility to the rim or flange. In the periphery of the rim is formed a V-shaped recess, *b*. This recess admits air from an upper to a lower bucket, so that when the pumping is stopped the water in the pump will fall immediately to the bottom. It also admits of the compression and expansion of the rim in the direction of the circumference, when necessary on account of any slight variation of the size of the tube in which it is used, and thus prevents an unequal wearing away of the bucket. *c* is the

link, constructed with the eyes *c*¹, at each end, for receiving connecting-links to form the chain. In the center of the link is formed a flange, *e*, which is adapted to be received within a recess, *e*¹, formed in the center of the hub *a*¹ of the bucket. Recesses *e*² are formed on opposite sides of the flange *e*, which are adapted to receive corresponding projections *e*³ formed on the interior of the recess *e*¹, for the purpose of preventing the revolution or turning of the bucket on the link.

The link *c* having been formed as described and shown, the bucket is formed thereon by suitable molds, the material for the bucket being in a plastic form when first applied. By this means of construction the parts will fit closely and securely together.

The bucket, after being formed on the link, can be, if desired, sprung off the link, and be again sprung on another.

It will be seen that my improved buckets are reversible, so that when, by the action of their pressure exerted upon them, they become bent in one direction, they can be reversed and inverted.

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

1. An india-rubber bucket, *a*, constructed with a central hub, *a*¹, having the recess *e*¹, and provided with projections *e*³, adapted to be received within recesses on a link, and a flange, *a*², provided with a V-shaped recess, *b*, substantially as and for the purposes described.

2. A link, *c*, provided with eyes or loops *c*¹ and a central flange, *e*, formed with recesses *e*² in its periphery, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EDWIN HOYT.

Witnesses:

ED. WOOD RIKER,
D. L. SCOTFIELD.