

(No Model.)

C. S. CHASE.
CHAIN PUMP BUCKET.

No. 305,667.

Patented Sept. 23, 1884.

Fig. 1.

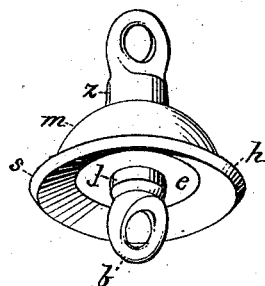


Fig. 2.

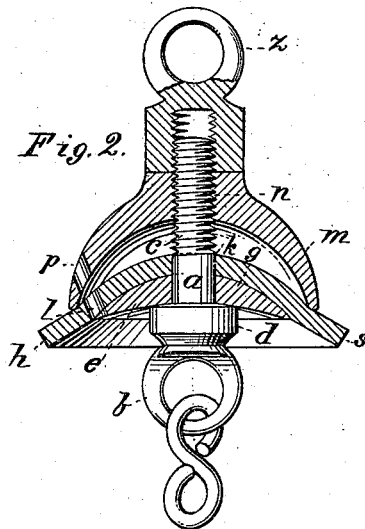


Fig. 3.

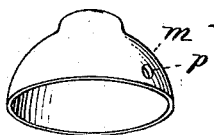


Fig. 4.

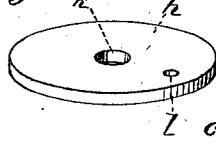


Fig. 5.

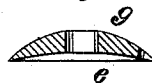


Fig. 6.

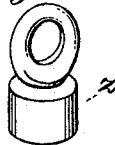
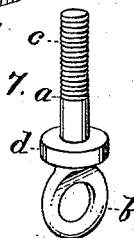


Fig. 7.



WITNESSES
Rufette Anderson.
John A. Morrow

INVENTOR
Christie S. Chase
by Anderson Smith
his ATTORNEYS

UNITED STATES PATENT OFFICE.

CHRISTIE S. CHASE, OF JOHNSTOWN, OHIO.

CHAIN-PUMP BUCKET.

SPECIFICATION forming part of Letters Patent No. 305,667, dated September 23, 1884.

Application filed November 28, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIE S. CHASE, a citizen of the United States, resident at Johnstown, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Chain-Pump Buckets; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, and is a perspective view. Fig. 2 is a vertical section. Figs. 3, 4, 5, 6, and 7 are detail views of the different parts.

This invention has relation to chain-pump buckets; and it consists in the construction and novel arrangement of devices, as herein-after set forth, and particularly pointed out in the appended claim.

In the accompanying drawings, the letter *a* designates the brass stem or pin of the bucket, said stem or pin having an eye, *b*, at its lower end, and a thread, *c*, at its upper end. Between the threaded portion of the pin and the eye is an annular shoulder, *d*, on which is received the metallic button *e*, the upper surface of which is convex, as shown at *g*.

Next to the button *e* on the pin *a* is the rubber or leather disk *h*, which is made of plain or flat material, and is formed with a central aperture, *k*, through which the pin passes, and with an aperture, *l*, near its margin. This disk is of greater diameter than any other portion of the bucket, and is designed to project on all sides beyond the peripheral edge of the metallic cup *m*, which is of greater diameter than the button, and is placed next to the disk *h*, above the same. The cup *m* is concave on its under side and convex on its outer surface, and its central opening, *n*, is threaded to engage the threaded end of the pin *a*. Near the lower edge of the cup is a perforation, *p*, which is designed, when the cup is applied, to coincide in posi-

tion with the perforation *l* of the soft disk *h*, so that the drip passes through the cup before passing through the rubber. In this way the drip-aperture of the disk is protected from injury and undue wear. When the cup is screwed down on the pin, its concave under side, being forcibly applied to the soft disk *h*, presses it into convex form over the button below, the projecting marginal portion of the disk extending outward and somewhat downward, and forming an annular flexible bearing-flange, *s*, designed to engage the wall of the tubing in a positive but elastic manner well adapted to maintain the suction. Upon the projecting portion of the threaded end of the pin *a*, which extends above the cup, is applied the eye-nut *z*, the socket of which is threaded to engage the pin, and, when turned down against the cup, serves as a locking device, to prevent the cup from becoming unscrewed. The disk *h* can be adjusted by tightening or loosening the cup on the brass pin to a less or greater diameter, so that it will move with the proper degree of contact-pressure in the tubing of the pump. The brass pin, being the medium of connection for the cup, disk, and button, prevents the accumulation of rust in places when it would interfere with the easy adjustment of the parts when necessary.

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

In a chain-pump bucket, the combination, with the flat disk *h*, of flexible material, having the perforation *l* near its margin, of the threaded and shouldered pin *a*, and the under concave metallic cup having a perforation, *p*, near its lower edge, to coincide with the perforation of the disk *h*, and a central threaded aperture to engage the threads of the pin, whereby the disk may be adjusted to the walls of pump-tubes, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHRISTIE S. CHASE.

Witnesses:

H. J. BUXTON,
JOHN STEVENS.