

(No Model.)

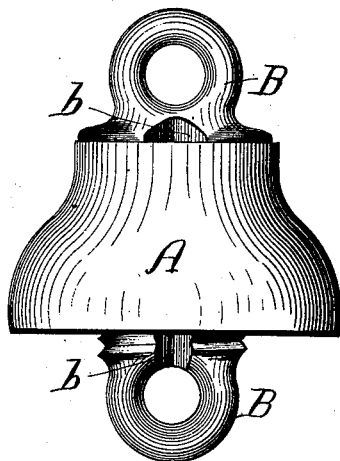
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EXPANSION RUBBER BUCKET FOR CHAIN PUMPS.

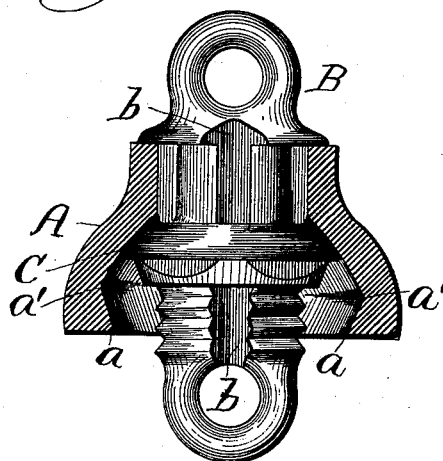
No. 347,342.

Patented Aug. 17, 1886.

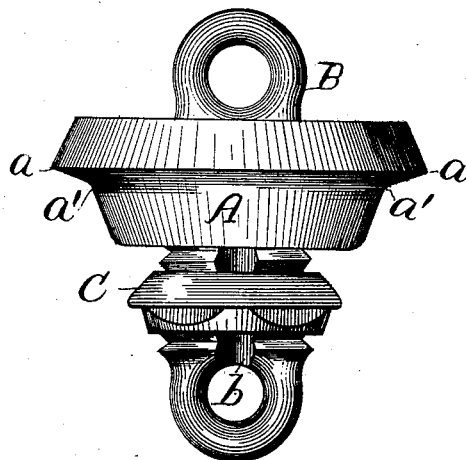
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

SANFORD A. GOSS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE GOSS PUMP AND RUBBER BUCKET MANUFACTURING COMPANY, OF SAME PLACE.

## EXPANSION RUBBER BUCKET FOR CHAIN-PUMPS.

SPECIFICATION forming part of Letters Patent No. 347,342, dated August 17, 1886.

Application filed October 13, 1885. Serial No. 179,754. (No model.)

*To all whom it may concern:*

Be it known that I, SANFORD A. GOSS, of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Expansion Rubber Buckets for Chain-Pumps, of which the following is a full, clear, and exact description, that will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to an improvement in that class of pump-buckets set forth in Letters Patent No. 305,071, granted to me September 16, 1884. The means for attaching the bucket and link in the present device being the same as that shown in said patent, illustration of said attaching means in this case is unnecessary.

Figure 1 is a side elevation of a pump-bucket embodying my improved features; Fig. 2, a vertical section of the bucket proper; and Fig. 3 shows the bucket doubled back, so as to permit of the expansion-nut being adjusted with facility.

Referring to the drawings, A represents a bell-shaped rubber bucket mounted on the screw-threaded link B. The exterior contour of this bucket is about the same as set forth in the patent above referred to.

The improved features consist, principally, in reversed inclines of the interior of the bucket, so that the expansion-cavity has its largest diameter above its lower end, with a gradual diminution in diameter both upwardly and downwardly, or gradually sloping inwardly from the angle or recess *a'*, and in combining the bucket with a screw-threaded link, and an expansion-nut adapted to expand the rubber, or present new wearing-surfaces, when moved in either direction along the link. Now, by placing the expansion-nut C, having a threaded adjustment on the link B, in the center of the recess *a'*, the bucket may be expanded by turning the nut C either in an upward or downward direction. The expansion-nut is set in recess *a'*, and for the best wear-

ing results it is first turned or adjusted in the upward direction until it has gradually reached its limit and the upper part of the bucket has become so much worn that it cannot be any longer expanded in that direction. The nut C is then returned to the recess or angle *a'*, and so adjusted as to bring the bearing-surface of the same against the inward incline of the thickened part *a*, and thereby expand the lower part of the bucket and change the exterior bearing or wearing-surface, thus not only providing a bucket possessing increased expansive qualities, but also lengthens the life and durability of the same. The thicker part *a* likewise prevents the expanding-nut from working off the link. The upper edge of the nut C is beveled to correspond to the inner circumferential surface of the bucket, the lower part being slightly beveled or rounded, so as not to present a sharp bearing-edge to the bucket.

The bucket may be doubled back on the link in the manner illustrated in Fig. 3, in which position it will remain fixed, thus allowing the expanding-nut to be readily and conveniently adjusted to a new position, and when so adjusted the bucket is turned back upon the nut, as in Fig. 2, and the rubber or bucket operates as a nut-lock to prevent changing the adjustment, and a guard to prevent the reel or its forks from moving it.

The link B is provided with the drip-groove *b*.

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

The rubber bucket A, having its largest inward diameter at *a'* thickened at its lower end to form the inward incline, *a*, whereby it is adapted to be expanded by moving an interior nut in either direction along the supporting-link, substantially as described.

SANFORD A. GOSS.

Witnesses:

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