

(No Model.)

S. F. LOCKWOOD.
Bucket for Chain Pumps.

No. 238,598.

Patented March 8, 1881.

FIG. 1.

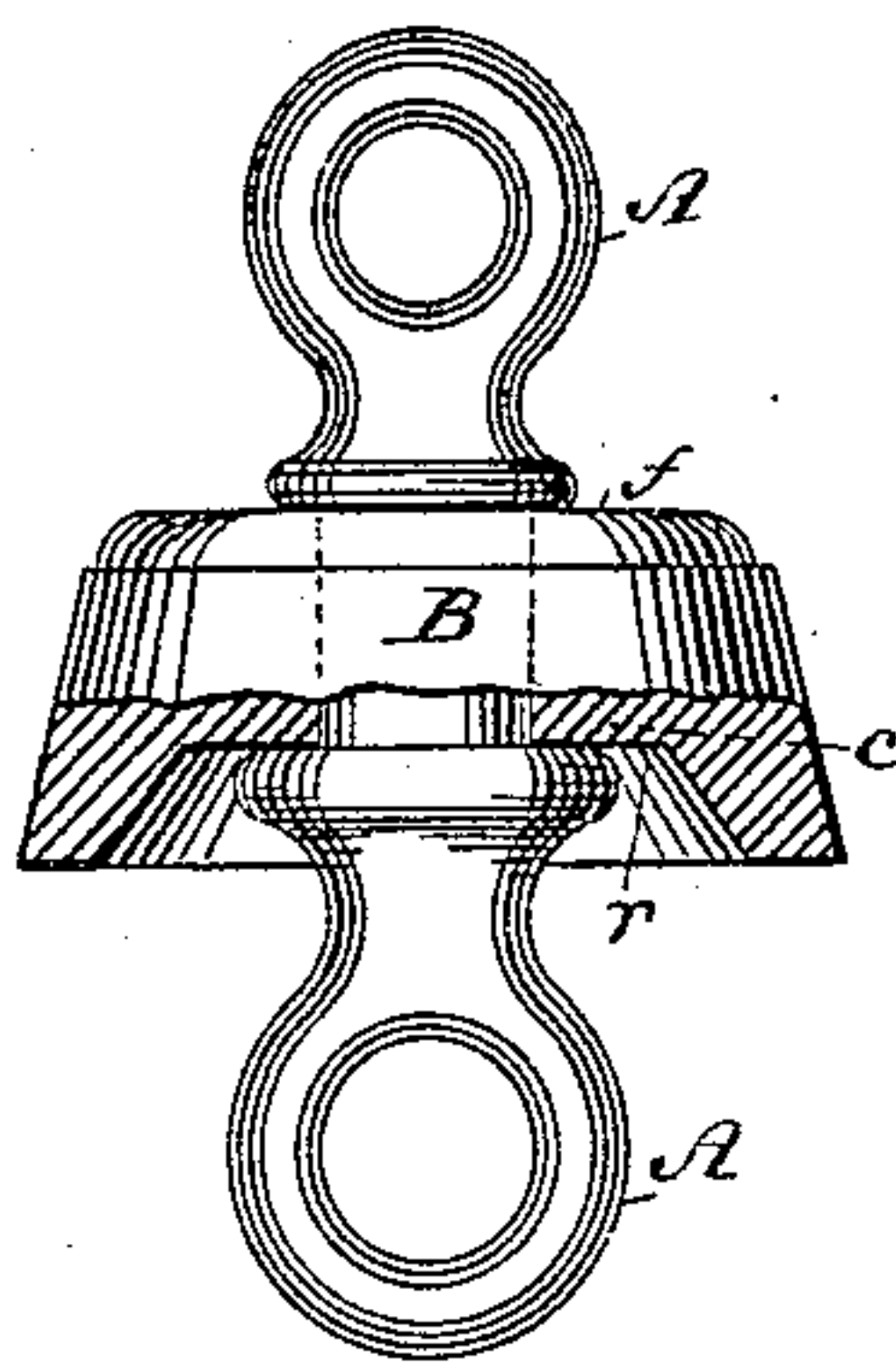


FIG. 2.

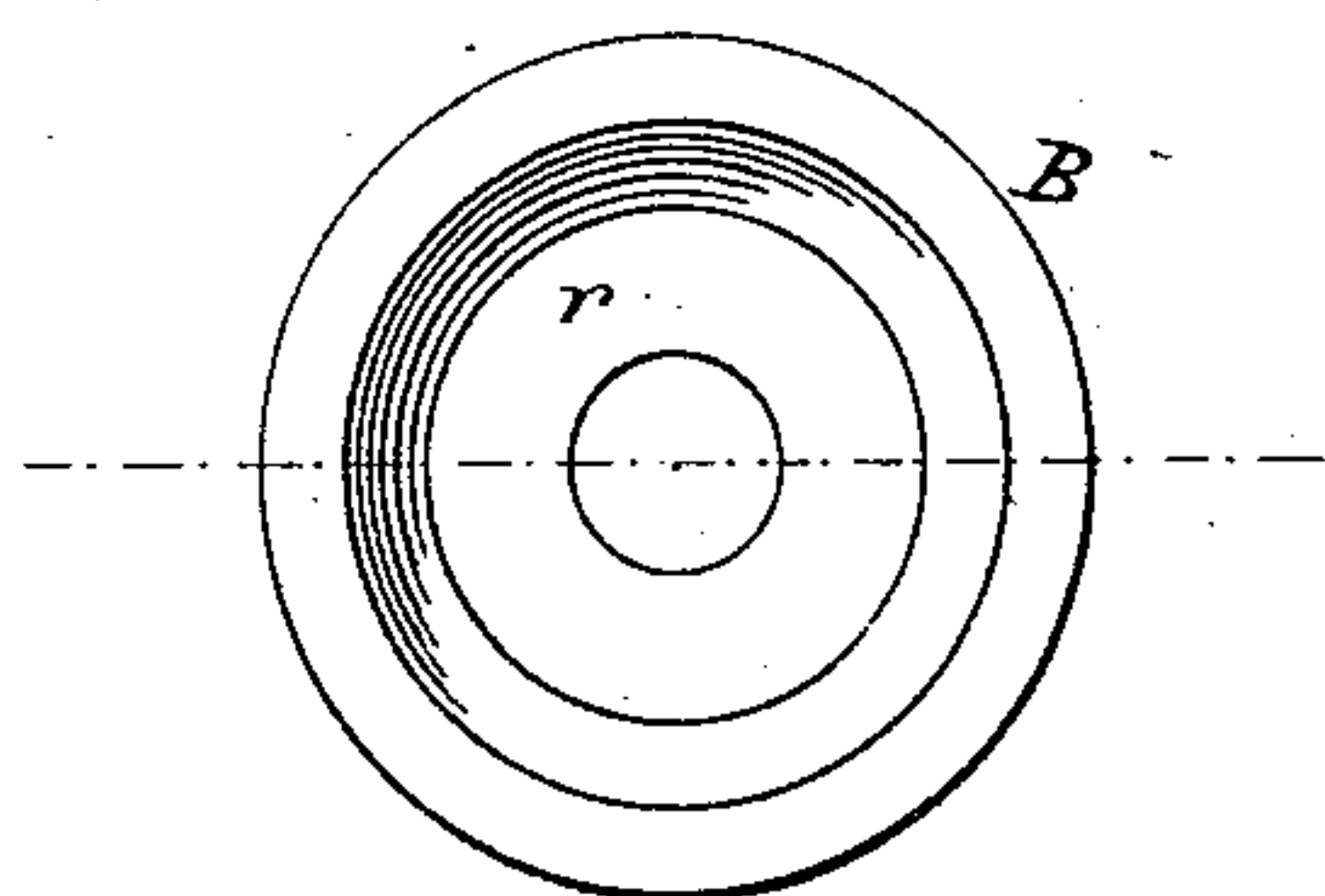
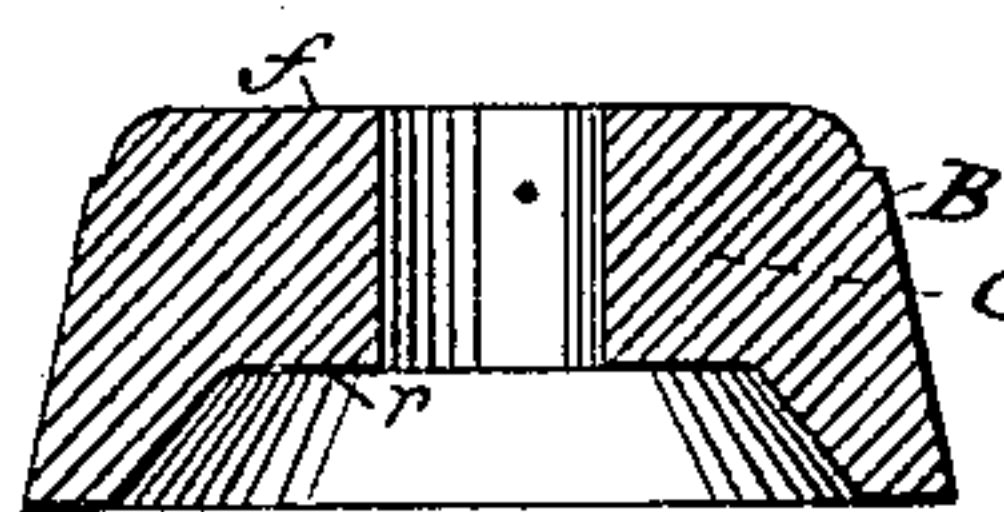


FIG. 3.



WITNESSES:

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STEPHEN F. LOCKWOOD, OF STAPLETON, NEW YORK.

BUCKET FOR CHAIN-PUMPS.

SPECIFICATION forming part of Letters Patent No. 238,598, dated March 8, 1881.

Application filed August 4, 1880. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN F. LOCKWOOD, of Stapleton, in the county of Richmond and State of New York, have invented an Improvement in Buckets for Chain-Pumps, of which the following is a full, clear, and exact description, made with reference to the accompanying drawings, forming part of this specification.

My invention is an improvement on a bucket for chain-pumps for which Letters Patent No. 187,151, dated February 6, 1877, were granted to me.

The object of my present invention is to give greater stability to the bucket and increase its wearing-surface.

In my former invention, above referred to, the upper face of the bucket was flat and an annular recess was formed on the under side. It was found that this bucket worked well except when the lift of water was too great, under which condition the buckets yielded too much and caused leakage. Moreover, the wearing-surface or that part of the perimeter which bears against the inner surface of the tube was not sufficiently ample to secure the requisite durability. To remove these defects, while still retaining the desirable flat upper surface, I construct my improved bucket as herein described and shown in the accompanying drawings, in which—

Figure 1 is a partial side elevation and a partial section. Fig. 2 is an under-side face view, and Fig. 3 a central vertical section through the bucket after the link has been removed.

A represents the link by which the buckets are united into a chain or series, and B represents the disk, of rubber, the material now generally employed for elastic buckets of chain-pumps. The upper face, *f*, of the bucket is made flat, and its outer edge is beveled, as in my former invention; but instead of the annular recess above mentioned I form a circular recess, *r*, on the under-side face.

It will be observed that my improved rubber bucket is of conical form, with a flat top,

straight inclined sides, and a central recess in its lower face, the largest circumference of the cone being that at its bottom, so that the lower part of the cone, which bears against the sides of the well-tube, has the recess in the lower face of the tube made opposite it, whereby greater elasticity is given the lower end of the cone opposite the recess in its lower face. In other words, the greatest circumference of the bucket, or where the edge thereof comes in contact with the well-tube in which the bucket operates, lies below the top of the recess *r* in the lower face of the bucket and admits of its freely bending to pass any obstruction in the well-tube caused by the swelling or bending thereof.

I am aware that an elastic bucket for chain-pumps, provided in its upper face with a central concave recess and a central circular recess in its lower face, has heretofore been employed, and I therefore lay no claim to such invention.

Furthermore, in my former invention the link was made in a single part, and with two flanges for holding the bucket, one of which flanges was smaller than the other, instead of making the link in two parts, as most of them had previously been made, and the bucket was attached to the link by slipping it over the smaller flange into the space between the two flanges. This feature I retain in my present invention, the improvement relating solely to the elastic disk.

What I claim as my improvement on my former invention above cited is as follows:

The bucket for chain-pumps herein described, consisting of the conical elastic disk B, having a flat top, *f*, straight inclined sides, and a circular recess, *r*, in its lower face, the line of greatest circumference of said bucket being below the top of the recess *r*, substantially as described, and for the purpose set forth.

STEPHEN F. LOCKWOOD.

Witnesses:

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EDWARD H. WALES.