

(No Model.)

J. D. SHOOTTS.
Chain Pump Bucket.

No. 232,554.

Patented Sept. 21, 1880.

Fig. 1.

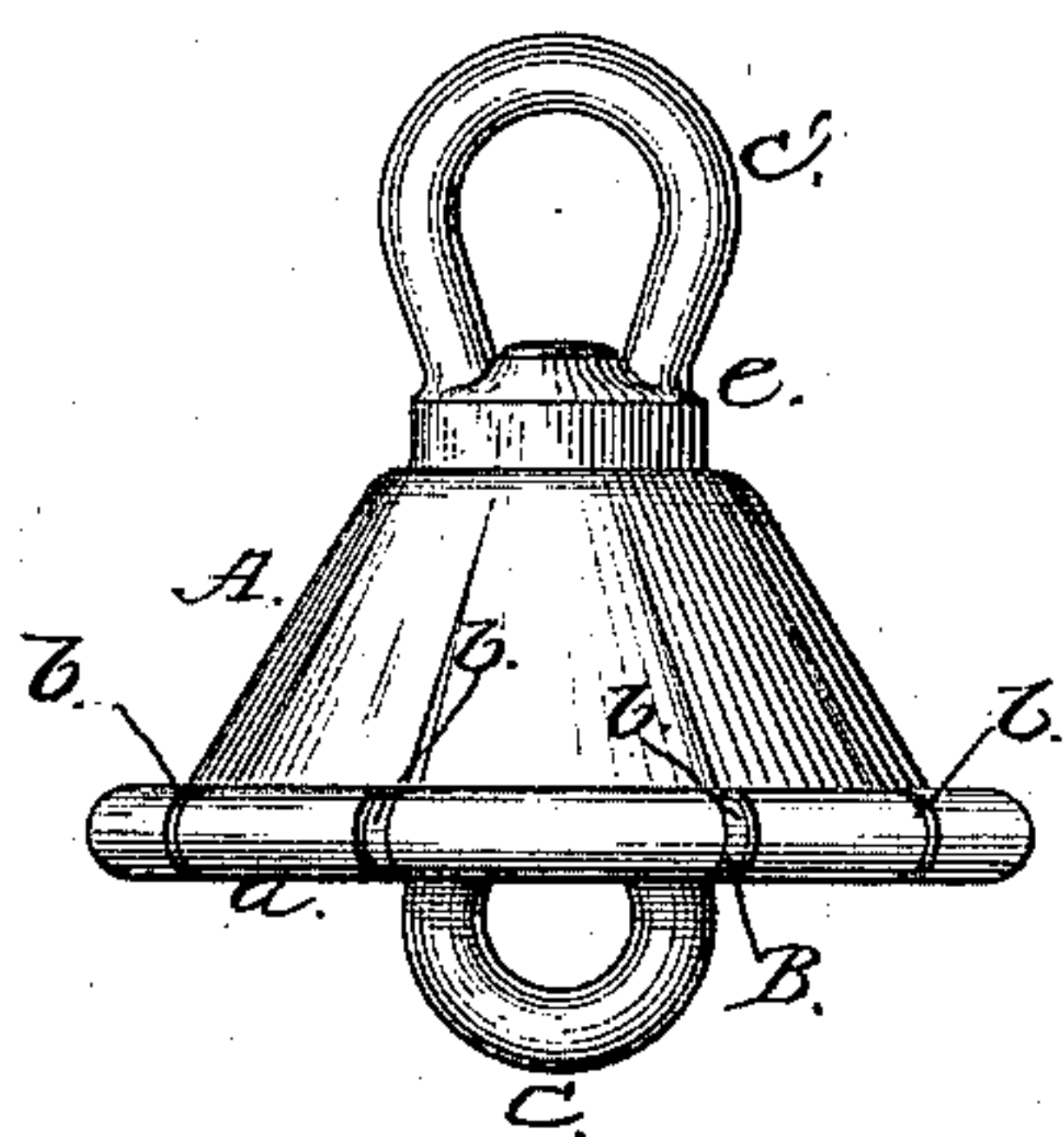


Fig. 2.

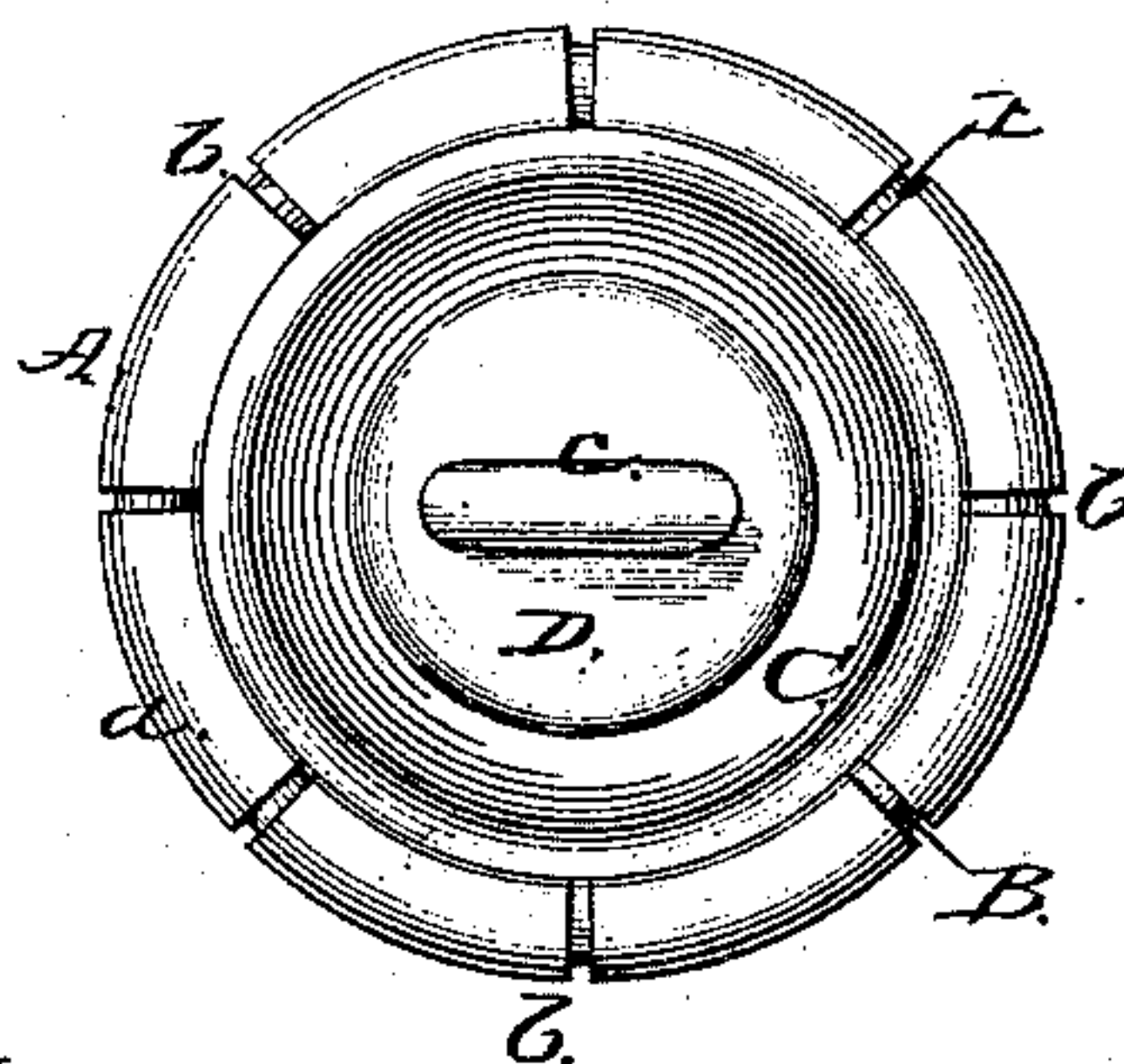
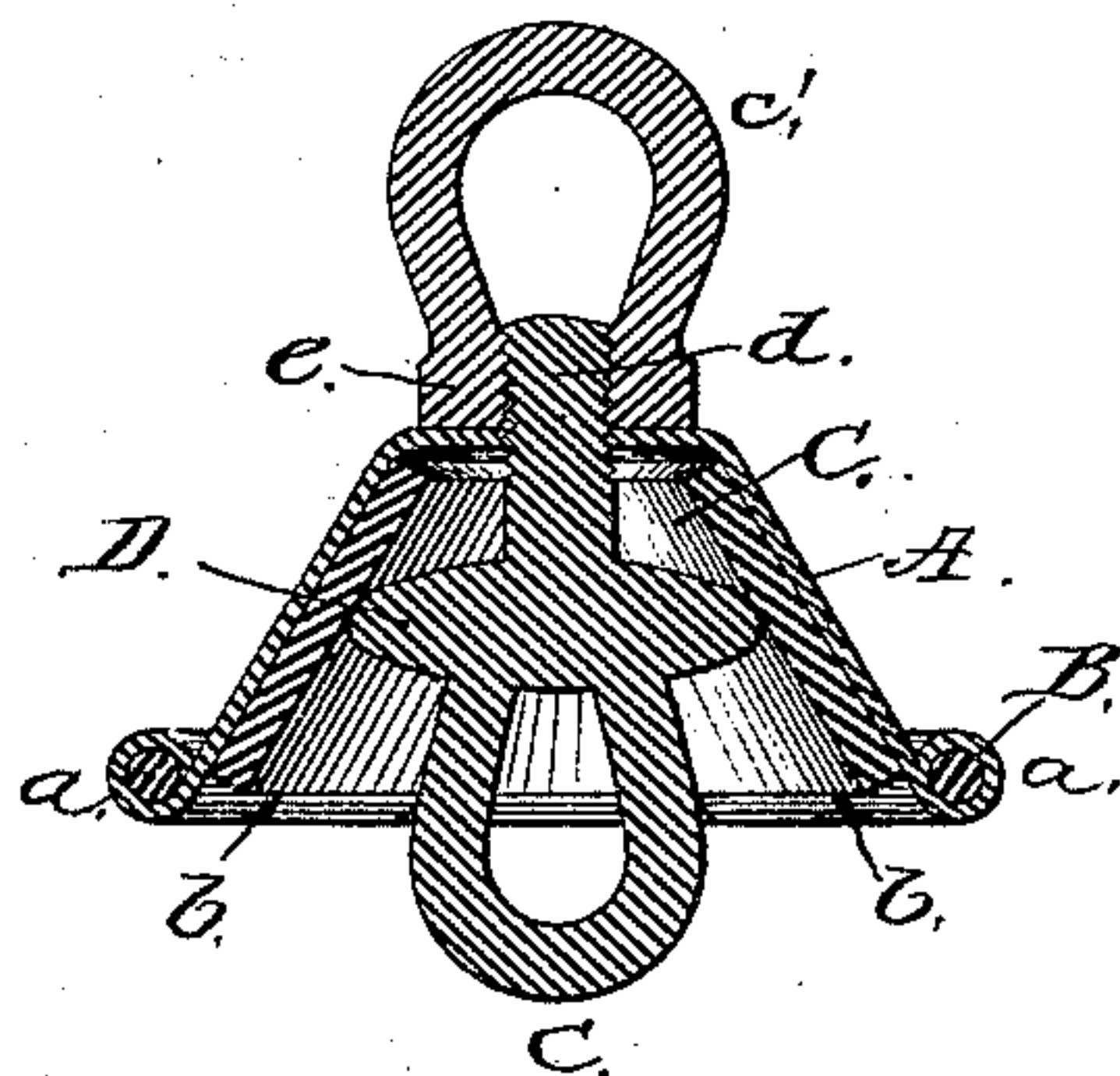


Fig. 3.



WITNESSES

John A. Lewis.
F. J. Mabi.

INVENTOR

J. D. Shoots.
G. W. Audensm
his ATTORNEY

UNITED STATES PATENT OFFICE.

JAMES D. SHOOT, OF HORSEHEADS, NEW YORK.

CHAIN-PUMP BUCKET.

SPECIFICATION forming part of Letters Patent No. 232,554, dated September 21, 1880.

Application filed July 24, 1880. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. SHOOT, of Horseheads, in the county of Chemung and State of New York, have invented a new and valuable Improvement in Chain-Pump Buckets; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my improved valve. Fig. 2 is a bottom view thereof, and Fig. 3 is a vertical central section of the same.

This invention has relation to improvements in chain-pump buckets; and it consists in the construction and novel arrangement of parts, as hereinafter shown and described.

In the accompanying drawings, the letter A designates an elastic metallic cup, shell, or valve, having its lower portion bent out to form a rolled edge, *a*, which is designed to present to the pump-tube a smooth surface. The cup or shell A is made in either rounded or conical form, or it may be flat. In either case holes, notches, or creases are made in or near the edge, so that it will readily expand and contract. In the drawings the notches *b* through the rolled edge are made radial. In the rolled edge is seated the elastic ring B, which serves to complete the edge of the valve and give it additional elasticity. It is designed to have a contracting effect on the shell. Within the cup or shell is placed the expanding packing C, which is made with a central hole for the passage of the link screw or connection. This packing C is pressed outward by the expanding-plate D, which may be of any suitable disk-like form, and which is made with a link or loop, *c*, and a screw, *d*, to connect with a nut, *e*, having also a link or loop, *c'*.

Instead of a screw a rivet or other connection may be employed to join the plate D with the part *e*.

The object of the packing C is to prevent excessive drip through the notches *b*, and to preserve the suction power of the valve.

By screwing the nut *e* to the plate D the packing C is expanded as the plate is drawn up, and the metallic shell, with its rolled edge, is likewise expanded; but when the nut is unscrewed the tension is taken off the metallic shell and the elastic ring in its rolled edge will cause it to contract. It can therefore be suited to tubes of different size, and expanded or contracted according to the suction required.

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

1. In a pump-valve, a metallic shell having creases or notches *b*, and a rolled edge, *a*, substantially as specified.

2. In a pump-valve, the combination, with a yielding metallic shell having a rolled edge, *a*, of an elastic ring, B, seated in said rolled edge, substantially as specified.

3. In a pump-valve, the combination, with a yielding metallic shell having a rolled edge, *a*, of an elastic edge-ring, B, and a central packing, C, substantially as specified.

4. In a pump-valve, the combination, with a yielding metallic shell having a rolled edge, *a*, of an elastic edge-ring, B, a central packing, C, and the adjustable link-connections D *e*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES D. SHOOT.

Witnesses:

JOHN BENNETT,
T. B. COLWELL.