

No. 793,195.

PATENTED JUNE 27, 1905.

H. HUBBELL.
SHADE HOLDER.

APPLICATION FILED SEPT. 7, 1904.

Fig. 1.

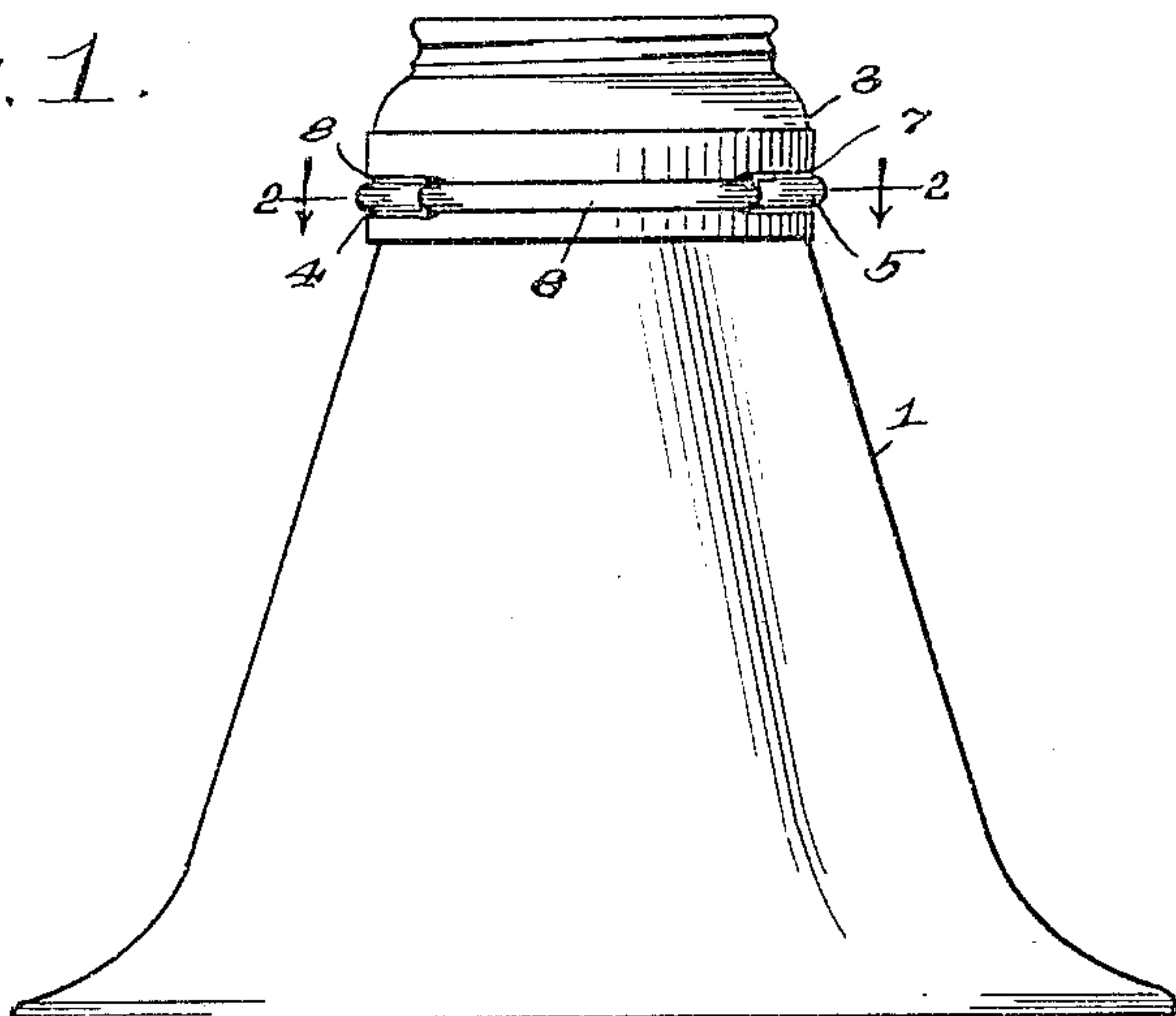


Fig. 2.

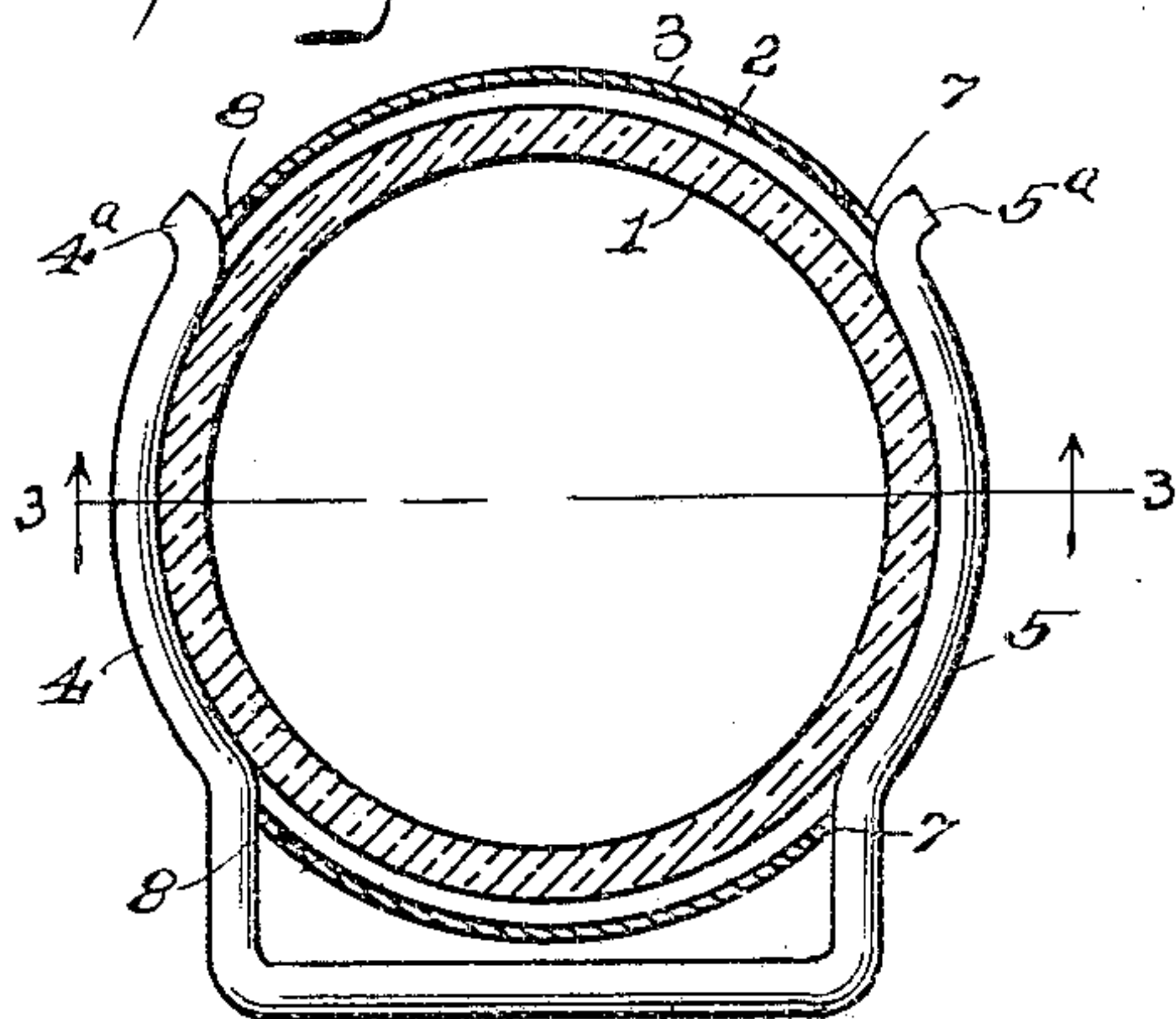


Fig. 3.

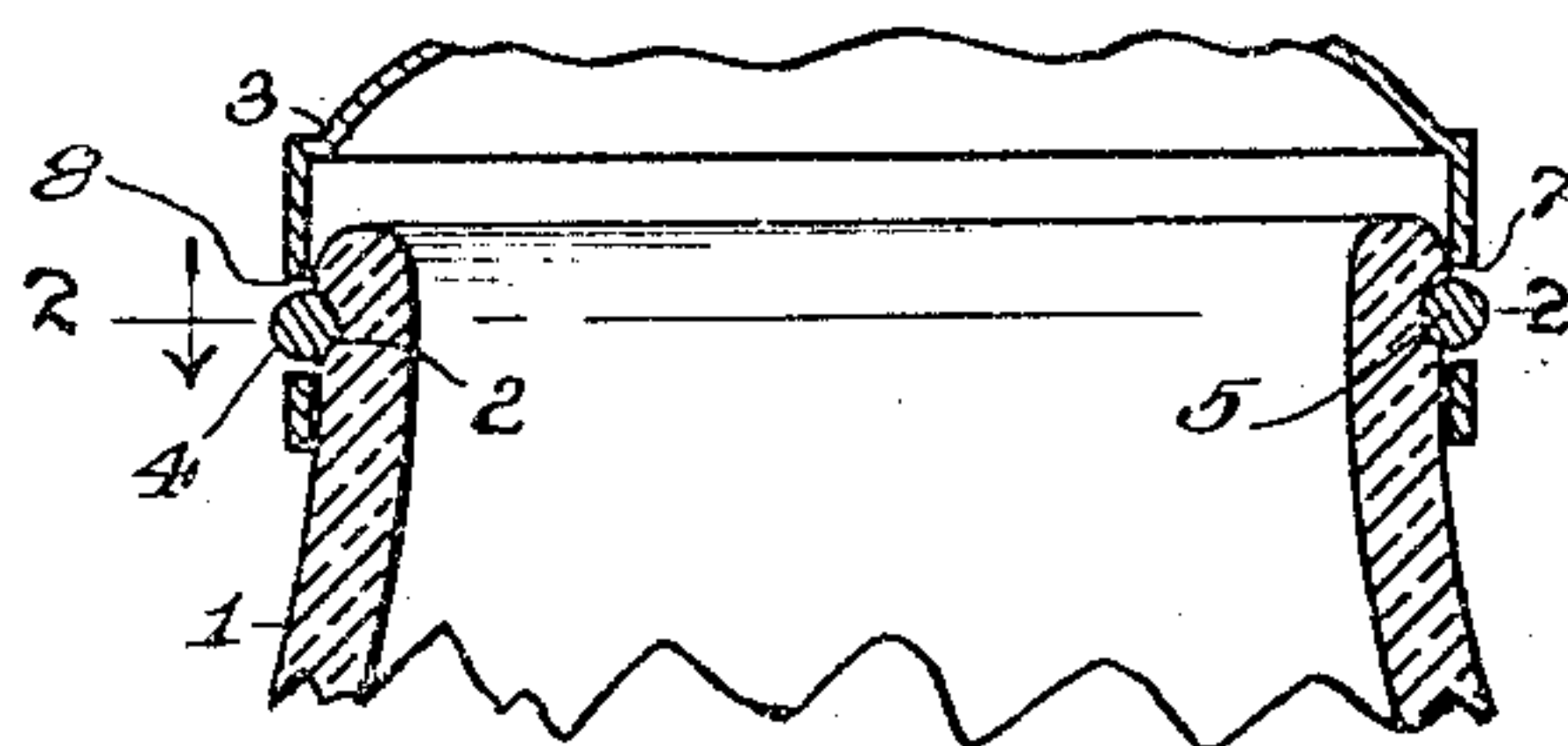


Fig. 4.

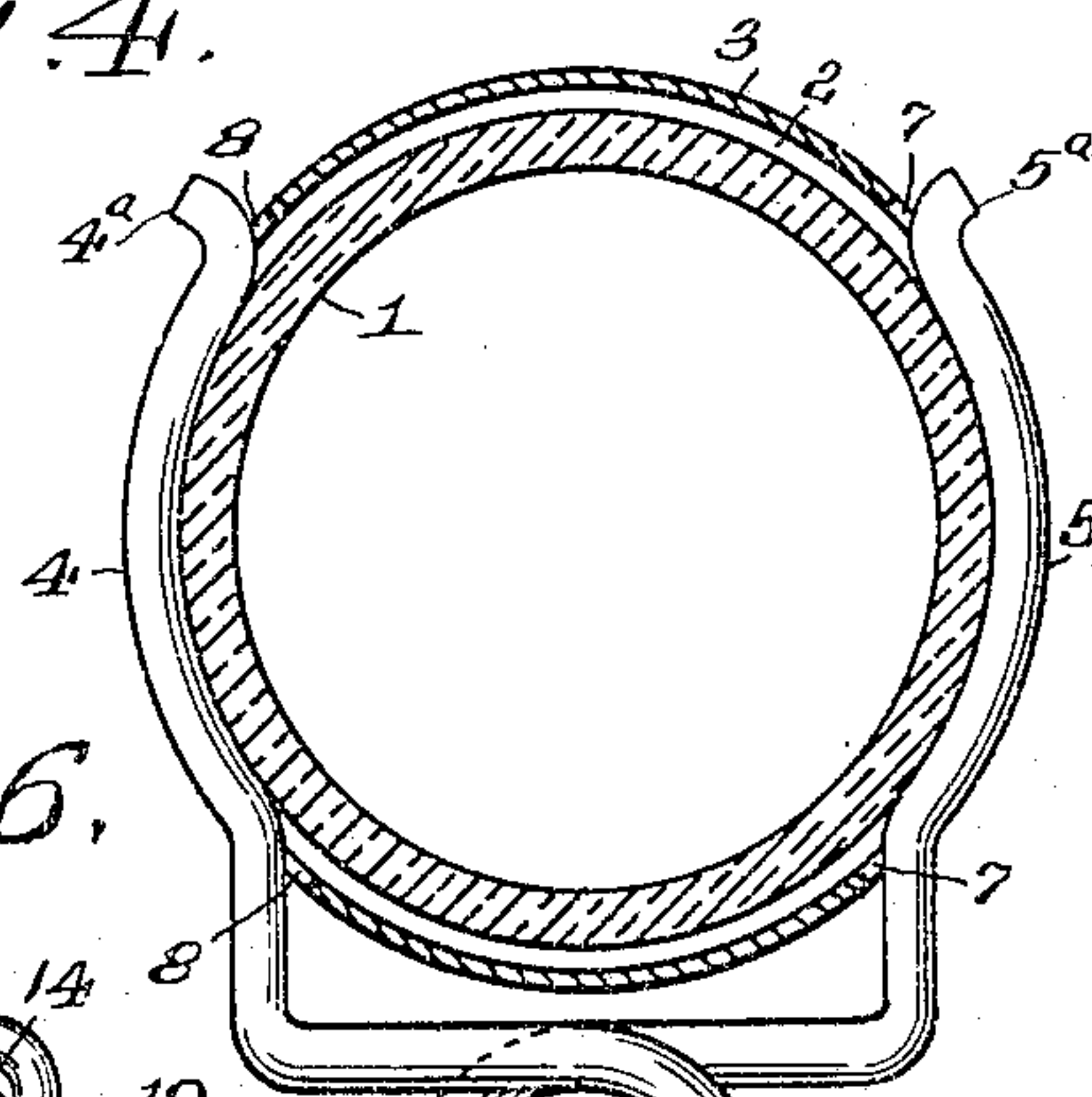


Fig. 5.

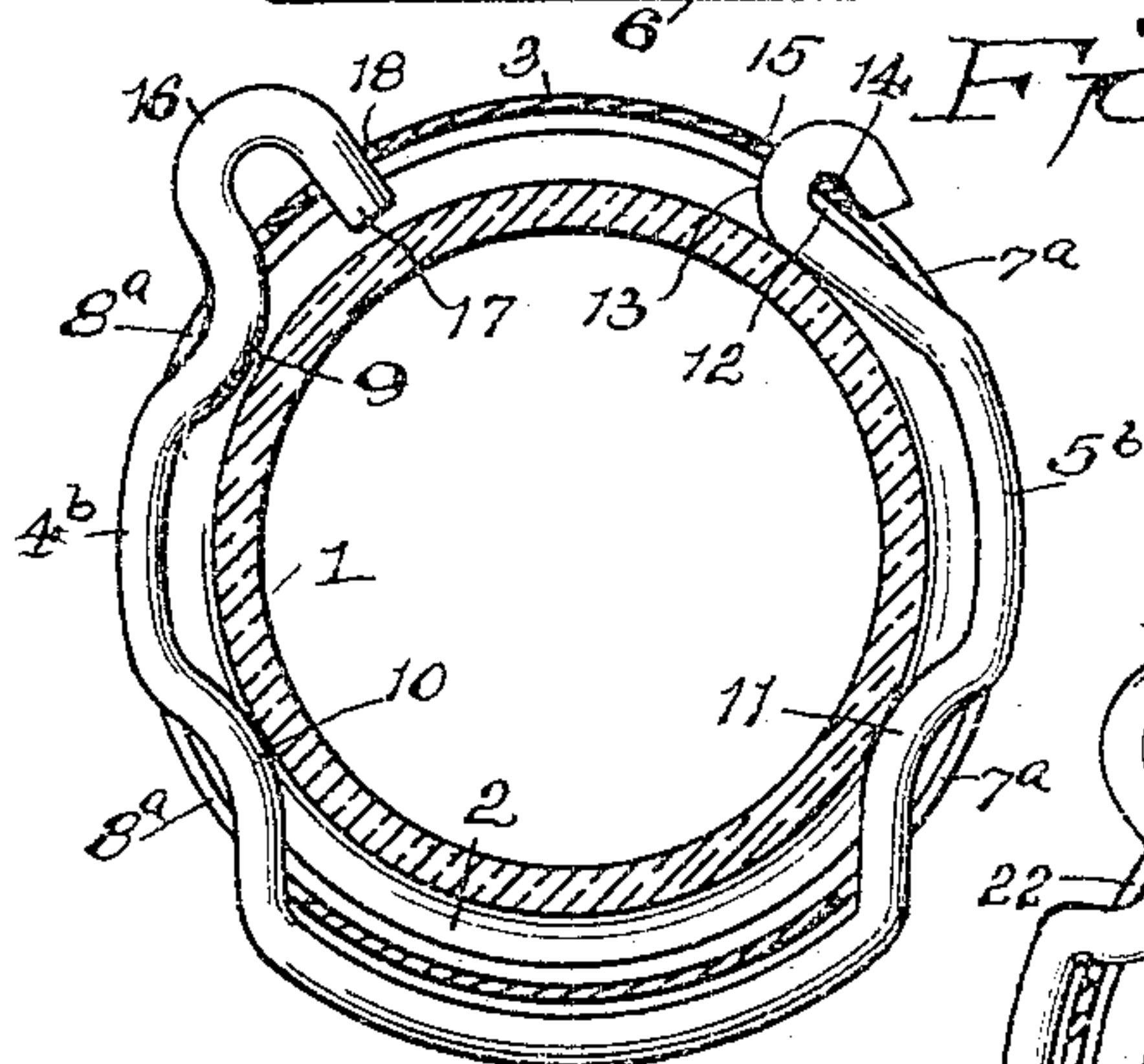
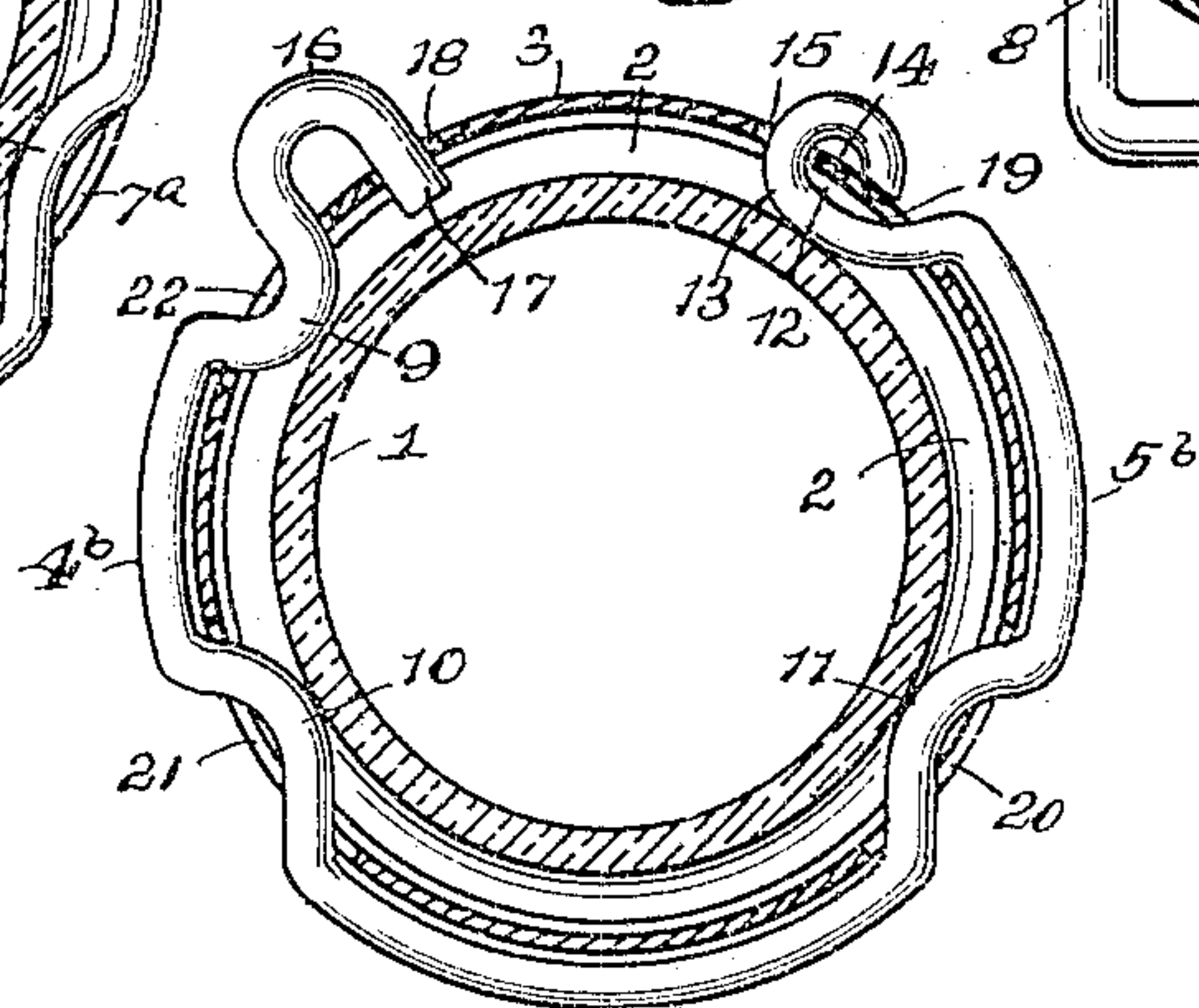


Fig. 6.



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SHADE-HOLDER.

SPECIFICATION forming part of Letters Patent No. 793,195, dated June 27, 1905.

Application filed September 7, 1904. Serial No. 223,669.

To all whom it may concern:

Be it known that I, HARVEY HUBBELL, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Shade - Holders, of which the following is a specification.

My invention has for its object to produce a simple and inexpensive shade-holder for incandescent lamps and similar uses so constructed that a shade may be locked to the holder or unlocked therefrom by means of an inwardly-contracting spring locking-clamp, the device consisting of two parts only, both of which may be made complete by automatic machines and assembled in an instant's time by unskilled operatives.

With these ends in view I have devised the simple and novel shade-holder which I will now describe, referring to the accompanying drawings, forming a part of this specification, and using reference characters to indicate the several parts.

Figure 1 is an elevation of one form of my novel shade-holder as in use retaining a shade; Fig. 2, a horizontal section, on an enlarged scale, of the holder and shade on the line 2 2 in Fig. 1, the spring locking-clamp appearing in plan; Fig. 3, a vertical section of the shade and holder on the line 3 3 in Fig. 2, the spring locking-clamp appearing in cross-section; Fig. 4, a horizontal section similar to Fig. 2, differing only in that the spring locking-clamp is provided with a ring-shaped finger-piece; and Figs. 5 and 6 are horizontal sectional views similar to Figs. 2 and 4, showing variations in the construction of the holder and the spring locking-clamp.

1 denotes an ordinary incandescent-lamp shade or reflector having attaching means, as a recess, consisting in this instance of an external circumferential groove 2 near its smaller end, and 3 denotes the holder, which is made of sheet metal and is adapted to receive and inclose the attaching end of the shade. In the form illustrated in Figs. 1 to 4, inclusive, the holder is shown as provided on opposite sides with circumferential slots 7 and 8, each slot being shown in the present instance as

extending approximately one-fourth the circumference of the attaching end of the holder.

The spring locking-clamp is made from a single piece of spring-wire, which may be round wire, as shown in the drawings, or angular wire may be used, if preferred. The essential feature of the locking-clamp is the inwardly-contracting spring-arms, which are indicated by 4 and 5, these arms being curved to correspond with the curvature of the attaching end of the shade. 6 denotes a finger-piece, which is formed at the mid-length of the piece of wire from which the locking-clamp is formed. The free ends of the arms of the locking-clamp are outwardly turned, as at 4^a and 5^a, to facilitate locking a shade to the holder, as will presently be fully explained. In the form illustrated in Fig. 4 a ring-shaped finger-piece 6^a is formed at the mid-length of the spring locking-clamp for convenience in operation.

In order that a shade may be placed in the holder, the spring locking-clamp is removed, and then the attaching end of the shade is passed into the holder, the recess or groove 2 in the shade and the slots 7 and 8 in the holder being in alinement. The locking of the shade to the holder is effected by passing the free ends of the inwardly-contracting spring-arms of the locking-clamp through the slots in the holder and into the recess or groove in the shade, the ends of the spring-arms being first placed in engagement with the groove at the near ends of the slots and then sufficient pressure applied to the locking-clamp to force it forward, the arms yielding outward until the outwardly-turned ends have passed the center of the shade and then contracting and firmly seating themselves in the groove in the shade. In the locking position the free ends of the spring-arms pass out through the slots in the holder, thereby locking the shade securely thereto. In order to detach the shade from the holder, it is necessary to apply sufficient power to the spring locking-clamp to draw it out again—that is, the pull must be strong enough to cause the spring-arms to yield outward and pass backward over the attaching end of the shade, the shade not being released

until the locking-clamp is wholly withdrawn from the holder.

The form illustrated in Fig. 5 differs from the form just described in that the spring locking-clamp is not detachable from the holder; but one end of the locking-clamp is pivotally secured to the holder, the locking and unlocking being effected by swinging the locking-clamp on its pivoted end instead of wholly withdrawing it from the holder. The slots 7^a and 8^a in the holder correspond with slots 7 and 8 in the other form, and the spring-arms 4^b and 5^b of the locking-clamp correspond with the arms 4 and 5 in the other form. Arm 4^b is provided with inwardly-extending gripping bends or projections 9 and 10, and arm 5^b is provided with a similar inwardly-extending gripping bend or projection 11. These gripping projections are adapted to pass through the slots in the holder and engage the circumferential groove in the shade, and thus lock the shade securely to the holder, as will be more fully explained. 15 denotes a hole or short slot in the holder contiguous to slot 7^a and in line therewith, leaving a bridge or short strip of metal 14 between them. Arm 5^b is provided at its free end with a head 13, which constitutes an additional gripping projection for the shade and is provided with an eye 12, which incloses bridge 14, said bridge forming the pivot on which the locking-clamp is oscillated. The spring-arm 4^b in this form is provided with an outwardly-extending U-shaped bend which constitutes a finger-piece 16, and the end 17 of said arm extends inward and is adapted to pass into a hole 18 in the holder to retain the clamp in the locking position.

The form illustrated in Fig. 6 differs from the form just described only in that instead of the holder being provided with the two relatively long slots 7^a and 8^a the holder is provided with a series of shorter slots, (indicated by 19, 20, 21, and 22,) which receive the gripping projections on the spring-arms, the bends in the spring-arms which form said projections being shown as made sharper and more pronounced in order that they may pass freely into the shorter slots in the holder.

In Figs. 5 and 6 a shade is shown as locked to the holder through the engagement of the gripping projections on the arms of the spring-clamp with the groove in the shade. To unlock the shade, the operator by means of finger-piece 16 draws the locking end 17 of arm 4^b out of hole 18 in the holder and then swings the locking-clamp on its pivot outward far enough to disengage the gripping projections from the grooves in the shade, when the shade may be readily removed. To lock the shade to the holder again, it is simply necessary to swing the locking-clamp inward again, so that the gripping projections will pass through

the slots in the holder and engage the shade and place the locking end of the clamp again in engagement with hole 18 in the holder.

In each form shown in the drawings the entire clamp is loosely mounted in the slots of the holder and is free to be swung laterally, so that one spring-arm of the wire may be swung entirely away and free from the holder. In the form shown in Figs. 5 and 6 one end of the clamp is curved outward so far through one of the slots that, as above described, the clamp is hinged or pivoted to the holder. In the form shown in Figs. 2 and 4 each end of each arm is curved outward and projects through a slot, and therefore when the clamp is swung laterally in either direction a curved end will first strike the farther end of the slot through which it projects, and further swinging movement in the same direction will cause the said curved end to act as the center of movement about which the entire clamp may be swung, so that the opposite spring-arm will be forced to move entirely free from the holder. The clamp shown in Fig. 2 or Fig. 4 may be entirely removed from the holder, while the form shown in Fig. 5 or Fig. 6 will usually remain connected to the holder after it has been swung around, as described; but the movement which serves to release the shade may be the same with either form.

Having thus described my invention, I claim—

1. A shade-holder comprising a holder adapted to receive a shade and having a plurality of slots, and a locking-clamp consisting of a single piece of wire having a curved end projecting outward through one of said slots, said wire having opposing inwardly-contracting spring-arms adapted to engage a shade, the entire clamp being loosely mounted in said slots whereby it may be swung laterally about said curved end as the center of movement so that the other arm of the wire may be swung entirely free from the holder.

2. A shade-holder comprising a holder adapted to receive a shade and having a plurality of slots, and a locking-clamp consisting of a single piece of wire having a curved end projecting outward through one of said slots, said wire having a finger-piece and opposing inwardly-contracting spring-arms adapted to engage a shade, the entire clamp being loosely mounted in said slots whereby it may be swung laterally about said curved end as the center of movement so that the other arm of the wire may be swung entirely free from the holder.

3. A shade-holder comprising a holder adapted to receive a shade and having a plurality of slots and a single locking-clamp having inwardly-contracting spring-arms adapted to pass into said slots to lock a shade to the

holder, one of said arms being pivotally connected to the holder.

4. A shade-holder comprising a holder adapted to receive a shade and having a plurality of slots and a bridge 14, and a locking-clamp having inwardly-contracting spring-arms with gripping projections adapted to pass into said slots to lock a shade to the holder, one of said arms having at its end an eye engaging the bridge whereby the clamp is pivotally connected to the holder.

5. A shade-holder comprising a holder adapted to receive a shade and having a plurality of slots and a hole 18, and a locking-clamp having inwardly-contracting spring-arms adapted to pass into said slots to lock a shade to the holder, one of said arms being pivotally connected to the holder and the other arm provided with a U-shaped bend to form a finger-piece and an end adapted to en-

gage the hole to retain the clamp in the locking position.

6. In combination, a holder, a shade removably secured thereto, a locking-clamp having spring-arms, one of said arms being pivotally connected to said holder, the other arm detachably locked thereto, said shade having a grooved neck with which said arms are adapted to engage and means formed in said holder to engage said arms simultaneously with the engagement of the shade, for the purpose set forth.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 6th day of September, A. D. 1904.

HARVEY HUBBELL.

Witnesses:

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GEO. D. PHILLIPS.