

No. 856,158.

PATENTED JUNE 4, 1907.

A. G. KAUFMAN.
BOTTLE SEAL.

APPLICATION FILED MAR. 29, 1907.

Fig. 1

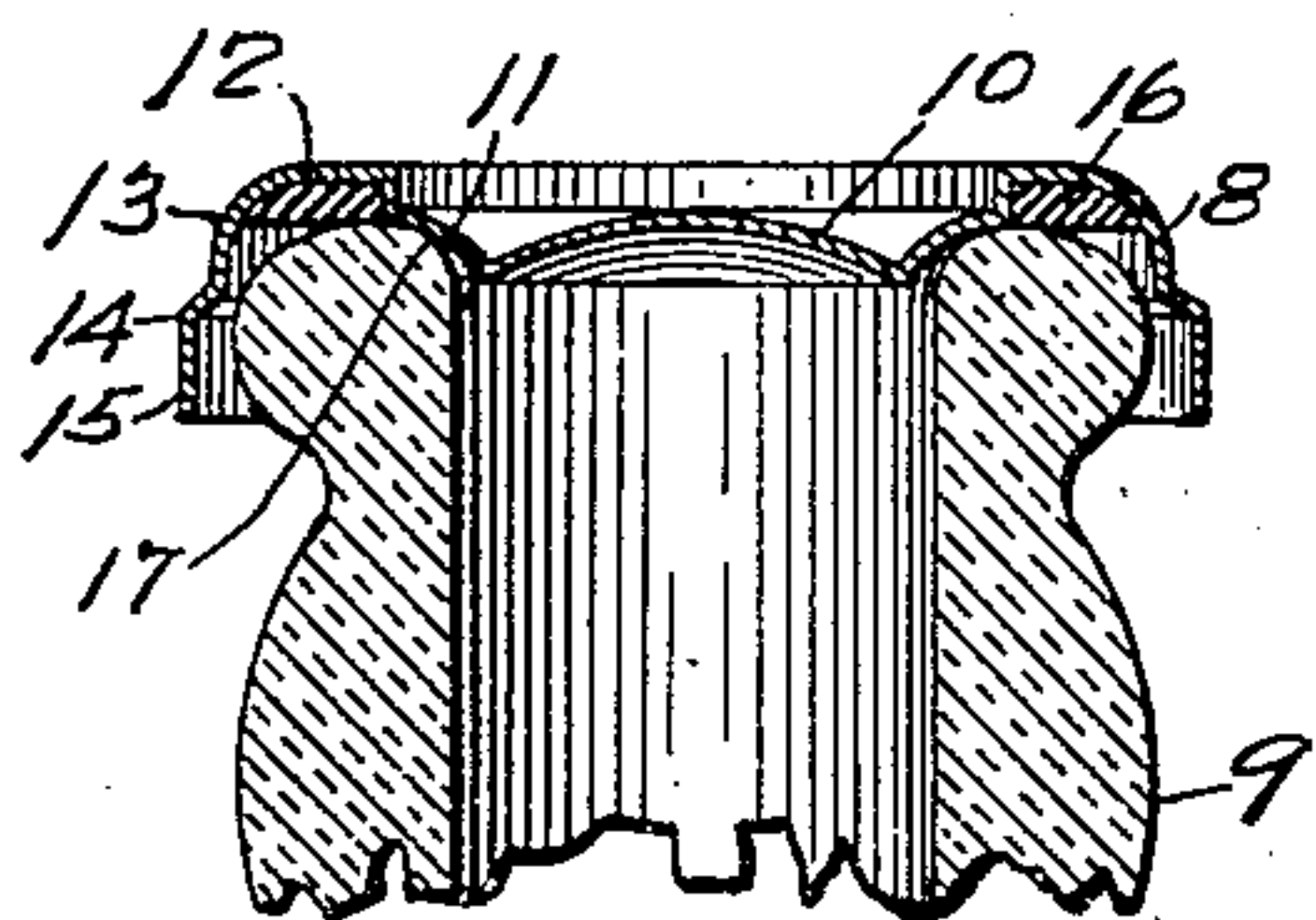


Fig. 2

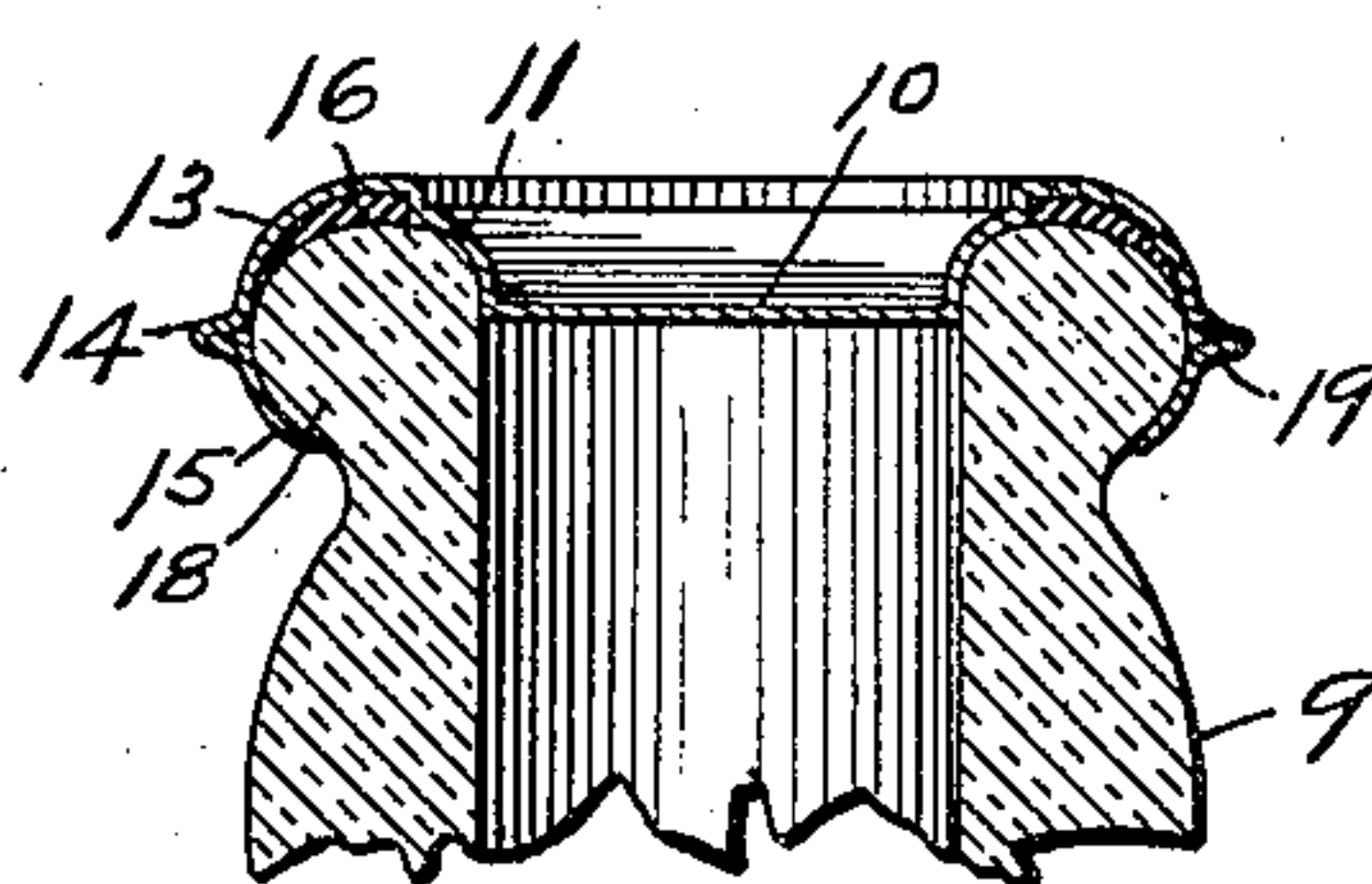


Fig. 3

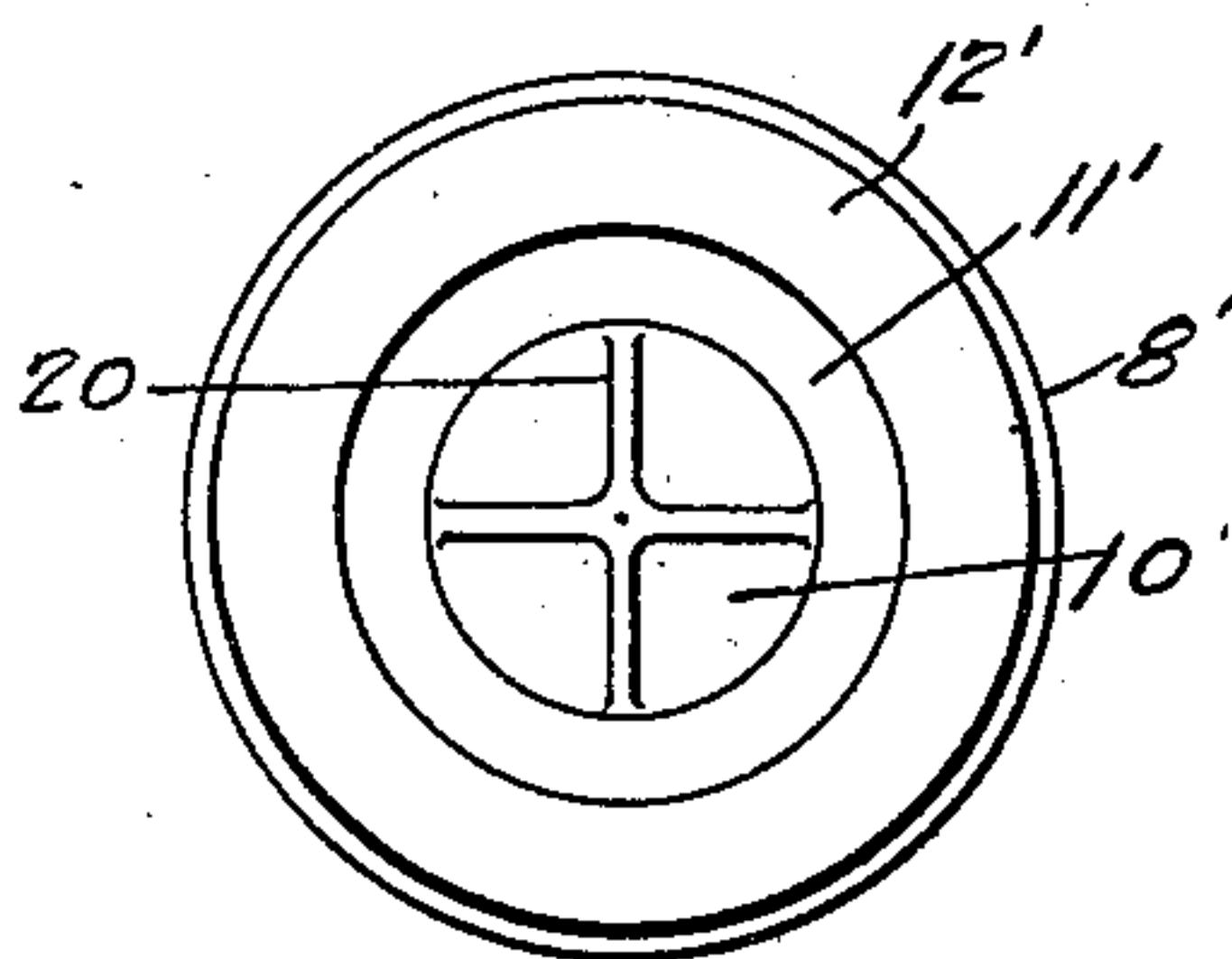


Fig. 4

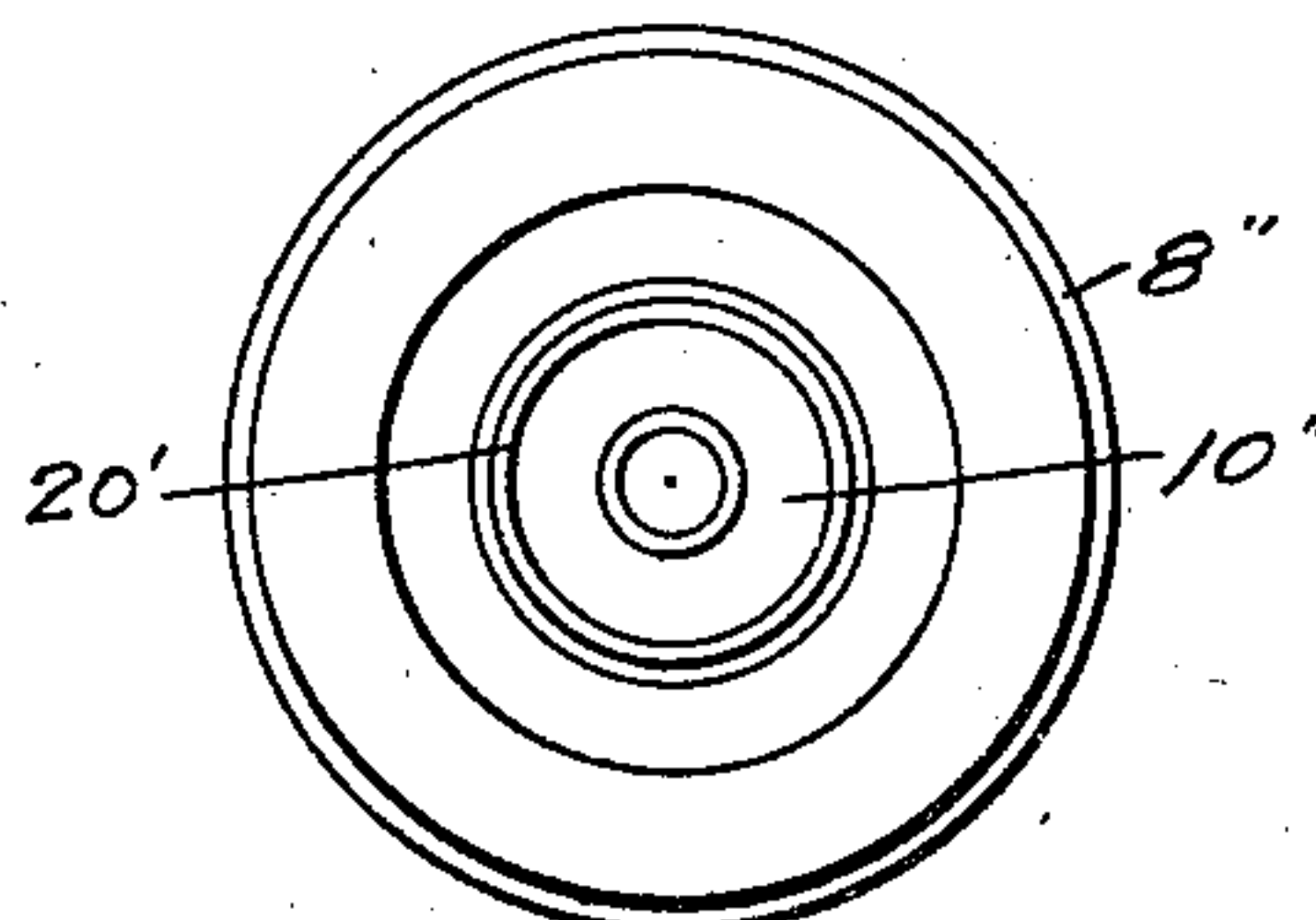


Fig. 5

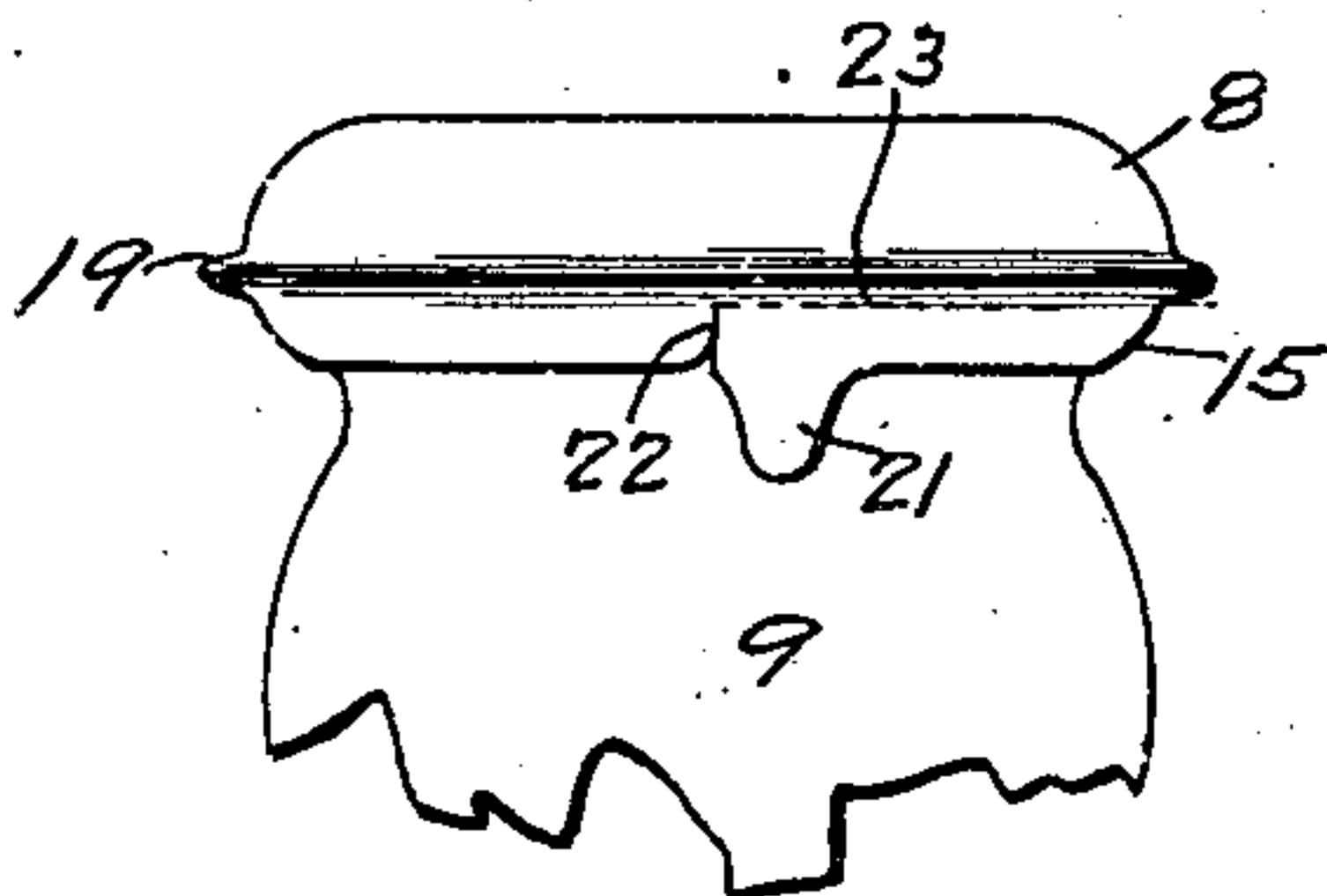


Fig. 6

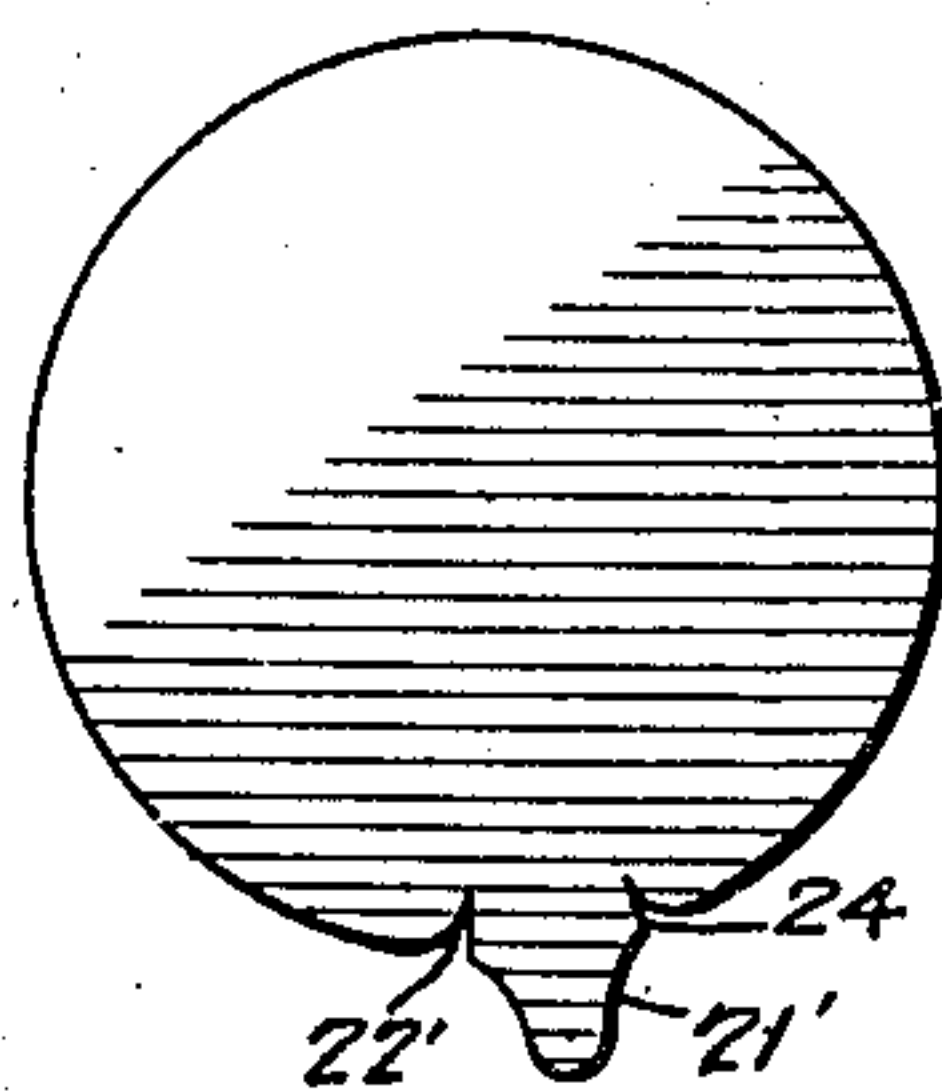
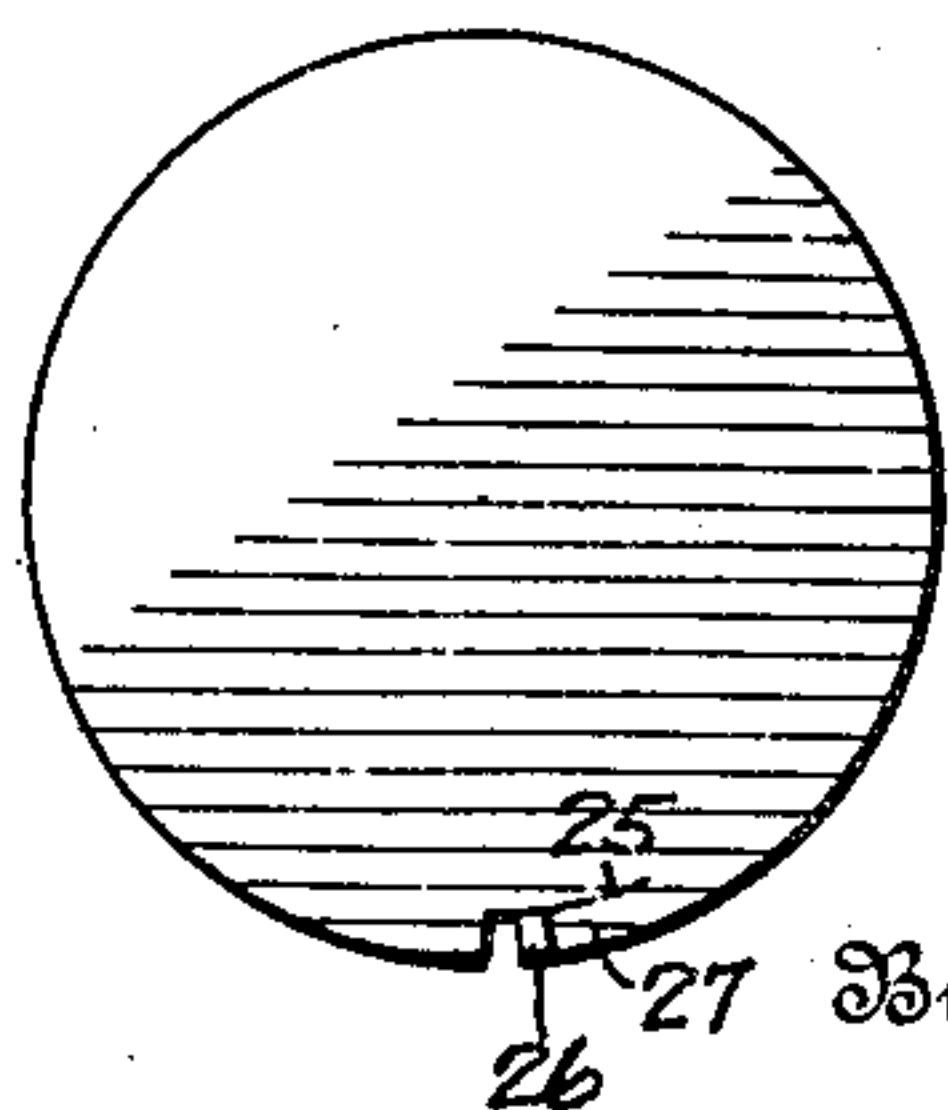


Fig. 7



Witnesses:
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UNITED STATES PATENT OFFICE.

ADOLPH G. KAUFMAN, OF NEW YORK, N. Y., ASSIGNOR OF ONE-FOURTH TO BENJAMIN L. WEIL AND ONE-FOURTH TO BERTHOLD WEIL, OF NEW YORK, N. Y.

BOTTLE-SEAL.

No. 856,158.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed March 29, 1907. Serial No. 365,325.

To all whom it may concern:

Be it known that I, ADOLPH G. KAUFMAN, a citizen of the United States, residing at New York, in the county and State of New York, have invented a new and useful Bottle-Seal, of which the following is a specification.

This invention relates to seals for bottles; and especially to that class which are used but once; and the object thereof is to provide a seal, first, in which rubber may be used as the gasket, means being provided to effectually shut off the rubber from coming in contact with the contents of the bottle; second, to provide a seal which can be secured to a bottle and bring the central portion thereof in close contact with the inner side of the lip without causing the breakage of a large percentage of the bottles; third, to provide a seal which may be spun on a bottle and have the required strength in the locking skirt while using a comparatively thin metal; and, fourth, to provide ready means for opening the bottle without a tool.

I accomplish the objects of my invention by the construction illustrated in the accompanying drawing, in which—

Figure 1, is a central, vertical section of my improved seal about to be applied to a bottle; Fig. 2, is a similar view of the same applied; Fig. 3, is a top plan view of a seal showing means to stiffen the central part; Fig. 4, is a similar view showing different arrangement of the stiffening means; Fig. 5, is an elevation of the seal applied to a bottle, showing special opening means; Fig. 6, is a blank, on a smaller scale, showing a modified form of special opening means; and, Fig. 7, is a modified form of blank, on same scale as Fig. 6.

In the accompanying drawing the several parts of my invention are indicated by numerals of reference; and in practice I provide a seal comprising a metal cap 8, which may be of any desired material, but preferably of aluminium; and which when formed ready to be applied to a bottled, as 9, consists of a central part 10, a concaved annular part 11, viewing from the inside, an annular gasket seat 12, on an elevated plane, and a skirt 13, provided with a step 14, leaving about half, or a little less than half the skirt 15, below the step. Within the seat 12, is mounted the gasket 16, which is preferably composed of rubber, although I do not confine myself to the use of that material.

When the seal is ready to apply to a bottle, the parts are so proportioned that when the part 11, is in contact with the lip 17, of the bottle, the part 12, and skirt 13, will be elevated above the normal position they will occupy when the seal is secured in place so that when the capping tool is applied, the pressure block of the tool will cause the part 11 to become more concave, bending around the interior of the lip, and dragging the skirt of the cap down until it is at the normal level, when the part 15, of the skirt is spun in under the locking shoulder 18, of the bottle, causing the step 14, to be formed into a close rib 19, as clearly shown in Fig. 2. I also prefer to make the part 10 concave, as shown in Fig. 1, and bring the same down to the horizontal, or practically horizontal by the capping tool, to occupy the position shown in Fig. 2, causing the lower edge of the part 11 to come in very close contact with the interior of the lip, and effectually cutting off the contents of the bottle from the gasket 16. In order that the part 10 may be held in the position driven by the tool, I may provide ribs, as indicated at 20, in Fig. 3, or 20' in Fig. 4.

By providing the step 14, when the part 15 of the skirt is spun in under the shoulder 18, the strain of locking will be on the part of the skirt 15, from the bottom thereof to the rib 19, the rib causing the stiffening of the part 15, and also of the upper part of the skirt so that the entire skirt will cling more rigidly to the bottle than would be the case with a plane skirt thereby enabling the use of thinner material which has the double advantage in that the seal can be applied with less liability of breakage, and can be removed more easily.

In order to make the seal easily removable without a tool I have provided a lip, or projection 21, which may be cut from the portion of the metal intervening between the blanks in stamping the same from sheet metal, and on one side of which I form a slot 22, which extends upward adjacent to the rib 19; and by taking hold of this projection, the metal may be torn along the line indicated by the dotted line 23, until sufficient metal has been torn away to allow the removal of the cap. This can be readily done especially if the cap is composed of aluminium; and if composed of aluminium it is also

understood that the bottle may be opened by cutting out the central part 10.

In Fig. 6 I have shown a modification in that the metal of the blank is slotted on each side of the lip 21', as indicated at 22', and 24. By slotting the metal on each side of the lip, the seal will be opened by tearing the metal up across the top of the cap, as will be understood.

In Fig. 7, I have shown a modified form of special opening means, in which the edge of the blank is slotted, as shown at 25, and the end 26, is turned upon itself, so that it may be readily engaged by a finger nail, and the part 27, may be raised so that it can be seized to tear the metal as illustrated in Fig. 5. It will thus be seen that I have provided a seal which can be brought in close contact with the interior of the lip of the bottle; and, at the same time, as the part in contact with the lip is bent while in contact with the lip in order to bring the skirt down into locking position, the force causing the metal to bend will be sufficient to relieve any sudden shock which otherwise might come directly on the lip of the bottle causing the bottle to break. The mode of applying, too, will cause the part 11 to contact more closely with the lip than could practically be done in another manner, especially as the lips of the bottles as ordinarily constructed, are very uneven.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is—

1. A bottle seal comprising a cap and gasket, said cap being provided with a concaved part adapted to contact with the lip of a bottle, and an elevated gasket seat and skirt adapted to be brought into a locking position after said part is in contact with the lip of a bottle.

2. A bottle seal comprising a cap and gasket, said cap being provided with a central part, a concave part adapted to engage the lip of a bottle, and an elevated gasket seat and skirt adapted to be brought into a locking position after said concave part is in contact with the lip of a bottle, substantially as described.

3. A bottle seal comprising a cap and gasket, said cap being provided with a concaved part adapted to contact with the lip of a bottle, an elevated gasket seat and skirt adapted to be brought into a locking position by the bending of said concaved part in contact with the lip of a bottle, said skirt being stepped, as and for the purpose described.

4. In a bottle seal, a cap having a concaved annular part adapted to contact with the lip of a bottle, and a gasket seat elevated above said concaved part, as and for the purpose set forth.

5. In a bottle seal, a cap having a concaved annular part adapted to contact with the lip of a bottle, a gasket seat elevated above said concaved part, and a stepped skirt, as and for the purpose set forth.

6. In a bottle seal, a cap having a concaved annular part adapted to contact with the lip of a bottle, a gasket seat elevated above said concaved part, a stepped skirt, and a tongue, or lip projecting from the edge of said skirt, as and for the purpose set forth.

7. In a bottle seal, a cap having a concaved annular part adapted to contact with the lip of a bottle, a gasket seat elevated above said concaved part, a stepped skirt, and a tongue, or lip projecting from the edge of said skirt, the metal adjacent to said lip being slotted, as and for the purpose set forth.

8. In a bottle seal, a cap having a concaved annular part adapted to contact with the lip of a bottle, a gasket seat elevated above said concaved part, a stepped skirt, and a tongue, or lip projecting from the edge of said skirt, the metal adjacent to said lip being slotted, said slot extending adjacent to said step, as and for the purpose set forth.

9. In a bottle seal, a cap having a dome-shaped central part, a concaved annular part adapted to contact with the lip of a bottle, and a gasket seat elevated above said concaved part, as and for the purpose set forth.

10. In a bottle seal, a cap having a dome-shaped central part, a concaved annular part adapted to contact with the lip of a bottle, a gasket seat elevated above said concaved part, and a stepped skirt, as and for the purpose set forth.

11. In a bottle seal, a cap having a dome-shaped central part, a concaved annular part adapted to contact with the lip of a bottle, a gasket seat elevated above said concaved part, a stepped skirt, and a tongue, or lip projecting from the edge of said skirt, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ADOLPH G. KAUFMAN.

Witnesses:

WM. C. CHRISTIANSON,
G. P. VAN WYE.