

Dec. 14 , 1926.

A. H. ELLERMAN, JR

1,610,501

BOTTLE CAP

Filed April 24, 1926

Fig. 1

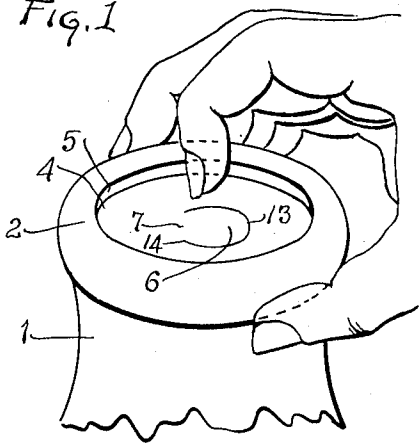


Fig. 4,

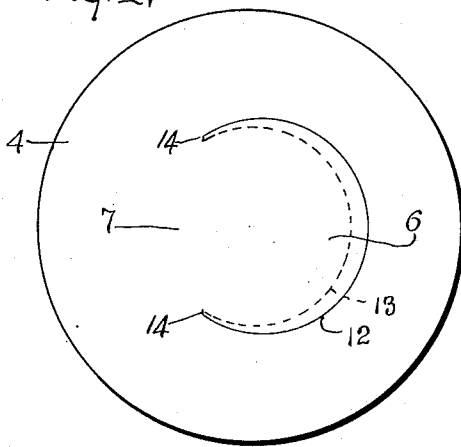


Fig. 2.

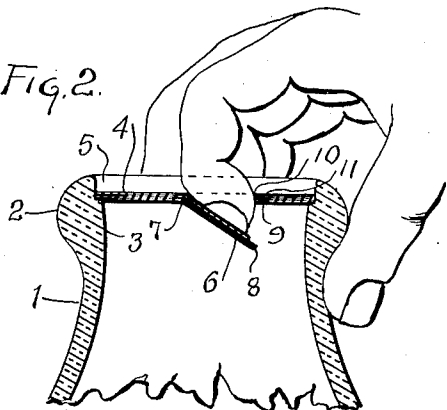


Fig. 5,

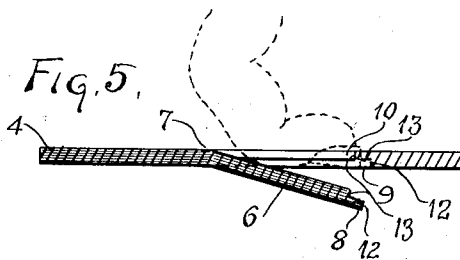


Fig. 6

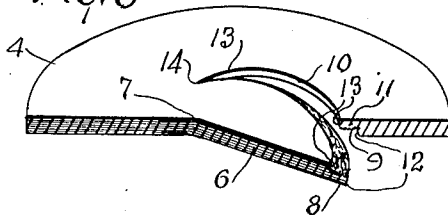


Fig. 3.

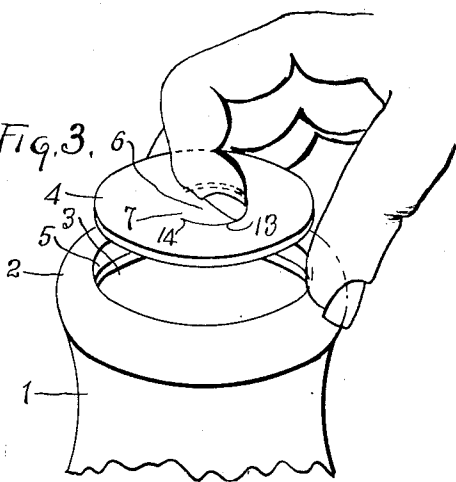
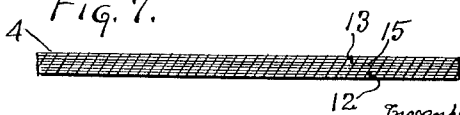


Fig. 7.



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UNITED STATES PATENT OFFICE.

ALEXANDER H. ELLERMAN, JR., OF PIQUA, OHIO, ASSIGNOR TO OHIO BOTTLE CAP COMPANY, A PARTNERSHIP COMPOSED OF A. H. ELLERMAN, C. F. ELLERMAN, AND ALEX ELLERMAN, JR., OF PIQUA, OHIO.

BOTTLE CAP.

Application filed April 24, 1926. Serial No. 104,321.

My invention relates to bottle caps.

It is the object of my invention to provide a bottle cap that is easy to remove, that will remain perfectly sealed, that will be self-sealing and which may be used either to pour through or can be completely removed.

Referring to the drawings:

Figure 1 illustrates the bottle cap of my invention in position sealing a bottle just prior to being extracted, showing the position of the operator's fingers;

Figure 2 is a sectional view showing the second position of the operator's finger when the movable gate has been depressed;

Figure 3 shows the final operation in which the finger of the operator has been hooked beneath the margin of the opening in order to lift the cap positively from the bottle;

Figure 4 is a large bottom plan view of the cap;

Figure 5 is a section through the cap showing in dotted lines the position of the operator's finger as in Figure 3;

Figure 6 is a section through the cap showing in detail the construction;

Figure 7 is an enlarged section through the cap showing the arrangement of the cuts partially through the cap on either side thereof to form the hinged gate which is held in position by the layers of uncut paper therebetween.

Referring to the drawings in detail, 1 is a bottle wall having an enlarged mouth portion 2 with an internal annular flange 3 on which rests the periphery of the cap 4 within the lip 5 of the bottle. This cap is provided with an arcuate gate 6 integrally formed along one side designated 7 with the remainder of the bottle cap. The remainder of this gate of arcuate form is provided with a marginal portion of crescent shape of lesser thickness than the main body of the gate designated 8 which forms an overlapping flange which is recessed into the bottom of the cap in a cutaway portion designated 9 adjacent the margins of the arcuate opening 10 which the gate 6 closes. The remainder of the gate, other than the flange 8, is of the same thickness as the body portion and when the gate is closed the flange 8 will be recessed in the recess 9 of the

body of the cap and the surface of the gate 6 will be flush with the surfaces of the cap 4.

When it is desired to open the cap, the operator's finger may depress the gate which moves inwardly and downwardly into the bottle, thus permitting the contents of the bottle to be poured through the gate opening 10 or permitting straws to be inserted therethrough.

Due to the fact that the gate is supported on its hinge 7, if the bottle should be turned over, the pressure of the liquid would cause the gate to be closed outwardly so that the flange 8 would engage with the recess 9 and the shoulder portion 11 above it of the cap thus closing the bottle automatically preventing leakage of the contents. When the gate is pressed open and it is desired to lift the entire cap out of the bottle mouth, the operator's finger may be hooked beneath the bottom of the cap adjacent the opening 10 thus giving a firm hold on the bottle cap with the minimum contact of the finger with the interior wet portion of the cap as the major portion of the finger will be in contact with the dry upper portion of the gate and cap.

In manufacturing this article, I make the arcuate cut 12 and the arcuate cut 13. These cuts are opposite to one another only at their ends 14 and are spaced from one another throughout the rest of their length, but the cuts are not deep enough to pass by each other so that a few layers of paper designated 15 are left complete and uncut so that they provide a permanent seal which must be broken and these layers of paper ruptured before the gate 6 can open. Thus, a perfect seal is not only provided, but a lock for the gate.

It will be understood that I desire to comprehend within my invention such modifications as may be necessary to adapt it to varying conditions and uses.

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

1. In a bottle cap, a body consisting of a plurality of layers of paper, the intermediate layers of which are unbroken, a gate portion hinged to the main body portion and integral therewith, said gate portion being formed by an arcuate cut through some of

the upper layers of the body portion, and a second arcuate cut through some of the lower layers of the body portion.

2. In a bottle cap, a body consisting of a plurality of layers of paper, the intermediate layers of which are unbroken, a gate portion hinged to the main body portion and integral therewith, said gate portion being formed by an arcuate cut through some of the upper layers of the body portion, and a second arcuate cut through some of the lower layers of the body portion, said cuts being so arranged that they only coincide at their extreme free ends adjacent the gate hinge whereby an overlapping flange is provided on the gate and a corresponding recess is provided in the body portion adjacent to the gate so that when the gate is closed the surfaces of the cut will be flush with the surfaces of the body portion.

3. In a bottle cap, a cap member formed of a plurality of superimposed paper layers, a gate portion composed of a portion of the body and integral therewith, an integral connection forming a hinge, a flange on the free edge of the gate portion, recesses on the under side of the body portion adjacent the gate portion to receive said flange, said gate being adapted to move downwardly and inwardly, said body portion having cuts partially through the upper layers of paper and a cut partially through the bottom layers of the paper, said cuts being so arranged as to not extend through the intermediate layers which serve as a lock for the gate to maintain it closed.

In testimony whereof, I affix my signature.

ALEXANDER H. ELLERMAN, JR.