Nov. 17, 1936. E. H. FABRICE 2,061,067

BOTTLE AND SEAL THEREFOR

Filed Dec. 27, 1932

Fig. 1.

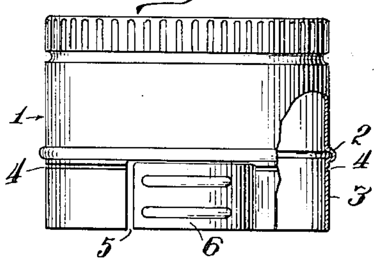


Fig. 2.

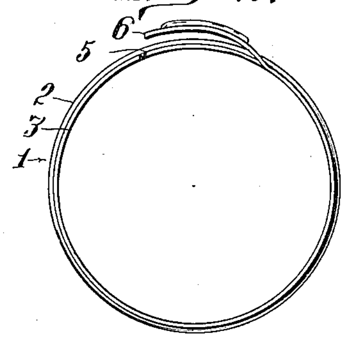


Fig. 3.

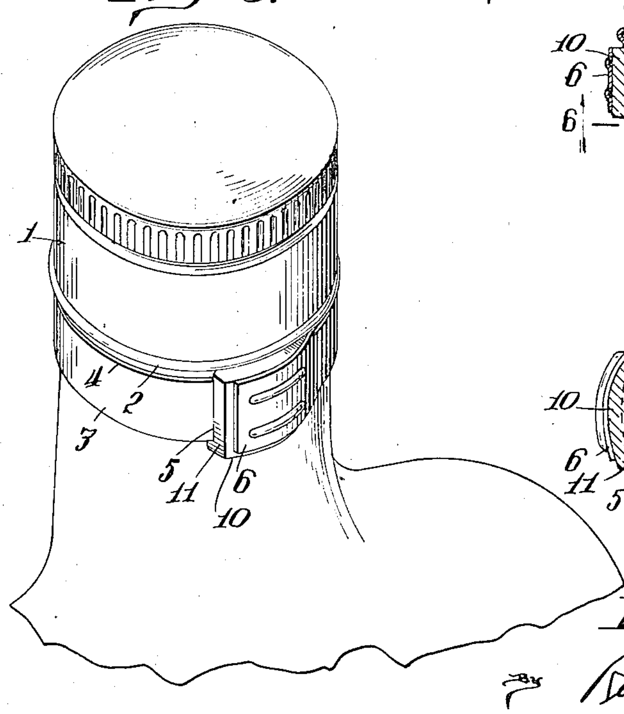


Fig. 4.

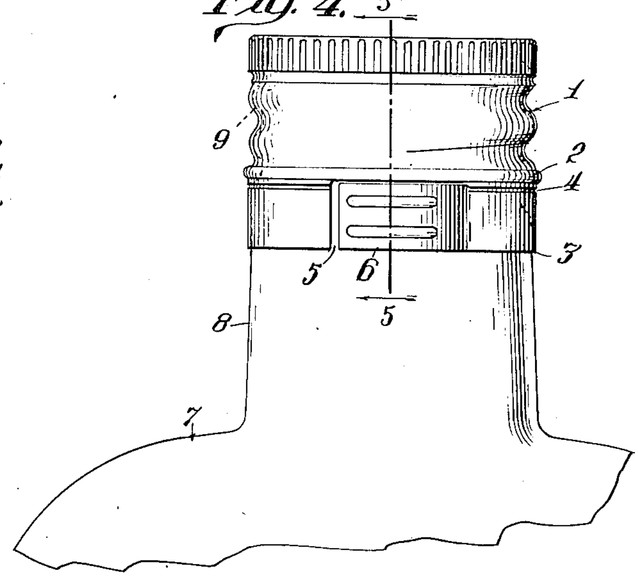


Fig. 5.

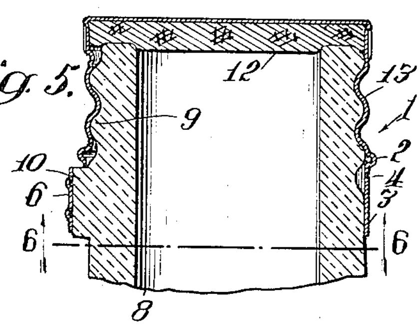
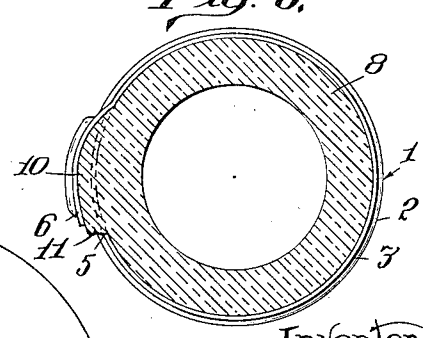


Fig. 6.



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2,061,067

BOTTLE AND SEAL THEREFOR

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Application December 27, 1932, Serial No. 648,947

8 Claims. (Cl. 215—46)

This invention has for its object to provide a bottle seal which is very simple, cheap and advantageous, in that it includes means for preventing the removal of the bottle sealing cap from the bottle without effecting severance of a portion of the sealing cap from the body thereof.

A suitable embodiment of the invention is illustrated in the accompanying drawing wherein:

Fig. 1 is a side elevation, partly in section, of a sealing cap constructed in accordance with the invention and showing the same in the condition in which it is applied to the bottle neck.

Fig. 2 is a bottom plan view of the cap shown in Fig. 1.

Fig. 3 is a perspective view showing a bottle neck constructed in accordance with the invention, with the sealing cap mounted thereon, but not secured thereto.

Fig. 4 is a side elevation of the neck portion of the bottle constructed in accordance with the invention and having the sealing cap of the invention secured upon the same.

Fig. 5 is a fragmentary vertical sectional view on the line 5—5 of Fig. 4.

Fig. 6 is a plan section on the line 6—6 of Fig. 5.

The sealing cap constituting a part of the present invention, consists of a cylindrical capsule (1), the skirt portion of which is provided with an annular bead (2) between its ends. The lower end portion (3) of said skirt portion constitutes a severable portion of the cap and is bordered substantially at its junction with the bead (2), by a scoring (4) which effects weakening of the metal in a well known manner.

Said portion (3) may be termed a rip-strip, which is severed longitudinally at one point (5) from the lower edge of the skirt portion to the scoring (4) of the cap, to provide a stop-shoulder (5). The line of severance is continued along the lower edge of the bead (2) from the shoulder (5) through an arc of about fifteen degrees to provide a free portion or tongue (6) integral with the rip-strip (3) and which constitutes a terminal thereof. The tongue (6) is offset outwardly from the rip-strip (3) and constitutes a digitally engageable member for effecting severance of the strip (3) from the cap.

The bottle (7) is equipped with a substantially cylindrical neck (8) having its upper end portion equipped with external screw-thread (9). The said neck (8) is provided at one side, and immediately below the terminal portion of the screw-thread (9), with an arcuate projection (10) which terminates at one end in a radial shoulder (11). The other end portion of said projection (10) presents a curve or taper which vanishes into the circumferential surface of the neck (8) of the bottle. The tongue (6) of the cap (1) is adapted to overlie the projection (10) of the bottle neck and the shoulder (5) of the rip-strip (3) of the cap will abut the shoulder (11) of the projection (10) of the bottle neck when the cap (1) is inserted over the bottle neck. The said shoulder (11) is disposed to oppose the threads (9) of the bottle neck in the direction of removal of a threaded cap from the bottle.

The cap (1) is initially devoid of threads. Within said cap, a disc (12) of cork or other suitable material is provided as a packing or sealing element, which is maintained lightly compressed against the rim of the bottle neck as said cap is mounted upon the latter and during the succeeding operation of forming the threads (13) in said cap in a suitable manner, the threaded portion of the bottle neck constituting the mandrel upon which the said threads (13) are formed.

From the foregoing description, it will be obvious that when the cap (1) is initially mounted upon the bottle neck, the shoulder (5) of the rip-strip (3) will engage the shoulder (11) of the projection (10) to prevent rotation of the cap on the bottle neck in one direction. As the cap is maintained tightly compressed upon the bottle mouth during the threading operation last referred to, the rotation of said cap relatively to the bottle neck in the opposite direction or the direction wherein the disc (12) would be still further compressed, is substantially prevented by the threads (13) cooperating with the threads (9) of the bottle neck. To unseal the bottle, the tongue (6) of the rip-strip (3) is digitally engaged and pulled outwardly from its normal position and while this outward pull thereon is maintained, the bottle is rotated to cause the strip (3) to be severed, along the score line (4), from the body of the cap. The remaining portion of the cap may be now removed and replaced in the ordinary manner.

The bead (2) serves to reinforce the skirt portion of the cap and serves to prevent, also, an expansion or distortion of the rip-strip (3) and adjacent metal for effecting removal of the cap without first severing the rip-strip (3) from the same.

I claim as my invention:—

1. A sealed receptacle comprising a bottle having an externally threaded discharge portion and equipped with a preformed projection below and contiguous to said threads and presenting a rigid stop shoulder, a sheet metal closure cap

having threaded engagement with said discharge portion of the said bottle and equipped with a skirt portion closely hugging the bottle neck below the said threads and including a terminal annular rip-strip severable from said cap, said rip-strip being split at one point longitudinally of the cap, and presenting a rigid stop shoulder engaged with the shoulder of said projection for cooperation therewith to prevent removal of the cap from the bottle without first effecting severance of the rip-strip from the cap.

2. A sealed receptacle comprising a bottle having an externally threaded discharge portion and equipped with a projection below and contiguous to said threads and presenting a rigid stop shoulder, a sheet metal closure cap having threaded engagement with said discharge portion of the said bottle and equipped with a cylindrical skirt portion closely fitting the bottle neck below the threads thereof and including a terminal annular rip-strip severable from said cap and removable from the bottle, said rip-strip being split at one point longitudinally of the cap and presenting a rigid stop shoulder engaged with the shoulder of said projection for cooperation therewith to prevent removal of the cap from the bottle without effecting removal of the rip-strip from the cap and bottle, a portion of said rip-strip opposed to the shoulder thereof, being severed from the skirt portion of the cap and constituting a digitally engageable terminal tongue at one end of said rip-strip.

3. A sealed receptacle comprising a bottle having an externally threaded discharge portion and equipped with a projection below and contiguous to said threads and presenting a rigid stop shoulder, a sheet metal closure cap having threaded engagement with said discharge portion of the said bottle and equipped with a skirt portion including a terminal annular rip-strip severable from said cap, said rip-strip being split at one point longitudinally of the cap and presenting a rigid shoulder engaged with the shoulder of said projection for cooperation therewith to prevent removal of the cap from the bottle without effecting severance of the rip-strip from the cap, said rip-strip having a free lower edge, and an annular weakening scoring bordering the upper edge of the said rip-strip.

4. A sealed receptacle comprising a bottle having an externally threaded discharge portion and equipped with a projection below and contiguous to said threads and presenting a rigid stop shoulder, a sheet metal closure cap having threaded engagement with said discharge portion of the said bottle and equipped with a skirt portion including a terminal annular rip-strip severable from said cap and removable from the bottle, said rip-strip being split at one point longitudinally of the cap and presenting a rigid stop shoulder engaged with the shoulder of said projection for cooperation therewith to prevent removal of the cap from the bottle without effecting removal of the rip-strip from the cap and bottle, said rip-strip having a free lower edge, an annular weakening scoring bordering the upper edge of the said rip-strip, a portion of said rip-strip opposed to the shoulder thereof being severed from the skirt portion of the cap and constituting a digitally engageable terminal tongue at one end of said rip-strip.

5. A sealed receptacle comprising a bottle having an externally threaded discharge portion and equipped with a projection below and contiguous to said threads and presenting a rigid stop shoulder, a sheet metal closure cap having threaded engagement with said discharge portion of the said bottle, said cap having a skirt portion extending below the threaded portion thereof, an annular bead in said skirt portion below the threaded portion thereof, a substantially annular scoring below and contiguous to said bead and defining a severable rip-strip constituting the terminal portion of the cap, said rip-strip being severed longitudinally of the cap at one point and presenting a rigid stop shoulder engaged and cooperating with the shoulder of the said projection for preventing removal of the cap from the bottle.

6. A cap for a bottle neck equipped with screw threads and equipped with a projection below said threads, said cap equipped with threads engaged with the threads of the bottle neck and equipped with a severable rip-strip constituting the terminal lower portion of said cap, there being a recess in said rip-strip receiving said projection a wall of said recess and a face of said projection constituting cooperative inflexible stop formations to prevent rotation of said cap, the latter being non-removable from the bottle without first effecting removal of said rip-strip from said cap and bottle, and a tongue constituting one end of said rip-strip and overlying said projection.

7. A sealed receptacle such as a bottle, comprising a receptacle equipped with a threaded discharge spout portion and with a stop formation below and proximate to the threads of said discharge spout portion and a capsule equipped with thread formations engaged with those of said discharge spout portion, said capsule being equipped also with a longitudinally split annular terminal end portion digitally severable from the body of the capsule, one end of said annular terminal end portion of the capsule engaged with said stop formation for cooperation therewith to prevent rotation of the capsule in a direction to unseal the bottle.

8. A sealed receptacle such as a bottle comprising a receptacle equipped with a threaded discharge spout portion and with a stop formation below and proximate to the threads of said discharge spout portion, and a capsule equipped with thread formations engaged with those of said discharge spout portion, said capsule being equipped also with a longitudinally split annular terminal end portion digitally severable from the body of the capsule, one end of said annular terminal end portion of the capsule engaged with said stop formation for cooperation therewith to prevent rotation of the capsule in a direction to unseal the bottle, the other end of said terminal end portion of said capsule equipped with a digitally engageable tongue free from the body of the capsule and overlying said stop formation.

EDWARD H. FABRICE.