Nov. 13, 1956 G. LIVAS 2,770,383

PLASTIC MATERIAL BOTTLE-SEAL

Filed Feb. 11, 1952

Fig. 1.

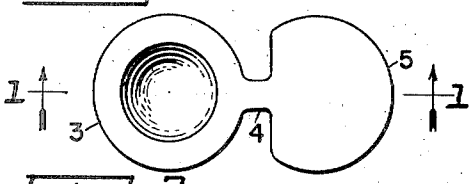


Fig. 2.

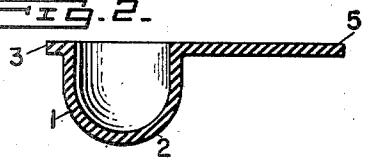


Fig. 3.

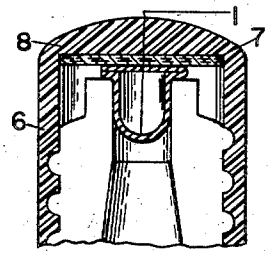


Fig. 4.

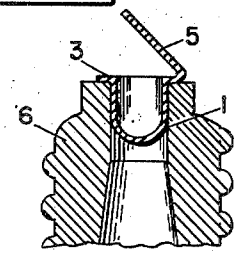


Fig. 5.

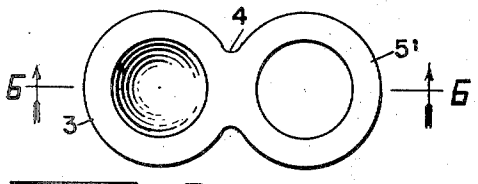


Fig. 6.

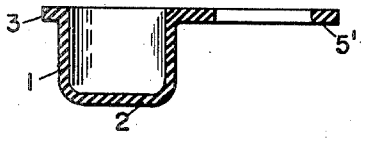


Fig. 7.

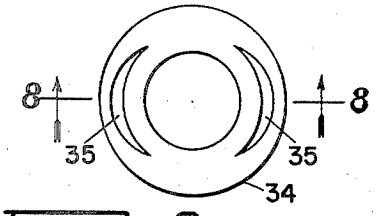


Fig. 8.

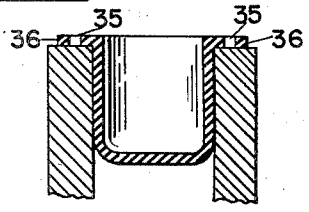


Fig. 9.

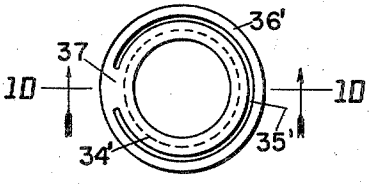
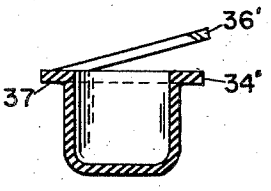


Fig. 10.



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United States Patent Office 2,770,383
Patented Nov. 13, 1956

2,770,383

PLASTIC MATERIAL BOTTLE-SEAL

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Application February 11, 1952, Serial No. 270,960
Claims priority, application France March 5, 1951
2 Claims. (Cl. 215—55)

This invention relates to a bottle seal or plug made of transparent or opaque material or plastic material such as rubber or synthetic resin, and particularly to a seal or plug of the type used for small bottles and usable in combination with a safety cap anchored at the outer part of the neck of the bottle.

It is known that plugs or bottle-seals of this kind, whether solid or hollow oppose a certain resistance to being pulled out from the neck of the bottle due to the fact that the air pressure outside of the bottle is greater than that existing in the bottle at the moment when the plug is being pulled out, an account of the increase of volume in the bottle between the level of the contained liquid and the lower face of the plug.

To remove the plug a substantial effort must, therefore, be exerted on the flange with which the plug is generally provided and which is in most cases very narrow, so that the extraction becomes a tiring, long and unpleasant matter, which requires sometimes the use of a pointed tool. Moreover, there is the risk of upsetting the bottle, with unpleasant and unfortunate consequences.

One object of the present invention is to eliminate or minimise all or some of the aforesaid disadvantages. This is achieved according to the present invention by providing a bottle seal for use in conjunction with a safety cap anchored externally to the neck of the bottle, comprising a hollow plug adapted to fit in the neck of the bottle and having a flat circumferential flange adapted to seat against the rim of the bottle neck but not substantially to overlap the same, said flange having one or more members integral therewith which is or are adapted to be gripped for the purpose of removing the flange and the plug from the bottle neck.

Said gripping members consist of at least one tongue connected with the upper rim of the plug, directly or by means of an extension of said rim or of a flange thereof. The size of this tongue or of these tongues is such as to correspond to the upper surface of the plug when the bottle is closed, that is, when a cap is fixed to the bottle-neck, this cap being, for instance, a screw or pressure cap. This tongue or these tongues is or are yielding and spring up when the cap is taken off, which fact allows the plug to be removed very easily and quickly by holding the bottle in one hand and exerting an upwards pull on at least one tongue with the fingers of the other hand.

The tongue may also serve, when the bottle has been closed and it bears against the flange of the plug, to secure a further tight closure of the container, since said tongue is pressed against the flange of the plug by means of the gasket placed in the inner side of the cap.

Within the scope of the invention several tongues associated with the flange may be provided, but this arrangement is not very practical, because it increases the cost of the bottle-seal, without facilitating the opening of the bottle.

The accompanying drawings show by way of example some embodiments of the invention. In the drawings:

Figure 1 is a plan view on an enlarged scale of a bottle-seal according to the first embodiment of the invention;

Figure 2 is a section on the line 1—1 of Fig. 1;

Figure 3 shows a sectional side elevation of a capped bottle according to this invention;

Figure 4 is a section analogous to that of Figure 3 showing the position taken by the tongue, after the cap has been taken off;

Figures 5 and 6 are a plan view and a vertical section respectively of a modification of the bottle-seal shown in Figures 1 to 4;

Figure 7 is a plan view of another embodiment of the bottle-seal according to the invention, of which

Figure 8 is a section on the line 8—8 of Figure 7, and finally

Figure 9 is a plan view of another embodiment, of which

Figure 10 is a section on the line 10—10 of Figure 9.

In Figures 1 to 4 the bottle-seal is hollow and comprises in a known way, a cylindrical portion or plug 1 closed at its lower end by a hemispherical portion 2, the upper portion having a flange 3 integral with a tongue 5 by means of an extension 4.

Due to its elasticity, said tongue 5 can be folded down over flange 3 at the moment of closing the bottle 6 and takes then the position shown in Figure 3 in which position it is kept by the pressure of a gasket 7 commonly provided on the inside of cap 8.

When the bottle is opened, tongue 5, on account of its elasticity takes up the position shown in Figure 4 in which position it can be easily grasped for removing the bottle-seal or plug 1.

The embodiment shown in Figures 5 and 6 differs from the one just described only in that the disc-shaped tongue is changed for a ring-shaped tongue 5' thus saving material, whilst the bottom of the plug is more rectangular than hemispherical.

In the embodiment shown in Figures 7 and 8, flange 34 is wider than usual and is formed with two openings 35, diametrically opposed, forming two handles 36, enabling the plug readily to be removed.

According to the modification shown in Figures 9 and 10, the opening 35' is in the form of an annular slot concentric with the bottle seal or plug, of a great angular width so as to isolate from flange 34' an annular tongue 36' connected to flange 34' through a short portion common to the plug and to the ring.

From the foregoing it is apparent that herein there has been provided a seal for insertion into the neck of a bottle, said seal comprising a substantially cylindrical hollow body fabricated of flexible, resilient material, one end of said body being closed for insertion into a bottle neck, the other body end being provided with a flange adapted to bear upon the mouth of said bottle neck, and grasping means formed integrally with said flange but severed therefrom along substantially a major portion of its circumference, said grasping means normally projecting laterally outwards with respect to said flange and being yieldably displaceable out of its laterally projecting position for facilitating the extraction of said body from said bottle neck.

I claim:

1. A seal for insertion into the neck of a bottle, said seal comprising a substantially cylindrical hollow body fabricated of flexible, resilient material, one end of said body being closed for insertion into a bottle neck, the other body end being provided with a flange adapted to bear upon the mouth of said bottle neck, and grasping means formed integrally with said flange but severed therefrom along substantially a major portion of its circumference, said grasping means normally projecting laterally outwards with respect to said flange and being

yieldably displaceable out of its laterally projecting position for facilitating the extraction of said body from said bottle neck.

2. A seal for insertion into the neck of a bottle, said seal comprising a substantially cylindrical hollow body fabricated of flexible, resilient material one end of said body being closed for insertion into a bottle neck, a laterally outwardly extending flange formed on said body adjacent the other end thereof and grasping means integral with and normally laying in the plane of said flange, said grasping means comprising a strip extending circumferentially about and having a relatively small segment secured to said flange, the unsecured portion of said strip being yieldingly displaceable out of the plane of said flange.

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