April 28, 1936. H. M. SACKS 2,038,858

STOPPER

Filed Sept. 25, 1933

Fig. 1.

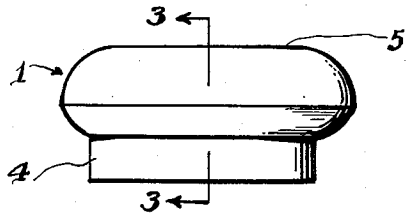


Fig. 2.

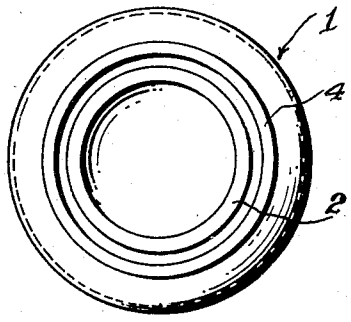


Fig. 3.

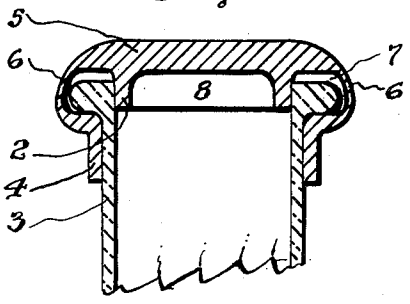


Fig. 4.

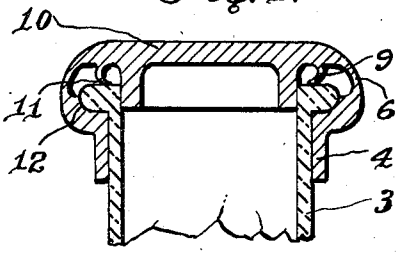


Fig. 5.

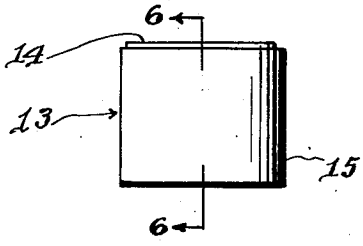


Fig. 6.

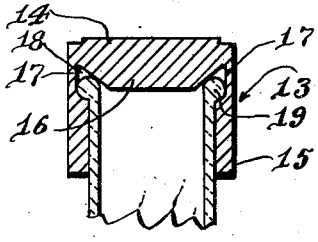
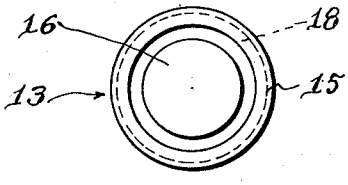


Fig. 7.



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Patented Apr. 28, 1936 2,038,858

UNITED STATES PATENT OFFICE

2,038,858

STOPPER

Harry M. Sacks, Philadelphia, Pa., assignor to General Health Corporation, Philadelphia, Pa., a corporation of Delaware

Application September 25, 1933, Serial No. 690,896
In Canada September 25, 1933

1 Claim. (Cl. 215—41)

This invention relates to rubber bottle stoppers.

The main object of the invention is to provide a stopper for bottles which is leak-proof, long lasting, and which can easily be put on the bottle and taken off.

Another object of the invention is to provide a stopper having a skirt portion which fits around the neck of the bottle, a cylindrical insert which fits in the neck of the bottle and a stretchable thinned wall area above the skirt portion for allowing the skirt portion to be bent upwardly.

With these and other objects in view which may be incident to my improvements, the invention consists in the parts and combinations to be hereinafter set forth and claimed, with the understanding that the several necessary elements comprising my invention may be varied in construction, proportions and arrangements, without departing from the spirit and scope of the appended claim.

In order to make my invention more clearly understood, I have shown in the accompanying drawing means for carrying the invention into practical effect, without limiting the improvements in their useful applications to the particular constructions, which for the purpose of explanation have been made the subject of illustration.

In the drawing:

Figure 1 is an edge view of the stopper.

Figure 2 is a bottom view thereof.

Figure 3 is a section on line 3—3 of Figure 1 showing the stopper applied to the neck of a bottle.

Figure 4 is a similar view as Figure 3 but showing a modified form of the stopper.

Figure 5 is an edge view of another modified form of the stopper.

Figure 6 is a section on line 6—6 of Figure 5 showing the stopper applied to the neck of a bottle.

Figure 7 is a bottom view of the stopper.

Referring now to the drawing in detail, numeral 1 designates the body of the nipple, 2 the cylindrical insert which fits in the neck 3 of the bottle and 4 the skirt portion which fits around the neck of the bottle. The body comprises a relatively thick flat top portion 5 and leading from the ceiling of the top portion down to the skirt portion is a relatively thin and flexible wall area 6 which is gradually thickened where it meets the said skirt portion. The purpose of this thinned wall area is to provide for a greater amount of flexibility and thereby allow the skirt portion to be bent upwardly when applying or taking off the stopper from the bottle. Between the thinned wall 6 and the wall 2 of the cylindrical insert is a circular chamber to accommodate the flange 7 of the bottle neck. The cylindrical insert 2 is hollowed out as at 8 in order to allow the wall of the insert to "give" when inserting it in the bottle neck.

The form of the invention shown in Figure 4 is the same as that shown in the form of the invention shown in Figures 1 to 3 with the exception that an additional seal 9 is provided to make the stopper more completely water and air tight. The seal comprises a thin circular wall curving inwardly and extending from the top 10 of the body of the device and having the bottom end 11 bear against the top edge of the bottle neck. Also a relatively wide seat 12 is provided for the flange of the bottle neck to rest on.

In the form of the invention shown in Figures 5 to 7, numeral 13 designates the body of the stopper comprising a top portion 14, a skirt portion 15 and a tapered plug 16. The wall of the upper skirt portion is thinned as at 17, thus forming a circular chamber 18 which is triangular in section to accommodate the flange 19 of the bottle neck. Also the thinned area of the wall offers a means on which to readily bend the skirt portion upwardly when applying or taking off the stopper from the bottle.

While I have shown and described the preferred embodiment of my invention I wish it to be understood that I do not confine myself to the precise details of construction herein set forth, by way of illustration, as it is apparent that many changes and variations may be made therein, by those skilled in the art, without departing from the spirit of the invention, or exceeding the scope of the appended claim.

Having described my invention, I claim:

In a stopper of the class described, a flat top portion of relatively thick rubber, a hollow cylindrical portion extending downwardly from said top portion and adapted to fit in the neck of a bottle, a skirt portion, a thinned wall area between said top portion and skirt portion, the said thin wall bulging outwardly forming an interior circular chamber to accommodate the flange of a bottle neck, and a seal comprising a thin and resilient inwardly curving circular wall between said cylindrical portion and said thinned wall area.

HARRY M. SACKS.