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1,625,016

E. H. BARKER

REINFORCEMENT FOR SPRINKLER TOPS

Filed Jan. 31, 1925

Fig. 1.

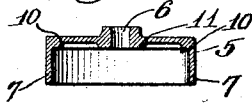


Fig. 4.

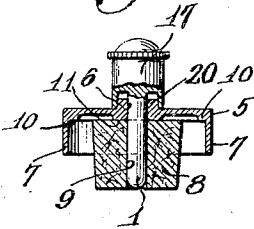


Fig. 2.

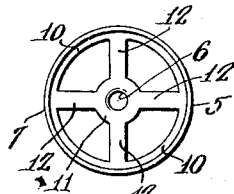


Fig. 5.

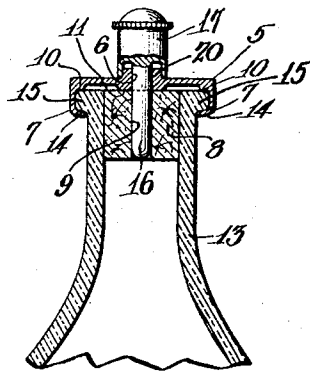


Fig. 3.

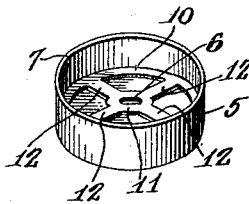
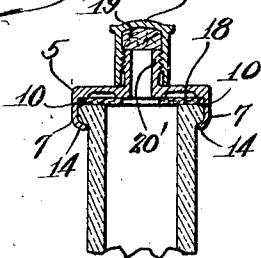


Fig. 6.



INVENTOR

Edwin H. Barker

BY

W. Steel Johnson

ATTORNEY.

UNITED STATES PATENT OFFICE.

EDWIN H. BARKER, OF MOYLAN, PENNSYLVANIA, ASSIGNOR TO A. H. WIRZ, INC., OF CHESTER, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

REENFORCEMENT FOR SPRINKLER TOPS.

Application filed January 31, 1925. Serial No. 5,940.

My invention relates to pressed metal sprinkler tops used primarily upon bottles for dispensing liquids and having various types of ultimate seal, usually closing by a plug top or by a screw cap.

The main purpose of my invention is to improve the seal of the flange element (found in all of these several combinations) by which the seal is effected against the bottle thimble or the cork or against both.

A further purpose is to prevent rotation of the flange element when the cap or top is removed.

A further purpose is to provide a ring of metal close to the skirt of the flange and inside of it for the purpose of sealing to the best advantage against the bottle thimble.

A further purpose is to provide an interior ring of metal about the sprinkling opening for the purpose of sealing against a cork within the bottle.

A further purpose is to increase the strength and reduce the weight of the flange element by outwardly extending ribs connecting the inner and outer rings respectively.

Further purposes will appear in the specification and in the claims.

I prefer to illustrate my invention in one general form only and have selected the form with a view to illustrating to the best advantage the principles involved.

Figure 1 is a central sectional elevation showing my flange as adapted to use with a plug top.

Figure 2 is a bottom plan view of the flange of Figure 1.

Figure 3 is a perspective view of the flange from below.

Figure 4 is a side elevation, largely in central section of the flange mounted upon a cork and with a plug top in place.

Figure 5 is a sectional view corresponding generally to Figure 4 but showing also a bottle to which the flange is applied.

Figure 6 is a sectional view corresponding generally to Figure 5 but using a screw cap and a washer in place of the bottle cork.

Similar numerals indicate like parts in the figures.

Describing in illustration and not in limitation and referring to the drawings:—

The flange 5 is molded of soft metal and

is shown provided with the usual pouring spout 6 and skirt 7. The bottle cork 8 is shown as perforated at 9.

I have found it advantageous to form the interior of the flange with downward facing rings or bosses 10 and 11, respectively adjacent the perforation 9 and the outer wall or skirt 7. These rings or bosses are connected by preferably radial circumferentially spaced stiffening ribs 12. The flange is attached to the bottle 13 by spinning the skirt in at 14 beneath the thimble 15 of the bottle.

The narrowing of the contact surfaces upon the flange to annular bands very much improves the efficiency of the seal secured with the thimble 15 of the bottle and with the cork 8, respectively. In addition I have found that the ribs 12 not only stiffen the flange, reducing the weight required for the same service, but secure a very much better hold upon the outer surface of the bottle than would be secured by flat metal and thus prevent rotation of the flange when effort is made to twist out the plug or unscrew the cap closure.

I thus secure the benefit of the stiffening and strengthening ribs while increasing the efficiency of the seal and reducing the weight.

The aperture of the cap and cork in Figures 4 and 5 receive the sealing plug 16 of a closure 17 of which one form is shown in Wirz Patent No. 1,146,986, of July 20, 1915. The plug, of whatever type is intended to enter the perforation 9 and seal against the side walls of the perforation 9 is of smaller diameter of course than the diameter of the opening in the pouring spout 6.

In the form seen in Figure 6 the cork 8 is omitted and a washer 18 is used between the ring 11 and the thimble of the bottle. A washer 19 is also used between the cap 17 and the spout 20.

In this case there is additional sealing and prevention of rotation due to the outer ring along with considerable stiffening and strengthening for the same weight though the inner ring is not directly utilized.

It is my purpose to include herein all variations and modifications in so far as they fall within the reasonable spirit and scope of my invention.

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

1. In a dispensing closure, a container for fluid having an outlet opening, an axially perforated cork fitting into the opening, a metal cap having a circumferential wall secured to the container about the outlet opening and having a perforation in registry with the cork perforation, an annular boss on the cap adjacent to and around the perforation on the side toward the cork, a second annular boss on the cap circumferentially adjacent the wall on the same side as the first and radial stiffening ribs joining the bosses.

2. In a dispensing closure, a container for fluid having an outlet opening, an axially perforated cork fitting into the opening, a metal cap having a circumferential wall secured to the container about the outlet opening, and having a perforation in registry with the cork perforation, an annular boss on the cap adjacent to and around the perforation, facing the top of the cork, a second annular boss circumferentially adjacent the wall and engaging the top of the container about the outlet and spaced radial stiffening ribs joining the bosses.

3. In a dispensing closure, a container for fluid having an outlet opening, an axially perforated cork fitting into the opening, a metal cap having a circumferential wall embracing the outlet and having a perforation in registry with the cork perforation, two spaced annular bosses on the cap, one sealing against the top of the cork, and the other engaging the container about the outlet and circumferentially spaced radial stiffening ribs joining the bosses.

4. In a dispensing closure, a container for fluid having an outlet opening and a rim free from threads and about the opening, a metal flange having a skirt adapted to engage with the rim to hold the flange to the bottle and a boss within the flange engaging the bottle about the opening.

5. In a dispensing closure, a container for fluid having an outlet opening and a rim about the opening, a metal flange having a skirt adapted to engage with the rim to hold the flange to the bottle and a boss and inwardly extending ribs engaging the end face of the bottle about the opening.

6. In a dispensing closure, a container for fluid having an outlet opening and a rim about the opening, a flange having a skirt engaging with the rim and having two spaced interior annular bosses and a pouring outlet, and a cork engaged by one of the bosses to seal against leakage of liquid between the skirt and the rim.

7. In a dispensing closure, a container for fluid having an outlet opening and a rim about the opening, a metal flange having a skirt for engagement about the rim, an interior boss in line with the rim and an outlet pouring spout in combination with a cork lying between the boss and the rim engaging the boss to seal against leakage between the rim and skirt.

8. In a dispensing bottle a closure cap adapted to fit about an outer bottle flange against the end of the bottle and beneath the flange and having an annulus to engage the end of the bottle, an apertured boss forming a pouring spout and stiffening ribs extending between the boss and annulus.

EDWIN H. BARKER