July 22, 1958 W. J. SLADE 2,844,290

DETERGENT CAN

Filed July 27, 1955

FIG. 1.

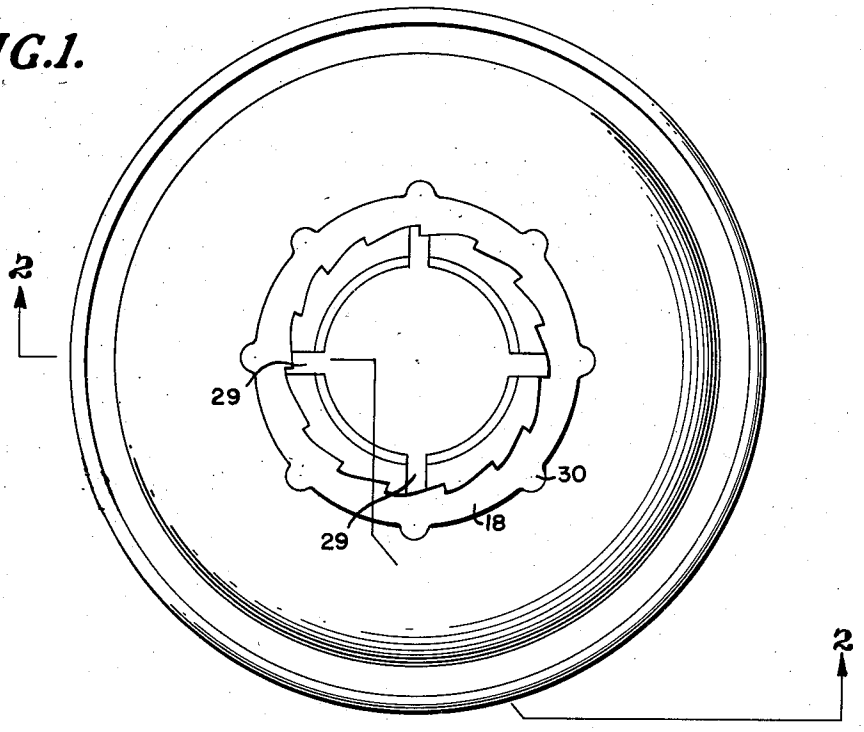
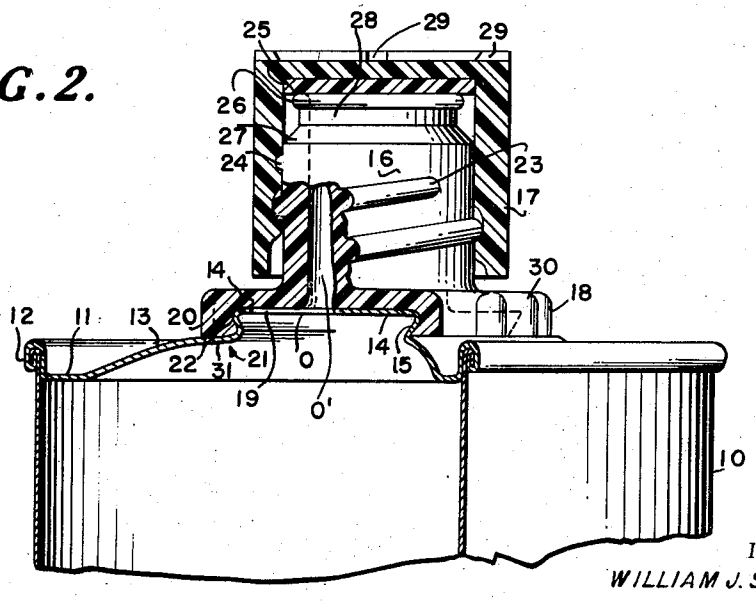


FIG. 2.



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DETERGENT CAN

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2 Claims. (Cl. 222—562)

This invention relates to containers such as metal cans useful particularly for detergent liquids and powders.

The container has its ends normally closed and one of the ends is formed with means for securely receiving a plastic pouring spout. The latter, in turn, may be threaded or otherwise provided with a cap-receiving finish to thereby receive and retain a reseal closure. Thus, the can may be effectively sealed at all times, both prior to initial opening and thereafter until the contents are used up.

Referring to the drawings:

Figure 1 is a top view, and

Figure 2 is a section on line 2—2 of Figure 1 with the container body broken away.

In the drawing, **10** indicates a conventional cylindrical metal container body having, at its top and bottom, customary metal ends **11** seamed to the body in the usual manner, as shown at **12**.

The top end **11** is dome-shaped, i. e., centrally convex, as shown at **13**, and the dome terminates upwardly in a continuous closed flat portion **14** having an inwardly extending shoulder **15**. The flat portion **14** may be scored to aid forming the opening O.

In use, after this flat portion **14** has been severed to form an opening O of any desired size, a neck-pouring spout **16** with cap **17** is attached to the end **11** to continue the seal, as the contents are used up.

This neck-pouring spout is made of plastic such as polyethylene, and has an integral, circular base or flange **18** of greater diameter than the upstanding, cylindrical neck **16**, as shown. The undersurface of the flange **18** is flat, as shown at **19**, to correspond with and engage the flat surface of the portion **14** of the end. The circular skirt **20** of the flange has its inner wall **21** undercut to form an inwardly extending groove **22**. This circular groove **22** will receive, in resilient, frictional, sealing fit, the circular pouring spout-receiving shoulder **15**, as shown.

The neck-pouring spout **16** is shown as having a threaded cap-receiving finish **23** to receive a usual threaded reseal cap **17** of plastic, such as polyethylene, or metal, as desired. The cap is provided with the usual sealing liner **25** on its inside engaging the integral, outwardly extending, rounded bead **26** of the pouring spout. The neck above the threaded area is inclined inwardly at **27** and extends upwardly as the cylindrical portion of reduced diameter **28** terminating in the outwardly projecting, rounded bead **26**. The top of the plastic closure **17** has diametrically intersecting grooves **29** for receiving a tool to turn the cap to open or closed position for convenience, and, if desired, the flange **18** is suitably knurled or provided with spaced hand-gripping projections **30** to assist in applying the pouring spout to the container and locking the same thereto, as above-described.

The container may be provided initially with the opening O and the pouring spout **16** and cap **17** in position as shown. Also, the top **14** may be scored so that the opening may be easily formed. The container may be made of plastic, such as polyethylene, and, as stated, the pouring spout and closure may be of metal or plastic.

While I have mentioned polyethylene as the preferred plastic, other suitable plastics may be used.

While the threaded finish **23** is preferred, other conventional closure-receiving finishes may be used, e. g., to receive lug caps, crowns and pressed-on caps, the closure **17** being shown with cap-receiving threads **24** to engage the threaded finish **23** for purposes of illustration.

The container structure above-described provides a continuous and reliable pouring spout and reseal for liquids, pastes and granular products which are customarily packed in metal or plastic containers.

It will be observed that the container **10** has the end **11** provided with the projection defined by the flat surface **14** and the integral shoulder **15**, the latter extending inwardly and downwardly therefrom, and that the pouring spout has a neck portion **16** provided with an internal opening O′ which is enlarged adjacent the flange **18**, and is of reduced diameter as it passes centrally through the neck or pouring spout **16**. The flange portion, as stated, has the flat portion **21** engaging the flat surface **14** of the projection, and this flange also has the depending skirt **20** formed with an internal groove **22** for receiving in frictional, resilient, sealing relation the shoulder **15** of the projection on the end **11**. Whether the flat surface **14** is provided initially closed or closed and provided with a scoring defining an opening O, or the opening O is already formed in the surface **14**, the respective openings O and O′ communicate when the pouring spout is in position, as shown. As will be appreciated, the container can be supplied independently of the pouring spout, i. e., the spout may be attached to the container, either before or after an opening O is formed in the flat surface **14**. That is, the pouring spout is detachably secured to the end **11** and, of course, where the opening O is initially formed in the surface **14**, the pouring spout and its closure will form a part of the container package before or after the same has been filled.

Referring to Figure 2, it will be observed that not only does the shoulder **15** engage in the groove **22**, but the flange being located at the base of the pouring spout, has the lower edge of its skirt **18** also engaging the adjacent curved top surface of the end, as shown at **31**, to further assure, not only a rigid fit, but a tight seal as well.

It will be appreciated that the preferable construction consists of a metal container having a metal end with a plastic pouring spout, as illustrated.

I claim:

1. A cylindrical container having a metal end, a projection on said end having a flat surface and an integral shoulder extending inwardly and downwardly therefrom, a plastic pouring spout having a cylindrical neck portion provided with an opening and a flange portion located at the base of the pouring spout, said flange having a flat surface engaging the flat surface of the projection, a depending skirt on said pouring spout flange formed with an internal groove for receiving in frictional, resilient, sealing relation the said shoulder of the projection, the lower edge of said skirt of the flange also engaging the adjacent top surface of the end of the container, said container opening through its flat surface in said end into

the opening of the pouring spout, the pouring spout terminating in an upper, cylindrical, rounded bead portion of lesser diameter than said neck portion, and the outer wall of said pouring spout being adapted to receive a closure.

2. A container according to claim 1 having a closure thereon, said closure being in sealing relation with the rounded bead portion of said pouring spout.

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