March 17, 1931. G. A. WILLIAMS 1,797,033

INNER SEAL FOR NOZZLES

Filed April 7, 1927

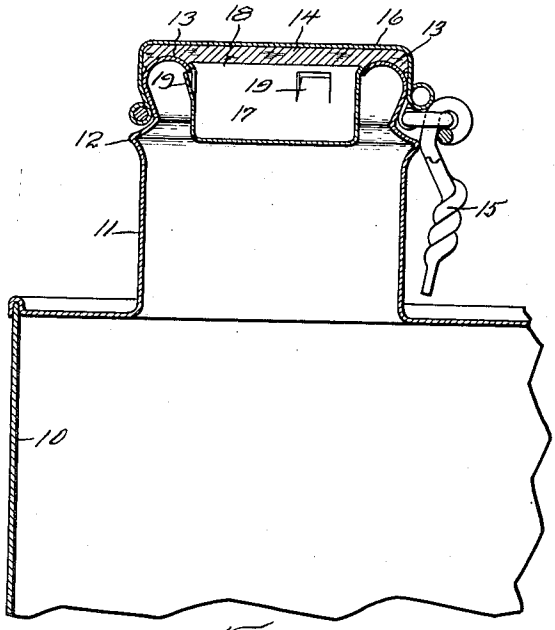


Fig. 1

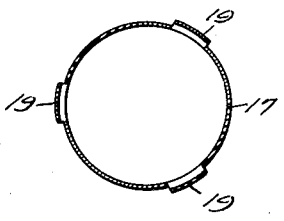


Fig. 4

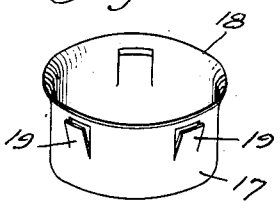


Fig. 3

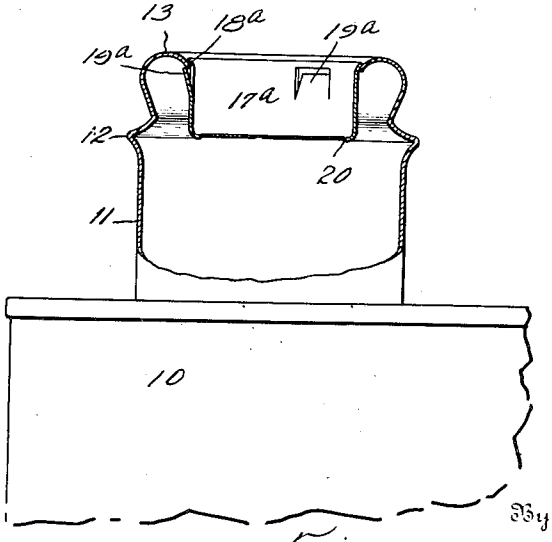


Fig. 2

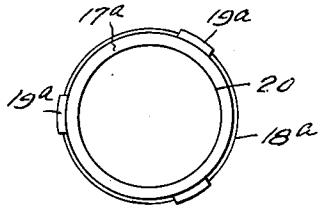


Fig. 5

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1,797,033

UNITED STATES PATENT OFFICE

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INNER SEAL FOR NOZZLES

Application filed April 7, 1927. Serial No. 181,700.

This invention relates generally to nozzles for containers and more particularly to a seal which will prevent the re-use of the container after the original contents have been removed; the object being to prevent the fraudulent use of the container to palm off spurious contents, once the container has been emptied of its genuine contents.

The invention is particularly adapted for use in connection with a sheet metal nozzle such as described and claimed in my Patent No. 1,339,245, said nozzle being designed for use with lever fastened caps of the type shown in my Patents Nos. 1,108,959 and 1,430,133.

With these objects in view the invention consists in the novel features of construction and in the manner of combining the same all of which will be fully described hereinafter and set forth in the claims.

In the drawings forming a part of the specification Fig. 1 is a sectional view of a sheet metal nozzle with seal applied thereto and cap fastened thereon; Fig. 2 is a similar view showing a slight modification; Fig. 3 is a horizontal sectional view of the seal; Fig. 4 is a perspective view of the same, and Fig. 5 is a plan view of the modified form of seal.

In the practical embodiment of my invention I employ a container 10 having a sheet metal nozzle 11 which is formed with an outwardly projecting annular shoulder 12, and an inwardly rolled upper end 13. A cap 14 having a locking lever 15 is fitted upon the nozzle 11 and secured by turning the lever down as shown in Fig. 1, the lining 16 contacting with the rolled-in edge 13 to tightly close the mouth.

Within the top of the nozzle is fitted a cup shaped seal 17 of sheet metal, the upper edge of which is rolled over as shown at 18 to conform and fit tight upon the rolled-in edge 13. The seal 17 is of such size that it fits snugly in the mouth of nozzle and has integral tongues 19 punched therefrom, the upper ends of said tongues being free and bent slightly outwardly so that they will slip beneath the rolled-in edge 13 as shown in Figs. 1 and 2 thereby preventing the seal being withdrawn once it has been set into the nozzle as a seal.

In use the container 10 is filled and the seal 17 is then fitted and secured in the top of the nozzle.

The cap is then applied and locked and the container with its original contents is ready for sale.

To remove the contents the cap is first removed and then the seal 17 is forced down into the container inasmuch as the tongues 19 engaging under the rolled-in edge 13 prevent extraction of the seal from the nozzle. Consequently the only way to open the end of nozzle is to force the seal inwardly.

Anyone purchasing a container can tell at a glance whether the contents are the original by simply removing the cap, and if the seal is in place it indicates that the original contents are intact and on the other hand if the seal is not in place, its absence indicates that the nozzle has been opened.

The container will of course have a proper warning legend marked thereon relative to not accepting the can if the seal is not intact in the end of the nozzle. The cap tightly seals the nozzle when locked and thereby prevents the escape of any of the contents through the tongue openings.

In Figs. 2 and 5 I have shown a slightly modified form of seal 17^a having the tongues 19^a which act the same as before described, but the bottom of the seal has a line of weakness 20 punched therein so that the central part of the bottom can be pushed in without disturbing the balance of the seal. In every other respect the seal 17^a is identical with the seal 17 in construction and operation.

The cooperation between the seal and the particular type of nozzle is apparent from the drawings and the advantages of the entire assembly will be obvious to those skilled in the art to which the device relates.

Having thus described my invention, what I claim is:

1. In a device of the kind described, the combination with a sheet metal nozzle having an inwardly and downwardly rolled edge at its upper end, of a cup shaped sheet metal seal fitted into the upper end of said nozzle, the

upper edge of said seal being rolled outwardly to conform to the upper side of said inrolled edge, the sides of said seal having tongues punched therefrom, said tongues engaging the underside of said inrolled edge, and a cap fitted upon said nozzle and having a sealing lining contacting with said inrolled edge of the nozzle and the outrolled edge of said seal to securely close said nozzle.

2. In a device of the kind described, the combination with a sheet metal nozzle having an inwardly and downwardly rolled edge at its upper end, of a cup-shaped seal fitted into the upper end of said nozzle, the upper end of said seal being flared outwardly to engage the inrolled portion of the nozzle, the body of said cup-shaped seal extending downwardly below the inrolled edge of the nozzle, struck out portions of the sides of said seal projecting laterally outwardly at definite points below the underside of said inrolled edge whereby the removal of said seal outwardly without mutilation of some part of the device is prevented, and a cap fitted upon said nozzle and contacting with said inrolled edge for re-closing said nozzle upon removal of said seal.

In testimony whereof, I hereunto affix my signature.

GEORGE A. WILLIAMS.