E. D. CHELLIS, DEC'D.

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CLOSURE AND NOZZLE FOR CONTAINING VESSELS.

APPLICATION FILED JULY 8, 1911.

1,115,507.

Patented Nov. 3, 1914.

2 SHEETS—SHEET 1.

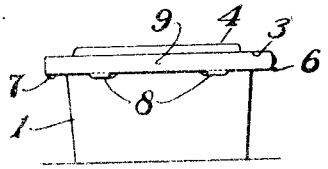

FIG. 1

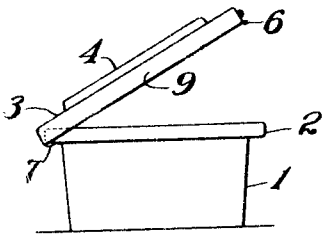

FIG. 2

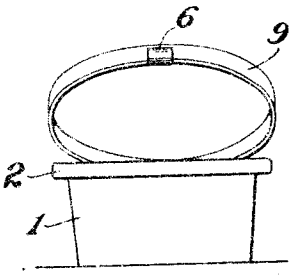

FIG. 3

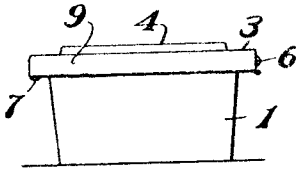

FIG. 4

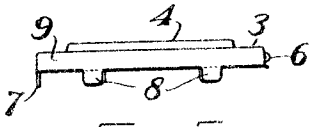

FIG. 5

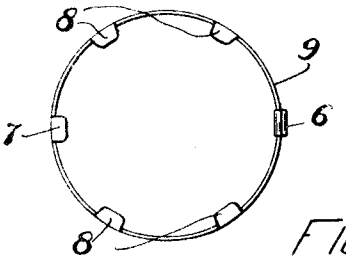

FIG. 6

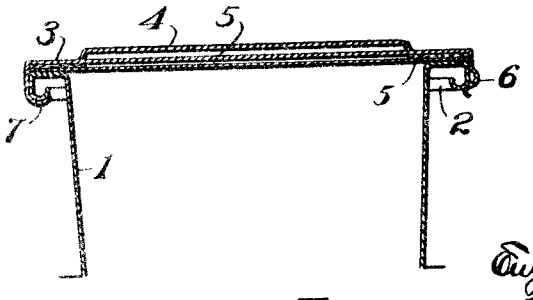

FIG. 7

WITNESSES

INVENTOR

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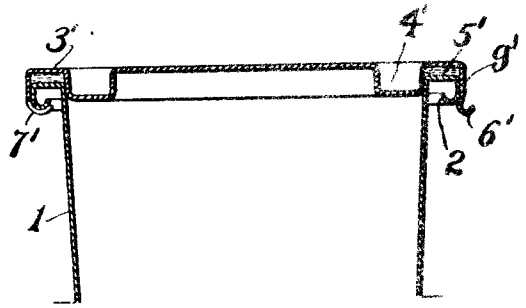

FIG. 8

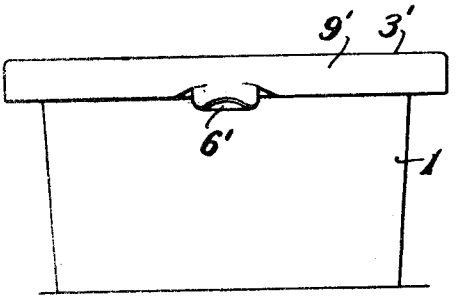

FIG. 9

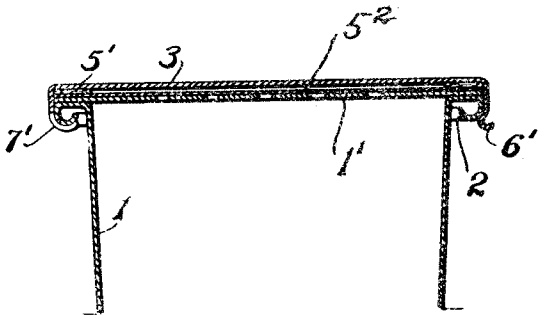

FIG. 10

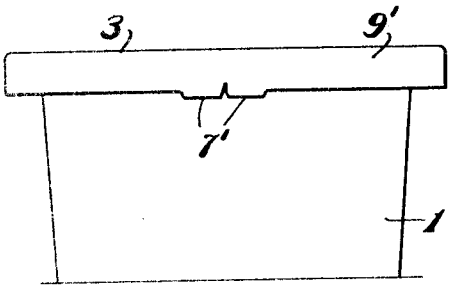

FIG. 11

WITNESSES

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ATT'Y

UNITED STATES PATENT OFFICE.

EUGENE D. CHELLIS, OF PORTLAND, MAINE; GERRY L. BROOKS, OF PORTLAND, MAINE, ADMINISTRATOR OF SAID CHELLIS, DECEASED, ASSIGNOR TO NATIONAL METAL SEAL CORPORATION, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

CLOSURE AND NOZZLE FOR CONTAINING VESSEL.

1,115,507. Specification of Letters Patent. Patented Nov. 3, 1914.

Application filed July 8, 1911. Serial No. 637,411.

To all whom it may concern:

Be it known that I, EUGENE D. CHELLIS, a citizen of the United States, residing at Portland, county of Cumberland, State of Maine, have invented certain new and useful Improvements in Closures and Nozzles for Containing Vessels, of which the following is a specification.

This invention relates to closures for containing vessels and particularly to a closure or cap for a vessel having a shouldered mouth or flanged neck.

In many industries in which goods are packaged for delivery in containing vessels which are to be used from time to time after their first opening it has been greatly desired to produce a low priced closure capable of sealing the vessel tight during shipment and yet be capable of subsequent use during the intermittent access to the contents.

It is the object of my present invention to produce such a closure and in the specification which follows and in the drawings which form a part of it I have shown a form of device which I have found to be well adapted to such usage.

In the forms which I have shown in the drawings and which will be discussed in the specification particular reference is made to the combination of such a closure with a metal vessel neck or nozzle. While my present closure is particularly adapted for combination with this type of nozzle it may be used with various shouldered necks.

In the drawings above referred to:—Figure 1 is a side view of my closure clamped in place, Fig. 2 is a view of the closure open and viewed from the side, Fig. 3 is a front view of the closure similarly positioned, Fig. 4 is a view of the closure replaced on the vessel, Fig. 5 is a side view of the closure before being applied to the nozzle, Fig. 6 is a bottom view of the same, Fig. 7 is an enlarged central section showing the closure applied to a flanged metal nozzle, Fig. 8 shows a central sectional view of another modification, Fig. 9 is a front elevation of the same modification, Fig. 10 is a central sectional view of a still further modification, and Fig. 11 is a rear elevation of the modification shown in Fig. 10, showing the hinges.

The vessel mouth or nozzle 1, as shown, is preferably made of sheet metal, or other suitable material. It has its upper edge rolled over into a flange with a curved rim about its under side. This leaves on the under side of the flange which surrounds the mouth a recess into which the lugs, which will be hereinafter described, will be clenched or engaged.

The several modifications which I have shown are all preferably used with this type of nozzle. These various modifications all closely resemble each other but for convenience I will refer to figures or groups of figures in my description.

Referring to Figs. 1 to 7, inclusive, the cap comprises a plate 3 having a central recessed portion 4 within which a pack may be located. Surrounding the plate 3 is a depending skirt or flange 9 preferably extending about the thickness of the under-turned lip of the closure. On one side of the cap and formed on the lower edge of the flange 9 is a spring locking lip 6 struck up from the metal of the skirt or flange 9 On the opposite side of the cap and also formed on the skirt 9 are one or more lugs 7. These lugs 7 are tripped up under the edge of the lip 2 to form a permanent hinge. On each side of the closure, as clearly shown in Figs. 1, 5 and 6, are lugs 8 which are clenched under the rim 2 when the vessel is first filled. These lugs 8 are scored, as indicated in dotted lines in Fig. 5, so that they are readily frangible at the line of their connection with the flange 9. When it is desired to open the vessel these lugs 8 are broken off by prying with any sharp pointed instrument, after which the cap is released and may be swung up as shown in Figs. 2 and 3. After being initially released, as above described, the cap may be swung back, as shown in Fig. 4. For some usages the lugs 8 might not be necessary and it is, of course, possible to make the cap without these lugs so that it will be produced in the condition shown in Figs. 2 to 4. In most usages, however, it is of great importance that the cap be permanently clenched in place and for this purpose the lugs 8 are usually provided.

In Figs. 8 and 9 the cap plate is indicated as 3^1 and the depending skirt or flange 9^1. The plate 3^1 has an annular depression 4^1 adapted to fit just within the mouth of the

vessel. Permanent hinge lugs 7^1 are provided and a locking lip 6^1. In this form of cap see Figs. 8 to 11, inclusive no side lugs are shown, although, of course, they might obviously be employed if it should be so desired. The cap is swung up in the same way as described in connection with Figs. 1 to 7, turning on its hinge lugs 7^1 and being held closed by its spring locking lip 6^1.

In Figs. 10 and 11 a construction is shown for use with talcum powder or like articles. In these figures the cap 3 covers a perforated plate 1^1 which is soldered or attached in any suitable way to the mouth of the nozzle 1. An annular pack 5^1 surrounds the mouth of the nozzle and a wafer 5^2 may be employed to seal the perforations in the plate 1^1. In this type of construction the same hinge lugs 7^1 and spring locking lip 6^1 are employed.

Various other modifications may obviously be made in the device shown, all of which are contemplated as within the spirit of my invention if within the limits of the appended claims.

What I, therefore, claim and desire to secure by Letters Patent is:—

1. In combination with a containing vessel having a circular lip with a downturned flange about its mouth, said flange having an inturned margin spaced from the vessel wall, a closure comprising a cap member having a downwardly extending circumferential skirt, a depending permanent hinge lug on said skirt turned under said margin within said space and so proportioned as to hook over said inturned margin and abut the inner side of said flange when said cap is in raised position and deformable semi-permanent rim engaging lugs turned under said inturned margin and a resilient flange engaging locking lip oppositely disposed to said hinge lug and adapted to yieldingly engage said flange when the cap is closed.

2. In combination with a containing vessel having a circular lip with a downturned flange about its mouth, said flange having an inturned margin spaced from the vessel wall, a closure comprising a cap member having a downwardly extending circumferential skirt, a depending permanent hinge lug on said skirt turned under said margin and abutting the inner side of said flange when the cap is in raised position, and a flange engaging lock oppositely disposed to said hinge lug and adapted to engage the flange when the cap is closed and prevent accidental raising of the cap on the hinge.

In testimony whereof I affix my signature in presence of two witnesses.

EUGENE D. CHELLIS.

Witnesses:

GERRY L. BROOKS,

ROBERT W. DE WOLFE.