

March 16, 1943.

H. N. PERELSON

2,314,052

CLOSURE AND SPOUT

Filed May 26, 1941

2 Sheets-Sheet 1

Fig-1.

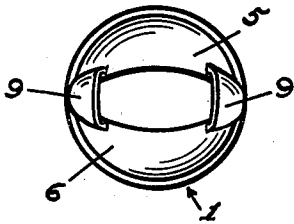


Fig-2.

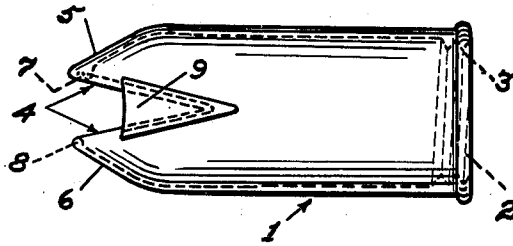


Fig-3.

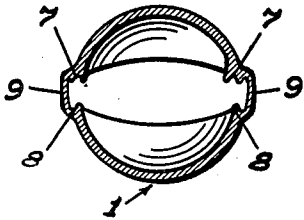


Fig-4.

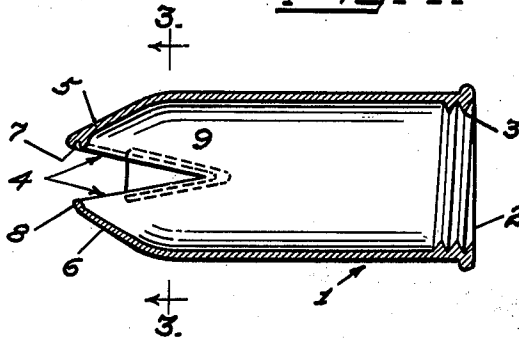


Fig-5.

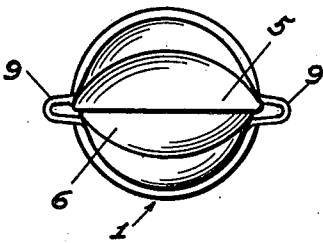
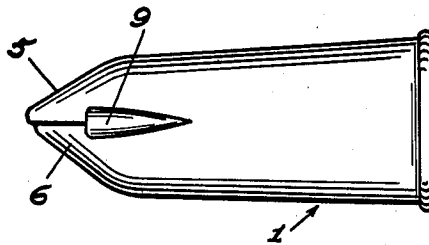


Fig-6.



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Fig-7-

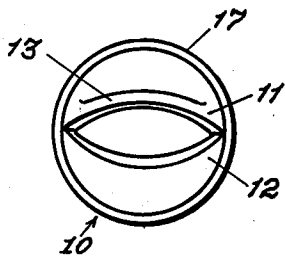


Fig-8-

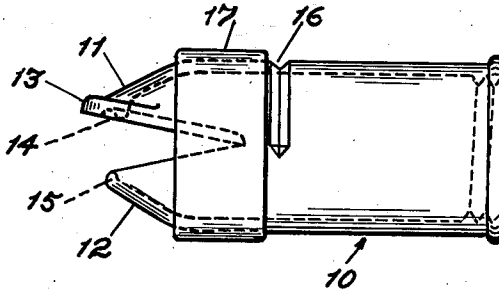


Fig-9-

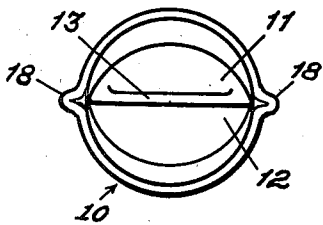


Fig-10-

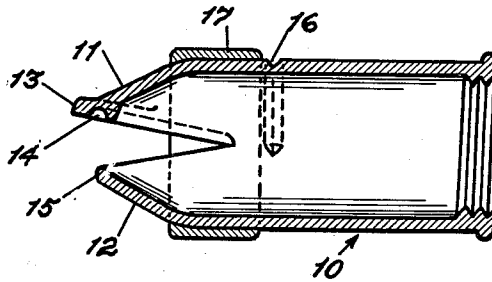


Fig-11-

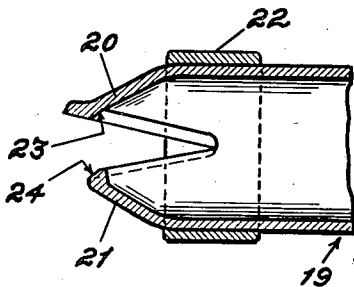
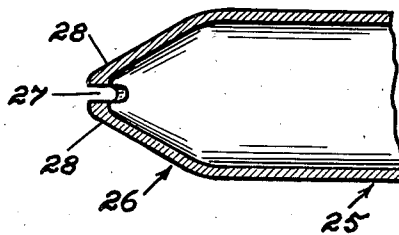


Fig-12-



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UNITED STATES PATENT OFFICE

2,314,052

CLOSURE AND SPOUT

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Application May 26, 1941, Serial No. 395,189

3 Claims. (Cl. 221-60)

This invention relates to combined closure and spout for collapsible tubes and containers from which quantities of the contents may be discharged from time to time, the spout being normally closed and subject to being readily opened with a finger nail or thumb nail or any flat thin object and as readily squeezed or forced shut with the fingers, without in either case necessitating the removal of the device or the turning or manipulation thereof other than as above stated.

An object of the invention is to provide a closure and discharge spout such as described which may be employed as an attachment for dispensing receptacles and when once attached need not be removed in order to effect a discharge of the contents of the receptacle or replaced to close the receptacle, thus doing away with the objectional loss of closure caps which frequently occurs with types of dispensing containers wherein the cap is removed each time a discharge of the contents is desired and must be replaced to seal the receptacle.

A further object is to provide an attachment such as described which may be opened in such manner as to regulate the discharge of the material as desired.

Another object is to provide a device of the character described which may be inexpensively produced and employed either as an attachment or as a permanent or factory equipped part of the container with which it is used.

With the above and other objects in view the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings, and set forth in the claims hereto appended, it being understood that various changes in form, proportion, size and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Figure 1 is a front elevation of a closure and spout embodying my invention when open.

Figure 2 is a side elevation of the device shown in Figure 1.

Figure 3 is a sectional view taken on the line 3-3 of Figure 4.

Figure 4 is a longitudinal sectional view of the device when open.

Figure 5 is a front elevation of the device when closed.

Figure 6 is a side elevation of the device when closed.

Figure 7 is a front elevation of a modified form of my invention, when open.

Figure 8 is a side elevation of the device as shown in Figure 7.

Figure 9 is a front view of the device of Figure 7 when closed.

Figure 10 is a longitudinal sectional view of the device shown in Figure 8, when open.

Figure 11 is a fragmentary longitudinal sectional view of another modified form of my invention.

Figure 12 is a fragmentary longitudinal view of another modified form of my invention.

Referring to the drawings more specifically and particularly to Figures 1 to 6 inclusive it is seen that one form of closure and discharge spout embodying my invention includes a tubular body 1 fully open at its inner end 2 and there internally screw threaded as at 3 so as to be readily applicable to dispensing containers not shown, having a screw threaded discharge end or nipple.

The outer end of the body is tapered or reduced and formed with a longitudinal slit or cut 4 or otherwise divided for defining opposed lips 5 and 6 which are normally in contact with one another so as to close said outer end as shown in Figures 5 and 6. The lip 5 has a marginal groove 7 in which the edge 8 of the lip 6 will snugly fit to form a tight closure or seal.

Webs 9 are joined to the side edges of the lips on opposite sides of the pointed end of the body and are doubled or folded and extend laterally outward as shown in Figures 5 and 6 when the lips are closed.

It should be understood that the body is formed of any suitable soft, pliable, or ductile material like lead or a foil, which will substantially retain its generally tubular form and outline yet permit the lips 5 and 6 to be readily pried apart to serve as a discharge spout as shown in Figures 1 to 4 inclusive, and subsequently pressed together as shown in Figures 5 and 6 to close the spout. The metal or material used should be such as to permit of the repeated opening and closing of the lips without breaking until the full contents are discharged and should be inelastic or such that the lips will remain in the position to which they are pried, bent, forced or pressed. Material somewhat heavier than used in collapsible tubes for pastes and the like would be suitable or a semi-resilient rubber-like material such as now used for bandaging purposes could be used inasmuch as such a material may be pulled apart and will thus remain but when pressed together will stick or adhere together.

It is seen that when the lips 5 and 6 are forced apart with a finger nail or a thumb nail or a suitable thin flat object, the webs 9 will unfold, straighten out and conform somewhat to the general contour of the body as shown in Figures 1 to 4 inclusive. These webs strengthen the device and prevent premature breaking of the lips as they act as hinges. Moreover, the webs close the sides of the outlet formed when the lips are pried open and prevent sidewise discharge of the material dispensed through said outlet. The discharge is regulated by the extent to which the lips are forced apart, the lips remaining in any position to which they are forced.

After a dispensing operation the lips may be readily pressed together with the fingers to close the outer or discharge end of the device whereby it will serve as a closure cap. As the device does not require removal it is always available as an effective closure and thus will insure the proper sealing and consequent preservation of the contents of the receptacle.

A modified form of my invention as shown in Figures 7 to 10 inclusive, embraces a tubular body 10 and lips 11 and 12 substantially the same as to construction and arrangement as the body and lips in the first described form of my invention, except that the lip 11 has a widened or flanged margin 13. In this margin is a groove 14 for receiving the margin 15 of the lip 12 to form a tight closure when the lips are pressed together.

To facilitate bending or prying the lips apart the body is grooved or scored as at 16 near the base of at least one of the lips, the groove or score weakening the body and providing a hinge point.

Instead of integral webs this form of the device has a deformable band 17 pressed and frictionally held thereon so that it will close the sides of the outlet formed when the lips are forced apart. At opposite sides this band has outwardly extended doubled or folded portions 18 which straighten out similarly to the webs 9 when the lips are forced apart.

The lips of this modified form of the invention are adapted to be opened and closed in the same manner as the lips 5 and 6. The widened or flanged margin 13 of the lip 11 projects outwardly beyond the margin 15 of the lip 12 when the lips are closed so that the lip 11 may be readily gripped or engaged to pry the lips apart.

Another modified form of my invention as

shown in Figure 11 includes a tubular body 19, lips 20 and 21 and a band 22 corresponding to like parts in the other forms of the invention except that the lip 20 is beveled as at 23 on the inner edge of its wider margin to overlie and contact a beveled outer edge 24 of the narrower margin of the lip 21. This construction forms a lap joint when the lips are together and facilitates the spreading and opening of the lips as well as a tight closing thereof. These lips are opened and closed in the same manner as in the forms of the invention hereinbefore described.

In Figure 12 I have shown another form of my invention which includes a tubular body 25 and a tapered outer end 26 similar to corresponding parts in the other forms of the invention. In this form a small slot or opening 27 is cut in the apex of the end 26 and defines small bendable lips 28 which are adapted to be pressed together and forced apart to close and open the device. This form has no appreciable side opening of the outlet which is formed when the lips are pried apart and therefore a ribbon-like discharge will be insured when the device is used with containers for paste and the like.

I claim:

1. In a closure, a tubular body, an end on said body formed of inelastic material and divided to define opposed bendable lips which are movable relative to the body into positions for opening and closing the body, and foldable inelastic material webs formed integrally with the body and said lips for closing opposite sides of the opening formed when said lips are forced apart, and arranged to fold outwardly when said lips are forced together.

2. In a closure, a tubular body, opposed lips of inelastic material formed integral with said body so as to be bendable into positions for opening and closing an end of the body, and foldable, inelastic material webs overlying side margins of said lips and arranged to fold outwardly when the lips are bent into position to close said end of the body.

3. In a closure, a tubular body, opposed lips of inelastic material at an end of said body being bendable relative to said body for opening and closing said end, one of said lips having a marginal groove for receiving the margin of the other lip, and foldable inelastic material webs joined to the said lips and overlying portions of the side margins of said lips.

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