

Sept. 3, 1935.

R. W. SHERMAN

2,013,527

COLLAPSIBLE CONTAINER AND CLOSURE THEREFOR

Filed Aug. 29, 1933

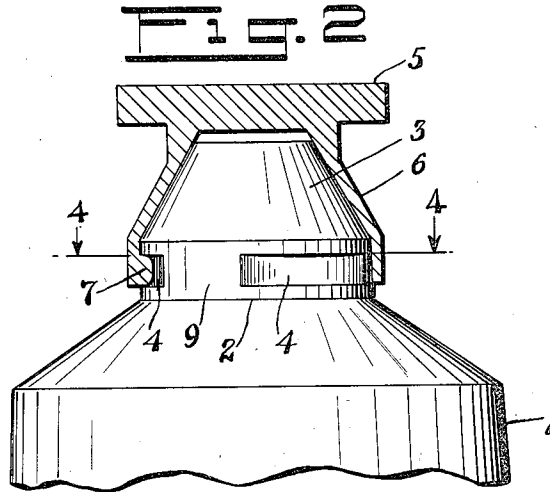
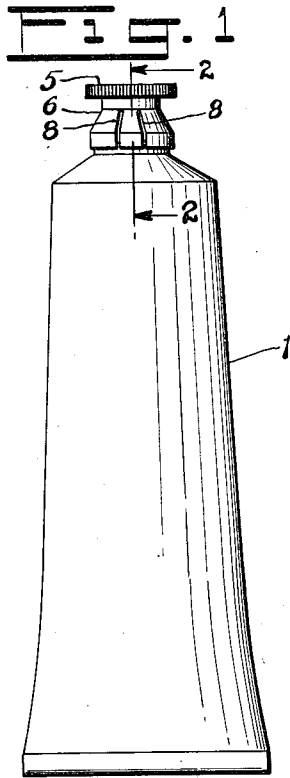


Fig. 3

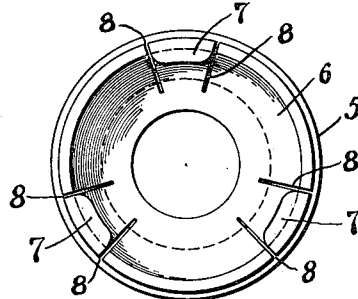


Fig. 4

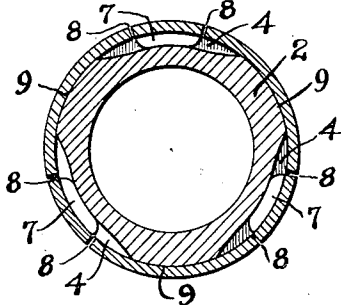


Fig. 6

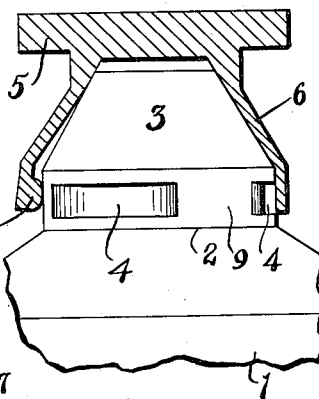


Fig. 7

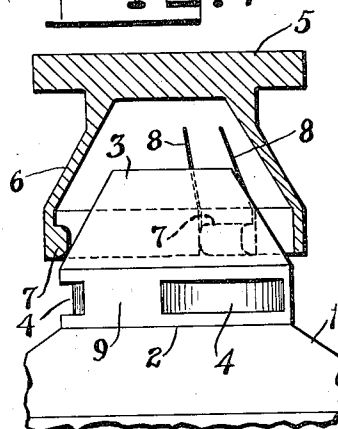
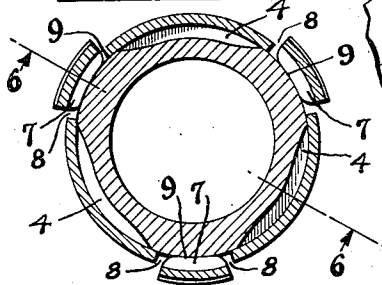


Fig. 5



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2,013,527

COLLAPSIBLE CONTAINER AND CLOSURE
THEREFOR

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Application August 29, 1933, Serial No. 687,252

6 Claims. (Cl. 221-60)

This invention relates to collapsible containers of the type in which the body of the container is formed of tinfoil or a similar material and has a reduced neck through which the contents of the container are discharged.

More particularly the invention relates to an improved form of construction of the reduced neck portion of such type of container and the construction of the cap or closure therefor.

The usual type of collapsible dispensing container is formed with a reduced threaded outlet neck portion which is adapted to receive thereon an interiorly threaded cap or closure. In this type of container frequently the threads of the cap are not true and it is difficult to properly fit the cap on the reduced neck portion so that the screw threads of the cap and the neck portion will properly engage with each other.

It has also been found that in the usual construction of the reduced neck portion of these prior containers there is provided too few threads for the purpose of engaging with the threaded cap and therefore when the cap is applied there is a tendency for it to tilt and not mesh properly with the threads.

It is the object of the present invention to eliminate entirely the screw threaded feature of the cap and neck portion as used in prior structures of containers and to provide a container with a neck portion and a closure cap therefor which are so constructed that, in closing the container, the cap, instead of being screwed on the neck, may be simply pushed down thereon and when in full closing position it will snap into locked position with the neck.

A further object of the invention is to provide a construction of a collapsible container and a closure or cap therefor wherein the closure or cap may be quickly and easily removed from the neck of the container when it is desired to discharge a portion of the contents of the tube.

The other features of the invention will be apparent from the following description and will be pointed out in the appended claims.

Referring to the drawing—

Figure 1 is a view of a collapsible container embodying the features of my invention;

Fig. 2 is an enlarged sectional view of the neck portion of the container taken on the line 2-2 of Fig. 1;

Fig. 3 is a bottom plan view of the closure or cap employed with my improved container;

Fig. 4 is a sectional view of Fig. 2 taken on the line 4-4 in said figure and looking in the direction of the arrows;

Fig. 5 is a sectional view similar to Fig. 4 but showing the cap or closure in partially removed position with respect to the neck portion;

Fig. 6 is a sectional view of Fig. 5 taken on the line 6-6 looking in the direction of the arrows; and

Fig. 7 is a view of the neck portion of the container with the cap or closure shown in section and showing the cap partially positioned on the neck as it is pushed downwardly into closing position.

In the drawing the tube or container is indicated at 1 and is shown as provided at its upper end with a reduced neck formed with the base 2 and the tapered portion 3. The base 2 of the reduced neck is provided with the depressed portions or grooves 4. The grooves 4 are so formed that they gradually slope downwardly from their end portions towards the center thereof.

The cap or closure for the container comprises a closed top portion 5 and a skirt portion 6. The skirt portion is shaped so that it will have a sliding fit over the tapered portion 3 and base 2 of the reduced neck. The base of the skirt portion has formed thereon the lugs 7. The lugs 7 are adapted to engage in the depression or grooves 4 in the base of the reduced neck when said cap or closure is in closed position with respect to said neck.

The skirt portion 6 of the cap or closure is provided with a plurality of slits 8. These slits provide the skirt with sufficient resiliency so that when the cap is forced down on the reduced neck portion of the container said skirt will have an outwardly yielding action and the cap can be pushed downwardly into its intended closed position on the neck and so that the lugs 7 will engage with the depressed portions or grooves 4. When the lugs 7 are in position in the grooves 4 the resiliency of the skirt 6 will hold said lugs in the groove.

If the cap should be forced down on the reduced neck of the container so that the lugs 7 do not coincide with the groove 4, then by slightly turning the cap or closure said lugs are caused to slide into the grooves and the cap becomes locked with respect to the neck portion of the container.

Also, in case it is desired to remove the cap from the neck, all that is necessary to be done is to give the cap or closure a slight turn in either direction so that the lugs 7 will ride up the sloped ends of the grooves and until said lugs are positioned on the surfaces of the base indicated at 9 and then the cap can be slidingly removed from the said reduced neck. The resiliency of the skirt portion

6 of the cap, caused by the slits 8, permits the skirt to expand outwardly as the lugs 7 ride up the sloped ends of the grooves, and permits said lugs to be removed from the said grooves so that the cap may be pulled off the reduced neck portion of the container.

While I have shown and described my invention as applicable to a container of the collapsible type, it is readily apparent that the novel features thereof are applicable also to other types of tubes or containers where the contents thereof are intended to be discharged through a reduced neck portion and a removable cap or closure is employed to retain the contents in the tube or container.

Having now described my invention, what I seek to secure by United States Letters Patent is:

1. A container provided with a reduced discharge neck having a plurality of elongated recesses formed in the base portion thereof which extend circumferentially with respect thereto and which are shallower at their ends than at the center portions thereof, a closed cap having a slitted skirt adapted to slidingly and yieldingly fit over said reduced neck, and having means formed on the inner wall thereof to yieldingly engage in the recesses of said base portion when said cap is in position on said neck.

2. A container provided with a reduced discharge neck having a base portion provided with a plurality of spaced elongated grooves therein extending circumferentially thereof and which are formed so that they are shallower at the ends than at the center portions thereof, and a closure cap for said neck provided with a slitted skirt portion having inwardly projecting lugs which are positioned so as to engage in the recesses of the base portion when said cap is in closed position with respect to said neck.

3. In a collapsible container a reduced discharge neck having spaced elongated recesses formed in the base portion thereof which extend

circumferentially thereof, said recesses being shallower at their ends than at their center portions, a removable closure cap for said discharge neck formed with a radially resilient skirt, means provided on the inner wall of said skirt for slidingly and yieldingly engaging in and disengaging from said recesses formed in the base portion of the neck if said cap is rotated when positioned on said neck.

4. In a collapsible container, a reduced discharge neck having spaced elongated circumferentially disposed grooves in the outer wall of the base portion thereof which are formed with a deeper recessed portion at their centers than at their ends and a removable closure cap for said discharge neck having a skirt portion provided with a plurality of slits therein and a plurality of inwardly projecting lugs adjacent the mouth thereof to slidingly engage in said recesses in said base portion so as to maintain said closure cap in locked position with respect to said neck.

5. In a collapsible container, a reduced discharge neck provided with a plurality of elongated circumferentially disposed grooves in the outer wall thereof, a removable closure cap for said discharge neck provided with a slitted skirt having means formed on the inner wall thereof to engage in said grooves so as to maintain said cap in locked position on said neck.

6. In a collapsible container, a reduced discharge neck provided with a plurality of spaced elongated circumferentially disposed recesses in the outer wall thereof, a removable closure cap for said discharge neck provided with a slitted skirt portion formed so as to have a yielding sliding fit over said neck, and inwardly extending lugs provided on the inner wall of said skirt to slidingly and yieldingly engage in said recesses to maintain said cap in locked position on said neck.

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