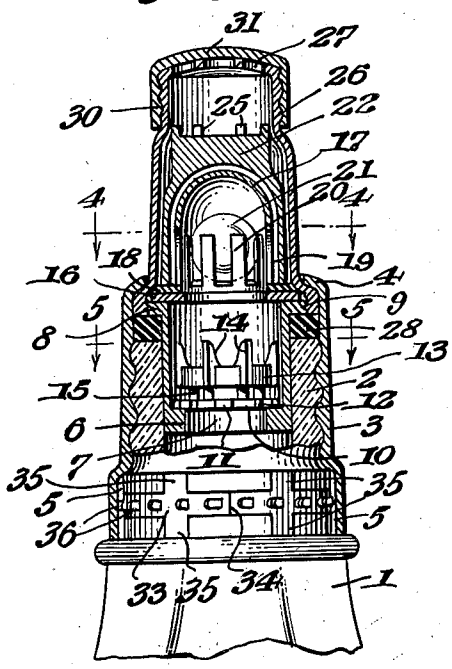
Nov. 23, 1937. N. S. MARTIN 2,100,083

DISPENSING BOTTLE TOP

Filed Nov. 30, 1936

Fig. 1.



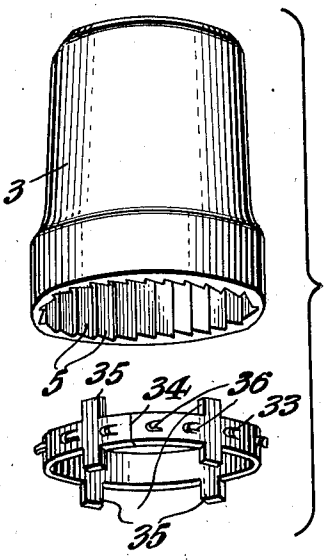


Fig. 3.

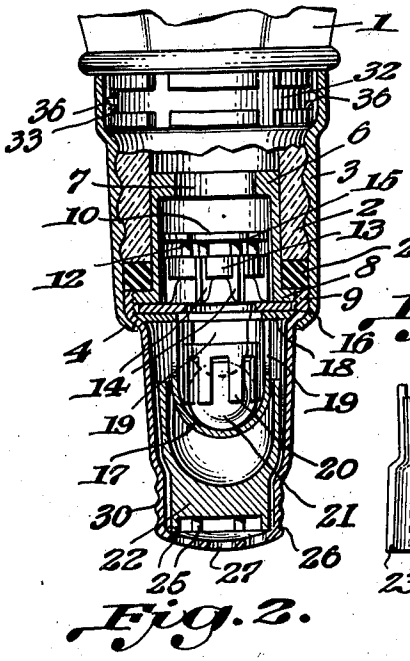


Fig. 2.

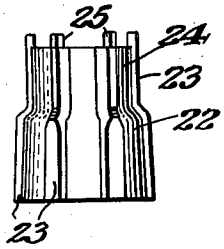


Fig. 6.

Fig. 4.

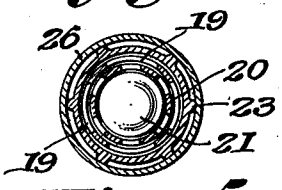


Fig. 5.

Inventor,

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Patented Nov. 23, 1937 2,100,083

UNITED STATES PATENT OFFICE

2,100,083

DISPENSING BOTTLE TOP

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Application November 30, 1936, Serial No. 113,488

4 Claims. (Cl. 215—25)

This invention relates to improvements in dispensing tops for bottles or other containers, and has for an object to provide a novel top which may be permanently secured to the neck of a bottle and when so secured may be considered as providing a non-refillable bottle.

A further object is to provide a dispensing top which may be used with a container applied to the neck thereof until the contents of the container is exhausted, and after which the bottle may not be refilled.

A further object is to provide in such a dispensing top means to guide and distribute the contents from the central opening around the outside but within the body of the device so that in the case of liquids air may be allowed to enter so that the liquid may readily pour. In the case of powder the moveable members within the body of the device will tend to prevent clogging and will keep the powder loose so that it will flow freely through the device.

Other objects will appear as the description proceeds.

This application is a continuation in part of my copending application Serial No. 79,589 filed May 13, 1936.

In the accompanying drawing which forms a part of my application,

Figure 1 is a vertical sectional view of the device applied to a bottle neck in upright position;

Figure 2 is a vertical sectional view of the device applied to a bottle, which is in upside down position;

Figure 3 is a perspective view of the cooperating exterior clamping member and the associated ratchet locking band;

Figure 4 is a sectional view taken on the line 4—4 of Figure 1;

Figure 5 is a sectional view taken on the line 5—5 of Figure 1, and

Figure 6 is a side elevation of the distributor.

Like characters of reference are used throughout the following specification and the accompanying drawing to designate corresponding parts.

In carrying out my invention, I provide a bottle 1 formed with a threaded portion 2 upon which is mounted an exterior clamping member 3 having a shoulder 4 at its upper end, and formed with circumferentially arranged ratchet teeth 5 on its inner surface at its lower end.

Seated within the bottle neck is an annular shell 6 apertured at 7 and provided with a lip 8 threaded at 9 and carrying within itself a closure 10 having circumferential tabs 11 with cut-away portions 12 therebetween. Upon this is mounted a follower comprising a body 13 and legs 14 and 15 adapted to contact the adjacent washers.

Seated on the lip 8 is an apertured washer 16 upon which is mounted a cage 17 whose base 18 seats on washer. The cage is apertured at 19. Movably retained within the cage, and adapted to seat on the washer when in non-dispensable position is a pellet guide 20 which may be cut away as shown or may be merely cup-shaped. This carries within its embrace a pellet 21 which acts as a closure for the bottom of the pellet guide.

Mounted exteriorly of the pellet guide cage 17 is a distributor 22 having exterior ribs 23 and intermediate grooves 24. The whole is adapted to slide down as shown in Figure 2 until it is spaced away from the cage and in dispensing position. In this position, fluid pours through the apertures and around the distributing cap into the space provided by the lugs 25 on the element 22.

A tapered cap 26 with an apertured top 27 is threaded to contact the threads 9 before mentioned to thus draw together the upper and lower elements of the device. The cap 26 is also externally threaded at its outer end at 30 and is adapted to receive the threaded closure cap 31.

The member 26 seats firmly on the washer 28, and provides a tight connection.

The outer surface of the bottle neck 1 is recessed as at 32 correspondingly to the shape of the spring ratchet band 33 shown in Figure 3 of the drawing, which is adapted to seat therein. The band 33 is split at 34 and comprises a plurality of integrally formed laterally extending positioning lugs 35 and a plurality of circumferentially arranged locking teeth 36 adapted to cooperate with the ratchet teeth 5 in the exterior clamping member 3, whereby the member 3 may be screwed down on the bottle neck to clamp the tapered cap 26 in place, and can not be unscrewed due to the locking of the cooperating toothed locking member and the engaging ratchet teeth 5.

When in normal upright position the upper closure assembly comprising the pellet, cage, and washer joins the lower closure assembly and its associated follower to completely close the bottle to refilling. The cooperating clamping member 3 and the ratchet band 33 provide a positive non-refilling of the bottle.

This application is an improvement on my previous application Serial No. 9,473, filed March 5, 1935, which matured into U. S. Patent No. 2,021,562 for Dispensing bottle top.

Many minor changes in detail of construction may be resorted to without departure from the spirit of the invention.

Having thus described my invention what I claim as new and desire to secure by Letters Patent of the United States is:

1. In combination a fluid container having a threaded nipple and a dispensing closure therefor comprising an apertured element within the bottle neck having an annular threaded lip overhanging the bottle top, a movable closure and a follower therefor within the apertured element; a resilient washer between the bottle top and the lip, an apertured washer on said lip, a movable pellet guide on said washer, a pellet within the guide, a cage for the pellet and pellet guide assembly, a movable fluid distributor embracing the cage, a guide for said distributor comprising a tapered annular body portion having an apertured outer end, and a threaded inner end with a shoulder adapted to clamp the washer and pellet cage, and an exterior tapered cap threaded at the top for a closure and at the bottom for the bottle neck and having a shoulder to clamp the dispensing closure as a whole to the bottle top.

2. A dispensing closure comprising a lower apertured element adapted to fit in the container, a movable washer closure for the aperture and a follower therefor in combination with an upper closure comprising an apertured cage, an apertured pellet guide and pellet closure therefor, and means to secure the lower and upper elements together.

3. A dispensing closure comprising a lower apertured element adapted to fit in the container, a movable washer closure for the apertured element and a follower therefor in combination with an upper closure comprising a cage, an apertured pellet guide and pellet closure therefor, a washer interposed between the upper and lower elements, apertured for fluid flow therethrough and forming a seat for the pellet guide, a grooved distribution element surrounding the upper cage, and a guide therefor comprising a tapered body portion, an apertured upper end and a lower end including means to bind the upper and lower elements.

4. The subject matter as set forth in claim 1, and said bottle being formed with an annular recess about its neck, a split locking ring seated in said recess and formed with a plurality of laterally extending locking lugs and a plurality of circumferentially arranged locking teeth, and a cooperating exterior clamping member formed at its upper end with an annular inturned shoulder, and at its bottom end with interiorly positioned circumferentially arranged ratchet teeth adapted to be engaged by said locking teeth when said exterior clamping member is screwed onto the bottle neck whereby the cap may not be unscrewed without breaking the same or destroying the bottle.

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