Dec. 18, 1945. W. F. PUNTE 2,391,345

SELF CLOSING TOP AND DISPENSING CONTAINER

Filed April 26, 1943

Fig. 1.

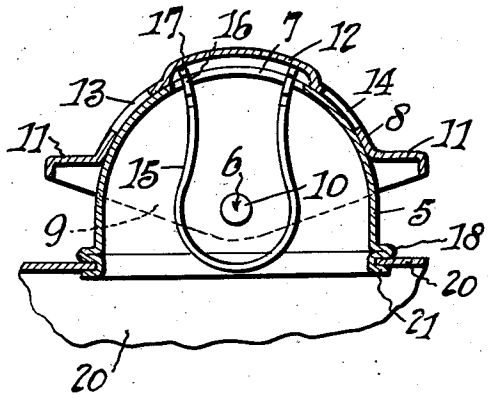


Fig. 4.

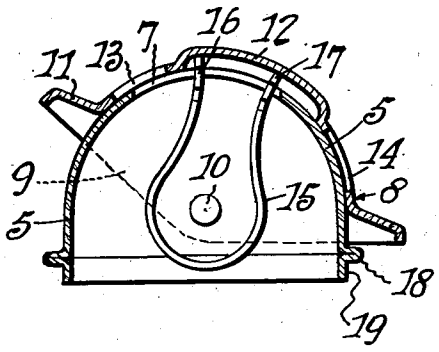


Fig. 5.

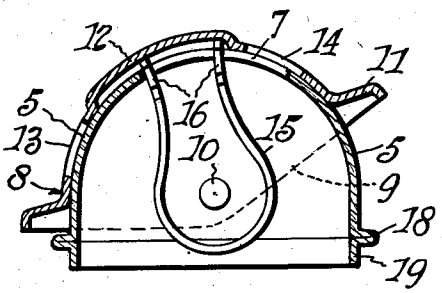


Fig. 2.

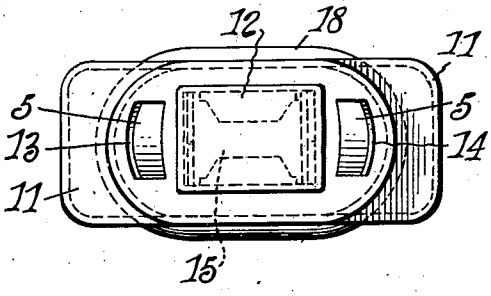


Fig. 3.

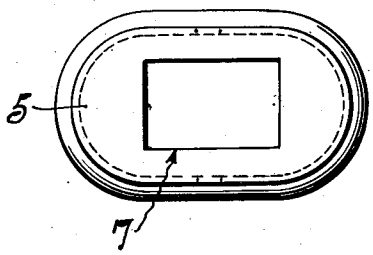
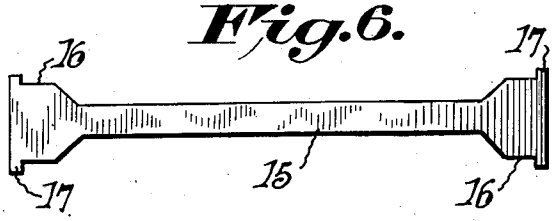


Fig. 6.



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UNITED STATES PATENT OFFICE

2,391,345

SELF-CLOSING TOP AND DISPENSING CONTAINER

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Application April 26, 1943, Serial No. 484,630

5 Claims. (Cl. 222—517)

The invention relates generally to container structures employed in the packaging of powdered granular or similar products which are to be poured or dispensed in limited quantities from the containers, and it primarily seeks to provide a novel top structure for containers of the type stated wherein at least one pouring or dispensing opening is provided, and wherein is included a slide or gate structure for controlling said opening and displaceable by finger pressure for uncovering said opening, and means for automatically closing the opening when finger pressure is released.

An object of the invention is to provide a container top of the character stated in which is included a centrally disposed dispensing opening, a slide or gate structure having two dispensing openings therein one disposed at each side of the center of the slide or gate, and spring means constantly tending to hold the slide or gate centered with its openings out of registry with and at opposite sides of the top opening and its center portion over and closing the center opening, said slide or gate being displaceable by finger manipulation for bringing one or the other of its openings into registry with the top center opening and automatically returnable, upon release of finger pressure and by spring action, to its normal top center opening closing position.

Another object of the invention is to provide a container top of the character stated which is dome shaped or upwardly crested, in which the dispensing opening closure member slidably embraces and is pivotally mounted on the top and in which the spring means is in the form of a loop having its main body suspended into the top through its top opening and its ends engaging the closure member through the center top opening in a manner for constantly tending to hold the closure member centered over the top opening.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more fully understood by following the detailed description, the appended claims and the several views illustrated in the accompanying drawing.

In the drawing:

Figure 1 is a vertical central longitudinal sectional view illustrating the improved dispensing top affixed to a container structure.

Figure 2 is a plan view of the dispensing top structure per se.

Figure 3 is a plan view of the top body per se with the slide or gate removed therefrom.

Figure 4 is a central vertical longitudinal section of the dispensing top per se with the slide moved to the right, as for dispensing powdered or granular products through the dispensing aperture at the left of the center of the top.

Figure 5 is a central vertical longitudinal section of the dispensing top per se with the slide moved to the left, as for dispensing powdered or granular products through the dispensing aperture at the right of the center of the top.

Figure 6 is a detail plan view of the slide or gate centering spring per se.

The improved dispensing top includes a top body 5 which is dome shaped or crested. The top is half circular in vertical longitudinal cross section, the arc of curvature being struck from the center 6 as illustrated in Figure 1. The top 5 is provided with a central opening 7 in the manner clearly illustrated in Figures 1, 3, 4 and 5.

A slide or gate member 8 snugly fits over and is slidable on the top body 5, said slide or gate being curved to conform to the curvature of the external surface of the top in the manner clearly illustrated in Figures 1 and 2. The element 8 is provided with side wings 9 which closely embrace the sides of the body 5 and are pivoted as at 10 to the top body 5 so as to swingably mount the slide or gate 8 for slide swinging movement about the center or axis 6.

The slide or gate 8 is provided with oppositely directed finger engaging extensions 11, and with a centrally disposed elevated portion 12 forming a space intervening the element 8 and the upper or external surface of the top body 5. The centrally elevated portion 12 of the slide element 8 is dimensioned to completely cover the central opening 7 in the top body 5 when the slide is in its normal, centered relation illustrated in Figures 1 and 2 of the drawing. The slide or gate member 8 is equipped with two dispensing openings, one thereof 13 being disposed at one side of the elevated portion 12 and the aperture 7, and the other opening 14 being disposed at the opposite side of said elevated portion and opening in the manner clearly illustrated in Figures 1 and 2.

A leaf spring 15 is provided and depends in the form of a loop in the top body 5 and through the central aperture 7 therein in the manner clearly illustrated in Figure 1. It will also be apparent by reference to said figure that the top opening 7 presents two end stop walls as indicated at the right and left in Figures 1, 4 and 5. When the slide is in its centered position illustrated in Figure 1 the ends of the spring loop 15 are disposed

at points adjacent said top opening end walls. Thus one end of the spring loop will be engageable with an end stop wall of the top opening and held against movement thereby as indicated in Figure 4, or in Figure 5, when the slide is moved in one direction or the other, and the other end will move with the slide in the manner indicated in said Figures 4 and 5. It will be observed by reference to Figures 1, 2 and 6 that the spring element includes end enlargements 16 dimensioned to closely but movably fit in the top body opening 7, and each enlargement 16 also is provided with lateral projections 17 which engage over the edges of the top body 5 defining its central opening 7 within the space formed beneath the elevated central portion 12 of the slide or gate member 8.

At the lower portion thereof the top body 5 has its upright wall portions bent upon themselves to form a bead or abutment shoulder 18. It will be observed by reference to Figures 4 and 5 of the drawing that a skirt portion 19 extends below the shoulder 18. The dispensing top illustrated per se in Figures 4 and 5 can be conveniently attached to any form of container structure in the manner clearly illustrated in Figure 1. In this illustration the top portion of the container is generally indicated at 20. In the attachment of the dispensing top to the container, the skirt 19 is inserted through a suitably shaped receiving opening and is then upset or flanged as at 21 so as to clamp the edge of the container defining the dispensing top receiving opening between the flange 21 and the abutment shoulder 18 in the manner clearly illustrated in Figure 1.

The normal position of the slide or gate on the dispensing top is illustrated in Figures 1 and 2 of the drawing. Should it be desired to dispense powdered or granular material from the container, a person grasping the container in his hand would depress the finger piece 11 at the right hand side of the figure in the manner illustrated in Figure 4, thereby bringing the left hand dispensing aperture 13 into registry with the top body central opening 17, and then by suitably tilting the container the material could be dispensed through the registering openings 7 and 13. Should it be desired to dispense material through the right hand aperture 14, the tilting of the slide or gate 8 is reversed in the manner illustrated in Figure 5. Regardless of the direction of movement of the gate or slide 8 for bringing the central aperture into registry with the left hand dispensing opening 13 or the right hand dispensing opening 14, the movement results in a storing of energy in the spring 15 by moving the ends thereof toward each other, one said end abutting an end of the aperture 7 and the other opposite end of the elevated portion 12 of the slide or gate 8. Obviously the spring will react to return the slide or gate to its centered, normal position illustrated in Figure 1 whenever an operator releases finger pressure from whichever one of the finger pieces 11 has been engaged to bring dispensing openings into registry.

It is of course to be understood that the details of structure and the arrangement of parts may be variously changed and modified without departing from the spirit and scope of the invention.

I claim:

1. A dispensing top for containers comprising a top body having a dome shaped portion having a centrally disposed dispensing opening therein, a slide movable over and having a fixed pivotal mounting on the dome shaped portion of the top body and having two dispensing openings therein one disposed at each side of and out of registry with the top body opening, and spring means constantly tending to hold the slide centered over the top opening with its central portion closing the top opening, said slide being displaceable by finger manipulation for bringing one or the other of its openings into registry with the top opening and automatically returnable upon release of finger pressure, and by action of said spring means, to its normal top opening closing position, said spring means comprising a spring loop suspended in the dome shaped top body portion with its ends extended through the top body opening for engagement by the slide, and said slide having means engageable with one or the other of the ends of the spring as the slide is moved to one side or the other from its normal aperture closing position whereby said spring is effective for yieldably holding the slide centered over said top body opening.

2. A dispensing top for containers comprising a top body having a dome shaped portion having a centrally disposed dispensing opening therein, a slide movable over and having a fixed pivotal mounting on the dome shaped portion of the top body and having two dispensing openings therein one disposed at each side of and out of registry with the top body opening, and spring means constantly tending to hold the slide centered over the top opening with its central portion closing the top opening, said slide being displaceable by finger manipulation for bringing one or the other of its openings into registry with the top opening and automatically returnable upon release of finger pressure, and by action of said spring means, to its normal top opening closing position, and said spring ends being dimensioned to have movement guiding fit in the top body opening and having lateral extensions overlying the edges of the body opening above the body, and said slide being recessed to receive said end extensions and including abutments for engaging and moving inwardly one or the other of the spring ends as the slide is moved to one side or the other from its normal aperture closing position.

3. A dispensing top for containers comprising a top body having a dome shaped portion having a centrally disposed dispensing opening therein, a slide movable over and having a fixed pivotal mounting on the dome shaped portion of the top body and having two dispensing openings therein one disposed at each side of and out of registry with the top body opening, and spring means constantly tending to hold the slide centered over the top opening with its central portion closing the top opening, said slide being displaceable by finger manipulation for bringing one or the other of its openings into registry with the top opening and automatically returnable upon release of finger pressure, and by action of said spring means, to its normal top opening closing position, and said spring ends being dimensioned to have movement guiding fit in the top body opening and having lateral extensions overlying the edges of the body opening above the body, and said slide being recessed to receive said end extensions and including abutments for engaging and moving inwardly one or the other of the spring ends as the slide is moved to one side or the other from its normal aperture closing position and also having finger pieces extending from opposite sides thereof for facilitating finger manipulation of the slide in one direction or the other for bringing one or the

other slide openings into effective registry with the top body opening.

4. A dispensing top for containers comprising a top body having a centrally disposed dispensing opening therein, a slide movable over the top and having two dispensing openings therein one disposed at each side of and out of registry with the top opening, and spring means constantly tending to hold the slide centered over the top opening with its central portion closing the top opening, said slide being displaceable by finger manipulation for bringing one or the other of its openings into registry with the top opening and automatically returnable upon release of finger pressure, and by action of said spring means, to its normal top opening closing position, said spring means comprising a spring loop extending down through the top body opening with its ends extending up through said body opening and engaging the slide in a manner for yieldably holding it centered over said body opening, said spring ends being dimensioned to have movement guiding fit in the top body opening and having lateral extensions overlying the edges of the body opening above the body, and said slide being recessed to receive said end extensions.

5. A dispensing top for containers comprising a top body having a centrally disposed dispensing opening therein presenting two end stop walls, a slide movable over the top and having two dispensing openings therein one disposed at each side of and out of registry with the top opening, and spring means constantly tending to hold the slide centered over the top opening with its central portion closing the top opening and with the two dispensing openings of the slide disposed like distances at opposite sides of said top opening, said slide being displaceable by finger manipulation for bringing one or the other of its openings into registry with the top opening and automatically returnable upon release of finger pressure, and by action of said spring means, to its normal top opening closing position, said spring means comprising a spring loop extending down through the top body opening with its ends extending up through said body opening and engaging the slide at points adjacent said top opening end walls in a manner for yieldably holding the slide centered over said body opening and so that one end thereof will be engageable with an end stop wall of the top opening and held against movement thereby as the slide is moved in one direction or the other and the other end will move with the slide.

WILLIAM F. PUNTE.