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DISPENSING CAN

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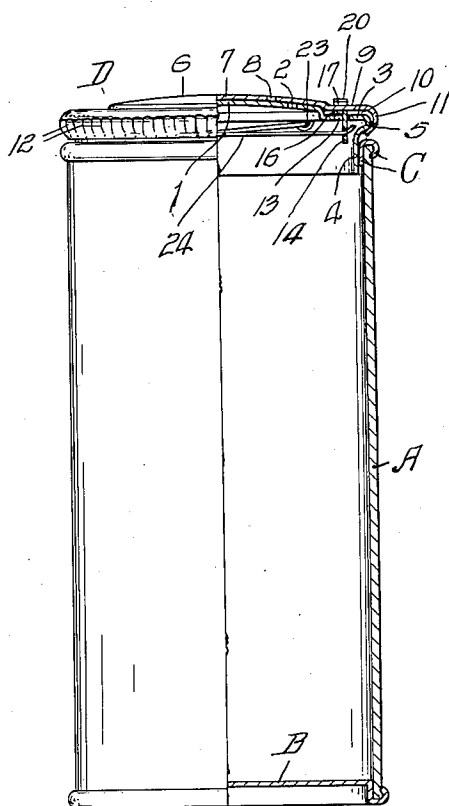


Fig. 1.

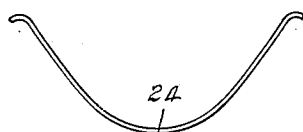


Fig. 3.

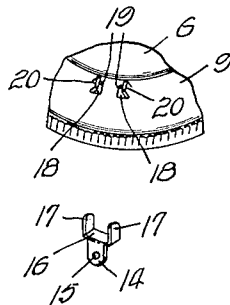


Fig. 4.

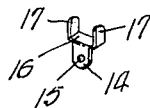


Fig. 5.

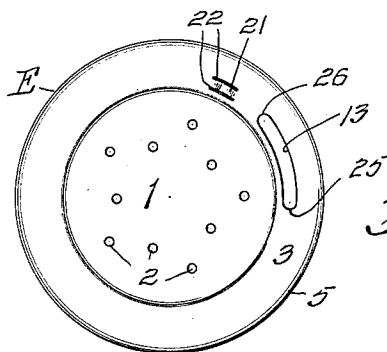


Fig. 6.

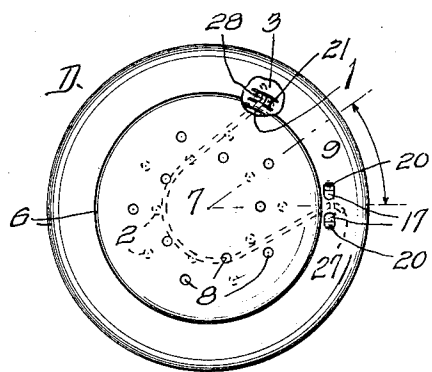


Fig. 2.

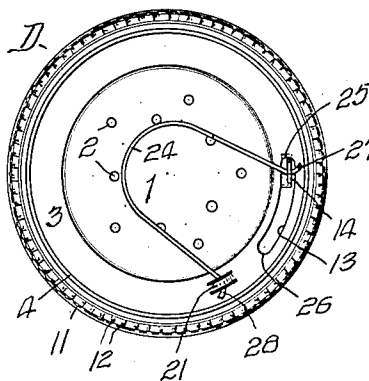


Fig. 7.

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UNITED STATES PATENT OFFICE

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DISPENSING CAN

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tion of Missouri

Application August 8, 1932, Serial No. 627,886

7 Claims. (Cl. 221—64)

My invention relates to dispensing cans, known as sprinkler, sifter or shaker top cans, and, more particularly to a self closing top closure for the can, and, it has for its object to provide a device which is a distinct and practical improvement to overcome certain practical objections to, and defects in, can tops of the character now in use.

A further object of the invention resides in the provision of a reliable self closing closure top of the dispensing type for zinc stearate cans and similar containers of the dispenser type for powder and like contents.

A further object of the invention resides in the provision of a closure top for dispensing cans, which is manually actuated to open the closure top to register its openings, and to automatically close when thumb and finger pressure is released on the peripheral edge of a rotatable closure cap included in the closure top.

A still further object of the invention is the provision of a dispensing can which possesses advantages in points of simplicity and efficiency, and, at the same time proves itself comparatively inexpensive in cost of manufacture.

With the above and other objects in view, the invention consists in the novel features of construction, arrangement and combination of parts hereinafter more fully described and finally pointed out in the claims hereto appended.

Referring to the accompanying drawing forming a part of this specification, wherein like characters of reference denote similar parts throughout the several views:

Fig. 1 is a view partly in side elevation and partly in sectional elevation, embodying the features of my invention.

Fig. 2 is a view in plan elevation of the dispensing can with a part of the closure top broken away.

Fig. 3 is a detail of the closure cap closing spring.

Fig. 4 is a detail in perspective of a portion of the rotatable closure cap.

Fig. 5 is a top plan view of the delivery top which is the lower member of the closure top.

Fig. 6 is an inverted plan view of the closure top.

Fig. 7 is a bottom plan view of the top closure.

Referring to the drawing, the reference character A designates a suitable container body, preferably made from paper stock, although not necessarily so, as it can be made from metal. The container body A is provided at its lower end with a suitable fixed metallic bottom closure B of the type well known in the paper and metal can art.

In the type of dispensing can illustrated, the container body A is provided at its top, or open end, with a metal reinforcing ring C which engages both the inner end and the outer faces of the top edge portion of the container A and which is crimped, or rolled into locked position on the container to prevent displacement thereof, as is usual and customary in the paper can art. This ring C serves as a sleeve to which is fitted a friction plug type of top closure designated generally as D. While I have illustrated a friction plug type of top closure for the container, it is evident that my invention is readily adaptable to fixed types and slip cover types of top closures, as well as the friction plug type of top closure.

The top closure illustrated and designated generally as C, includes a metallic delivery top E having a slightly upwardly curved central top portion 1 provided with a plurality of suitably spaced dispensing openings 2 and having a flat marginal portion annularly depressed, as at 3. The edge of the marginal portion 3 is directed downwardly to provide a cylindrical side wall 4 for frictional engagement with the container body reinforcing ring C, thus providing a friction plug type of delivery top for the container body A. The delivery top E, when removed from the ring C, permits the container to be filled from the top, and, as is manifest, it is readily applied to the ring C by merely pushing it into fitted relation therewith.

The side wall 4 of the delivery top is provided near its juncture with the marginally depressed top body portion 3 with a suitable outwardly directed bead 5.

A suitable metallic closure cap 6 having a slightly upwardly curved central top portion 7 is provided with a plurality of dispensing openings 8 and has its marginal edge portion annularly depressed as at 9. The depressed portion 9 of the cap 6 is not as deep as the depressed portion 3 of the delivery top E, thus providing an annular space 10 between the depressed top portion 3 of the delivery top E and the depressed top portion 9 of the closure cap 6. The openings 8 in the closure cap 6 are equal in number and arrangement to openings 2 of the top portion 1 of the delivery top E. The closure cap 6 is mounted on the top portion 1 of the delivery top E and the depressed marginal portion 9 thereof overrides the depressed marginal portion 3 of delivery top E and the cap 6 has its edge portion curved downwardly and slightly inwardly, as at 11 for circumferential movement on the bead 5 of the side

wall 4 of the delivery top E. The curved or rolled edge 11 of the closure cap 6 is crimped or knurled, as at 12, to allow a good thumb and finger grip thereon to rotate the cap.

5 The depressed marginal portion 3 of the delivery top E is provided with an arcuate shaped slot 13 through which extends, or depends a short arm 14 having an opening 15. The arm 14 is integral with a fastening member 16 having
10 a pair of spaced upwardly directed legs or prongs 17, which being relatively short, pass upwardly through a pair of spaced passages 18 formed by the U-shaped slitting of the closure cap as at 19, and by forcing the metal of the cap within the
15 bounds of the slits upwardly at a slight angle to form lips 20. After the prongs 17 have entered the passages 18, they are clinched over onto the outer face of the depressed portion 9 of the closure cap 6 in a direction toward each other, as
20 shown in Fig. 2. Also the lip portions 20 of the closure cap, which have been raised to provide the prong passages 18, are then forced down and upon a portion of the clinched over ends of the prongs 17 of the fastener device 16 to positively
25 close the leg passages 18 to prevent any possibility of the contents of the can leaking through the fastener leg receiving passages 18 of the closure cap 6 which is mounted for rotation on the delivery top E.

30 The depressed flat marginal portion 3 of the delivery top E is provided adjacent one end of the slotted opening 13 thereof with a narrow strip of material designated 21 formed by slitting the delivery top material, as at 22, 22. This strip 21 is depressed slightly to provide passage 23 within the
35 delivery top E to receive one end of a U-shaped wire spring 24. The opposite end of the U-shaped wire spring 24 is receivable in the eye, or opening 15 in the arm 14 of the staple like
40 fastener device 16. The U-shaped spring 24 normally exerts outward pressure at its ends; thus the cap 6 is always held in its closed position relative to the delivery top E so that the dispensing openings of both members are out of
45 register. In this position of the cap 6, the arm 15 of the fastening device 16 is in contact with the end edge 25 of the slot 13 in the marginal section 3 of the delivery top E.

When the closure cap 6 is rotated or advanced
50 in the direction to register the dispensing openings thereof with the openings of the delivery top E, the arm 14 of the fastening device 16 will engage the opposite end edge 26 of the delivery top slot 13, thus preventing rotary movement of the
55 rotatable closure cap 6 beyond a registering position with the dispensing openings 2 of the delivery top E.

It is thus apparent that, due to the U-shaped spring 24, which is horizontally disposed within
60 the delivery top E, the closure cap 6 will always remain in its closed position relative to the delivery top E due to the action of the spring 24 until manually rotated to a position to bring the spring end 27 of the U-shaped spring 24 toward
65 the other or fixed spring end 28. When the arm 15 engages the end edge 26 of the slot 13, the dispensing openings 8 of the cap 6 will have been brought into register with the dispensing openings 2 of the delivery top E so that the contents of the
70 container can be dispensed through the registered closure openings as long as the cap 6 is held in this position. Just the instant that thumb and finger pressure is released on the edge 10 of the closure cap 6 when in its open position relative
75 to the delivery top E, the spring 24 will auto-

matically rotate the closure cap 6 by the action thereof, to its closed position relative to the delivery top E, thereby breaking register of the dispensing openings in the two top closure members.

From the foregoing description, it is evident
80 that I provide a dispensing can for zinc stearate and other substances in powder or near powder form, which is leak proof and also that there are no projections extending from the can with which children can come in contact to be injured should
85 they bite the top closure thereof.

The many advantages of the herein described invention will readily suggest themselves to those skilled in the art to which it appertains.

From the foregoing description, it is evident
90 that a simple device for this purpose has been disclosed, but it is to be understood that I do not desire to restrict, or limit myself to the very details of the construction shown and described, which is merely illustrative, it being obvious that
95 changes, not involving the exercise of invention, may be made without conflicting or departing from the spirit of the invention within the scope of the appended claims.

What I claim is:

100 1. A dispensing can comprising a tubular body having a removable delivery top provided with a plurality of dispensing openings, a closure cap having a plurality of dispensing openings mounted for rotation on said delivery top, a member
105 struck down from the delivery top to provide an opening, an apertured support fixed to the closure cap and depending through an arcuate slot in the removable delivery top, a single wire spring below and within the removable delivery top and the
110 ends of the spring having connection with the member struck down from the delivery top and the apertured support on the closure cap to urge the closure cap to closing position.

2. A dispensing can comprising a tubular body
115 having a delivery top provided with a plurality of dispensing openings, a closure cap having a plurality of dispensing openings mounted for rotation on said delivery top, a horizontally disposed U-shaped spring disposed below and within the
120 delivery top, means struck down from the material of the delivery top to provide an opening to receive one end of said spring, means fixed to the closure cap and depending through an arcuate slot in the delivery top to which the opposite end
125 of said spring is connected, said latter means adapted to engage one of the end edges of said arcuate slot in the delivery top when the closure cap is in its normally closed position, and said means adapted to be brought into engagement
130 with the opposite end of the arcuate slot of the delivery top to register the dispensing openings of the closure cap with the dispensing openings of the delivery top.

3. A dispensing can comprising a tubular body
135 having a fixed bottom closure, a dispensing member removably connected to the upper end of the body, said dispensing member having a flat marginal portion provided with an arcuate slotted opening, a perforated closure cap mounted for rotation on the removable dispensing member, resilient means disposed below and within the removable dispensing member, means depending
140 from said closure cap and insertable through the slotted opening in the removable dispensing member to which one end of said resilient means has connection and the opposite end of said resilient means having connection with the removable dispensing member adjacent one end of the slotted opening in the flat marginal portion thereof.
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4. A dispensing container comprising a tubular body having a fixed end closure and a top closure of the friction plug type, said top closure having a crowned perforated delivery portion terminating in an annular flat marginal rim portion having an arcuate slotted opening therein, a perforated closure cap having an annular flat marginal rim portion providing a shallow annular space between the rim portions of the delivery top and the closure cap, a pronged fastener device having its prongs passing upwardly through passages formed in the rim portion of the closure cap by slitting the material thereof and forcing the material within the bounds of the slits upwardly at a right angle, said prongs being clinched to the outer face of the closure cap and the cap material within the bounds of the slits being pressed down into contact with the clinched prongs to prevent leakage around said prongs, a portion of said fastening device depending from said closure cap and insertable through the arcuate slotted opening in the delivery top, a wire spring disposed horizontally within the delivery top, one end of said spring having connection with said fastening device and the opposite end of said spring being sprung into connection with the delivery top adjacent one end of the arcuate slot in the rim portion of the delivery top.

5. A closure construction for containers comprising a removable dispensing member having a horizontally disposed marginal portion provided with an arcuately shaped slotted opening, a supporting member formed on the horizontal marginal portion of the removable dispensing member adjacent one end of the slotted opening, a rotatable dispensing member having a horizontal marginal portion mounted upon the removable dispensing member, a support secured to the rotatable dispensing member and insertable downwardly through the slotted opening in the marginal portion of the removable dispensing member and a normally bow shaped spring having angularly directed ends sprung into position for engagement with the supports on the

removable and rotatable dispensing members so as to be disposed within the container below the removable dispensing member to urge the rotatable dispensing member to closing position.

6. A sifter closure for containers having, in combination, a friction type of dispensing member removably connected with one end of the container, said dispensing member having a flat marginal portion provided with an arcuately shaped slotted opening, said flat marginal portion terminating in a beaded edge which in turn terminates in a flange for frictional insertion into the container, a rotatable dispensing member mounted on the removable dispensing member, said rotatable member having a flat marginal portion disposed parallel with the flat marginal portion of the removable dispensing member and terminating in a curved marginal flange securing the rotatable member to the removable member, a support secured to and depending from the flat marginal portion of the rotatable member and insertable through the arcuate slotted opening in the flat marginal portion of the removable member, a spring disposed below and within the removable member and having its ends connected to the depending support and to the rotatable member adjacent one end of the arcuate slotted opening to urge the rotatable member to closing position.

7. In combination with a dispensing can having a stationary dispensing member and a dispensing member rotatable with respect thereto and normally closing the same, of a supporting member secured to and depending therefrom and through an arcuate slotted opening in the stationary dispensing member and a spring disposed below and within the stationary dispensing member having one end thereof connected with the stationary dispensing member and having its opposite end sprung into connection with the depending support for urging the rotatable dispensing member to closing position.

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