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222. DISPENSING.
480

July 20, 1943. G. C. ERB 2,324,499

480
x561
x541

CONTAINER

Filed Sept. 30, 1939

Fig. 1

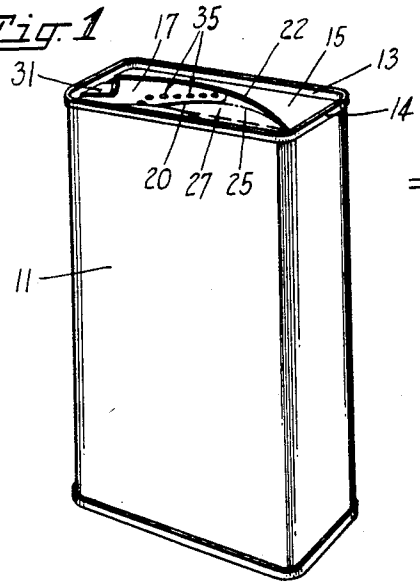


Fig. 3

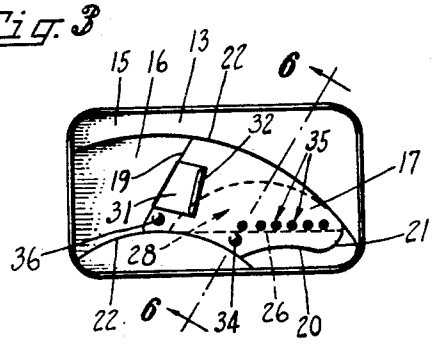


Fig. 2

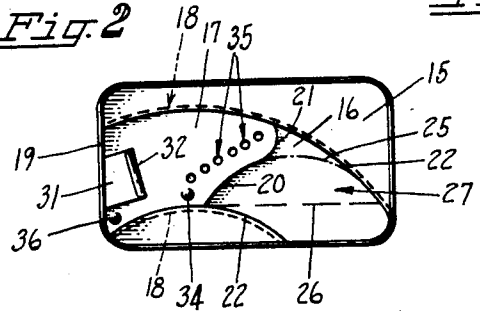


Fig. 4

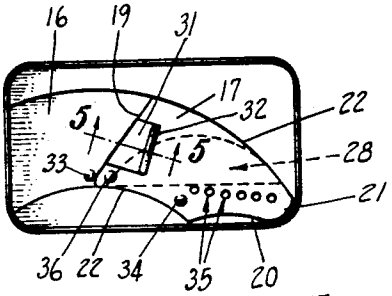


Fig. 5

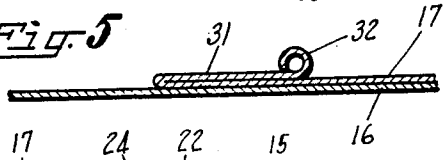
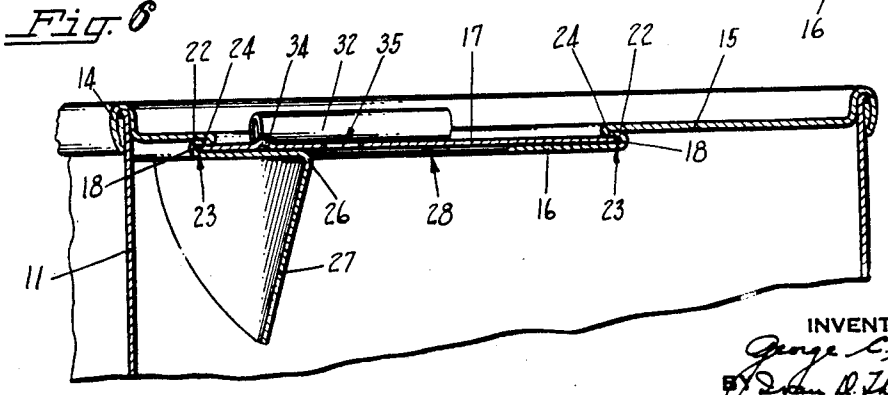


Fig. 6



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480

Patented July 20, 1943

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UNITED STATES PATENT OFFICE

2,324,499

CONTAINER

George C. Erb, Forest Hills West, N. Y., assignor to American Can Company, New York, N. Y., a corporation of New Jersey

Application September 30, 1939, Serial No. 297,398

2 Claims. (Cl. 221—62)

The present invention relates to dredging cans for powders, condiments and the like and has particular reference to a fully sealed rectangular can which is opened by breaking out scored parts cut in a central panel of the can end or top, this panel having a depressed section the sides of which are concentric arcs and these opposite walls along their full arcuate extent are folded over to provide spaced oppositely disposed channels or slide seats for a flat perforated top slide having side edges cut along concentric lines corresponding to the sides of the depressed top section by means of which the can may be fully opened for dispensing of its contents as in removal by a spoon, or the dispensing may be done by sifting the contents through the perforations or dredge openings in the slide, or the can may be reclosed against any discharge of contents depending upon the position of the slide.

An object of the present invention is the provision of a dredging can which is initially sealed to enclose its contents and which may be opened to make effective a flat perforated top slide having its two opposite side edges formed on concentric arcs and which slides forward and back along a curved path while it is retained in the can top, different positions of the slide determining different methods of dispensing of the can contents in addition to functioning as a reclosure for the can.

Another object of the invention is the provision of a simple flush top curved slide member for a rectangular dredging can which allows for removal of a relatively large amount of the contents as by a spoon when the slide is moved toward one short edge of the rectangular can top and which closes the can when the slide is moved to the adjacent long edge during which movement it passes along the arc of a circle, an intermediate position in its circular travel making effective dredge openings in the slide.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawing, discloses a preferred embodiment thereof.

Referring to the drawing:

Figure 1 is a perspective view of a dredging can embodying the present invention;

Figs. 2, 3 and 4 are top plan views of the can of Fig. 1, the three views showing different positions of the slide;

Fig. 5 is an enlarged sectional detail as viewed along the section line 5—5 in Fig. 4; and

Fig. 6 is a fragmentary sectional view taken on the line 6—6 in Fig. 3 and drawn to a larger scale.

The present invention is concerned with a dredging can having a simple one-piece perforated top slide which has a curved movement across a flush surface provided in the can top, this top of the can being secured to the can body in a double seam. The slide becomes effective to condition the can for dispensing of or for enclosing its contents after the can has been initially opened, by the breaking out of a scored part of the top end. Such a can is shown as being rectangular in shape and the slide is formed with concentric curved lines so that it has movement from one end wall of the can top to an adjacent side wall of the top, the slide being held in proper position on the can top by the slideway construction formed in the top.

Such a rectangular can comprises a can body 11 (Figs. 1 and 6) preferably formed of metal and provided with an imperforate bottom or end member and an imperforate top end member 13. The two end members may be secured to the body in conventional double or other types of seams 14. The top end 13 is primarily of the usual dished form required for double seaming and this construction provides a sunken web wall 15 inside of the double seam. The wall 15 is further depressed as a sunken panel part 16 which extends from one end of the top wall 15 to an adjacent side of the wall. This depressed panel 16 is of curved outline along its side walls which are or may be concentric arcs of a circle.

The flush wall surface of the depressed panel 16 permits the use of a one-piece top slide member 17 which rests on the panel wall and which has various sliding positions to effect different dispensing actions or to reclose the can after it has been initially opened. This top slide 17 is of simple construction having concentric edges 18 which correspond to the side walls of the depressed panel 16. The slide has an additional straight edge 19 and an opposite connecting curved edge 20 which joins the concentric edges 18. The edge 20 may extend into a reverse small circular section 21.

The slide 17 is confined in the sunken panel 16 of the can top in a manner which permits it to move into its different positions. This holding and guiding of the slide is effected by a special shaping of the concentric side walls of the sunken panel 16. From a manufacturing standpoint it is desirable to reshape the side walls of the sunken panel after the slide member 17 has been positioned in the can top. When can top and slide

are assembled, therefore, these concentric walls are collapsed or pressed edgewise transforming them into S-shape in cross section, as indicated at 22 in Fig. 6. This re-shaping of each side wall provides a channel 23 and an overhanging ledge 24. The slide 17 is confined against displacement from the can top by its concentric edges 18 sliding freely within the opposed channels 23 while being held down by the ledges 24 of the sunken panel section.

In the position of Fig. 2 the straight edge 19 of the slide 17 is against the inner wall of the double seam. The opposite curved edges 20, 21 of the slide now uncover a scored part formed in the depressed web wall of the panel.

In this depressed wall of the sunken panel 16 a continuous arcuate score line 25 is cut through fully or in part and the two ends of this curved line are joined by a broken chord line 26. These curved and straight score lines set off a removable part or area 27 which prior to initial opening of the can remains in the plane of the wall of the sunken panel thus forming an imperforate top for the can.

With the parts in the position of Fig. 2, the can is opened. This renders the slide 17 effective as a slide closure. This initial opening of the can is made by pressing down on the segment area of the removable part 27, the part being pushed down into the can as illustrated in Fig. 6. In such action of opening the can, the arcuate score line 25 breaks through and the metal of the top bends along the chord score line 26. This removal of the part 27 from the plane of the can top creates a dispensing opening 28 (Fig. 6).

With the slide remaining in the position of Fig. 2 and with the can thus initially opened quantity dispensing of the contents may be had by inserting a spoon into the dispensing opening 28. The shape of this opening is such as to permit insertion and withdrawal of a spoonful of contents, the straight chord wall of the opening providing a scraping element so that just a level spoonful may be obtained.

Following such opening of the can and this partial dispensing of its contents, movement of the slide to the opposite end of the sunken panel effects a reclosure and again confines the contents. To simplify such a slide movement, the slide 17 is formed with a bent-back lug 31 (Fig. 5) which is pressed flat against the top of the slide, this lug terminating in a curled finger-piece 32.

To move the slide from open to closed position for example, it is merely necessary to grasp the finger-piece and draw or push the slide along its slideways. Its straight edge 19 moves away from the double seam of the short end of the can top and its curved edge 21 is then brought adjacent to the long side of the top which is adjacent thereto. In other words, the slide is moved from the position indicated in Fig. 2 to that shown in Fig. 4.

Stop elements are used to lock the slide in each of the open and the closed positions. Such a stop feature includes a protuberance 33 (Fig. 4) pressed up from the sunken web wall of the panel 16. In the open position a raised button or protuberance 34 on the slide snaps over the protuberance 33 holding the slide in place. In the closed position of the slide (Fig. 4) the slide fully closes or covers over the dispensing opening 28 and confines the contents in the can. In this position the straight edge 19 of the slide is immediately adjacent the protuberance 33 and the latter holds the slide with its curved wall 20 adjacent the side of the seam and with the curved corner edge 21 in the rounded corner of the seam.

When it is desired to dispense the contents in a sifting or dredging action the slide is moved to an intermediate position. A straight line of perforations 35 is cut through the wall of the slide 17 adjacent its curved edge 20 and in an intermediate position, illustrated in Fig. 3, these perforations lie over the dispensing opening 28 just inside of the chord line edge of the opening. As shown in Fig. 6, this position results in free communication through the openings from the inside of the can to the outside and the contents may be sifted therethrough by the usual shaking or tilting of the can.

This sifting position, as in the open and closed positions of the slide, is positively maintained in a definite location by a stop feature. The protuberance 33 is again used. This time a stop button or protuberance 36 pressed up from the wall of the slide 17 adjacent its straight edge 19 engages over the protuberance 33 and holds the slide in the intermediate position with both of the edges 19 and 20 spaced inwardly from the surrounding seam.

It will be observed that in the full open position of the can (Fig. 2), the perforations 35 come over the web wall of the sunken panel 16. In the closed position of Fig. 4 this web wall also prevents any communication with the inside of the can. Therefore the perforations are only operable in the intermediate position of the slide.

In this way an exact and predetermined location of the slide relative to the dispensing opening 28 is made possible for all of its dispensing positions. It will also be observed that the movement of the slide is unique in that it moves between adjacent sides of the end member rather than moving across the end between opposite sides. This is made possible by reason of the curved or arcuate path of movement of the slide and results in a smaller can top size and a shorter slide movement for the same maximum size of dispensing opening. This is important in a dredging can inasmuch as such a can finds its greatest use in the packaging of spices in which small quantities of contents are desired in a single can.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. In a sealed rectangular dredge top can wherein a perforated slide member is movably confined within a slideway on an imperforate can end member seamed to the can body, for sliding movement within the confines of the end seam into a plurality of closing and dispensing positions relative to a prelocated dispensing area in the can end member, the improvement comprising said slideway and slide member being of conforming arcuate configuration with the slideway extending from one seam edge to an angularly disposed adjoining seam edge of the container end member, to obtain movement of said slide member in a curved path of travel, whereby to obtain a maximum movement of the slide member

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into said plurality of positions on the end of a can of relatively small cross sectional size.

2. In a sealed rectangular dredge top can wherein a perforated slide member is movably confined within a slideway on an imperforate can end member seamed to the can body, for sliding movement within the confines of the end seam into a plurality of closing and dispensing positions relative to a prelocated dispensing area in the can end member, the improvement comprising said slideway and slide member being of conforming arcuate configuration with the slideway extending from one seam edge to an angularly disposed adjoining seam edge of the container end member, to obtain movement of said slide member in a curved path of travel, whereby to obtain a maximum movement of the slide member into said plurality of positions on the end of a can of relatively small cross sectional size, said slide member when disposed in closing position adjacent one seam edge of the container end covering said dispensing area, when moved through said slideway to adjacent said angularly disposed adjoining seam edge completely exposing said dispensing area for bulk dispensing purposes, and when moved to an intermediate position between said adjoining seam edges registering the slide member perforations with said area for sifter dispensing of the can contents, and means on said can end member engageable with spaced means on said slide member for yieldingly holding the latter in each of the aforesaid positions.

GEORGE C. ERB.