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CAN OPENER

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3 Claims. (Cl. 220—24)

My invention relates to can closures of the internally operated type and has for its object to provide a closure device which may be formed on a can on the interior thereof with double closure lugs passing out through suitable openings in the can. One of the lugs being operated to simultaneously operate the other lug.

A further object is to provide an internal type of closure device for containers, said device being spring held to normally hold the openings closed, the openings to be opened by depression of one of the closure plugs for one opening, thus depressing the other plug and opening one hole sufficient to allow air to enter the container and to allow the fluid to flow from the other opening.

A still further object is to provide a closure device for milk cans or similar types of cans which has double openings therein, one to allow air to enter the can for free flowing of the fluid from the other opening. This double plug closure is within the can and is adapted to close both openings when the can is not in use and to partially open one opening when the other is completely opened by pressure on one of the closure plugs.

These objects I accomplish with the device illustrated in the accompanying drawing in which similar numerals and letters of reference indicate like parts throughout the several views and as described in the specification forming a part of this application and pointed out in the appended claims.

In the drawing

Figure 1 is a vertical diametrical section of the upper portion of a can with the closure plugs shown before the seal on the can has been broken.

Figure 2 is a sectional view of the top of the can when the seal has been broken and the closure plugs are closing the openings.

Figure 3 is a vertical section of a modified form of the device in which a spring holds the closure plugs and they are carried on a pivoted lever.

Figure 4 is a modified form of device with a central control plug.

Figure 5 is a side view of another modified form.

Figure 6 is a plan view of Figure 5.

In the drawing I have shown the can as A, having a top B thereon and as usual this top is crimped or soldered to the can A. The top B is then provided with spaced apart ports or openings 1 and 2, and these openings are sealed by a strip of metal 3 around each opening. The openings are then provided with mechanically operated closure plugs 4 and 5 carried on an

arm 6 in alignment with the openings 1 and 2 respectively. One end of the arm 6 is formed as a spring 7 and the spring is secured to the top B by strips 8 or by suitable welding or solder.

The strip of metal 3 which forms the seal for the openings has one end 3a extended down one side of the rim of the can to enable the operator to remove the seal from the can by hand. As the strip 3 is not secured to the can except around the openings, the end 3a and that portion 3b of the strip 3 which extends across the top of the can to the secured portion adjacent the hole 1, will be sufficient length to allow the opener of the can to grasp the strip 3 with his fingers and break the seal by entirely removing the strip. The spring 7 then forces the plugs 4 and 5 into the openings 1 and 2. The plug 4 is frusto-conical in form and the plug 5 is conical in form and the largest end where they are secured to the arm 6 is larger than the area of the openings. Variations in the form of the plugs and in the openings may be made without departing from the spirit of the invention.

When the plugs are sealing the openings they will be in the position shown in Figure 2 of the drawing and when they are depressed to open the can they will be in a position similar to that one shown in Figure 1 before the can has been opened. The operator when opening the can presses down on the plug 4 which flexes the spring 7 and lowers the arm 6 with the outer free end lowering sufficient to free the plug 5 from the opening 2.

In Figure 3 I have shown a modified form in which a lever 10 is pivotally secured to the top C by a pivot pin 11 and bracket 12. The lever 10 carries spaced apart plugs 13 and 14 adapted to control the openings 15 and 16 respectively. A leaf spring 17 normally holds the plugs 13 and 14 seated in the openings 15 and 16.

In Figure 4 I have shown the two openings as 30 and 31 with closure plugs 32 and 33, carried on a bar 34. The bar has a vertical rod 35 extending up through the top of the container and a spring 36 normally holds the plugs 32 and 33 seated in the openings 30 and 31. The operator controls the openings by pressing down on the rod 35.

In Figures 5 and 6 I have shown a modified form in which the two closure plugs 40 and 41 are carried on a plate 42. A spring 43 holds the plate 42 to the top of the can 44, the spring is secured to the top of the can by soldered strips 45 or other suitable means.

The operation of the device is as follows:

The strip of metal closing the openings is first removed by the operator. The can is then ready for use. When it is desired to pour some of the contents from the can the operator presses down on that lug which has the apex cut off, with his finger or other means. This flexes the spring holding the plugs, and the other plug is simultaneously depressed into the can and the contents may then be poured from the can. When through the pouring, the operator releases the lug which he has depressed and the two plugs then seal in the openings, sealing them until future use.

Having thus described my invention I desire to secure by Letters Patent and claim:

1. In a can closure, the combination of a spring supported arm carried within the top of the can and adjacent thereto; spaced apart openings through the top of said can; spaced apart closure plugs carried on said arm to control the openings in the top of the can; and a sealing

strip carried across the top of the can secured thereto around the openings to seal the can prior to use.

2. In a can closure of the class described, the combination of an arm; means to pivotally mount said arm onto the under side of the top of a can; spaced apart conical plugs on the side of said arm adjacent said can top; openings through said can in alignment with said plugs said plugs to normally hold said openings sealed; and a spring engaging said arm to hold said arm in position and said plugs seated in said openings.

3. In a can closure of the class described, the combination of a can having spaced apart openings through the top end thereof; a spring controlled arm mounted on the inside of said can; spaced apart plugs on said arm in alignment with said openings, said plugs to normally hold said openings sealed.

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