Patented Dec. 16, 1941 2,266,001

UNITED STATES PATENT OFFICE

2,266,001

COLLAPSIBLE ICE CREAM CAN

Peter F. Christianson, Eau Claire, Wis.

Application November 9, 1939, Serial No. 303,529

2 Claims. (Cl. 220—93)

This invention relates to containers, more particularly to ice cream containers or cans in which ice cream is furnished in wholesale quantities to dispensers to the public, and aims to provide primarily a can of such construction that, as the ice cream is gradually removed from the top, the bottom of the can is raised. In this way the necessity for the server to dig deep into the can, which is the case with the common type of can when the can is nearly or partly empty, is eliminated, and the level of the ice cream is always conveniently within reach, no matter how much or how little ice cream remains in the can. The sanitary features of such a can, in addition to the practical convenience to the server, are obvious.

The above and other objects will become apparent in the description below, in which the characters of reference refer to similarly-numbered parts in the accompanying drawing.

Referring briefly to the drawing, Figure 1 is a perspective view of the can.

Figure 2 is a cross-sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a fragmentary elevational view, showing the bottom in an elevated position.

Referring in detail to the drawing, the numeral 10 represents a base having two diametrically opposed uprights 11 secured thereto. An annular band 12 surrounds, and is secured to, the upper ends of these uprights. The inner opposed surfaces of the uprights 11 are provided with vertically spaced rack teeth 11*a*; hence the uprights 11 may be termed mutually opposed vertical racks.

Also secured to the inner sides of the uprights 11, are a pair of opposed sockets or trunnions 13 in which the lower extremities of vertical shafts or rods are rotatably guided. Each rod 14 is provided with a longitudinal slot or key way 15, in which the key, not shown, of a worm 16 is slidable. The worms 16 are slidably mounted on the rods 14.

A disc 17 provides the bottom of the can, and is provided with two diametrically opposed openings through which the rods 14 pass. This disc is situated between the worms 16 and the trunnions 13. A coiled spring 18 is mounted between the base 10 and the disc 17 and normally urges the latter upward against the worms 16, and the worms 16 are in mesh with the racks 11. The upper extremities of the rods 14 are provided with knurled handles 19, and the upper ends of these rods are also rotatably supported in trunnions 20 secured to the uprights.

A filled telescopic container 22 similar to a collapsible drinking cup, is placed on the can bottom 17, with the lowermost segment 21 (whose bottom is closed) of the container resting on the member 17. Ice cream is supplied to the dealer in the container 22, whose segments are extended, as shown in Figure 2, when the container is full. The tension of the spring 18 is sufficient to retain the bottom 17 with the full container supported thereon in a position elevated above the trunnions 13. Oppositely disposed pivoted lugs 23 are provided on the band 12, which are swung back against the band while the full container is being inserted and are swung over the uppermost segment of the container after the latter is in position. Thus the lugs 23, in the latter position, prevent upward movement of the uppermost segment.

The operation of the device is as follows. Assuming that the container shown in Figure 2 is full, it is a simple matter for the server to scoop the ice cream from the top. When an amount equal to the volume of the uppermost segment 24 has been removed from the container, the level of ice cream therein is again brought to the top of the can by rotating the handles 19 in a direction which will cause the worms 16 to rise. As the worms rise, the pressure of the spring 18 will raise the bottom 17 a similar distance. Since the uppermost segment 24 of the container is prevented by the lugs 23 from rising the next lower segment 25 will telescope into the uppermost segment, thus again bringing the ice cream level to the top. This operation is repeated until the container has been emptied and, consequently, completely collapsed. The collapsed container is easily removed after the lugs 23 have been swung clear. To prepare the device to receive another full container, the worms 14 are again restored to the positions shown in Figure 2. For the sake of convenience and to aid the operator in restoring the worms to the proper position to receive a full container, some sort of marking, not shown, may be provided on the rods 14 near their lower ends.

Obviously, modifications in form and structure may be made without departing from the spirit and scope of the invention.

I claim:

1. A device of the character described comprising a base having upright supports secured thereto, each of said supports having a trunnion at its upper end and a trunnion near its lower end, vertical rods rotatably supported in said trunnions adjacent each of said uprights, a band