July 3, 1928. 1,676,224

A. SPILIOTAKARAS ET AL

DISPENSING CONTAINER

Filed March 29, 1926 2 Sheets-Sheet 1

Fig. 1.

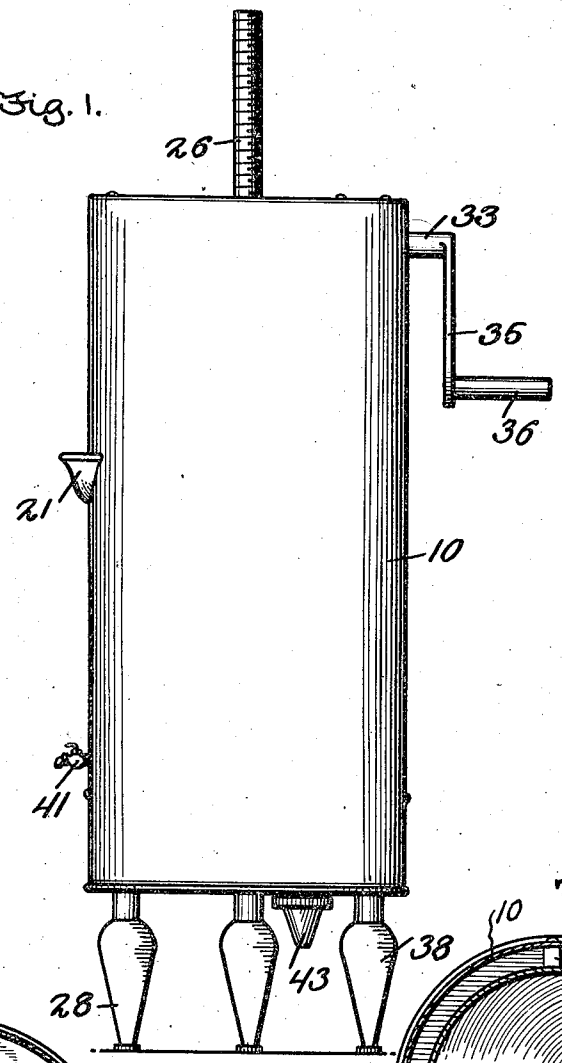


Fig. 5.

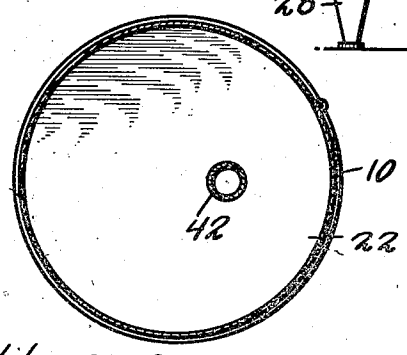
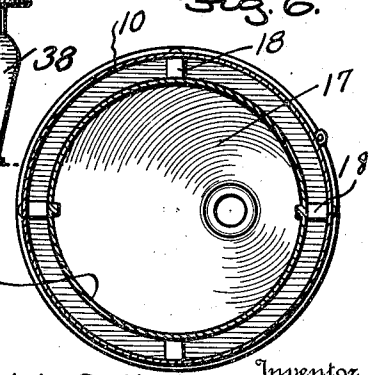


Fig. 6.



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Fig. 2.

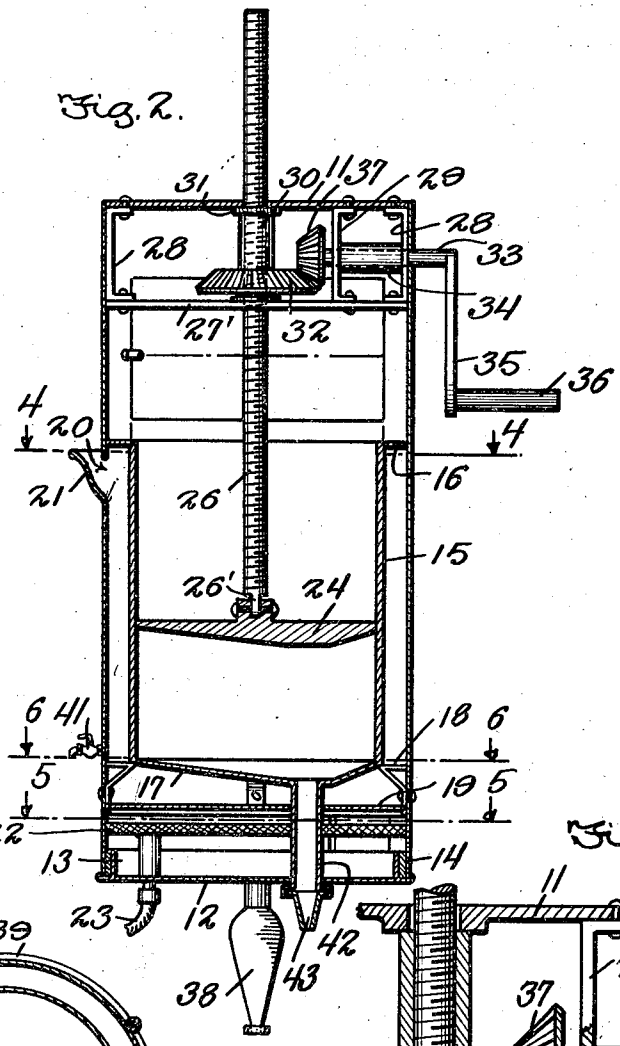


Fig. 3.

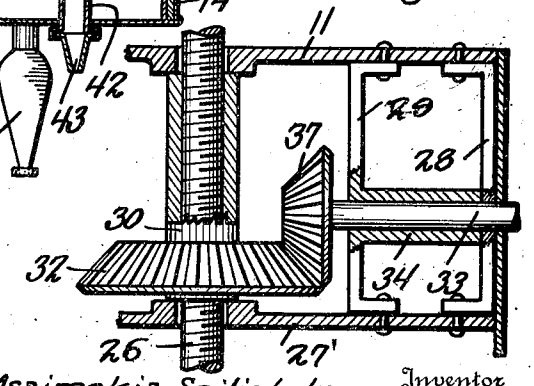
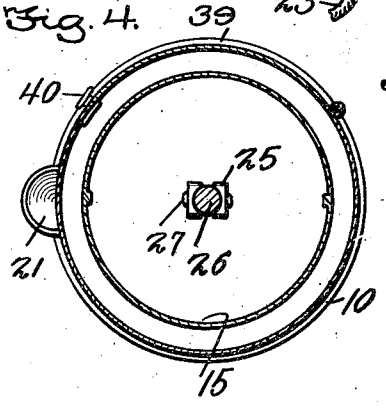


Fig. 4.



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DISPENSING CONTAINER.

Application filed March 29, 1926. Serial No. 97,398.

The present invention relates to improvements in dispensing devices and has for its prime object to provide a dispensing container for plastic or semi-solid substances whereby the same may be forcibly discharged in suitable quantities.

A further object of the invention is the provision of a dispensing container of the above character particularly designed for dispensing food, such as mashed potatoes and the like. A still further object of the invention is the provision of a dispensing apparatus of the above type formed so that the commodity therein may be maintained in a suitably heated condition for instant service.

Still another object of the invention is the provision of an apparatus of this type whereby the commodity may be discharged in predetermined bulk.

Another object of the invention is the provision of a dispensing container of comparatively simple yet durable construction, efficient in operation and which can be manufactured at a relatively low cost.

Other objects and advantages of the invention will become apparent as the description progresses.

In the accompanying drawings forming a part of this specification and in which like reference characters are employed to designate corresponding parts throughout the same:—

Figure 1 is a side elevational view of the assembled structure embodying my invention;

Figure 2 is a vertical transverse sectional view taken through the center of the same;

Figure 3 is an enlarged fragmentary elevational view, partially in section, showing the operating mechanism;

Figure 4 is a horizontal transverse sectional view taken on the line 4—4 of Figure 2;

Figure 5 is a similar view taken on the line 5—5 of Figure 2; and

Figure 6 is a similar view taken on the line 6—6 of Figure 2.

Referring now to the drawing, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 10 generally designates the tank or outer casing for my improved dispensing device, this tank being cylindrical in formation. This tank is closed at its upper end by a cover 11, formed integral with or rigidly secured to the cylindrical body wall. The lower end of the tank is closed by a removable bottom plate 12 provided with a vertically extending annular flange 13. With reference to Figure 2 of the drawings, it will be noted that the flange 13 is arranged inwardly of the outer periphery of the bottom plate so that a suitable packing ring 14 may be disposed between the the outer surface of the flange and the inner surface of the wall of the tank, to provide a substantially air-tight connection.

Arranged within the tank 10 and spaced from the wall thereof is a container 15, also of cylindrical formation. The upper end of the container 15 is open and a horizontal annular flange 16 is provided about its upper edge, the outer periphery of the flange 16 snugly fitting against the inner surface of the tank wall so as to maintain the container 15 in a concentrically spaced position within the tank. The lower end of the container 15 is closed by a bottom 17, this bottom being provided with an eccentrically arranged outlet opening. The bottom is of concave formation, sloping from the circumferential connecting edge downwardly to the eccentric discharge opening to facilitate the delivery of the material, to be dispensed, therethrough.

As illustrated in the drawing, the container 15 is supported upon a plurality of angular brackets 18 secured to the interior of the tank adjacent the lower end and adapted to support the container in an intermediate position therein.

From the foregoing description, it will be noted that the container 15 is held in position in the tank, spaced from the side walls thereof so as to provide an intermediate chamber between the tank and container. An intermediate partition 19 is secured in the tank casing immediately below the bottom of the inner container 15, thus forming a circulating chamber about the sides and bottom of the container for the circulation of water or other liquid. This liquid is supplied to the circulating chamber through an arcuate opening 20 formed in the wall of the tank, adjacent to and immediately below the plane of the annular flange 16 on the inner container. Secured to the tank and extending exteriorly thereof about the opening 20 is a filling trough 21 arranged so as to facilitate the delivery of water or other liquid to the circulating chamber.

In order that the liquid in the circulating chamber may be constantly maintained in a desirable heated condition, to heat the contents of the container 15, we contemplate the provision of a heating unit 22, in the present instance embodying an electric heating coil positioned directly beneath the partition 19. This electrical heating element is connected, through the instrumentality of the conducting cable 23, with a suitable source of electric energy, and is designed to heat the water to a sufficiently high temperature to constantly maintain the food matter in the container at a desirable temperature for table use. Attention is invited to the fact, however, that a gas burner or other type of heating element may be efficiently employed for this purpose, and my improved apparatus is not restricted to this particular type of heater.

It is further contemplated, in the construction of our invention, to provide mechanism for forcibly discharging the mashed potatoes or other contents of the container 15 through a suitable outlet, so that the delivery of the commodity may be effected with extreme convenience and in suitable quantities. This is accomplished, in the present instance, by means of a follower 24 in the general form of a metallic disk, its upper surface being flat and provided at its center with a pair of complementary ears 25. The lower surface of the piston disk 24 is of convexed formation, designed to conform to the contour of the bottom 17 so as to be snugly received therein in the lowermost position of the piston.

The piston 24 is vertically reciprocated in the container 15 through the instrumentality of a threaded stem 26, provided at its lower end with a reduced tongue 26′ fitted between the ears 25 and secured thereto by a bolt 27. The upper end of the stem 26 projects through an opening in the upper central portion of the casing cover 11, adapted to permit vertical adjustment of the stem. In the illustrated construction of the device, the stem is adjusted by a manually operated mechanism arranged within the top of the tank and disposed substantially above the food container. This mechanism is supported upon a suitable frame structure embodying a frame bar 27′ spaced somewhat below the cover 11 and supported by brackets 28 at its ends. An auxiliary bracket 29 is arranged on one side of the frame bar 27′ parallel to one of the frame brackets 28, and the purpose of this bracket 29 will be presently described. Inasmuch as the frame bar 27′ is disposed diametrically of the tank an opening is formed in the center thereof to accommodate the stem 26, this opening being disposed in vertical alignment with the opening formed in the cover 11.

Arranged for rotatable engagement with the stem 26 is a sleeve 30 interiorly screw threaded for engagement with the threads upon the stem and provided at its upper and lower ends with bearing collars 31. This sleeve is supported between the cover 11 and the frame bar 27′ and held against vertical movement therebetween. Fixed to the lower end of the sleeve 30 is a horizontally disposed drive gear 32. Arranged horizontally and journaled in the bracket 29 and end bracket 28 is a crank shaft 33 rotatably mounted in a bearing sleeve 34. The outer end of the crank shaft 33 carries a crank arm 35 to the outer end of which is rotatably connected a handle 36. Firmly secured to the inner end of the crank shaft 33 is a beveled pinion 37 meshing with the drive gear 32. It is apparent, from the foregoing description, that rotary operation of the crank arm 36 will rotate the meshing beveled gears 32 and 37 and effect rotation of the sleeve 30. This adjustment of the sleeve will cause upward or downward movement of the stem 26, depending upon the direction of rotation of the crank.

As shown to advantage, in Figures 1 and 2, the tank 10 is supported in elevated position upon a plurality of supporting legs 38 which may be of any conventional design.

For the purpose of conveniently filling the container 15, a rectangular shaped opening is formed adjacent the upper end of the tank, this opening being closed by a door 39 carrying a latch 40, providing a fastener for the door. Where it is desired to drain the circulating water from the circulating chamber, the same may be conveniently emptied through a valve 41 mounted adjacent the lower end of the tank and communicating with the chamber.

As clearly illustrated in Figure 2, an outlet tube 42 is connected to the discharge opening in the bottom of the container and extends vertically downward through an aligned opening formed in the bottom 12 of the casing. Detachably connected to the lower end of the outlet tube 42 is a discharge nozzle 43 in the present embodiment shown as of tapered formation but, which may be formed in various shapes so that the commodity may be deposited on a dish in fanciful arrangement.

In use, the mashed potatoes or other commodity is placed in the container 15, the follower 24 being previously arranged in its elevated position to permit delivery of the commodity through the opening in the upper end of the tank into the container. The circulating chamber is then filled with water or other liquid and heated to a suitable temperature by means of the heating element 22. When it is desired to obtain a serving of mashed potatoes or other commodity from the container it is merely necessary to rotate

the crank arm 35 through the instrumentality of the handle 36 thus causing downward movement of the follower 34 and discharge of the commodity through the discharge nozzle 43. The amount of the commodity delivered upon a plate or other receptacle may be regulated by the crank movement. Thus, a predetermined quantity may be delivered upon one or more revolutions of the crank, so that the operator can readily determine the quantity discharged through the nozzle 43 by the crank movement, without constantly observing the actual delivery of the commodity.

It is to be understood that the form of my invention herewith shown and described is to be taken as the preferred embodiment of the same, and that various changes as to the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having thus described our invention, we claim:—

A dispensing apparatus comprising a casing having an opening formed adjacent its upper end for filling purposes, a closure for the opening, a container within the casing spaced from the wall thereof and provided with a flange at its upper end seating against the inner side of the wall of the casing circumferentially below the said opening, a partition wall in the casing near the bottom thereof closing the lower portion of the casing below the bottom of the container, the casing having an opening below the plane of the flange at the upper end of the container, the wall adjacent said opening being bulged outwardly to form a hopper, a removable bottom for the lower end of the casing, an electric heating unit supported upon the said bottom between the same and the partition to heat water introduced into the space between the casing and container, and a follower vertically adjustable in the container, the container having a discharge at its bottom for the material contained therein.

In testimony whereof we affix our signatures.

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