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J. GUMILAR

2,401,684

MEASURING DISPENSER

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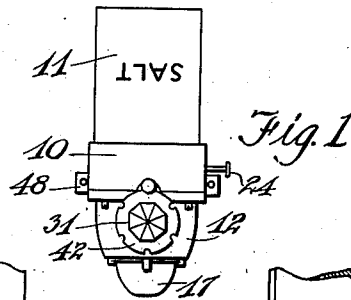
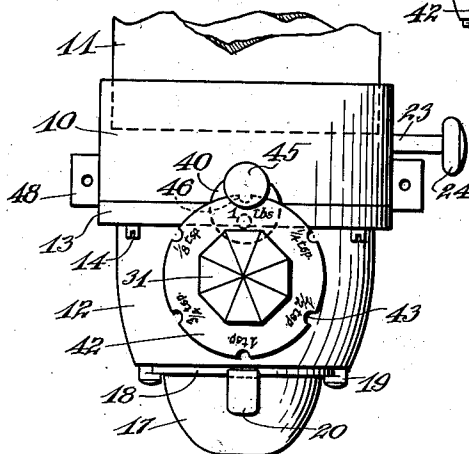


Fig. 2

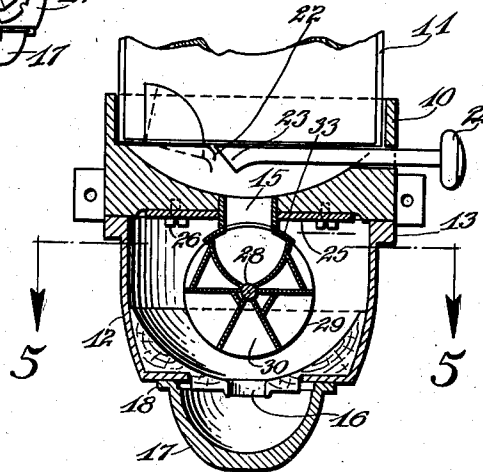


Fig. 3

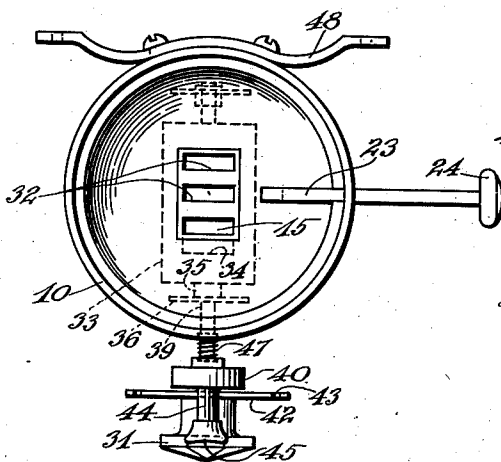


Fig. 4

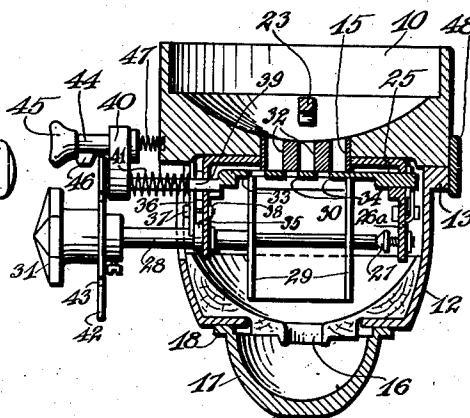


Fig. 5

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UNITED STATES PATENT OFFICE

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MEASURING DISPENSER

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5 Claims. (Cl. 222-288)

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My invention relates to measuring dispensers for salt, coffee or other materials of a loose or free-running consistency, and more particularly to that class of dispensers in which a rotary drum having a series of peripheral compartments is employed as a medium to measure and transfer material from a supply source to a serving or dispensing zone.

One object of the present invention is to provide a control which normally bars the passage of the material from the supply source to the measuring drum, so that no material is contained or wasted in the latter until a serving of material is desired.

A further object of the invention is to provide a control of the above character which is only operative to permit the passage of material into the measuring drum when a selected compartment of the latter is in the proper receiving position.

A still further object of the invention is to design the control with means to insure its return to original or shut-off position after it has been operated to fill a given drum compartment.

Another object of the invention is to provide a handy frontal indicator coincidently with a drum operating means to facilitate the setting of the drum to desired measuring capacities.

An additional object of the invention is to incorporate a simple adjunct in the supply zone of the dispenser for opening containers equipped with pivoted pouring spouts.

An important object of the invention is to design the novel dispenser along lines of simplicity, compactness and durability.

With the above objects in view and any others which may suggest themselves from the description to follow, a better understanding of the invention may be had by reference to the accompanying drawing, in which—

Fig. 1 is a front elevation of the dispenser on a reduced scale and showing the application of a conventional material container thereto;

Fig. 2 is an elevation of the dispenser on a scale approaching full size;

Fig. 3 is a cross-section;

Fig. 4 is a top plan view; and

Fig. 5 is a longitudinal section.

Referring specifically to the drawing, 10 denotes the upper portion of the dispenser, which is a cup-like receptacle and designed to receive an inverted container 11 of salt, sugar or any other material which is to be measured and dispensed.

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The receptacle 10 receives a housing 12 from below which has a marginal flange 13 through which securing screws 14 are directed upwardly into the base of the receptacle. The latter has a bottom outlet 15 into the housing, which in turn has a bottom outlet 16 into a serving cup 17 formed with a rim flange 18, which is suspended between hook-shaped lugs 19 depending from the housing. A frontal finger piece 20 of the cup enables it to be withdrawn like a drawer after it has received a measured quantity of the material.

While some food containers require tearing or perforating of their tops to secure the discharge of their contents, many of the more modern containers carry a quadrant-shaped pivoted closure which serves as a pouring spout when it is opened. Such a closure is indicated at 21 in Fig. 3, and has an outwardly curved lip 22 as a catch for the finger nail when the closure is to be opened. The present invention includes a handy device for opening the closure without the use of the finger nail and only after the container has been properly deposited in the receptacle 10, so that no part of the material can be spilled or scattered before the container is applied to the receptacle. As shown more clearly in Fig. 3, the device comprises a horizontal spear 23 slidable longitudinally in the receptacle and having an external knob 24. When the container is deposited with the closure lip 22 opposite the spear, the manual advance of the latter will open the closure to and beyond the position indicated by dotted lines, so that the container contents may fill the receptacle and the outlet 15 thereof.

An arch-shaped frame 25, secured to the bottom of the receptacle 10 by screws 26, depends with its legs 26a into the housing 12. The legs of the frame carry bearings 27 for the spindle 28 of a horizontal drum 29 disposed in the center of the housing. As noted in Fig. 3, the drum 29 is divided circumferentially with a series of compartments 30 of different capacities, whereby to hold fractions of a teaspoonful and a tablespoonful of the material receivable from the receptacle outlet 15. Thus, when a selected compartment is in the topmost position and receives its filling of material, a frontal knob 31 on the spindle 28 may be turned to rotate the drum and secure the emptying of the compartment into the bottom of the housing 12 for the discharge of the material through the outlet 16 into the serving cup 17.

A device is provided as a shut-off for the out-

let 15 in respect to the drum 29. The outlet is made with divisions 32 from front to rear, and the device referred to is a slide 33 also extending from front to rear. The slide is arcuate in cross-section to make a close fit both with the bottom of the outlet 15 above and with the periphery of the drum below, as indicated in Fig. 3. The slide has a longitudinal series of openings 34 spaced as the opening in the outlet 15. When normally positioned—as in Fig. 5—the slide forms a shut-off for the outlet 15, but a short, rearward movement will place the slide and outlet openings in registration, whereby to permit the passage of material from the outlet 15 into the topmost compartment of the drum 29.

The drum spindle 28 is formed with an external collar 35 opposite the frontal frame leg 26a, against which the collar is held by a friction plate 36, the latter being secured to the said frame leg by a bolt 37 and nut 38. The said frame leg and friction plate also form horizontal bearings for a stem 39 extending forwardly from the slide 33, the stem terminating with an upwardly-extending headpiece 40. A compression spring 41 on the stem 39 between the headpiece and the friction plate normally maintains the slide in the forward or shutting-off position with reference to the receptacle inlet 15.

The frontal knob carries a dial 42 having capacity markings placed as and corresponding to the drum compartments 30. Peripheral notches 43 are made in the dial opposite the several capacity markings. A plunger 44 extends forwardly from the headpiece 40, being formed with a frontal button 45 and a pendent lug 46 behind the button. The plunger 44 is directly over the center of the dial 42, and the lug 46 is located to enter the topmost notch 43 when the button 45 is pushed and to meet the dial as a bar in case a notch does not occur in the topmost or central position. Since the button 45 controls the movement of the slide 33, it is now apparent that the slide cannot be moved to the open position unless a drum compartment is fully and directly under the outlet 15. A small spring 47 is inserted between the upper portion of the headpiece 40 and the front of the receptacle 10 to equalize the pressure from the button 45 to the stem 39. Finally, the back of the receptacle receives a bracket 48 formed with perforations 49 to facilitate the attachment of the dispenser to a wall or a pantry or cabinet door.

With the novel dispenser constituted as described above, it is apparent that a frequently used commodity, such as sugar or salt, may be procured in measured amounts for general use, cooking or the compounding of recipes. The supply of the material is protected from dust, and need not be handled after the container of the material is mounted in the dispenser. The latter provides a positive shut-off for the material while the dispenser is not in use and as long as the quantity selector is not exactly at a point of registry with the push button lug, so that the dispenser remains locked while the drum is at some odd point or with overlapping compartments in respect to the outlet 15, or when the drum knob is turned by mistake or with a tampering intent. The push button control is for momentary use, simply to procure a filling of the uppermost compartment of the drum, the release of the button effecting a shut-off. Thus, only the particular compartment receives a filling of the material, and no surplus or afterflow enters the

drum as the same is rotated in either direction to discharge the contents of the filled compartment. A measuring dispenser is thus had which positively and accurately controls the flow of the material, is made of parts which are simple and rugged, and forms a neat and compact appliance for the purpose stated.

While I have described the invention along specific lines, various minor changes or refinements may be made therein without departing from its principle, and I desire to consider such changes and refinements as coming within the scope and spirit of the appended claims.

I claim:

1. A measuring dispenser for free-running materials comprising a receptacle for a supply of the material and having a bottom outlet, a rotatable measuring drum below the outlet, and formed with circumferentially-spaced compartments individually registrable with the outlet by setting the drum accordingly, a slidable control member intermediate the outlet and the measuring drum, and means rendering the control member inoperative when any of said compartments is out of registration with the outlet.

2. A measuring dispenser for free-running materials comprising a receptacle for a supply of the material and having a bottom outlet, a rotatable measuring drum below the outlet and formed with circumferentially-spaced compartments individually registrable with the outlet by setting the drum accordingly, an apertured slidable control plate intermediate the outlet and the measuring drum, and means preventing movement of said plate when any of said compartments is out of registration with the outlet.

3. A measuring dispenser for free-running materials comprising a receptacle for a supply of the material and having a bottom outlet, a rotatable measuring drum below the outlet and formed with circumferentially-spaced compartments individually registrable with the outlet by setting the drum accordingly, a slidable control member for the flow between the outlet and the measuring drum, and means carried by the rotatable measuring drum rendering the control member inoperative when any of said compartments is out of registration with the outlet.

4. A measuring dispenser for free-running materials comprising a receptacle for a supply of the material and having a bottom outlet, a rotatable measuring drum below the outlet and formed with circumferentially-spaced compartments individually registrable with the outlet by setting the drum accordingly, a spindle for the drum having an actuating knob, a slide parallel to the spindle and shutting off the flow from the outlet to the drum, and means between the slide and the spindle preventing the opening movement of the slide when any of said compartments is out of registration with the outlet.

5. The structure of claim 4, said means comprising a dial carried by the spindle with representative markings and peripheral notches in registration with said compartments, and a push button actuator for the slide carrying a lug opposite the dial and in a position to enter any selected notch when the button is pushed and the dial is turned to points corresponding with the setting of the drum, the dial otherwise forming a stop for the lug.

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