R. H. LITTLE.

DISPENSING MACHINE.

APPLICATION FILED APR. 23, 1919.

1,345,865. **Patented July 6, 1920.**

Fig. 1.

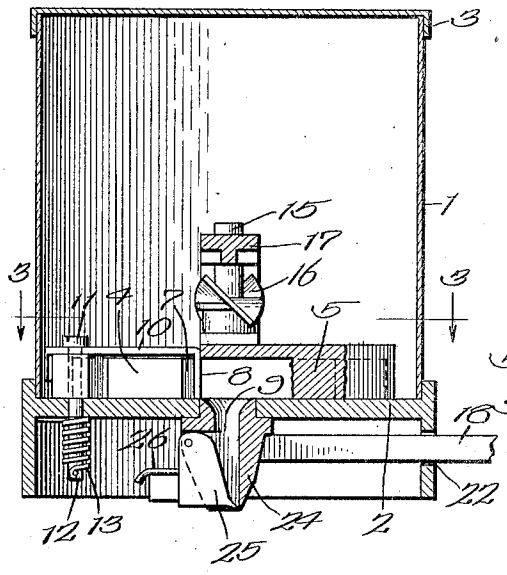


Fig. 2.

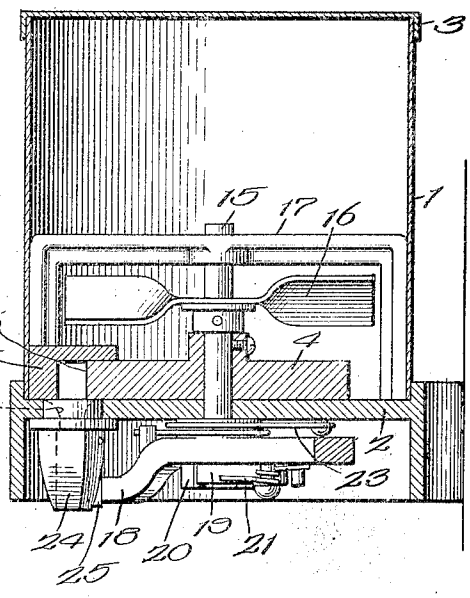


Fig. 3

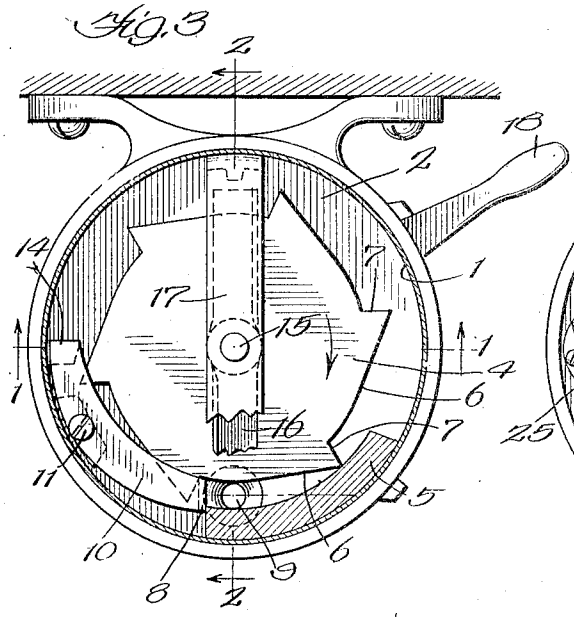
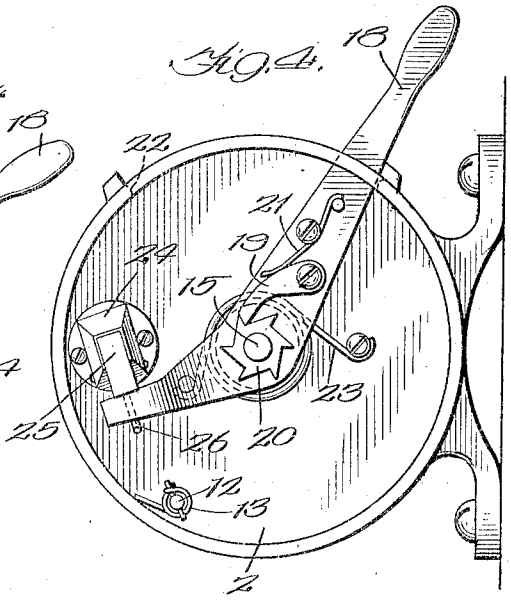


Fig. 4.



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UNITED STATES PATENT OFFICE.

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DISPENSING-MACHINE.

1,345,865. Specification of Letters Patent. **Patented July 6, 1920.**

Application filed April 23, 1919. Serial No. 292,131.

To all whom it may concern:

Be it known that I, ROBERT H. LITTLE, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Dispensing-Machines, of which the following is a full, clear, concise, and exact description.

My invention relates to dispensing machines and is of particular service when employed in dispensing soft soap, though the invention is not to be limited to any particular use.

In accordance with one feature of my invention I employ a turning element which is formed to effect the discharge of the material to be dispensed. In the preferred embodiment of the invention said turning element is a rotatable wheel mounted with one face closely adjacent a wall of the container for the material that is to be dispensed. There is also preferably employed a pocket wall portion closely approaching said container wall portion and the peripheral circle of the wheel and formed with a part closely overlying the other face of the wheel, said wheel being formed with a peripheral notch having a comparatively long bottom extending inwardly from the peripheral circle of the wheel and also having a short side at the inner end of the notch bottom. There is also employed, in the preferred embodiment of the invention, a movable abutment engageable with the long notch bottom and with an end of said pocket wall portion to form with said pocket wall portion, said container wall, and the wheel, a space in which a measured quantity of material to be dispensed is trapped, said container wall portion having a discharge opening communicating with said space and located near the abutment, through which opening the material is forced when the wheel is turned toward said opening.

Another feature of the invention relates to the discharge opening and resides in the provision of improved means for closing said opening when the machine is not in use to prevent leakage and deterioration of the container contents and also for unclosing said opening when the material is to be discharged.

I will explain my invention more fully by reference to the accompanying drawing showing the preferred embodiment thereof and in which Figure 1 is a sectional view on line 1—1 of Fig. 3; Fig. 2 is a sectional view on line 2—2 of Fig. 3; Fig. 3 is a sectional view on line 3—3 of Fig. 1; and Fig. 4 is a bottom view.

Like parts are indicated by similar characters of reference throughout the different figures.

The container 1 for the material to be dispensed is preferably permanently assembled with its bottom end wall 2 that desirably constitutes a mounting for the mechanism of the invention. This container is preferably cylindrical and may either directly hold the contents to be dispensed or may receive a can containing such contents, the material in either event being protected by a removable lid 3 within the container. A turning element, preferably in the form of a wheel 4, is co-axial with the container and has its bottom face closely adjacent the bottom end wall of the container to prevent the exudence of the material between the wheel and this container wall. A pocket wall portion 5 closely approaches the bottom wall of the container also to prevent exudence of material between it and said container wall. This pocket wall portion 5 has an upright surface which conforms to and closely approaches the peripheral circle of the wheel 4 having contact with the parts of the wheel that are at its periphery. This pocket wall portion 5 has a top part that closely overlies the top face of the wheel there to prevent exudence of material. The wheel is formed with at least one peripheral notch and preferably a number, say six. Each notch has a comparatively long bottom 6 extending inwardly from the peripheral circle of the wheel and also a short side 7 at the inner end of the notch bottom. A movable abutment 8 is engageable with the long notch bottom and the adjacent end of the pocket wall portion 5, this abutment forming, with said pocket wall portion, the bottom wall of the container and the wheel, a space in which a measured quantity of material to be dispensed is trapped. Said container wall has a discharge opening 9 communicating with said space and located near said abutment, the material being forced through this opening when the wheel is turned to-

ward it. This abutment is preferably an angular continuation of a plate 10 which is pivoted at 11. The pivot pin 12 is journaled in the bottom wall of the container and is preferably in fixed connection with the plate 10. A spring 13 turns the pivot pin 12 in a direction to maintain the abutment 8 in engagement with the periphery of the wheel so as to permit the space in which the material is trapped to decrease in size as the wheel is turned toward the discharge opening, in which operation the wheel forces the exudence of the material from the space in which it is trapped through the discharge opening. The plate 10 may carry a cam block 14 to be engaged by the wheel, in its initial movement, to supplement the action of the spring 13 in maintaining the abutment 8 in engagement with the long notch bottom at a time when the discharge of the material is initiated. The wheel may have an upright shaft 15 coaxial therewith and fixed with respect thereto. Feeding blades 16 may be provided upon this shaft for the purpose of agitating the contents within the container and for feeding the same downwardly around the periphery of the wheel whereby such material is positioned to enable the wheel to act thereupon to force a measured quantity thereof into the aforesaid space defined by the notch in the wheel and the portions 2, 5 and 8. A bridge piece 17 may be supported upon the bottom wall 2 of the container and may also carry a journal for the shaft 15. If a can is inserted within the container it is placed with its open top end downward and resting upon this bridge piece that prevents the can from interfering with the mechanism.

It is understood that the container 1 is usually higher than the drawing indicates, increased length not being shown for the lack of space.

Any suitable means may be employed for turning the measuring wheel 4 such for example as the hand lever 18 carrying an actuating pawl 19 maintained in engagement with the ratchet wheel 20 by a spring 21. The ratchet wheel 20 is in fixed connection with the shaft 15 and therefore with the wheel 4. The operating lever projects through a slot 22 in the bottom portion of the structure and is limited to one-sixth of a revolution (there being six teeth upon the ratchet wheel 20 similarly positioned to the six notches upon the wheel 4). A spring 23 holds the lever 18 normally at one end of its range of movement. When the lever is turned one-sixth of a revolution, the pawl 19 thereon turns the wheel 20 one-sixth of a revolution to turn the wheel 4 one-sixth of a revolution during which revolution a measured quantity of the container contents is forced through the discharge opening 9. Other mechanism may be employed for turning the wheel or turning element 4, that shown however being very serviceable.

The discharge opening 9 is formed in a discharge spout 24 which is slotted at one side to receive a valve 25 that normally closes said opening. The actuating lever 18 is extended beyond its axis of rotation into position to engage the valve 25 in order normally to close the same through the influence of the spring 23. The valve 25 may carry a hook 26 to overlie the extended portion 18 so that when this lever is moved to effect the discharge of material from the container it will, in the initial part of its movement, force an opening movement of the valve. I do not limit myself to any peculiar mechanism for effecting the forced discharge of material from the container in the interrelation thereof to the valve 25.

While I have herein shown and particularly described the preferred embodiment of my invention I do not wish to be limited to the precise details of construction shown as changes may readily be made without departing from the spirit of my invention, but having thus described my invention I claim as new and desire to secure by Letters Patent the following:—

1. A dispensing machine including a container for material that is to be dispensed; a rotatable wheel mounted with one face closely adjacent a wall of the container; a pocket wall portion closely approaching said container wall portion and the peripheral circle of the wheel and formed with a part closely overlying the other face of the wheel; said wheel being formed with a peripheral notch having a comparatively long bottom extending inwardly from the peripheral circle of the wheel and also having a short side at the inner end of the notch bottom; a movable abutment engageable with said long notch bottom and an end of said pocket wall portion to form with said pocket wall portion, said container wall, and the wheel, a space in which a measured quantity of material to be dispensed is trapped, said container wall portion having a discharge opening communicating with said space and located near said abutment through which opening the material is forced when the wheel is turned toward said opening; and a spring for pressing said abutment against said long notch bottom.

2. A dispensing machine including a container for material that is to be dispensed; a rotatable wheel mounted with one face closely adjacent a wall of the container; a pocket wall portion closely approaching said container wall portion and the peripheral circle of the wheel and formed with a part closely overlying the other face of the wheel, said wheel being formed with a peripheral notch having a comparatively long

bottom extending inwardly from the peripheral circle of the wheel and also having a short side at the inner end of the notch bottom; a movable abutment engageable with said long notch bottom and an end of said pocket wall portion to form with said pocket wall portion, said container wall, and the wheel, a space in which a measured quantity of material to be dispensed is trapped, said container wall portion having a discharge opening communicating with said space and located near said abutment through which opening the material is forced when the wheel is turned toward said opening; and means for pressing said abutment against said long notch bottom.

3. A dispensing machine including a container for material that is to be dispensed; a rotatable wheel mounted with one face closely adjacent a wall of the container; a pocket wall portion closely approaching said container wall portion and the peripheral circle of the wheel and formed with a part closely overlying the other face of the wheel, said wheel being formed with a peripheral notch extending inwardly from the peripheral circle of the wheel; a movable abutment engageable with the notch bottom to form with said pocket wall portion, said container wall, and the wheel, a space in which a measured quantity of material to be dispensed is trapped, said container wall portion having a discharge opening communicating with said space through which opening the material is forced when the wheel is turned toward said opening; and means for pressing said abutment against said notch bottom.

4. A dispensing machine including a container for material that is to be dispensed; a turning member mounted with one face closely adjacent a wall of the container; a pocket wall portion closely approaching said container wall portion and formed with a part closely overlying the face of the turning member opposite the aforesaid face thereof, said turning member being formed with a peripheral notch having a comparatively long bottom extending inwardly from the periphery of the turning member and also having a short side at the inner end of the notch bottom; a movable abutment engageable with said long notch bottom and an end of said pocket wall portion to form with said pocket wall portion, said container wall, and the turning member a space in which a measured quantity of material to be dispensed is trapped, said container wall portion having a discharge opening communicating with said space and located near said abutment through which opening the material is forced when the turning member is turned toward said discharge opening; and means for pressing said abutment against said long notch bottom.

5. A dispensing machine including a container for material that is to be dispensed; a turning member mounted with one face closely adjacent a wall of the container; a pocket wall portion closely approaching said container wall portion and formed with a part closely overlying the face of the turning member opposite the aforesaid face thereof, said turning member being formed with a peripheral notch extending inwardly from the periphery of the turning member; a movable abutment engageable with the notch bottom to form with said pocket wall portion, said container wall, and the turning member a space in which a measured quantity of material to be dispensed is trapped, said container wall portion having a discharge opening communicating with said space through which opening the material is forced when the turning member is turned toward said discharge opening; and means for pressing said abutment against said notch bottom.

6. A dispensing machine including a container for material that is to be dispensed; a turning member mounted with one face closely adjacent a wall of the container; and a pocket wall portion closely approaching said container wall portion and formed with a part closely overlying the face of the turning member opposite the aforesaid face thereof, said turning member being formed with a peripheral notch forming with said container wall, and pocket wall portion, a space in which a measured quantity of material to be dispensed is trapped, there being a discharge opening communicating with said space through which the material is discharged.

In witness whereof I hereunto subscribe my name this nineteenth day of April, A. D. 1919.

ROBERT H. LITTLE.