No. 778,770. PATENTED DEC. 27, 1904.

O. ZIEMS.

DISPENSING AND MEASURING APPARATUS.

APPLICATION FILED MAR. 30, 1904.

Fig. 1.

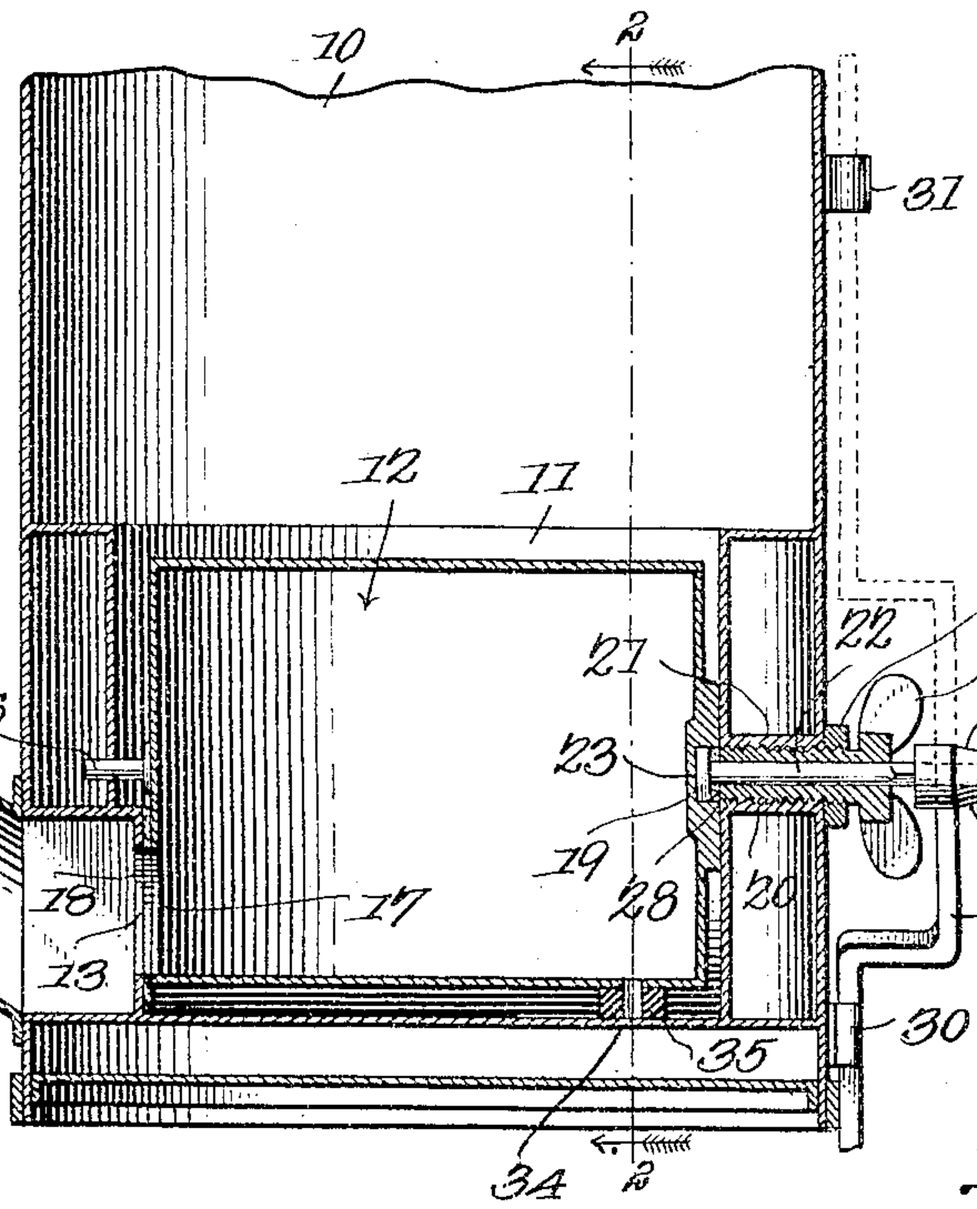
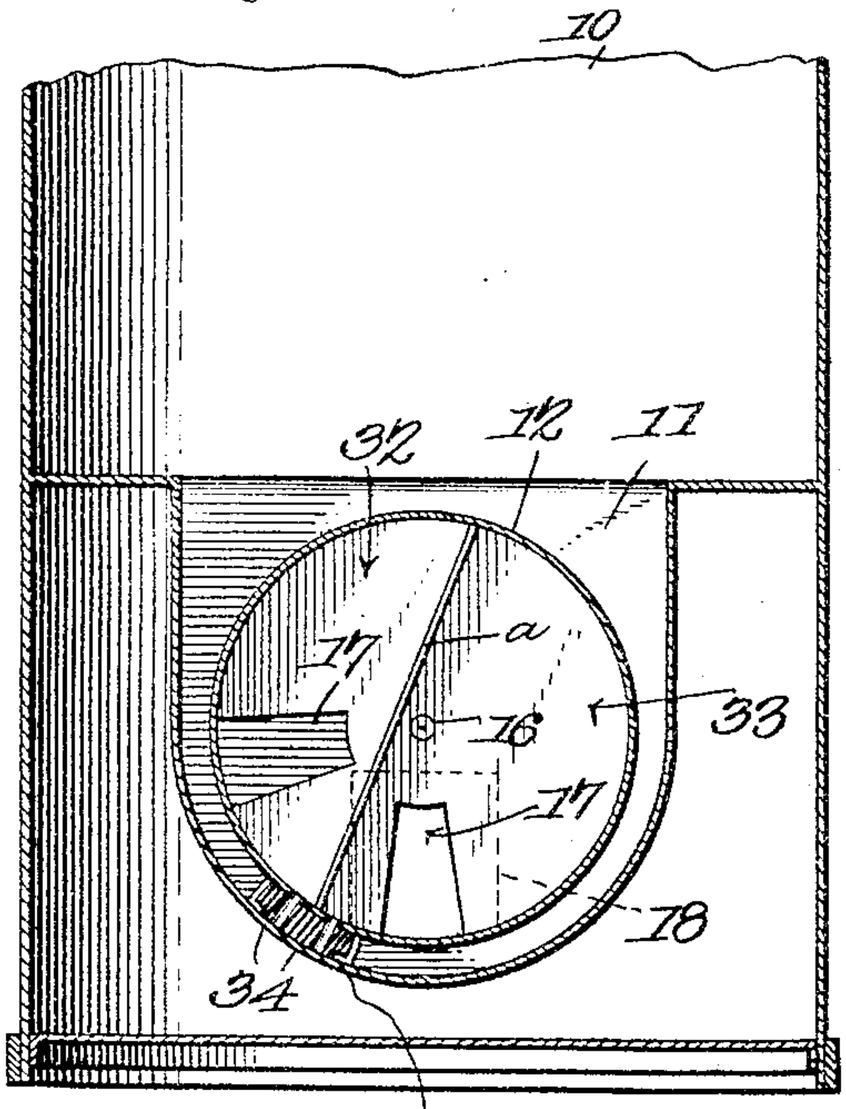
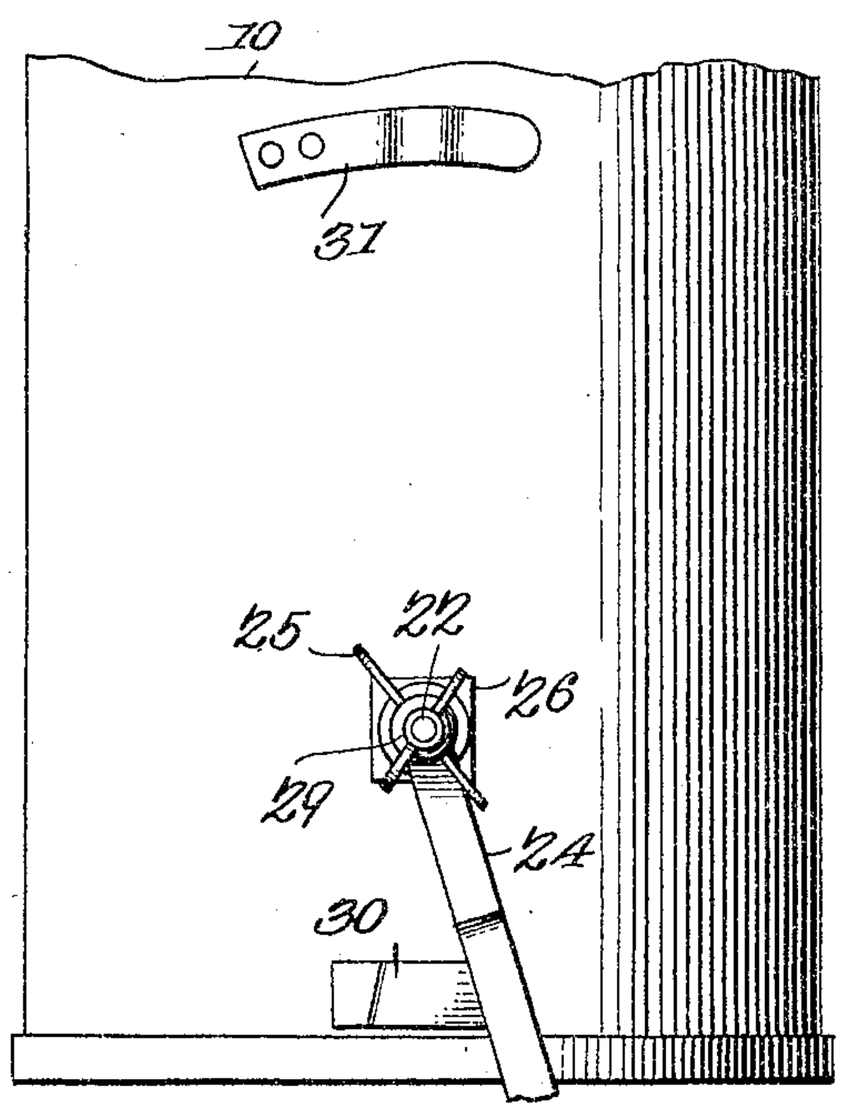


Fig. 2.

Fig. 3.





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UNITED STATES PATENT OFFICE.

OTTO ZIEMS, OF LEROY, ILLINOIS.

DISPENSING AND MEASURING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 778,770, dated December 27, 1904.

Application filed March 30, 1904. Serial No. 200,812.

To all whom it may concern:

Be it known that I, OTTO ZIEMS, a citizen of the United States, residing at Leroy, in the county of McLean and State of Illinois, have invented a new and useful Dispensing and Measuring Apparatus, of which the following is a specification.

This invention relates to apparatus for dispensing and measuring liquids in certain predetermined quantities, and has for its object to produce a simply-constructed and easily-operated device of this character whereby any desired quantity of liquid may be drawn from a receptacle by merely oscillating a lever under the control of the operator.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages, and the right is therefore reserved of making all the changes and modifications which fairly fall within the scope of the invention and the claims made therefor.

In the drawings thus employed, Figure 1 is a sectional side elevation. Fig. 2 is a transverse section on the line 2 2 of Fig. 1. Fig. 3 is a rear elevation.

The apparatus may be employed for dispensing liquids of any desired kind, but is more particularly designed for use by retail milk dealers, for which it is peculiarly applicable.

In the improved apparatus is comprised a receptacle 10 of any desired shape or size and of any suitable material, having in its lower end a semicylindrical seat 11, in which a cylindrical measuring-receiver 12 is mounted for rotation. At one end of the seat portion a discharge-aperture 13 is formed in a reëntrant portion of the seat and communicating with a conduit or discharge-spout 14, the aperture being located at the bottom of the seat portion, and disposed above the upper end of the aperture is a bearing-socket to receive a bearing-stud 16, extending centrally from the adjacent end of the receiver 12.

Formed in the otherwise closed end of the receiver 12 is a radial aperture 17, adapted to register with the aperture 13 when the receiver is in one position, the aperture 13 being cut off by the imperforate portion of the end of the receiver when the receiver is reversed. By this arrangement it will be noted that there is a space between the apertured end of the receiver and the adjacent end of the seat, wherefore it will be obvious that when the receiver is turned with the aperture 17 upward the receptacle will be filled with the liquid from the receptacle through said aperture, but will not flow therefrom, as the discharge-aperture 13 is cut off by the imperforate portion of the end of the receiver. Then when the position of the receiver is reversed the two apertures 13 17 will be disposed in registering positions and the liquid will be discharged from the receiver; but it is obvious that no liquid will flow into the receiver while in its inverted position. It will here be noted that the opening 17 in the receiver constitutes an inlet therefor when out of alinement with the opening 13 and forms a discharge-opening for the receiver when registered with the discharge-opening 13.

A suitable flexible packing 18 is disposed between the receptacle 12 and the end of the seat 11 adjacent to the aperture 13 to prevent leakage at this point.

In the end of the receiver 12 opposite the stud 16 and in alinement therewith is a rectangular recess 19, and in the adjacent end of the seat 11 in alinement with the bearing-socket 15 is a threaded aperture 20, in which a threaded sleeve 20 fits, and through this sleeve a shaft 22 is mounted for rotation and provided at one end with a rectangular head 23 for engaging the recess 19 and at the other end with an operating-handle 24.

The sleeve 21 is provided with lateral wings

25, by which to rotate it, and also with a jam-nut 26.

A packing 28 will preferably be provided between the inner end of the sleeve 21 and the head 23 of the shaft 22 to form a liquid-tight joint and prevent leakage at the joint.

The shaft 21 will preferably be square or oblong near its outer end to receive a similar-shaped aperture in the hub of the handle 24 and threaded at its extremity to receive a holding-nut 29, by which means the handle will be rigidly coupled to the shaft.

A stop 30 will be attached to the receptacle 10 in position to engage the handle 24 when the apertures 13 17 are in alined position to insure the proper discharging position of the receiver, and a yieldable stop 31 may be employed to hold the lever in its vertical position or with the receiver in position to be filled with the liquid.

The receiver 12 will preferably be divided by a longitudinal partition *a* into two or more longitudinal compartments 32 33, holding certain predetermined quantities of liquids—such as pints, quarts, and the like—and each compartment provided with its own independent combined inlet and discharge aperture 17, preferably disposed close together and radially of the central bearing-stud 16, and when thus arranged the stop 30 will be long enough to hold the handle 24 in position to maintain the aperture 17 of the compartment 32 in alinement with the aperture 13 when the handle 24 is engaged with the stop 30 at one side and to maintain the aperture 17 of the compartment 33 in alinement with the aperture 13 when the handle 24 is engaged with the stop 30 at the other side. Thus when the handle 24 is in vertical position both compartments 32 33 of the receiver will be filled with liquid, and if the contents of the compartment 32 is required to be drawn from the receptacle the handle will be turned in one direction until it engages stop 30, the contents of the other compartment being merely carried around with the receiver, but not discharged or otherwise affected, and if the contents of the other compartment is to be discharged the handle is merely turned in the opposite direction, as will be obvious. Thus any required quantity of the liquid may be drawn off and without the use of extraneous measures or devices of any kind.

Formed through the wall of the receiver 12 in alinement with the apertures 17 and on the same side of the receiver are vent-apertures 34, having a packing 35 of rubber or similar suitable material surrounding them, the vent for facilitating the filling of the receiver and the packing for engagement with the adjacent surface of the seat 11 to close the vents and prevent the escape of the liquid when the receiver is reversed.

The parts are simple in construction and easily removable for cleaning or repairs.

The packing members 18 will be of material or substance, such as white rubber, which will not be deleterious to milk or other liquids and which will not be injured by hot water when the apparatus is cleansed and may be readily renewed when worn or broken.

The adjustable sleeve 21 is an important feature of the invention, as by this means the tension of the packing members may be controlled to permit the free rotation of the receiver without permitting leakage at the joints and also permit the requisite "take-up" in event of the wearing of the parts.

Having thus described the invention, what is claimed is—

1. In a dispensing apparatus, a receptacle for the material to be dispensed having a semicylindrical seat, said seat having a discharge-aperture in one end, and a cylindrical measuring-receiver mounted for rotation in said seat and provided with an aperture in one of its otherwise closed ends at one side of the center for registration with said discharge-aperture when said receiver is disposed in one position and cut off by the imperforate portion of the apertured end of the cylindrical receiver when the same is in its reversed position.

2. In a dispensing apparatus, a receptacle for the material to be dispensed and having a semicylindrical seat, said seat having a discharge-aperture in one end, a cylindrical measuring-receiver mounted for rotation in said seat and provided with an aperture in one of its otherwise closed ends at one side of the center for registration with said discharge-aperture when said receiver is disposed in one position and cut off by the imperforate portion of the apertured end of the cylindrical receiver when the same is in its reversed position and a vent in said cylindrical receiver substantially in alinement with the apertures therein and adapted to be closed by contact with said seat when the receiver is reversed.

3. In a dispensing apparatus, a receptacle for the material to be dispensed, a cylindrical measuring-receiver mounted for rotation in said receptacle and having an aperture through one of its otherwise closed ends at one side of the center and a shut-off in said receptacle extending past the center at the apertured end and having a discharge-aperture for registration with said receiver-aperture when the receiver is rotated.

4. In a dispensing apparatus, a receptacle for the material to be dispensed having a semicylindrical seat, said seat having a discharge-aperture in one end and a cylindrical measuring-receiver mounted for rotation in said seat and divided into longitudinal compartments with apertures in one end communicating respectively with each of said compartments for alternate registration with said discharge-aperture when said receiver is in one position and cut off therefrom when the receiver is reversed, and vents communicating with each of

said compartments in substantial alinement with the apertures therein and shut off by the walls of said seat when the receiver is reversed.

5. In a dispensing apparatus, a receptacle for the material to be dispensed having a discharge-aperture through one side and a bearing-socket spaced from said aperture and with a threaded aperture in the opposite side in alinement with said bearing, a receiver having a bearing-stud at one end for engagement with said bearing-socket and a recess in the opposite end opposite said threaded aperture, said receiver having an aperture in the otherwise closed end for registration with said discharge-aperture when the receiver is turned in one position and cut off therefrom when the position of the receiver is reversed, a shaft extending through said threaded aperture and having at one end a rectangular head for engaging the rectangular recess in said receiver and with an operating-handle at the other end, and a hollow screw-plug engaging said threaded aperture and receiving said shaft-bearing and forming an adjustable bearing for said shaft.

6. In a dispensing apparatus, a receptacle having a reëntrant portion provided with a discharge-opening, a rotatable receiver mounted in the receptacle and having an opening for registration with the discharge-opening of the receptacle, there being a space between the receptacle and the receiver at one side of the reëntrant portion with which the opening in the receiver communicates when out of alinement with the opening in the receptacle and forms an inlet for the receiver, the receiver portion adjacent the opening therein constituting a closure for the opening in the receptacle when the two openings are out of alinement.

7. In a dispensing apparatus, a receptacle having a seat which is open at its top for communication with the interior of the receptacle and provided near its bottom with a reëntrant portion having an outlet-opening, a closed receiver mounted to rotate upon a substantially horizontal axis within the seat with one end having a working fit against the reëntrant portion of the seat and provided with an opening for registration with the opening in said reëntrant portion, there being a space between the ends of the seat and the receiver at one side of the reëntrant portion of the seat, the opening in the receiver forming an inlet when out of alinement with the opening in the seat and in communication with the space between the receiver and the receptacle, the imperforate portion of the receiver forming a closure for the opening in the seat when the two openings are out of alinement.

8. In a dispensing apparatus, a receptacle having a substantially semicylindrical seat provided with a discharge-opening, a rotatable receiver having an opening for registration with the discharge-opening of the receptacle, and a vent carried by the receiver and closed by the seat when the two openings are in alinement.

9. In a dispensing apparatus, a receptacle having a substantially semicylindrical seat which is provided with a discharge-opening, a substantially cylindrical receiver rotatably mounted within the seat and provided with a discharge-opening for alinement with the opening of the seat, and a vent carried by the periphery of the receiver and including a packing-ring projected externally of the receiver for engagement with the walls of the seat to close the vent when the two openings are in alinement.

10. In a dispensing apparatus, a receptacle having a discharge-opening at one side, a rotatable receiver mounted within the receptacle and having one end provided with a discharge-opening for registration with the discharge-opening of the receptacle, and an endwise-adjustable bearing for one of the journals of the rotatable receiver to maintain a liquid-tight joint between the discharge end of the receiver and the receptacle.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

OTTO ZIEMS.

Witnesses:
LESLIE J. OWEN,
HUGO PFITZENMEYER.