

May 24, 1932.

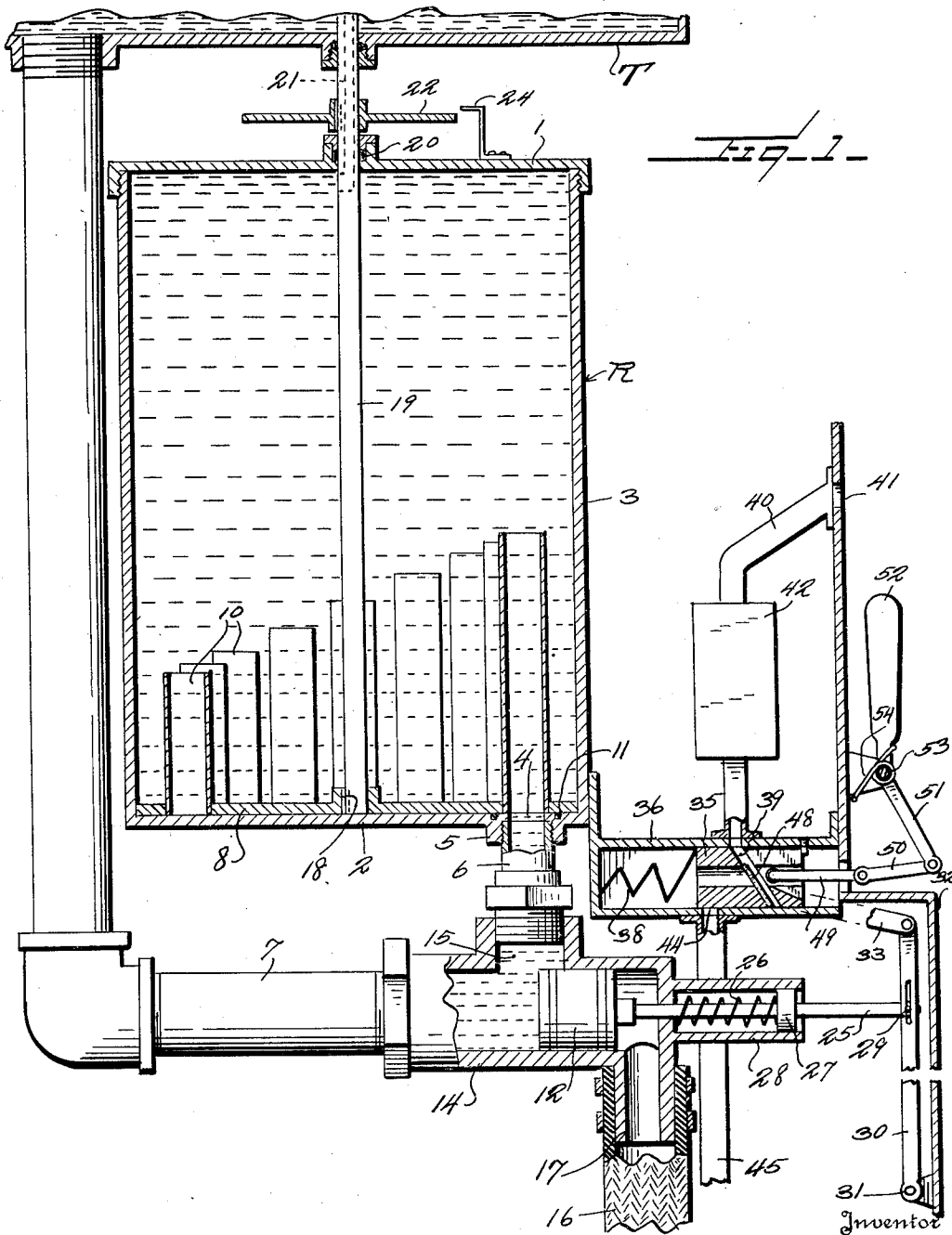
J. R. MANLEY

1,859,833

DISPENSING APPARATUS

Filed Aug. 23, 1930

3 Sheets-Sheet 1



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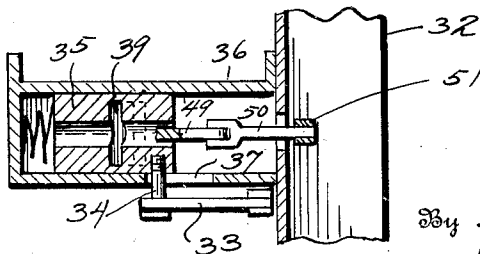
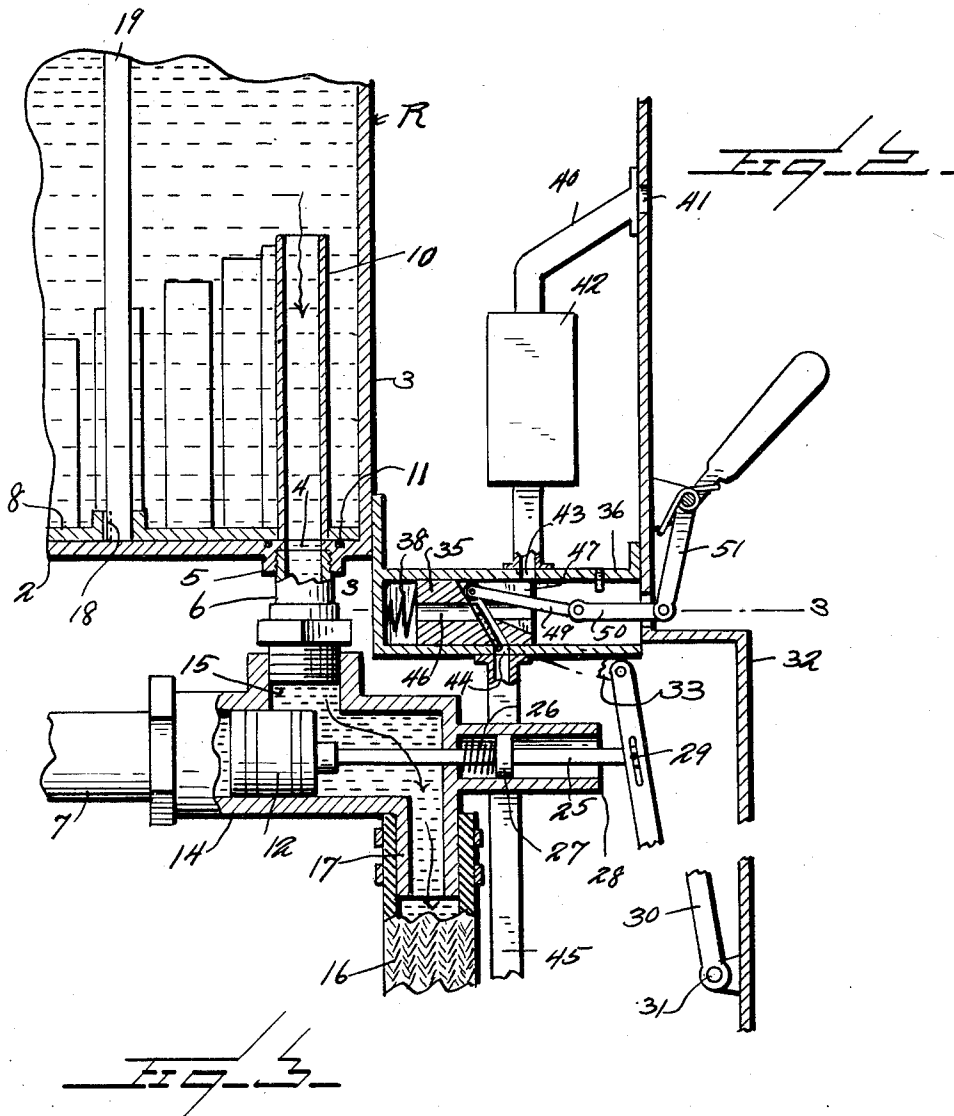
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DISPENSING APPARATUS

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3 Sheets-Sheet 2



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DISPENSING APPARATUS

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3 Sheets-Sheet 3

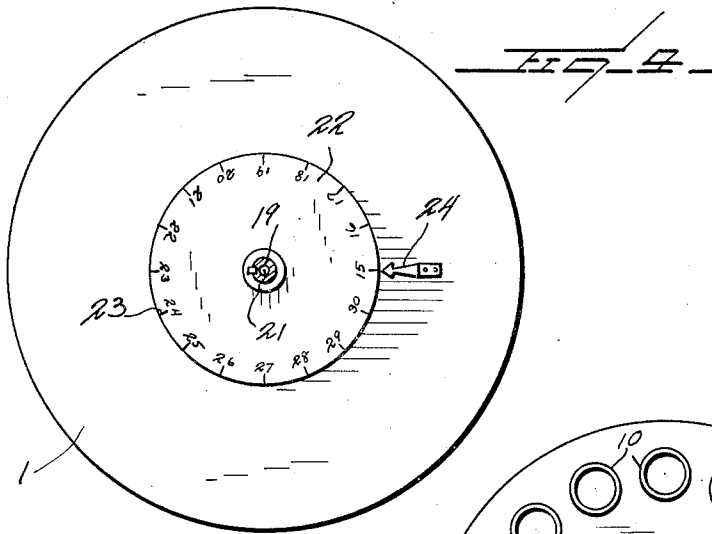


FIG. 5

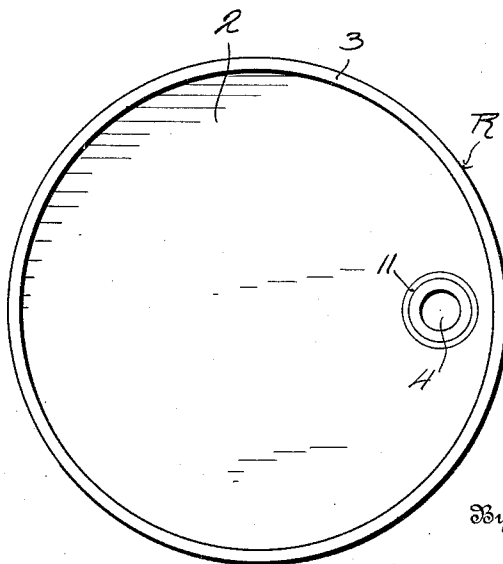
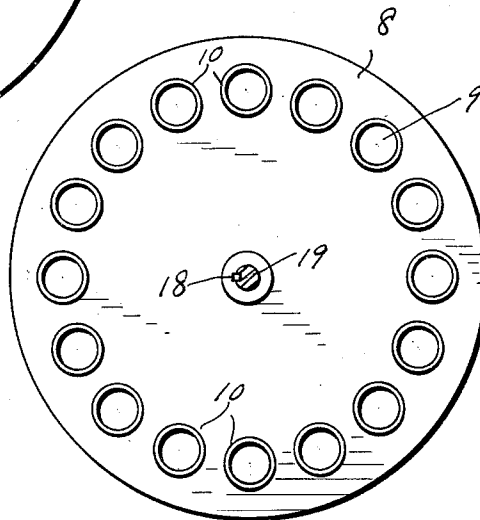


FIG. 6

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UNITED STATES PATENT OFFICE

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DISPENSING APPARATUS

Application filed August 23, 1930. Serial No. 477,390.

This invention relates to a dispensing apparatus and has relation more particularly to an apparatus of this kind especially designed and adapted for use in connection with a pump for gasoline or the like, and it is an object of the invention to provide an apparatus of this character wherein the gasoline or the like may be dispensed in predetermined bulk upon the deposit of a coin or other check.

The invention also has for an object to provide an apparatus of this kind wherein the amount of gasoline or the like to be dispensed may be varied or regulated as required.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved dispensing apparatus whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a fragmentary view partly in section and partly in elevation illustrating a dispensing apparatus constructed in accordance with an embodiment of my invention;

Figure 2 is a view somewhat similar to Figure 1 with certain of the parts in a second position;

Figure 3 is a detailed sectional view taken substantially on the line 3—3 of Figure 2 with the expansible member or spring omitted;

Figure 4 is a view in top plan illustrating the indicating means as herein embodied;

Figure 5 is a fragmentary view partly in top plan and partly in section of the delivery tube set as herein employed;

Figure 6 is a view in top plan of the measuring receptacle as herein employed, unapplied and with its top removed.

As disclosed in the accompanying drawings, R denotes a measuring receptacle adapted to be mounted or maintained in applied position in any desired manner and which, as herein disclosed, has its top end open and adapted to be closed by a top plate 1 threaded or otherwise secured thereon.

The bottom wall 2 of the receptacle R in relatively close proximity to the side or peripheral wall 3 of the receptacle is provided with an opening 4. Depending from the bottom wall 2 of the receptacle R and surrounding the opening 4 is a nipple 5 with which is coupled a pipe line 6 leading from the supply line 7. This supply line 7 is in communication with a tank T of desired dimensions and which contains a supply of gasoline or kindred fluid and which fluid by gravity flows through the line 7 up through the line 6 and into the receptacle R through the opening 4 as will hereinafter be explained in greater detail.

Snugly fitting within the receptacle R and resting upon the bottom wall 2 thereof is a plate 8 provided in its peripheral portion with a series of circumferentially spaced openings 9 in each of which is fitted the lower end portion of an upstanding tube 10 open at both ends. These tubes 10 successively are of different lengths so that the upper ends of the tubes 10 in the complete assembly terminate at different heights or distances above the applied plate 8 so that the amount of fluid discharging from the receptacle R may be selectively determined by bringing the desired opening 9 and the tube 10 into register with the opening 4.

The inner surface of the bottom wall 2 of the receptacle R is provided with a packing ring 11 surrounding the opening 4 for contact with the under surface of the plate 8 to minimize the liability of leakage.

The fluid enters the receptacle R through an opening 9 and tube 10 in register with the opening 4 and also discharges therethrough out from the receptacle. The admission and discharge of the fluid with respect to the receptacle R, however, is under control of the reciprocating cylindrical valve 12 having sliding movement within the casing 14

interposed in the line 7, said valve 12 when in one position, as illustrated in Figure 2, extending in advance of the communication 15 between the lines 6 and 7 to close the flow from the line 7 up through the line 6. When the valve 12, however, is in this position it opens the communication 15 at the opposite side of the valve 12 so that the desired amount of fluid may readily pass out through the delivery hose 16 in communication with the casing 14 and preferably through the medium of a depending nipple 17.

The plate 8 at its axial center, as indicated at 18, is keyed or otherwise fixed to the lower end portion of a shaft 19 extending upwardly through the receptacle R and out therefrom through a stuffing gland 20 carried by the top plate 1. The shaft, as herein disclosed, is intended to extend upwardly through the tank T and the upper portion of the shaft is provided with a bore 21 indicated by broken lines, adapted for communication with the upper part of the receptacle R and, of course, with the atmosphere above the tank T whereby the shaft 19 also serves to provide an air vent to facilitate the desired rise and fall of the fluid within the receptacle R.

Fixed to the shaft 19 above the receptacle R is a disc 22 provided with a plurality of suitably identified graduations 23 arranged circumferentially around the peripheral portion of the disc and which graduations coact with a stationary index or pointer 24 carried by the top plate 1 to readily identify which one of the tubes 10 is in register with the opening 4 of the bottom wall 2 of the receptacle. In other words, these graduations 23 together with the pointer or index 24 provide means whereby any desired tube 10 may be selected for registry with the opening 4.

As disclosed in Figure 4, the graduations are identified in accordance with the price of the gasoline or the like per gallon so that with the fluid selling at a certain price per gallon the tube 10 selectively brought into register with the opening 4 will assure the delivery of the proper amount of fluid upon deposit of a certain coin, as for example a twenty-five cent piece or a fifty cent piece.

The valve 12 is carried by the end portion of a rod 25 inserted substantially axially within the casing 14 and the rod 25 together with the valve 12 are constantly urged outwardly by the expansible member 26 of requisite tension, herein disclosed as a coil spring, surrounding the rod 25 and interposed between an enlargement 27 carried by the rod and the adjacent end of the casing 14. The enlargement 27, as herein disclosed, constitutes a circular member which is snugly received within an elongated guide sleeve 28 carried by the casing 14. This sleeve 28 also serves to frequently house the expansible member or spring 26. The outer end

portion of the rod 25 is operatively connected, as at 29, with an upstanding lever 30. This lever at its lower end is pivotally connected, as at 31, with the wall 32 of a housing or other support, while the opposite or upper end portion of the lever 30 has pivotally connected therewith an end portion of a rigid link 33. This link 33 at its opposite end portion is pivotally connected with a laterally and outwardly disposed part 34 carried by a sliding block 35. The block 35 is snugly received within a barrel or housing 36 for reciprocating movement and a wall of the barrel or housing 36 is provided with an elongated slot 37 through which the part 34 hereinbefore referred to is directed so that such part will offer no hinderance or obstruction to the desired reciprocation of the block 35. The barrel or housing 36 is supported in desired position in any preferred manner and, as herein disclosed, it is held in position by suitable attachment to the receptacle R and to the wall of a cabinet or the like which may be employed in connection with my apparatus.

The block 35 is normally maintained in one position through the medium of an expansible member 38, preferably a coil spring, interposed between an end of the block 35 and a closed end of the barrel or housing 36. Intermediate its ends the block is provided with a downwardly and forwardly inclined slot 39, the upper end of which when the block is in its normal position registering with a chute 40 leading from a coin slot 41 suitably located within the cabinet wall or the like. The chute 40 also preferably has associated therewith a slug detector 42 of any desired type or construction. The housing or barrel 36 in its upper part is provided with an opening or slot 43 to assure the desired communication between the chute 40 and the slot 49 in the block 35.

When the block 35 is moved inwardly of the barrel or housing 36 a predetermined distance the lower end portion of the slot 39 of the block will be brought into register with an opening 44 in the lower part of the housing or barrel 36 and from which leads a second coin chute 45 which discharges in a suitably positioned coin receptacle or otherwise as may be preferred.

Disposed axially of the block 35 is a bore 46 and in communication with the front or forward end of the bore 46 from above and in advance of the slot 39 is a longitudinally disposed slot 47.

With the block 35 in its normal position as illustrated in Figure 1, a coin placed in the chute 40 will drop down and be received within the slot 39 in the block 35, said applied coin or check 48 intersecting the bore 46. By movement of the push-in rod 49 inwardly of the bore 46 of the block 35, said

rod will come into contact with the coin or check 48 so that as the rod 49 continues to move inwardly of the bore 46 the block 35 will be caused to travel inwardly of the barrel or housing 36.

During this movement the inserted end of the push-in rod 49 will ride upwardly of the coin or check 48 for contact with the upper part of the inner wall of the slot 39 as illustrated in Figure 2 of the drawings; and when the lower part of the slot 39 comes into register with the opening 44 the coin or check 48 will at once pass down out through the chute 45.

As the block 35 is moved inwardly the lever 30 operates to shift the valve 12 from its normal position illustrated in Figure 1, wherein flow is closed out through the tube 16, to the position illustrated in Figure 2. In this second position the opening 4 is closed against communication with the pipe line 7 but open to the tube 16 so that the desired amount of fluid within the receptacle R will be delivered therefrom through the tube 16.

As herein disclosed, the push-in rod 49 is operatively engaged through the medium of a rigid link 50 with a rock lever 51. This rock lever 51 is operated upon manipulation of a hand lever 52, said rock lever 51 and hand lever 52 being pivotally mounted, as at 53, in a conventional manner. Coacting with the hand lever 52 in a well known arrangement is a spring 54 which serves to constantly urge the hand lever 52 in a direction to return the block 35 to its normal position.

From the foregoing description it is thought to be obvious that a dispensing apparatus constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

1. A liquid dispensing apparatus comprising, in combination, a receptacle having an opening, a supply pipe in communication with the receptacle through said opening, a delivery line in communication with the receptacle through said opening, a valve common to the supply pipe and the delivery line for controlling the flow therethrough, said valve when in one position opening the receptacle to the delivery line and when in a second position opening the receptacle to the supply pipe, a block supported for reciprocation, an operative connection between the

block and the valve for moving the valve upon operation of the block, a hand lever, a push rod operatively engaged with the hand lever, said push rod upon movement of the hand lever in one direction moving the block in one direction, and means for automatically moving the block in the opposite direction and normally maintaining the block at the limit of its movement in such direction.

2. A liquid dispensing apparatus comprising, in combination, a receptacle having an opening, a supply pipe in communication with the receptacle through said opening, a delivery line in communication with the receptacle through said opening, a valve common to the supply pipe and the delivery line for controlling the flow therethrough, said valve when in one position opening the receptacle to the delivery line and when in a second position opening the receptacle to the supply pipe, a block supported for reciprocation, an operative connection between the block and the valve for moving the valve upon operation of the block, a hand lever, a push rod operatively engaged with the hand lever, said push rod upon movement of the hand lever in one direction moving the block in one direction, means for automatically moving the block in the opposite direction and normally maintaining the block at the limit of its movement in such direction, said block having a bore into which the push rod extends, said slot being adapted to receive a check when in its normal position, the push rod having contact with such check, and means permitting the escape of the check when the block is at substantially the limit of its movement under the influence of the push rod.

3. In a dispensing apparatus, a hollow guide member, a block slidably mounted in said guide member and having a longitudinally disposed opening therein, said block also having a longitudinal slot communicating with said opening and a transverse downwardly inclined opening intersecting said first opening, a handle pivotally disposed forwardly of said guide means, a rod connected to said handle and having an end portion loosely disposed in said longitudinal opening, said end portion upon insertion of a check in said transverse slot and inward movement of said rod moving upwardly out of said longitudinal opening whereby upon further inward movement of said rod to move said block inwardly, and resilient means engaging one end of said block whereby to constantly urge said block in one direction.

4. In a dispensing apparatus including a dispensing receptacle, a hollow guide member carried by the receptacle, a block slidably mounted in the guide member and having a longitudinally disposed opening therein, said block also having a slot extending outwardly

of said opening, said block also having a transversely disposed opening therethrough, a tube carried by the guide means and communicating with the transverse opening
5 through said block, a second tube connected to said guide means oppositely from said first tube and adapted to communicate with one end of said transverse opening upon inward movement of the block, a handle, means for
10 rockably mounting the handle forwardly of the guide member, a block operating member disposed within said longitudinal opening, the inner end of said block operating member engaging a disk disposed in said trans-
15 verse opening, said disk having a diameter less than the length of the opening, inward movement of the operating member causing said member to ride upwardly on said disk and out of said longitudinal opening, a spring
20 disposed within said guide member and engaging said block whereby to constantly urge said block outwardly of said guide member, a valve member associated with said receptacle, and connecting means connecting said
25 valve with said block whereby to open or close said valve upon movement of said block in one direction.

In testimony whereof I hereunto affix my signature.

30 JOB RIGBY MANLEY.

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