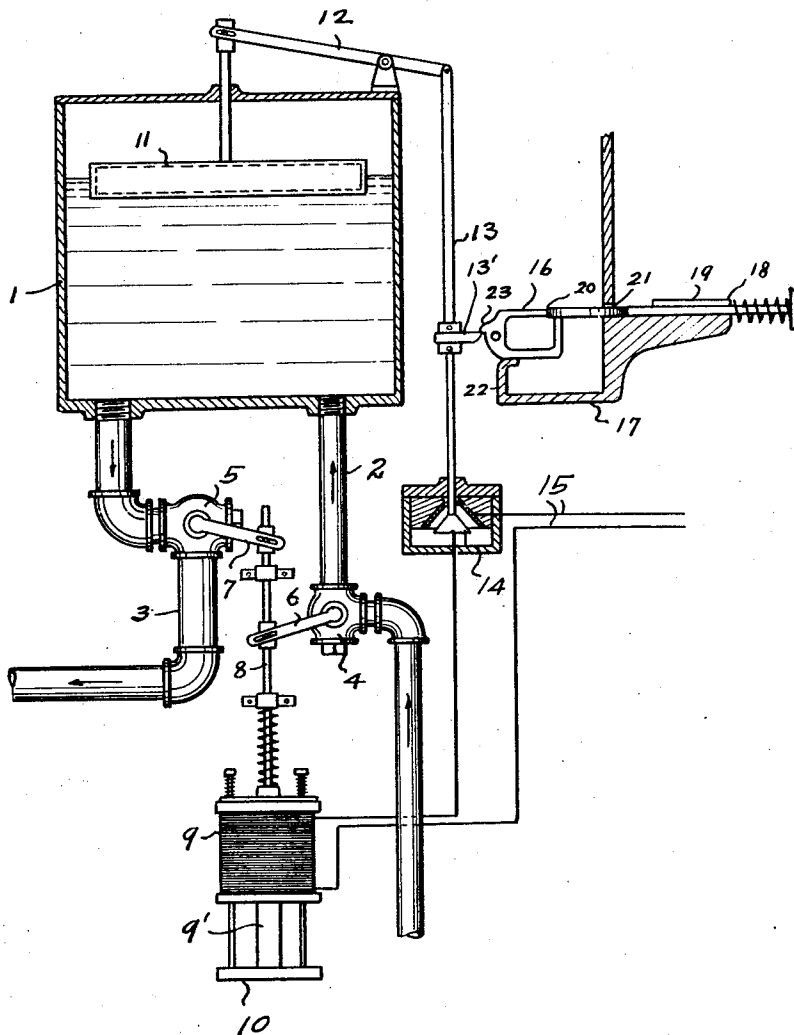


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J. C. PALMER
AUTOMATIC OIL PUMP
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AUTOMATIC OIL PUMP.

Application filed March 7, 1924. Serial No. 697,684.

This invention relates to new and useful improvements in an automatic oil pump.

One object of the invention is to provide a liquid dispensing device, whereby a predetermined quantity of liquid will be delivered, when the mechanism of the pump is released to operation.

Another object of the invention is to provide a device of the character described, which is normally locked against operation, but which is adapted to be released, through the instrumentality of a coin inserted therein, and which, when released, will automatically operate to deliver the fluid.

With the above and other objects in view this invention has particular relation to certain novel features of construction, operation and arrangement of parts an example of which is given in this specification and illustrated in the accompanying drawings, wherein—

The figure shows a side elevation of the complete device shown partly in section.

Referring now more particularly to the drawings, the numeral 1 designates a dispensing chamber, entering which is an inlet line 2, and leading from which is a delivery line 3. These lines are controlled by the inlet and discharge valves 4 and 5, respectively, which may be opened and closed through the respective valve arms 6 and 7. These arms are pivotally connected to the valve actuating rod 8. This rod is attached to the core 9' of the electromagnet 9 and is actuated by said electromagnet 9, in the usual, and well known manner. When the said magnet is charged it actuates said rod, in one direction to open the valve 4 and close the valve 5, thus permitting the chamber to fill. When the current is cut off from said magnet the rod 8 will be actuated in the other direction by the weight 10, carried by the core 9' thus cutting off the supply of fluid to chamber 1 by closing the valve 4, and opening the valve 5 to permit delivery of the fluid from said chamber.

There is float 11 in the chamber 1. This float depends from one end of the float lever 12, which is pivoted on top of said chamber. Pivoted to, and depending from, the other end of said lever 12 there is a switch control rod 13, which controls the electric switch 14, provided to complete or break the circuit through the wiring 15, leading from a source of electrical energy (not shown) to the magnet 9. The rod carries a catch 13' which

normally engages under the pivotally mounted trigger 16, which is located in the coin receiving box 17 and normally rests on the stop 22. When so engaged the switch 14 is held open, so as to break the electrical circuit, and the float is held elevated.

The coin box 17 has a plunger guide 18 in which is mounted, to slide, the spring seated, hand operable plunger 19. The guide 18 has a coin receiving notch 20 aligned with a coin receiving slot 21, cut through the adjacent wall of the coin box.

When it is desired to procure a supply of the liquid to be vended a coin is inserted in the notch 20 and the plunger forced inwardly. This will force the coin through the slot 21, which receives said coin snugly, and the coin will be held by the slot until the inner edge of the coin engages in the trigger notch 20. Further pressure on the plunger will actuate the trigger, on its pivotal support and lift it from the stop 22 and carry its beveled end 23 downwardly until it is disengaged from its catch 13' and the coin will then drop down into the box 17. The float, being released will descend and elevate the rod 13 and close the switch 14, and the trigger 16 will drop back by gravity on to the stop 22.

The circuit 15, now being completed the magnet will be energized and the rod 8 elevated, thus opening the valve 4 and closing the valve 5. The chamber 1 will now fill thus again elevating the float and the rod will be moved downwardly, carrying the catch 13' down with it and said catch will pass the beveled end 23 and into engagement beneath the trigger and the float will be held elevated until the catch is again released. When the rod 13 descends the switch 14 will be opened and the magnet 9 de-energized. The weight 10 will then carry the rod 8 downwardly and close the valve 4 and open the valve 5 and the liquid in the chamber will be delivered.

What I claim is:—

1. A device of the character described including a liquid chamber, an inlet line entering the chamber, a delivery line leading therefrom, a valve controlling each line, a weight having connections with said valves and normally holding the outlet valve open and the inlet valve closed, a magnet through the influence of which said connections may be actuated to reverse the position of said valves, when the magnet is energized, an

- electrical circuit into which the magnet is connected, a switch arranged to complete or break said circuit, a float in said chamber, operative connections through which the float operates the switch into open or closed position, a device normally holding the switch open, and a manually operable means adapted to release said holding means, to permit the switch to close.
- 10 2. A device of the character described including a fluid chamber, a float therein, an electrical circuit, a switch adapted to complete, or break, said circuit, means connected to the switch, and to the float, through which the float acts to normally hold the switch closed, a device adapted to hold the switch open, manually operable means adapted to release said device to permit the switch to close, an inlet line entering the chamber, a delivery line leading therefrom, a valve controlling each line, a valve actuating rod connected to said valves, means acting through said rod and normally holding said valves, one open and the other closed, a magnet connected into said circuit and when energized being effective to reverse the position of said valves.
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