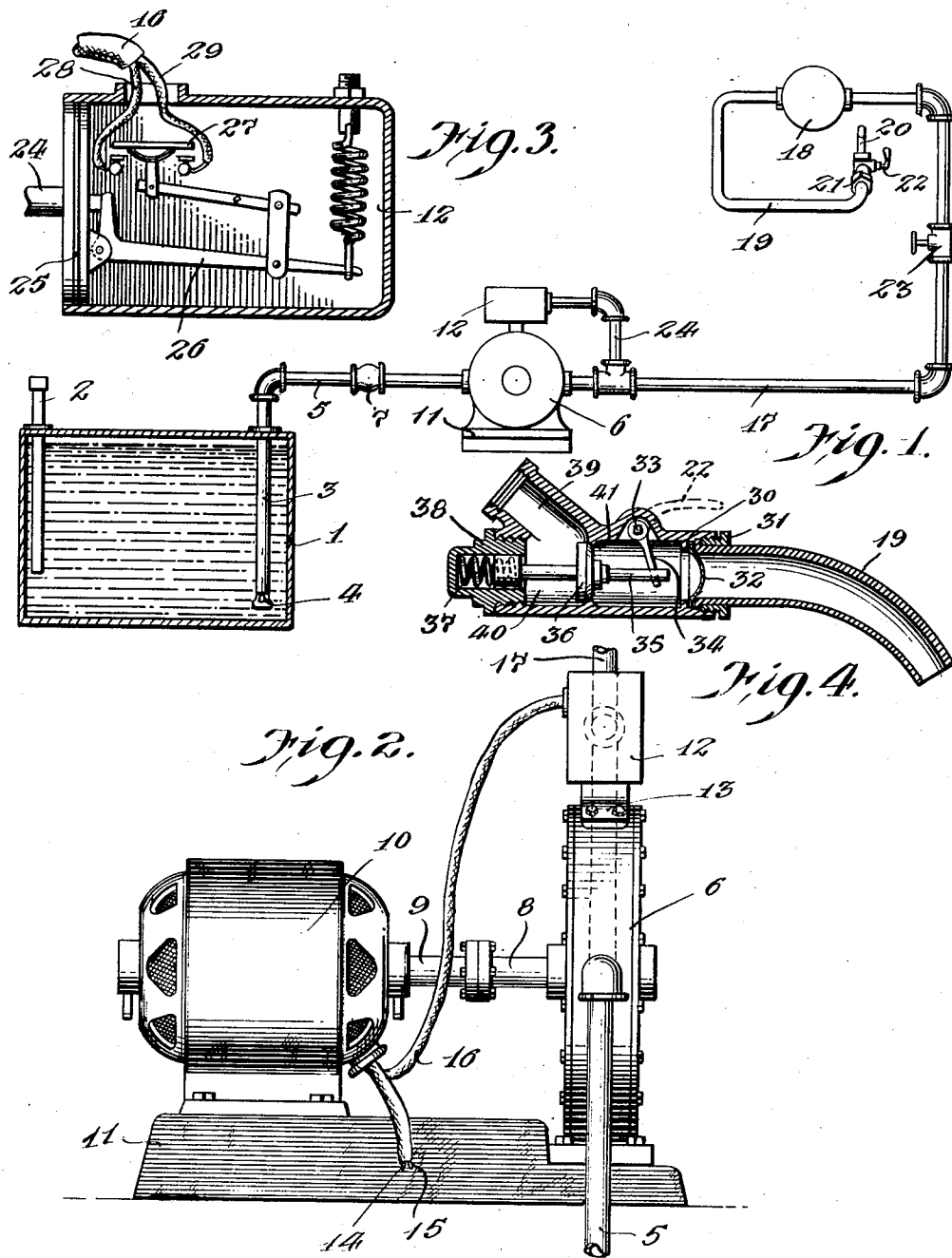


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AUTOMATIC DISPENSING DEVICE

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WITNESSES  
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## UNITED STATES PATENT OFFICE.

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CAMDEN, NEW JERSEY.

## AUTOMATIC DISPENSING DEVICE.

Application filed October 11, 1924. Serial No. 743,150.

*To all whom it may concern:*

Be it known that we, CHARLES A. GOLD-  
SMITH and JOSEPH F. MONTAGUE, citizens of  
the United States, and residents, respective-  
ly, of Collingswood, in the county of Camden  
and State of New Jersey, and Camden, in  
the county of Camden and State of New  
Jersey, have invented certain new and use-  
ful Improvements in Automatic Dispensing  
Devices, of which the following is a speci-  
fication.

This invention relates to a dispensing de-  
vice for liquids and has for its object the  
provision of a device which is automatically  
set in operation by the opening of the valve  
of the discharge pipe whereby the reduction  
of pressure in the discharge pipe will cause  
automatic operation of a motor for driving  
a pump connected with the discharge pipe.  
This invention will be best understood  
from a consideration of the following de-  
tailed description, in view of the accompa-  
nying drawing forming a part of the specifica-  
tion; nevertheless it is to be understood that  
the invention is not confined to the disclo-  
sure, being susceptible of such changes and  
modifications which shall define no material  
departure from the salient features of the  
invention as expressed in the appended  
claim.

In the drawings:

Figure 1 shows more or less diagram-  
matically the dispensing system.

Figure 2 is a side elevation of the pump,  
motor and automatic switch.

Figure 3 shows more or less diagram-  
matically an automatic pressure controlled  
switch.

Figure 4 is a longitudinal vertical section  
of the spring pressed valve controlling the  
flow of fuel from the dispensing device.

Referring more particularly to the draw-  
ing, 1 designates a storage tank which is  
normally located below the horizontal level  
of the discharge end of the dispensing de-  
vice and is adapted to be supplied with  
gasoline or other fuel when necessary  
through an inlet pipe 2. The suction pipe  
3 extends into the tank 1 and has at its low-  
er end a foot valve 4 which permits the flow  
of liquid through the pipe 3 but prevents  
the return of the liquid to the tank 1.

A pipe 5 connects pipe 3 with a rotary  
pump 6 and a check valve 7 in the pipe 5  
prevents the return of the liquid from the  
pump. The pump, as shown in Figure 2,  
is directly coupled with the respective shafts  
8 and 9 to an electric motor 10, the motor  
and the pump 6 forming a unit and mounted  
upon a base 11.

A pressure controlled switch 12 forming  
part of the motor and pump unit is con-  
nected with the pump casing as shown at 13.

The motor 10 is connected by means of  
wires 14 and 15 with a source of current,  
with the wire 14 leading directly to the  
motor while wire 15 is connected with a cir-  
cuit generally designated by the numeral  
16, the circuit 16 being connected with the  
automatic switch 12.

The discharge pipe 17 is connected to a  
pump 6 which is connected with a meter 18.  
An outlet pipe 19 is connected with the other  
side of the meter and is provided at its outer  
free end with a nozzle 20 and a spring valve  
21 operated by a lever 22. A cut-off valve  
23 in the pipe 17 permits closing of the  
system to the meter 18 and the discharge  
pipe 19 when desired or necessary. The  
meter 18 may be normally placed in a cas-  
ing and which has provision for receiving  
the nozzle 20 so that a bore on the housing  
or casing may be locked to prevent un-  
authorized manipulation of the lever 22 and  
the valve 21. The pipe 19 as is usual is flexi-  
ble so that the same may be moved to any  
convenient position in dispensing the liquids  
of the tank 1.

By-pass 24 connects the automatic switch  
control 12 with the discharge pipe 17 so that  
pressure in the pipe 17 is transmitted to a  
diaphragm 25 in the switch control for op-  
erating said diaphragm and actuating a  
lever 26 and moving contact 27 for closing  
the circuit 16 through wires 28 and 29 which  
connect with wire 15, as shown more par-  
ticularly in Figure 3.

The operation of our device is as follows:

When the lever 22 is operated to open the  
spring pressed valve 21 in the discharge pipe  
19 pressure is reduced in pipe 17 and pipe  
24 by the discharge of the liquid from the  
pipe 19. The diaphragm 25 will return to  
its normal position shown in Figure 3 where-

by the switch 27 has closed the circuit as shown and the motor 10 will be actuated for driving the pump 6. As soon as the valve 21 is closed pressure built up in the discharge pipe in the by-pass 24 will actuate the diaphragm 25, lever 26 and open the switch 27.

The spring pressed valve shown more particularly in Figure 4 discloses a casing 30 having an internally threaded end to receive a gland 31 for locking the flexible hose and screen 32 to the casing 30. An operating handle 22 operates a shaft 33 which moves a rock arm 34. This rock arm drives a stem 35 carrying a valve 36 against the pressure of a spring 37 carried by a hollow plug 38. This plug is screwed into a threaded opening in alignment with the inner threaded end of the casing which receives the hose 19. A discharge nozzle 39 is in open communication with the chamber 40 in the casing 30 and to one side of the valve 36. The valve as is shown is adapted to normally engage a seat 41 and when the stem is operated by the rock arm 34 the valve is moved off of its seat and permits the fuel to be dispensed from the nozzle 39.

What we claim is:

A gasoline dispensing device comprising a storage tank for liquids, a pump connected with said tank, an electric motor directly connected with the pump, a pressure switch, a discharge pipe connected with the pump, a by-pass connecting the discharge pipe with the automatic switch, a valve in the discharge pipe for controlling the flow of liquid from said pipe, said motor being connected with a source of current, and a circuit connecting the motor with the switch whereby upon a predetermined pressure of the liquid in the discharge pipe and in the by-pass the switch will be opened for cutting off the motor, the valve in the discharge pipe provided with a stem, a spring acting on the stem for maintaining the valve closed, a crank adapted to be manually operated for engaging the stem and moving the valve to open position for controlling the flow of liquid from the discharge pipe and for releasing pressure in the by-pass for causing automatic operation of the switch.

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