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SAFETY CONTROL FOR GASOLINE DISPENSING SYSTEMS

Filed May 16, 1930

Fig:1

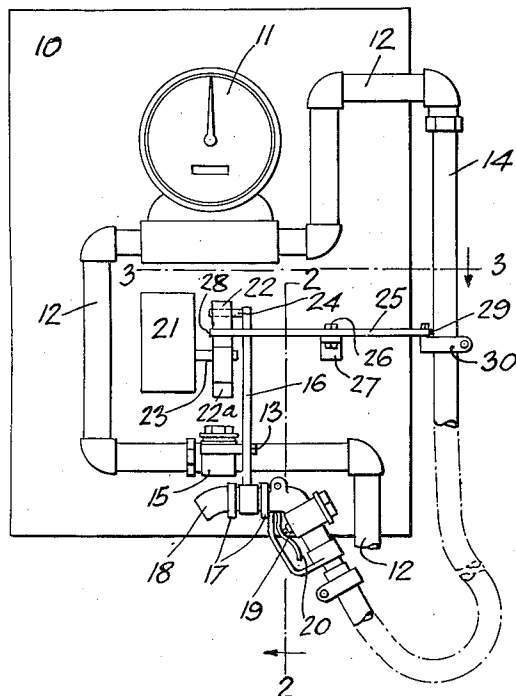


Fig:3

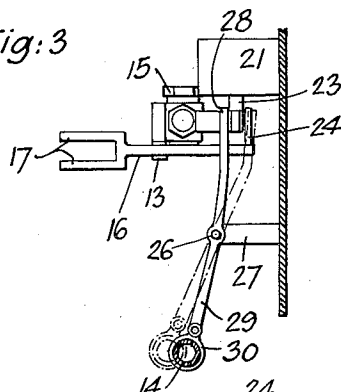
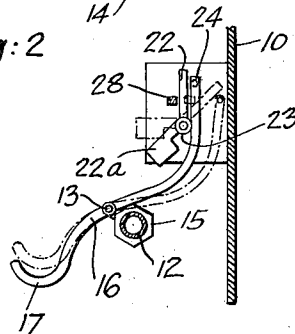


Fig:2



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SAFETY CONTROL FOR GASOLINE DISPENSING SYSTEMS

Application filed May 16, 1930. Serial No. 452,884.

This invention relates to safety devices for gasoline dispensing systems and has for its particular object the provision of dual means for dispensing gasoline for the purpose of compelling two distinct manual operations to be performed in order to start the mechanism of the system. The invention is an improvement over one disclosed in a co-pending application Serial #398,669 filed by me on October 10, 1929.

The invention consists briefly in an electrical switch unit which can only be closed to start the pumping mechanism, after the hose nozzle has been removed off its supporting hook, and after this hook has been raised manually to remove a switch lock. A second manual operation, namely the moving of the hose itself forward while dispensing the gasoline, then actually throws over the switch lever thereby closing the same.

In the drawing,

Fig. 1 is an elevational view showing a dispensing mechanism, with its cover removed, embodying a preferred form of my invention;

Fig. 2 is a fragmentary vertical sectional view along the plane of line 2—2 in Fig. 1; and

Fig. 3 is a fragmentary horizontal sectional view along the plane of line 3—3 in Fig. 1.

Like characters of reference denote similar parts throughout the several views and the following specification.

10 is a panel upon which is supported a meter 11 which is connected by suitable piping 12 to a motor driven pump 12a. The mechanism is customarily covered with a housing mounted upon the panel 10 which, however, for sake of clearness, has been omitted from the drawing. Piping 12 projects beyond the panel 10 and externally of the housing and has connected to it a discharge hose 14.

15 is a shut-off valve, preferably of the well known "gate valve" type, located within the housing and in the piping 12. Fulcrumed on the valve at 13 and serving as its operating handle is a lever 16, having its lower end projecting outside of the housing and formed like a hook at 17 for the recep-

tion and support of a hose nozzle 18 which is attached to the end of the hose 14. Nozzle 18 is of the usual construction well known in the art and includes, preferably, a nozzle valve 19 operated by an arm 20.

21 is an electrical switch unit, operably connected to the motor 21a driving the pump. The switch is actuated by a lever 22 fulcrumed at 23 to the switch and has a weight 22a angularly disposed with respect to the lever 22.

The upper part of the lever 16 is curved and extends parallel to the switch lever 22 where it terminates in a pin 24 at right angles to it immediately adjacent lever 22 and in back of it.

25 is an operating bar pivoted about a fulcrum 26 supported upon a bracket 27. This bar has one end 28 terminating immediately in front of the switch lever 22 and its other end 29 is bolted or otherwise secured to a hose clamp 30 fitted to the discharge hose 14. The end 29 of the bar is disposed at an angle away from the fulcrum 26 to where it connects to the clamp 30.

The operation of the device is as follows:

When dispensing gasoline, the hose nozzle 18 is taken off the end of lever 16. Lever 16 is then pushed upwards manually which opens the shut-off valve 15 and simultaneously moves the pin 24 away from its position in back of switch lever 22 to the one shown in dotted lines in Fig. 2. The operator then directs the hose nozzle 18 to the tank or other receptacle to be filled and in doing so moves the hose 14 forward of the panel into the position shown in dotted lines in Fig. 3. This trips the switch lever 22 over, the pin 24 which normally prevents tripping of the lever having been removed from a locking position as just now described. The closing of the switch then starts the motor of the pump and forces gasoline through the meter into the discharge hose 14 and out through nozzle 18. As soon as the nozzle 18 is replaced upon the hook 17 at the lower end of lever 16, the weight of the nozzle forces the lever 16 back to its original position which pushes the switch lever 22 back to open the switch which action

is assisted by the weight 22a and the usual retractile spring provided for within the switch housing. The discharge hose 14 which then resumes its vertical position alongside of the panel 10 again brings the pin 24 directly in back of switch lever 22 thus effectively locking it.

Attention is particularly called to the fact that putting the pump motor in operation requires two distinct manipulations, first, taking the hose nozzle off its support, and secondly, raising the support hook to remove the locking pin in back of the switch lever. In addition to these manipulations, it is necessary to give the hose itself a forward movement to actually trip the switch lever. The possibility of the switch being closed accidentally is thus entirely eliminated. The actual opening and closing of the switch is accomplished by the movement of the hose only and then only after the nozzle has been taken off and its support moved up manually.

While I have shown a pivotally supported locking bar, any other form of connection between hose and switch lever may, of course be employed, such as for instance a bar not pivotally supported having one end fastened to the hose and its other end fitted loosely over the switch lever. Moreover, the lever 16 need not necessarily be pivoted to the shut-off valve but may be fulcrumed on an independent bracket, and the shut-off valve may be operated manually also independently.

It is obvious, of course, that various kinds of switches and means for closing them may be employed in the successful execution of the principles of my invention and that many changes in the form, proportion and minor details may be resorted to without sacrificing any of the advantages of the invention as defined in the appended claims.

What I claim as new is:

1. The combination in a gasoline dispensing system of an operating switch, a discharge hose, a hose nozzle, a pivotally supported lever having a support for the said nozzle at one end and means to obstruct operation of the said switch at the other, the said lever being adapted to be raised manually to unlock the said switch, and means to open and close the said switch comprising a bar in operative connection with the said switch and fastened to the said hose.

2. The combination in a gasoline dispensing system of an operating switch, a discharge hose, a hose nozzle, a support for the said nozzle, means to obstruct operation of the said switch in operable connection with the said support and adapted to release the said switch by manual raising of the said support, and means to open and close the said switch comprising a bar in operative connection with the said switch and fastened to the said hose.

3. The combination in a gasoline dispens-

ing system of an operating switch, a weighted lever for operating the said switch adapted to normally maintain the switch in an open position, a discharge hose, a hose nozzle, a pivotally supported lever, having a support for the said nozzle at one end, its other end terminating alongside the said switch lever and being adapted to be raised manually for moving the other end of the said pivotally supported lever away from its position alongside the said switch lever, a pivotally supported operating bar, having one end connected to the said discharge hose, and its other end terminating adjacent the said switch lever, adapted to be rotated by a forward movement of the said hose and throw the said switch lever into a closed position after the said pivotally supported lever has been raised manually.

In testimony whereof I have hereunto set my hand.

ARTHUR C. MANDEL.