This invention relates to improvements in means to assure the recording of sales data in connection with sales of merchandise from a dispensing unit such as an electrically operated gasoline pump.

It is recognized that there is much loss of revenue in connection with the operation of an automobile service station, due to pressure upon operators in serving more than one customer at the same time, or because of other distractions. This is particularly true of failures to make records of charge sales. It is therefore a primary object of this invention to provide an electrically operated signaling means which will automatically be placed in operation at the time of a dispensing operation, for the purpose of maintaining a signal in operation, even after the dispensing action has been completed, until the sale has been noted, either upon a cash register or recorded upon other sales tabulating means.

A further object of this invention is the provision of a system which will assure either an accurate recording of a sale of merchandise or a registering of the purchasing price thereof, in connection with some merchandising unit, such as a gasoline pump, the system including a signal, either visual or audible, which will continue in effective operation, even after the merchandising unit has completed its operation, until a record of registering action upon the part of the operator has been completed.

Other objects and advantages of this invention will be apparent during the course of the following detailed description.

In the accompanying drawings forming a part of this specification, and wherein similar reference characters designate corresponding parts throughout the several views:

Figure 1 is a diagrammatic view showing a gasoline dispensing pump and a service station with a recording machine, and diagrammatically illustrating the combination features of the improved system.

Figure 2 is a fragmentary view showing the wiring diagram of certain portions of the improved system.

In the drawing, wherein is shown only a preferred embodiment of the invention, the letter A may generally designate a conventional gasoline dispensing pump located in proximity to the housing portion B of the service station. A machine C for registering or recording sales of gasoline from the unit A is provided. Usually this is located in the housing B, but it may be directly connected as a part of the dispensing unit A.

The gasoline dispensing unit A may comprise a casing 10 having a pump actuating electric motor 11 associated therewith. The usual flexible hose 12 is provided, normally adapted to hang (when the pump is inoperative) upon a switch operating hook 13. The latter closes a normally opened switch 14 in the electric circuit 15 in which the motor M is located when the nozzle of the hose is lifted from the hook.

In the drawings the machine C is shown as a cash register, although it may be any approved sales recorder for cash sales, charge sales, or the like. It is shown as mounted upon a suitable counter or stand 20, adjacent to which is located a unit D which may include an electric signal, relay and control switch. A second unit E is provided, in any appropriate location, housing a relay and switch mechanism, the details of which will be subsequently described.

The power line source is indicated at 25 and may extend through a suitable fuse box or combination switch and fuse box 26. One line 27 of the circuit leading to the motor M may extend directly to the motor, and the other line 28 is interconnected with details of the unit E.

The unit E includes a solenoid or relay having a core 29 and a coil 30. The latter is connected in the line 28. This places the relay, coil and core in series with the wiring leading from the power source to the motor 11. The unit E furthermore includes a switch arm 31, which may be spring actuated as at 32 to normally hold it open. When current passes through the relay to the motor circuit the switch 31 acts as an armature to close a circuit through lines 35 and 36 leading directly to the unit D.

The unit D houses a relay composed of a core 40 and a coil 41. The line 35 leads directly to and is connected at one end of the coil 41. The opposite end of the coil has a line 43 leading therefrom and is connected to the line 36 at 37. The relay in the unit D is low voltage actuated. The line 43 includes one winding of a stepdown transformer 45 also housed in the unit D. The other winding of the stepdown transformer is connected by wiring 46 leading to a plug 47 connected in an outlet box 48. The latter is wired connected with the system in the fuse box 26. The armature for the relay of unit D comprises a switch arm 50, which may be spring actuated at 51 to hold it normally open. When the switch arm 31 is closed incidental to starting of the motor 11 of the dispensing unit A the circuit will be closed through coil 41. This will attract the armature 50 and close a circuit through the lines leading to a signal 55. The latter is shown in the drawing as a buzzer, but it may be a visual or any other type of audible device.

The unit D includes a normally closed control switch 60 which is in the circuit leading through the signalling device 55.

When the operator has completed the dispensing of gasoline or other merchandise from the unit A, the motor 11 will be rendered inoperative. Notwithstanding such, the switch 50 will remain closed and the buzzer 55 will remain operative as a result of current flowing from the stepdown transformer 45, until the switch 60 is manually opened. This will serve as a reminder to the operator to either register or record the sale at the unit C. When such has been done the switch 60 may be manually opened. This will break the circuit through the relay of the unit D and also through the signalling means 55.

The component parts of the system may be located other than as shown and described. The system may include more than one signal or more than one control button for multiple operation.

It is within contemplation of the invention that an accounting operator may be informed through this system of sales from a number of pumps or merchandising units or locations. The sales recording details may be such that a record of the sale must be made before the signalling means can be disconnected.

Various changes in the shape, size, and arrangement of parts may be made to the form of invention herein shown and described without departing from the spirit of the invention or scope of the claims.

I claim:
1. In a system to assure recording or registering of
sales data the combination of a customer's dispensing unit having an electrically actuated dispensing motor with electric current and switch means controlled by dispensing action upon the part of the operator to set the motor in operation, an electrical signal device, means connecting said signal device in circuit with the motor for signaling when the motor is put into operation, and circuit means to continue the signalling of said signal device even after the motor has been subsequently rendered inoperative after a dispensing action of said unit.

2. In a system to assure recording or registering of sales data, the combination of a customer's merchandising unit having an electrical control motor and means under the manual control of an operator to set said motor into or out of merchandise handling operation, an electrical signal, means connecting said electrical signal in circuit with the said motor for signaling when the motor is put into operation, and relay controlled circuit means to continue the signalling of said signal device even after the motor has been subsequently rendered inoperative including a manually actuated switch to break the circuit through said signalling device.

3. In a system to assure the recording or registering of sales data the combination of a merchandising unit having an electric motor for handling and dispensing merchandise and means under the control of an operator to render the electric motor inoperative, an electrical signal device, circuit means for said electrical signal device including a relay to close said circuit through the electrical signal device when the motor is initially placed into operation, and circuit means to continue the signalling of said signal device even after the motor circuit has been rendered inoperative.

4. A system as described in claim 3 in which the said circuit means to continue the signalling of said signal device even after the motor has been subsequently rendered inoperative comprises a relay in said last mentioned circuit means for holding the circuit closed through the signal device, and a normally closed control switch in said last mentioned circuit to open said circuit through the last mentioned relay and said signal device.

5. In a system to assure the recording of sales data the combination of a merchandise dispensing unit having an electrically actuated dispensing motor, means under the control of an operator at said unit for closing and opening a circuit through said motor, an electric signal device, a circuit for the electric signal device including an electric power source connected therein and a relay having a coil in the last mentioned circuit, a normally opened armature circuit closing switch for said relay, a relay in the circuit for the motor including an armature switch which is normally opened, and a wiring circuit in which is connected both of the armature switches and having the power source for the first mentioned relay connected therein, the first mentioned armature switch being bridged in the circuit of the signal device and being closed for operation only when the armature switch of the first mentioned relay is closed in said circuit, and a normally closed control switch in the circuit where the switch of the first mentioned relay is located for manipulation by an operator to break current through the first mentioned relay and said signal device.

6. A system as described in claim 5 in which the source of power for the first mentioned relay and signal device consists of a circuit having a stepdown transformer therein for operating the first mentioned relay at a low rate of voltage.

7. In a system to assure the recording of sales data in connection with the dispensing of gasoline from electrically operated motor pumps, the combination of a gasoline dispensing pump including an electrically actuated dispensing motor and the conventional dispensing hose and nozzle, an electric circuit for said motor having a power source and a normally closed switch thereof actuated by supporting placement of the nozzle upon the pump for opening said circuit, a station located electrically actuated signalling device, an electric circuit for the signalling device including a power source connected therein and a relay in the signal circuit, a normally opened armature switch controlled by said relay for actuating the signal circuit, a second relay located in the motor circuit including a normally opened armature switch, a circuit having both of the armature switches located therein and having the power source for the first mentioned relay connected therein, the first mentioned armature switch being located in the circuit of the signal device and closed only for closing its circuit when the armature switch of the motor circuit relay is closed in its circuit, and a normally closed control switch in the circuit wherein the switch of the motor circuit relay is located for manipulation by an operator to manually break current through said relays and said signalling circuit.

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