W. E. GORTON.

AUTOMATIC SINGLE POLE ELECTRIC SWITCH.

APPLICATION FILED MAY 16, 1912.

1,050,939. Patented Jan. 21, 1913.

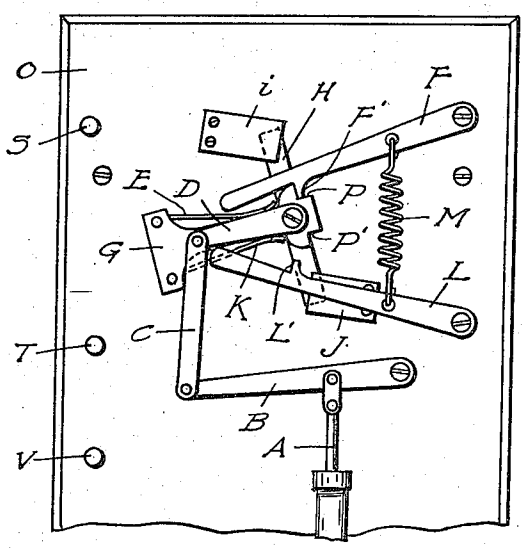

FIG. 1.

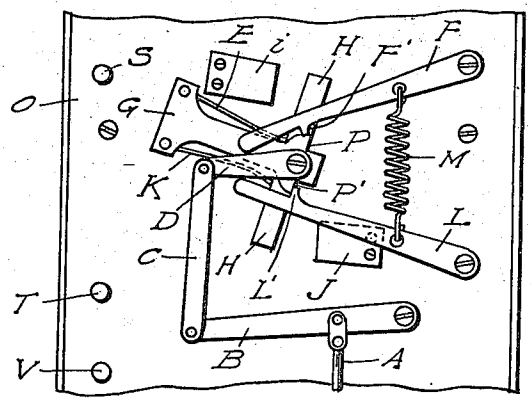

FIG. 2.

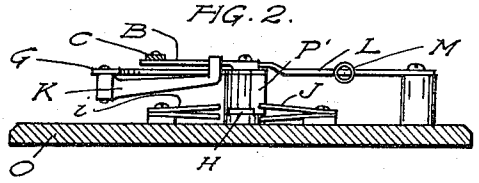

FIG. 3.

WITNESSES:

Chas. E. Wright

John J. Dooley.

INVENTOR:

William E. Gorton

BY Eugene Ayres,

ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM E. GORTON, OF ST. JOSEPH, MISSOURI, ASSIGNOR OF ONE-FOURTH TO REUBEN E. CREEL, ONE-FOURTH TO GEORGE H. WYATT, AND ONE-FOURTH TO HOMER A. OSBORN, ALL OF ST. JOSEPH, MISSOURI.

AUTOMATIC SINGLE-POLE ELECTRIC SWITCH.

1,050,939. Specification of Letters Patent. Patented Jan. 21, 1913.

Application filed May 16, 1912. Serial No. 697,691.

To all whom it may concern:

Be it known that I, WILLIAM E. GORTON, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Automatic Single-Pole Electric Switches, of which the following is a specification.

The object of my invention is to provide a device through which by suitable connecting mechanism a switch may be regulated automatically by air pressure or water pressure operated by an electric motor to pump liquids into barrels, tanks on buildings, or receptacles of any kind, and to automatically keep such barrels, tanks, or other receptacles, supplied with the necessary amount of liquid, never permitting either an overflow or an exhaust of the required liquid.

I accomplish my object by the mechanism illustrated in the accompanying drawings, in which,

Figure 1 is a top or plan view of the device with the switch thrown in contact; Fig. 2 is also a plan view, showing the switch out of contact but in the act of going in contact, and Fig. 3 is a side view showing one of the elliptic springs, contact points, switch, disk, piston and operating lever.

Similar letters refer to similar parts of the mechanism shown in the drawings and hereinafter described.

A is a piston rod and B an operating lever connected pivotally therewith.

C is a bar connected pivotally at one end to the operating lever B and at the other end to the outer end of a disk operating lever D.

G is an operating disk provided on its sides with elliptic springs E and K and at its inner pivoted end with notches P and P′.

F and L are latches provided with lugs F′ and L′ which alternately and automatically engage with said notches P and P′. M is a spiral spring connected with said latches and adapted to draw the latches and their lugs into engagement with said notches when said latches are respectively in or out of contact. I and J are switch contacts and H is a switch bar to break and connect at said switch contacts.

S is a line and switch connection, T is a line, switch and motor connection and V is a line and motor connection.

All of the above parts are mounted on a base O, preferably of slate.

The mode of operation of my device is as follows: When pressure moves piston rod A, operating lever B, connecting bar C and disk operating lever D to the left comes in contact with elliptic spring E and latch F continues to move to the left until the lug F′ on latch F is released from notch P in operating disk G, switch bar H instantly breaks the circuit at switch contacts I and J, as shown in Fig. 2, at any desired pressure. Said switch remains in said position until the pressure is released to any desired point of pressure; thence the operation is the same to the right, as shown in Fig. 2 which is in the act of throwing the switch in contact as shown in Fig. 1.

What I claim and desire to secure by Letters Patent, is,—

1. In an automatic single pole electric switch, a base, a piston, three binding posts mounted on a base for line, motor and switch contacts, of an operating lever pivotally attached at one end to said base, a connecting bar, a disk and disk operating lever both pivotally attached to said base at the same point, said operating lever engaging with said connecting bar, notches in said disk, duplicate elliptic springs attached to said disk, latches provided with lugs pivotally attached to said base, a spiral spring to hold said lugs in said notches holding said switch bar in or out of contact causing said bar to move instantly when said latches are released avoiding burning or corrosion of the contacts.

2. In an automatic single pole electric switch the combination with a base, of an operating lever pivotally attached at one end to said base, a disk having notches therein

and a disk operating lever both attached pivotally at the same point on said base, a connecting bar one end pivotally attached to the outer end of said operating lever the other end pivotally attached to the outer end of said disk operating lever, latches pivotally attached to said base and lugs thereon to engage with said notches and a spiral spring forming connection between said latches and elliptic springs on said disk.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM E. GORTON.

Witnesses:
F. K. ALLEN,
W. H. PINES.