Nov. 6, 1928. 1,690,473

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OPERATING MECHANISM FOR CIRCUIT CONTROLLERS

Filed May 10, 1927

Fig. 1.

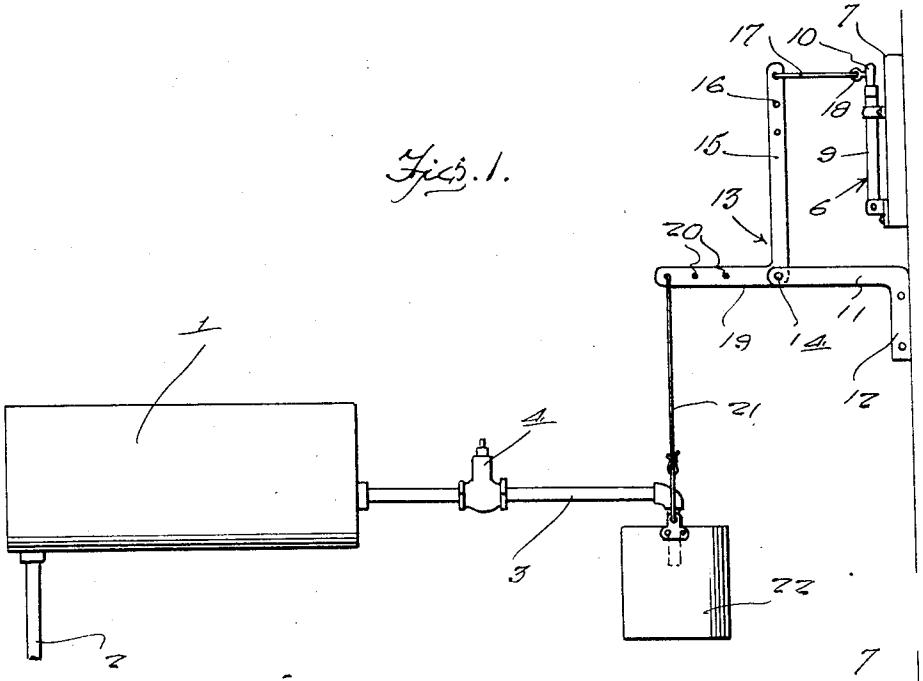
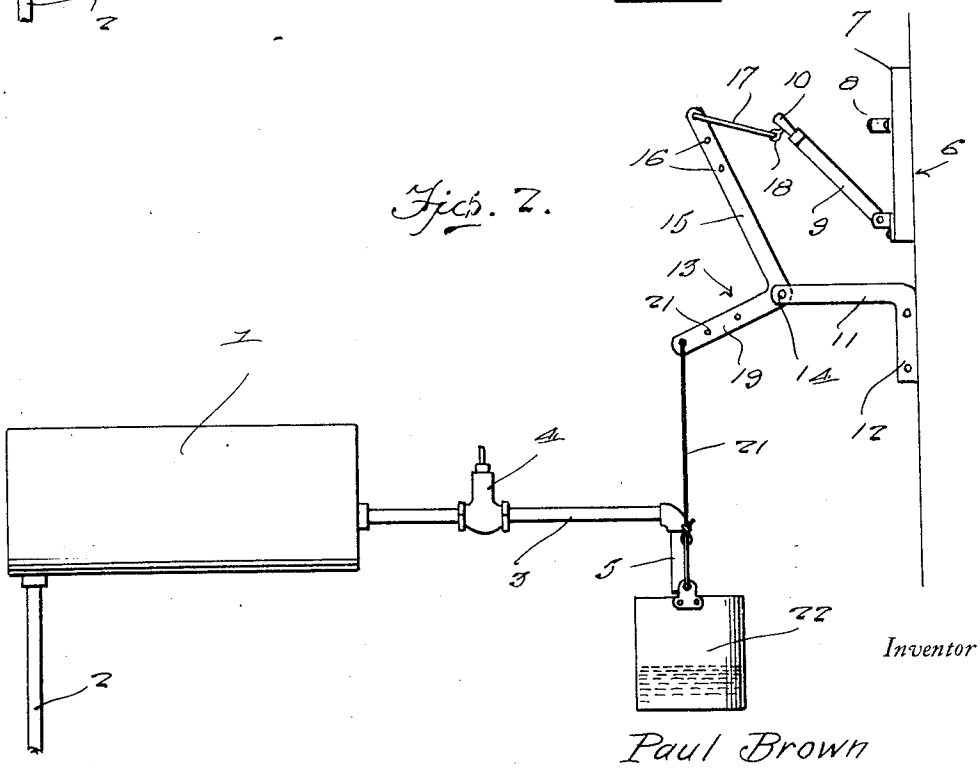


Fig. 2.



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Patented Nov. 6, 1928. 1,690,473

UNITED STATES PATENT OFFICE.

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OPERATING MECHANISM FOR CIRCUIT CONTROLLERS.

Application filed May 10, 1927. Serial No. 190,366.

The present invention relates to improvements in devices for automatically operating a circuit controller and has reference more particularly to an operating mechanism for association with a circuit controller used in conjunction with the pumping mechanism of a pressure water system.

One of the important objects of the present invention resides in the provision of a pivoted lever connected at one end with the circuit controller, a receptacle being suspended from the other end of the pivoted lever for communication with the discharge end of an outlet pipe extending from a pressure tank and in which pipe is arranged a safety valve, so that when the pressure becomes excessive in the tank and the liquid flows out through the outlet pipe, the same will enter the receptacle and due to the weight of the liquid in the receptacle the latter will cause the lever to automatically operate the circuit closer thereby breaking the said circuit to the pumping mechanism.

A further object is to provide a device of the above mentioned character which will, at all times, be positive and efficient in its operation, the same being further simple in construction, strong and durable, and further well adapted to the purpose for which it is designed.

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

In the accompanying drawing, forming a part of this application and wherein like reference characters designate like parts throughout the views:

Figure 1 is a side elevation of the device embodying my invention, the parts being disclosed in their normal postion and the circuit controller being shown in a closed position, and

Figure 2 is a similar view, showing the arrangement of the parts after the circuit closer has been moved to an open position.

In the drawing, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates the pressure tank of a water pressure system, the supply pipe therefor being illustrated at 2, and extending from one end of this tank is the outlet pipe 3, which has arranged therein, a safety valve designated generally by the numeral 4. A discharge nozzle 5 is associated with the outer end of this pipe 3, and this nozzle is disposed downwardly.

The circuit controller which is provided for controlling the circuit to the pumping mechanism (not shown) forming a part of the pressure water system, is illustrated generally at 6, the same comprising the insulated base 7 on which is arranged the stationary contact 8 and cooperating therewith is the pivoted contact blade 9, the insulated handle thereof being shown at 10. Normally when this circuit closer is disposed in the manner shown in Figure 1 of the drawing, the circuit to the pumping mechanism (not shown) is closed, and the pressure in the tank 1 is maintained.

My improved device comprises a substantially L-shaped supporting bracket 11, which has its shorter arm secured to a suitable support below the circuit closer or controller 6.

A substantially L-shaped lever 13 is pivotally secured at its bend to the outer end of the longer arm of the L-shaped bracket 11 as at 14. The longer arm 15 of the L-shaped lever 13 extends upwardly and is formed with a series of vertically spaced openings 16 in the upper portion thereof.

The upper end portion of this elongated arm 15 is operatively connected to the insulated handle 10 of the pivoted blade 9, of the circuit controller 6, through the medium of the rod 17.

This rod 17 has one end thereof disposed in one of the vertically spaced openings 16 provided therefor in the upper end of the vertically disposed or longer arm 15 of the L-shaped lever 13, while the other end of the rod is connected to a suitable eye 18, carried by the handle portion 10 of the pivoted blade 9.

The shorter or horizontally extending arm 19 of this L-shaped lever 13 is formed with a series of spaced openings 20 and suspended therefrom by means of the cable 21 is the bucket 22, the same being adapted for disposition beneath the spout 5, in the manner as clearly illustrated in the drawing.

Normally the parts are arranged as shown in Figure 1 of the drawing. When the pressure in the tank 1 becomes excessive and the fluid escapes from the tank through the pipe 3 past the safety valve 4, the same will enter the bucket 22 by reason of the disposition of the nozzle or spout 5 and when the bucket becomes filled to a predetermined height, the weight of the liquid in the bucket will cause the same to move downwardly and consequently the lever 13 will swing downwardly on its pivot 14 and as a result, the upper

end of the elongated or vertically disposed arm 15 of the lever will swing the blade 9 of the circuit controller outwardly out of engagement with the contact 8, thereby breaking the circuit to the pump mechanism (not shown) and as a result, the pumping operation will stop, thus preventing any possibility of the overflowing water which is discharged from the pipe 3 causing any damage.

In order to again operate the pumping mechanism, it is necessary to empty the water from the bucket 22 and then manually move the blade 9 into engagement with the contact 8, thus closing the circuit to the pumping mechanism and again rendering the device operative.

It will thus be seen from the foregoing description, that I have provided an operating mechanism for circuit controllers which will, at all times, be positive and efficient in its operation, and which will furthermore be capable of being associated with the parts of the pumping system without necessitating any material alterations of the parts of the system with which the present invention is to be associated.

While I have shown the preferred embodiment of my invention, it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to, without departing from the spirit of the invention or the scope of the appended claims.

What I claim is:

1. A circuit maker and breaker of the class described comprising a stationary contact, a vertically swinging contact for cooperation with the stationary contact, a bracket supported below the contacts, a substantially L-shaped lever pivoted at its bend on the bracket, an operative connection between the upper end of the vertically extending arm of the L-shaped lever and the movable contact, and a weight associated with the outer end of the horizontally extending arm of the L-shaped lever for effecting the actuation of the lever to move the vertically swinging contact out of engagement with the stationary contact.

2. A circuit maker and breaker of the class described comprising a stationary contact, a vertically swinging blade comprising a movable contact for cooperation with the stationary contact, a bracket supported below the contacts, a substantially L-shaped lever pivoted at its bend on the bracket, a rod pivotally connected at one end to the vertically swinging blade, the other end of the rod being adjustably connected to the upper end of the vertical arm of the L-shaped lever, and a weight suspended from the outer end of the horizontally extending arm of the L-shaped lever for actuating the lever to swing the blade outwardly out of engagement with the stationary contact at a predetermined time.

In testimony whereof I affix my signature.

PAUL BROWN.