May 6, 1930. D. L. FROOKS 1,757,456

TIME CONTROLLED SWITCH APPARATUS

Filed Sept. 6, 1928

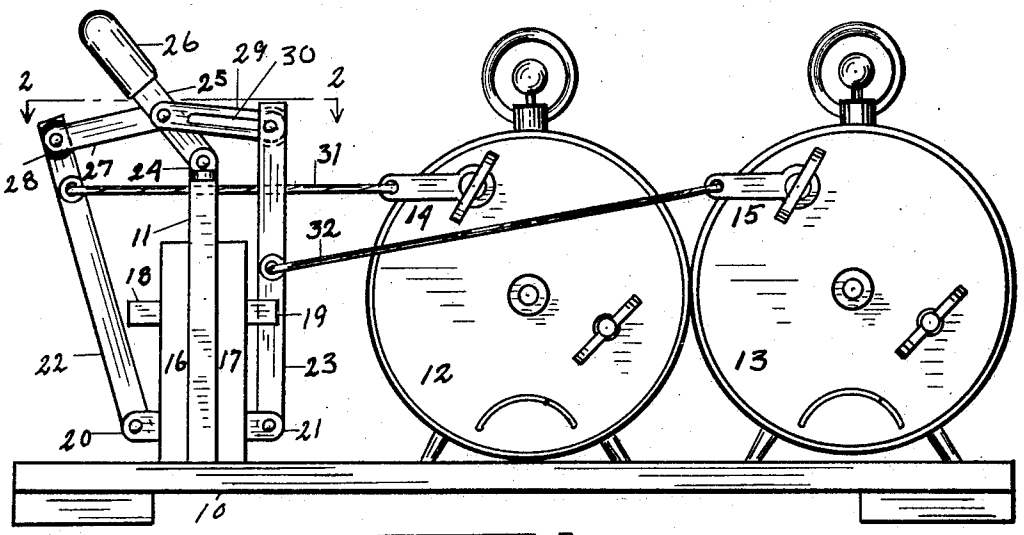


FIG. 1

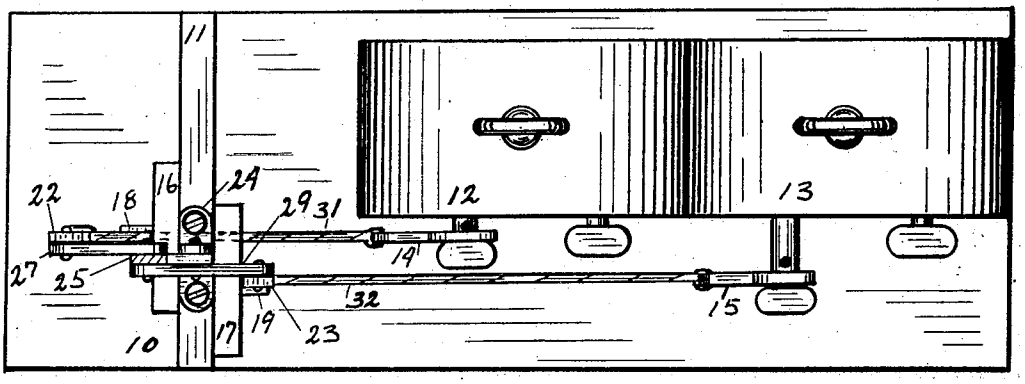


FIG. 2

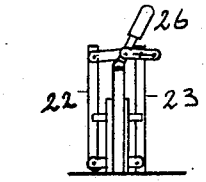


FIG. 3

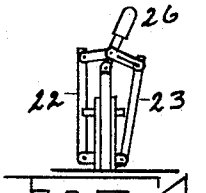


FIG. 4

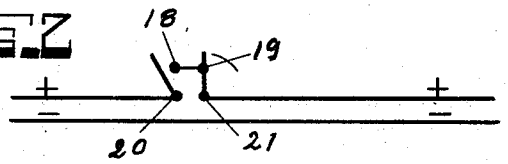


FIG. 5

INVENTOR
DONALD FROOKS
BY
O. S. Leszay
ATTORNEY

Patented May 6, 1930 1,757,456

UNITED STATES PATENT OFFICE

DONALD L. FROOKS, OF LYNBROOK, NEW YORK

TIME-CONTROLLED SWITCH APPARATUS

Application filed September 6, 1928. Serial No. 304,215.

This invention relates to a time controlled switch apparatus and its object is to provide a device of this character which is adapted to operate in conjunction with suitable clock mechanism at the expiration, or the beginning of pre-determined time intervals.

A further object is a simple and compact unit of construction embracing the several elements of the invention.

These and other objects and features of the apparatus will be fully described in the following specification and illustrated in the accompanying drawings, in which:

Fig. 1 shows a rear elevation of the apparatus.

Fig. 2 shows a plan view of the same; the switch handle being cut off on the line 2—2 of Figure 1.

Fig. 3 shows a diagram of the switch element in its second position.

Fig. 4 shows a diagram of the switch element in its third position.

Fig. 5 shows a wiring diagram.

Referring first to Figure 1 of the drawings; the device comprises a base 10 on which is mounted a vertical panel 11. These elements may be of wood, or any suitable material. Secured to the said base are two timing elements 12 and 13; as shown, these are ordinary alarm clocks, but other forms of clock movements may be used to suit the necessary requirements. Rotatable levers 14 and 15 are mounted on the clock movements as shown. Switch bases 16 and 17 are secured to the opposite sides of the panel 11 and contact elements of usual form 18 and 19 project from the said bases. Pivot bearings 20 and 21 support the switch blades 22 and 23. A bracket 24 supports the switch lever 25 which has a handle 26.

A link 27 extends from the switch blade 22 to the lever 25 and is insulated from the said blade at 28. A link 29 connects the blade 23 to the lever 25 and this is also insulated from the said blade. This link 29 is slotted as seen at 30.

Cords, or like elements 31 and 32 connect the switch blades to the levers 14 and 15.

The device may be installed in connection with any lighting fixtures, such as electric signs or the like; or connected to elements operating cooking utensils; or may be used to start and to stop motors, or other power appliances.

In use—the clocks having been wound and set and the required electrical connections having been made to the desired apparatus—the handle 26 is thrown into the position shown in Figure 1. In this position no current can pass through the circuit.

When the clock 12 actuates the lever 14, the blade 22 will be closed and the switch will be in the position shown in Figure 3; the circuit thus being closed and the operation of the desired mechanism will be started as required. This operation will continue until the clock 13 turns the lever 15 which will pull out the switch blade 23 thus opening the circuit and discontinuing the operation; the blades being then in the position shown in Figure 4.

To re-set the apparatus: it is only necessary to throw the handle 26 back to its first position.

While I have shown and described the invention in its preferred form; I do not wish to be limited to the exact details of construction as illustrated, but claim the right to such minor modifications in the same as may come within the spirit and scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is as follows:

1. In combination with a multiple time release mechanism, an electric switch comprising oppositely mounted blade members, opposite contact elements conductively connected with each other, an operating lever mounted between the said blades and connected thereto by insulated link members, one of which members is slidable over the pivot connection to its respective blade element, and the said blade elements operatively connected to the aforesaid release mechanism.

2. In combination with multiple time release elements and mounted adjacent thereto, a vertical panel, switch blades mounted on insulating bases on opposite sides of the said panel and conductively connected contact ele-

ments in position to engage the said switch blades, a rocking lever mounted between the said switch blades and connected thereto by insulated link members, one of which members is slotted to pass rearwardly over the pivot connection to its respective blade, and the said switch blades respectively connected to lever members mounted on the said multiple time release elements.

Signed at New York in the county of New York and State of New York this 28th day of August, A. D. 1928.

DONALD L. FROOKS.