Oct. 9, 1923. 1,470,323

H. HOKANSON

TIME CONTROLLED SWITCH

Filed Oct. 19, 1922

Fig. 1.

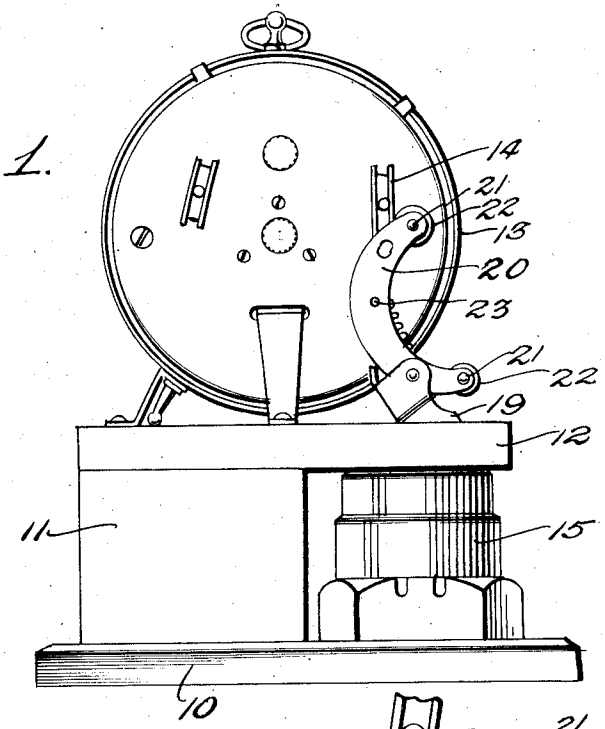


Fig. 2

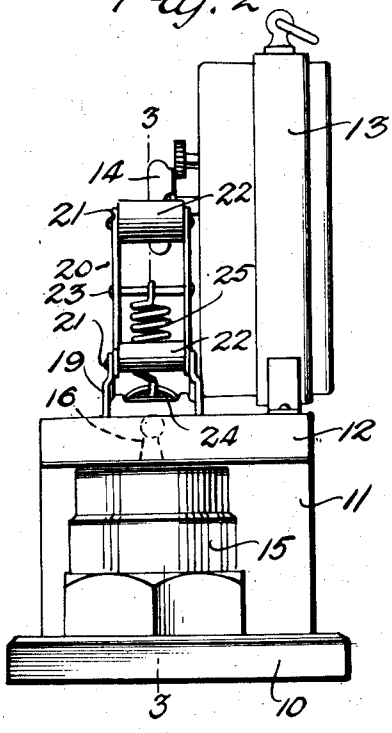
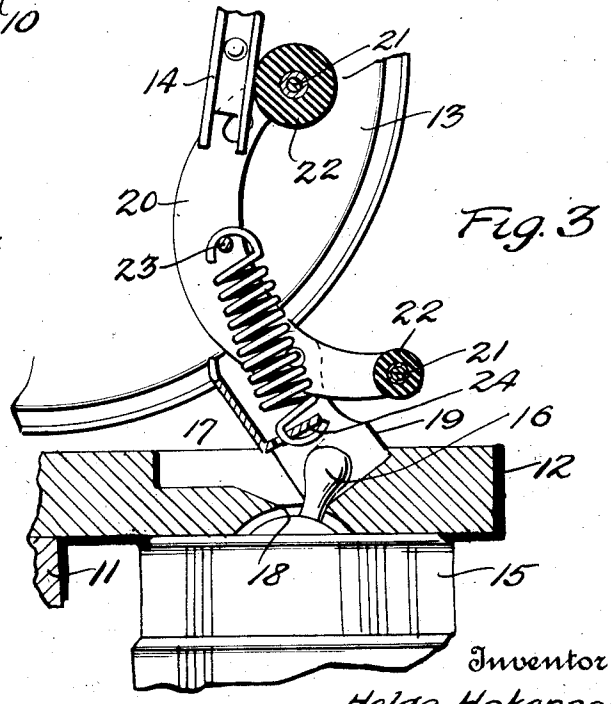


Fig. 3



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UNITED STATES PATENT OFFICE.

HELGE HOKANSON, OF WASHINGTON, NEW JERSEY.

TIME-CONTROLLED SWITCH.

Application filed October 19, 1922. Serial No. 595,603.

To all whom it may concern:

Be it known that I, HELGE HOKANSON, a citizen of Sweden, residing at Washington, in the county of Warren, State of New Jersey, have invented certain new and useful Improvements in Time-Controlled Switches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in time controlled devices and particularly to time controlled electric switches.

One object of the invention is to provide a switch operating mechanism which is arranged to be actuated by the alarm winder of a clock, the same being so arranged as to throw the arm of the switch when the alarm operates.

Another object is to provide a simple and cheap device of this character which can be readily placed in position for operation without modification to the structure of the clock.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing:

Figure 1 is a rear elevation of a clock and the invention in set position ready to be released when the alarm winding handle is rotated in the event the alarm goes off.

Figure 2 is a side elevation of the same.

Figure 3 is an enlarged vertical sectional view through the switch operating member, on the line 3—3 of Figure 2.

Referring particularly to the accompanying drawing, 10 represents a base on one end of which is secured a block 11, and secured to the upper face of the block and extending in parallel relation with the base, is a board 12. Mounted on the outer end of this board 12, and adjacent the front edge thereof, is a clock 13 having the alarm winding fingerpiece 14, which is adapted to operate the switch actuating member, as will be explained more clearly later herein.

Mounted on the base 10 is an electric switch 15 having the arm 16 extending upwardly through the board 12, and into a recess 17 formed in the upper face of the board around the opening 18. Mounted in the recess 17 is a metal yoke 19, and pivotally mounted on the arms of the yoke are the longitudinally curved plates 20. Connecting the ends of the curved plates 20 are the small shafts 21 on which are mounted the rollers 22, said rollers being disposed between the ends of the arms. Extending transversely between the intermediate portions of the arms or plates 20, and secured at its ends in the plates, is a pin 23. Extending angularly from the lower edge of the transverse member of the yoke 19 is a lug 24, and connected at its opposite sides to the said pin 23 and to the lug, is a strong coil spring 25, the plates 20 being pivoted to the yoke at such points, and the pin 23 being arranged at such a point with relation to the lug 24, that when the plates are swung upwardly to dispose the upper roller 22 against the fingerpiece 14, the spring will exert force to urge the roller against the fingerpiece. When the alarm goes off the fingerpiece 14 will rotate to press against the upper roller 22 and gradually push the roller outwardly until such time that the pin 23 is disposed outwardly beyond the outer end of the lug 24, when the force of the spring 25 will exert its force downwardly to swing the plates 20 to engage the lower roller 22 with the arm 15 of the switch with the result that the said arm will be swung into circuit opening position. To reset the switch into circuit closing position the finger of the person is inserted beneath the yoke and the arm 15 pushed toward the outer end of the recess 17. The alarm is then wound, by turning the fingerpiece, until said fingerpiece stands approximately vertical, after which the plates 20 are swung upwardly until the roller at the upper ends of the plate rests against the fingerpiece. When the alarm goes off the fingerpiece will turn in a retrograde direction, pushing on the upper roller 22 and gradually forcing the same outwardly until the spring can exert its downward force to cause the lower roller to move the switch arm 15.

What is claimed is:

1. A time controlled switch operating device including a base, a switch arm extending through the base, a yoke mounted on the base and straddling the switch arm, a member pivotally supported on the yoke, rollers on the ends of the member one of which is adapted to engage with and be moved by the fingerpiece of the winding of the alarm of a clock and the other to engage

and move the switch arm, and an overbalancing spring connected to the yoke and to the pivoted member.

2. In a device of the character described, a base, a member pivotally supported upon the base, an electrical switch mounted with its operating means in the path of movement of one end of the pivotally supported member, clock winding means mounted in the path of movement of the other end of the pivoted member, and means for selectively holding said last mentioned end of the pivoted member in or out of engagement with the winding means.

3. In a device of the character described, a base, a supporting member mounted on the base, a second member pivotally connected to the supporting member, an electrical switch mounted with its operating means in the path of movement of one end of the pivotally supported member, clock winding means mounted in the path of movement of the other end of the pivoted member, and spring means connected to the supporting member and to the pivoted member whereby the said last mentioned member will be held in or out of engagement with the said clock winding means.

4. In a device of the character described, a base, a supporting surface positioned above the base and held spaced therefrom, an electrical switch mounted on the base and having its operating means projecting through the said supporting surface, a rockable element mounted on the supporting surface and having one of its ends arranged to engage the switch operating means, and clock winding means positioned within the path of the other end of the said rockable element.

5. In a device of the character described, a base, a supporting surface positioned above the base and spaced therefrom, an electrical switch mounted on the base, a stationary element carried by the supporting surface, a rockable element connected to the said stationary element and having one of its ends arranged to engage the operating means of the said switch, and clock winding means positioned within the path of the other end of the said rockable element.

6. In a device of the character described, a base, a supporting surface positioned above the base, an electrical switch mounted on the base, a rockable element supported on the said supporting surface, and having one of its ends arranged to engage the operating means of the said switch, clock winding means positioned within the path of the other end of the said rockable element, and means for selectively holding said last mentioned end in or out of engagement with the said clock winding means.

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

HELGE HOKANSON.

Witnesses:
RUSSELL W. SHIELDS,
JOHN C. HUNTINGTON.