F. A. MECHAU.

TIME CONTROLLED ELECTRIC SWITCH.

APPLICATION FILED JUNE 27, 1916.

1,217,618. Patented Feb. 27, 1917.

FIG. 1.

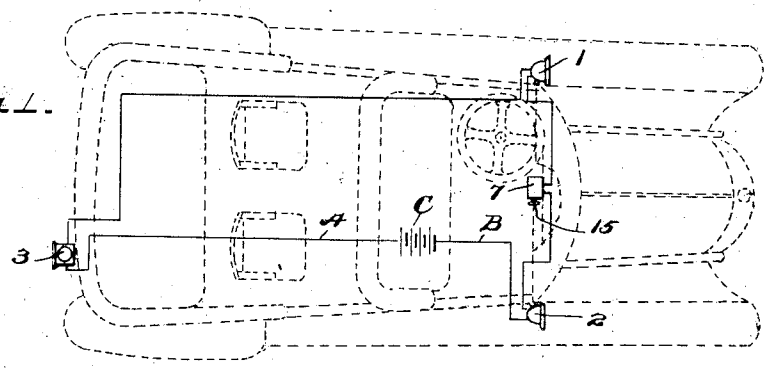


FIG. 2.

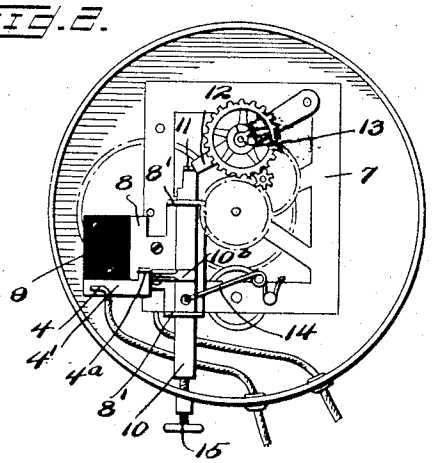


FIG. 3.

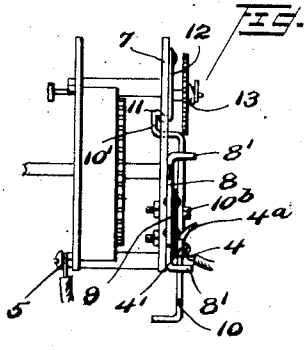
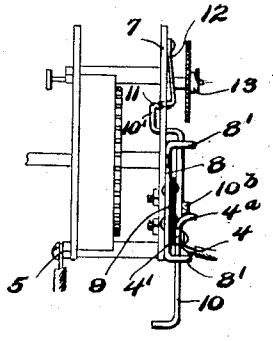


FIG. 4.



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TIME-CONTROLLED ELECTRIC SWITCH.

1,217,618. Specification of Letters Patent. **Patented Feb. 27, 1917.**

Application filed June 27, 1916. Serial No. 106,158.

To all whom it may concern:

Be it known that I, FREDERICK A. MECHAU, a citizen of the United States, residing at Washington, District of Columbia, have invented new and useful Improvements in Time-Controlled Electric Switches, of which the following is a specification.

My invention relates to time-controlled switches for electric lights, and pertains more particularly to improvements in the means for automatically lighting the electric lamps of automobiles at a predetermined time disclosed in Patent No. 1,154,193 granted to William C. Marrow and John M. Biddle on September 21, 1915.

The object of my invention is to produce a device for automatically lighting electric lamps at a predetermined time attached to an alarm clock of ordinary construction and contained within the case thereof. A further object thereof is to produce a sliding spring-pressed switch member carried on the frame of the works of an alarm clock of conventional form adapted to be actuated at a predetermined time, and a still further object of my invention is to produce a more simple, cheap and efficient device of the character described than has heretofore been attained.

To these ends, my invention includes the combination and arrangement of component parts to be hereinafter described and more particularly pointed out in the claims.

In the accompanying drawings in which like reference characters indicate similar parts,

Figure 1 is a diagrammatical plan view of my invention applied to an automobile;

Fig. 2 is a front view of my clock-controlled switch, with face removed;

Fig. 3 is a top view of the same showing the switch open, and

Fig. 4 is a similar view showing the switch closed.

Referring to the drawings, the numerals 1, 2 and 3 designate electric lamps connected with the circuit wires A and B leading from a source of electric supply C. The circuit wires, as shown, are broken and are attached to the opposite points 4 and 5 of the switch hereinafter described.

The switch of my invention, as before stated, is carried on the metal frame 7 of an alarm clock of conventional construction, and comprises the metal plate 8 secured to the frame and has secured thereon the fixed contact point 4 consisting of the plate 4′ having an upturned end 4^a which latter plate is insulated from the plate 8 by the layer of insulating material 9 interposed between the two plates.

Said plate 8 is provided with upturned bracket members 8′ having slots therein for slidably holding the switch bar 10. As shown in the drawings, the inner end of said switch-bar is bent backwardly at 10′ to bring the detent 11 thereon into operative contact with the free end of the spring 12 by which the cam wheel 13 is pressed outwardly when tripped at a predetermined time.

The switch bar is provided with a laterally extending arm 10^b intermediate of its ends adapted to engage the upturned end 4^a of the plate 4′ against which it is normally pressed by the spring 14, and the outer end of said switch bar is bent inwardly to provide a head for contact with the set-screw 15 passing through the case of the clock.

The operation of my device is as follows:

The cam-wheel 13 may be set to release the spring arm 12 at the desired time and the sliding switch bar 10 may be pushed inwardly by the set-screw 15 against the action of the spring 14 until the detent 11 engages the end of the spring arm 12, in which position the switch is open, and is held open until the cam wheel 13 is revolved by the time mechanism of the clock to release the spring arm 12 from engagement with the bar 10. The bar 10 is then pressed outwardly by the spring 14 and the lateral arm 10^b contacts with the bar or plate 4′ to close the switch.

It will be appreciated that the set-screw 15 may be left in closed position to prevent the closing of the switch when it is not desired to complete the circuit.

Having thus described my invention, what I claim as new and desire to be secured by Letters Patent, is—

1. A clock controlled electric switch, comprising a plate carried on the frame of a clock, a fixed contact carried thereon and insulated therefrom, bracket members at-

tached to said clock frame having slots therein, a spring-pressed switch member slidably carried in said slotted brackets, a detent on said member, a trip mechanism adapted to be operated at a predetermined time, a laterally extending arm carried on said switch member adapted to be contacted with said fixed contact, a spring-arm actuated by the trip mechanism for engaging said detent on the sliding switch member to hold same out of contact with the fixed contact and for releasing same at a predetermined time, and means for moving said sliding member into engagement with said spring arm and holding it against release when desired, substantially as described.

2. A clock controlled electric switch, comprising a fixed contact, a spring-pressed slidable switch member having a detent thereon, an arm for engaging the detent on said switch member to hold same out of contact with said fixed contact, a trip mechanism for releasing said arm at a predetermined time, and means for holding said sliding switch member against release when desired.

3. A clock controlled electric switch, comprising a plate carried on the frame of a clock, a fixed contact carried thereon and insulated therefrom, bracket members attached to said clock frame having slots therein, a spring-pressed switch member slidably carried in said slotted brackets, a detent on said member, a trip mechanism adapted to be operated at a predetermined time, a laterally extending arm carried on said switch member adapted to be contacted with said fixed contact, and a spring-arm actuated by the trip mechanism for engaging said detent on the sliding switch member to hold same out of contact with the fixed contact and for releasing same at a predetermined time, substantially as described.

FREDERICK A. MECHAU.