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No. 804,636.

PATENTED NOV. 14, 1905.

G. B. THOMAS.  
ELECTRIC SNAP SWITCH.  
APPLICATION FILED NOV. 3, 1904.

Fig. 1.

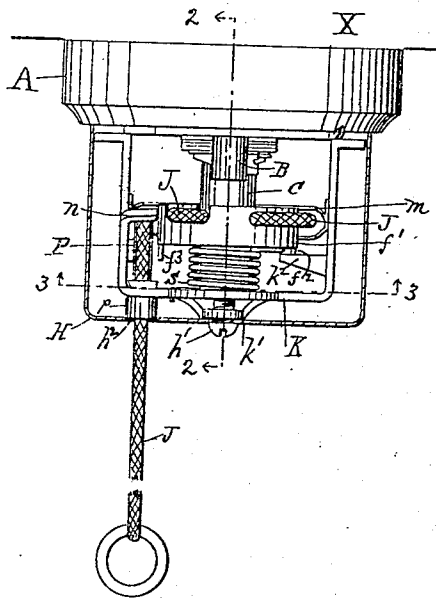


Fig. 2.

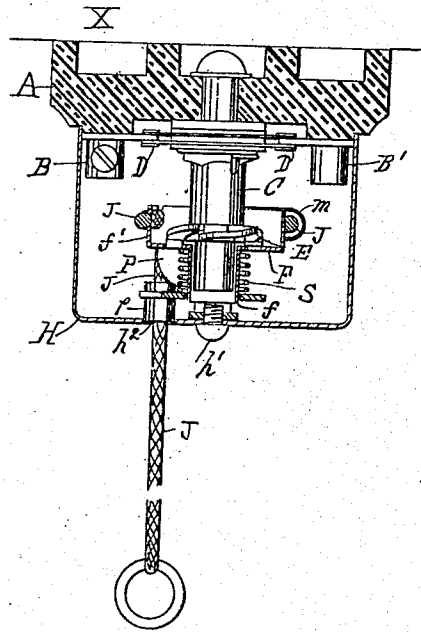


Fig. 3.

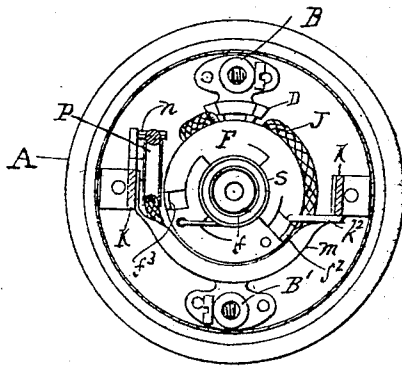
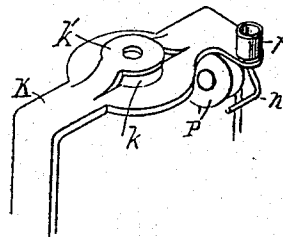


Fig. 4.



WITNESSES

E. W. Collins

Walter Abbe

INVENTOR

George B. Thomas

BY

Howson and Howson

ATTORNEYS

## UNITED STATES PATENT OFFICE.

GEORGE B. THOMAS, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE PERKINS ELECTRIC SWITCH MANUFACTURING COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

## ELECTRIC SNAP-SWITCH.

No. 804,636.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed November 3, 1904. Serial No. 231,212.

*To all whom it may concern:*

Be it known that I, GEORGE B. THOMAS, a citizen of the United States of America, residing in Bridgeport, in the county of Fairfield, State of Connecticut, have invented an Improved Electric Snap-Switch, of which the following is a specification.

The object of my invention is to construct a self-contained and strong, but slightly electric snap-switch, which is adapted for use on ceilings or like high places, but so that it may conveniently be operated notwithstanding its high position.

In the accompanying drawings, Figure 1 is an elevation of my improved ceiling-switch with the inclosing cap in section. Fig. 2 is a section on the line 2 2, Fig. 1. Fig. 3 is a section on the line 3 3, Fig. 1; and Fig. 4 is an inverted perspective view of a part shown in Fig. 1.

In carrying out my invention I may use any well-known or suitable form of rotary snap-switch, provided it has an insulating-base A, which by means of screws can be secured to the ceiling or the like and provided the base carries the make-and-break elements of a rotary snap-switch. In the drawings I have shown a single-pole rotary snap-switch with binding-posts and contacts B B' and a vertical rotary spindle C, carrying the conducting contact-arm D, and containing the usual spring tensioning and release devices, such as is shown in my Patent No. 687,669, dated November 26, 1901, for example.

I secure to the spindle C, near its outer end, a ratchet-disk E, which may conveniently be formed by stamping and bending a disk of metal to produce the needed inclines, and engaging shoulders or ratchet-teeth, as is common in this art. I then mount so as to turn freely upon the upper end c of the switch-spindle the sleeve f of a second ratchet-disk F, which is an operating-wheel, in a plane parallel with the base A and is provided with a rim or flange f'. I also punch up out of this same piece of metal two projecting stops f<sup>2</sup> f<sup>3</sup>. The outer end of the sleeve f is preferably guided in an opening k, formed in a rectangular yoke K, which is secured to the base A. This opening k is formed in the cross-bar of the yoke preferably by punching

ception of the screw h', by which the inclosing cap H is secured over all the working parts, Figs. 1 and 2. Around the sleeve f is coiled a spring S, one end of which is secured to the wheel F, while the other is connected to the yoke K in such a way as to tend to keep the stop f<sup>2</sup> up against the stop k<sup>2</sup> on the yoke or frame.

To the flange or rim f' of the wheel F, I secure the end of a cord (chain or the like) J, which is coiled part way around the rim and then passed over a grooved pulley P, turning on a pin at right angles to the axis of the wheel F, this pin being mounted on one of the side bars of the yoke or frame K. Thence the cord is passed through a guide-eye p in the cross-bar of the yoke through an opening in the end face h<sup>2</sup> of the cap H. The cord is guided and retained on the rim f' of the disk F by a curved and grooved cross-piece m, carried by the yoke, while a finger n on one of the side bars of the yoke bent over the pulley p, Figs. 1 and 4, aids in keeping the cord on the pulley.

When the switch is in place fastened to the ceiling X, the cord J passes down through the face of the cap, so that by pulling on this cord the operating-wheel F is turned against the action of the spring S until the stop f<sup>3</sup> approaches or reaches the stop k<sup>2</sup> on the frame, by which time the snap-switch will have been thrown from the closed position, Figs. 1, 2, and 3, to the open position, or vice versa. Upon the release of the cord J the spring S will turn the wheel F back to its normal position of rest with its ratchet-teeth reengaged with the ratchet-disk E, so that on the next pull of the cord J another semirevolution of the switch will be produced.

By the term "cord" I wish to embrace not only a cord as such, but its equivalent for the purpose, such as a chain.

I claim as my invention—

1. A snap-switch, comprising an insulating-base adapted to be secured to a ceiling, the make-and-break elements of a snap-switch carried by the base, an operating-wheel in a plane parallel with the base, a cord

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-base adapted to be secured to a ceiling, a make-and-break elements of a snap-switch, an operating-wheel in a plane parallel with the base, a cord-pulley at right angles to the wheel, an inclosing yoke carrying the pulley and having a guide-eye, and a cord secured to the wheel, and passing over the pulley and through said eye.

3. A snap-switch, comprising an insulating-base, the make-and-break elements of a snap-switch, an operating-wheel and cord therefor, an inclosing yoke on the base, a raised bridge formed out of the metal of the yoke, and an inclosing cap secured to said raised bridge.

4. A snap-switch, comprising an insulating-base, the make-and-break elements of a snap-switch, the spindle of which carries a ratchet-disk and an operating-wheel, said wheel consisting of a ratchet-disk having a flange to receive a cord, and a sleeve mounted on the spindle.

5. A snap-switch comprising an insulating-base, the make-and-break elements of a snap-switch, the spindle of which carries an operating-wheel parallel to the base, a cord therefor and an inclosing yoke on the base, in combination with means on said wheel and on said yoke for retaining and guiding the cord.

6. A snap-switch comprising an insulating-base, the make-and-break elements of a snap-switch, an operating-wheel parallel to the base and a cord therefor, an inclosing yoke mounted on the base and carrying a pulley, and means on said yoke to aid in keeping the cord on the pulley. 35

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE B. THOMAS.

Witnesses:

G. W. GOODRIDGE,  
H. G. WALES.