J. G. SWALLOW.

TIME RECORDER.

APPLICATION FILED AUG. 6, 1909.

954,403. Patented Apr. 5, 1910.

Fig. 1.

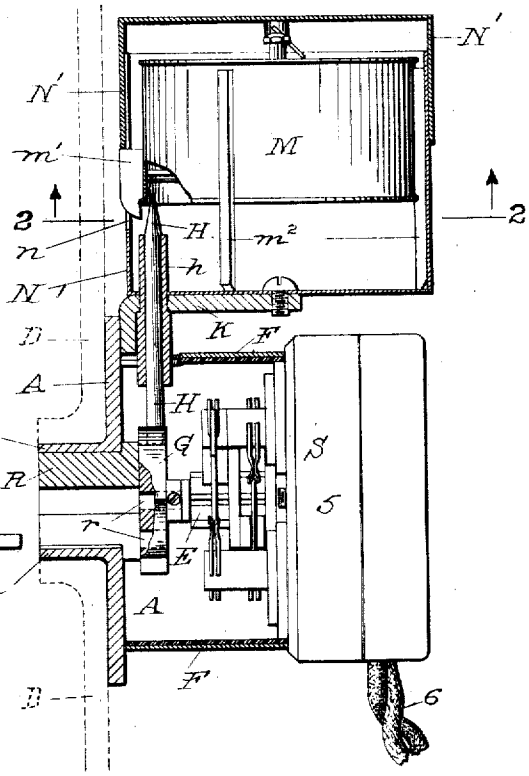


Fig. 2.

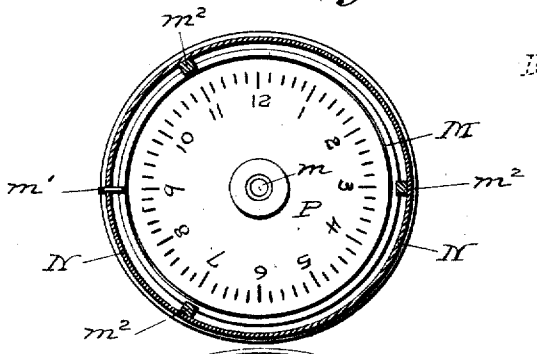


Fig. 3.

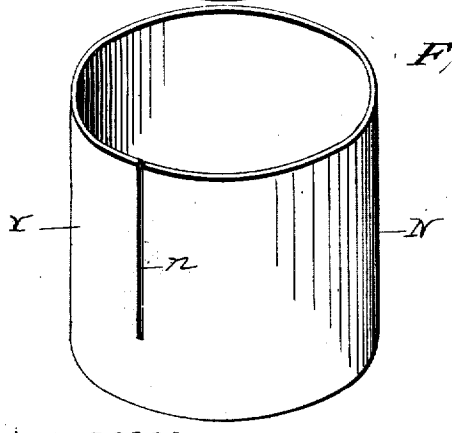
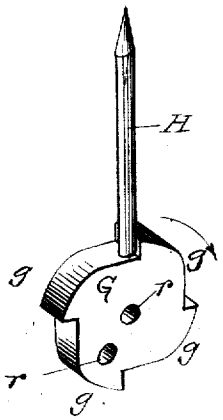


Fig. 4.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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TIME-RECORDER.

954,403. Specification of Letters Patent. Patented Apr. 5, 1910.

Application filed August 6, 1909. Serial No. 511,537.

To all whom it may concern:

Be it known that I, JOSEPH G. SWALLOW, a citizen of the United States of America, residing in the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Time-Recorders, of which the following is a specification.

My invention is more particularly intended for use in connection with electric lighting systems, although it may be employed usefully in other connections.

In many electric street lighting systems, a switchman is required at a certain time in the evening to go around to the different circuits or different lamps on a circuit to turn the current on, and, at a certain other time in the early morning to again turn the current off. It is also often the duty of an inspector to go the rounds of the circuit or circuits to inspect the lamps and see if they are working properly during lighting hours.

The main object of my present invention is to provide simple, and convenient means whereby a record may be made of the times when the lampman attended to his work of turning the current on and off, and when the inspector made his tour. This object I attain by combining with the electric switch for turning the current on and off a punch or other marker to be operated by the manipulation of the switch to actuate a punch or other marker to act on a time-operated sheet, preferably a removable dial marked like the face of a clock.

In the accompanying drawings Figure 1 is a sectional and side elevation of my improvement; Fig. 2 is a section on the line 2—2, Fig. 1; Fig. 3 is a perspective view of the clock-containing case; Fig. 4 is a perspective view of the punch and its actuating cam.

A is a supporting plate of any suitable shape and size and which itself may be mounted on any convenient support. I prefer to secure it by riveting or screws or other convenient means to the inner face of the hinged door D of a box constructed to contain the switch and time recorder. This plate A supports the switch S and the case B, which contains the time recorder. The switch S shown in the drawing, is a rotary surface snap switch comprising an insulating base 5 carrying suitable binding posts for the wires 6 leading to the lamp or lamps, and upon the surface of the base are the usual contacts, with which coöperate contacts upon the rotary operating spindle E. These parts are inclosed with a lined shell F secured to the supporting plate A.

On the inner end of the switch spindle E is secured a cam disk G, Figs. 1 and 4, with as many cam faces, *g*, Fig. 4, as there are off and on positions of the switch, four being shown in the drawing. Upon the cam faces rests the lower end of a vertical punch H, guided in a tube *h* carried by the bracket K, which is secured to the supporting plate A. The sharpened upper end of the marking punch H projects into a vertical cylindrical case N near one side of the latter. This casing is mounted fixedly upon the bracket K, and within the casing is contained the clock movement M, arranged with its face downward and having removably secured to its hour spindle *m*, Fig. 2, a paper or other sheet P in the form of a dial with hour graduations. This clock movement M is arranged to fit snugly within, but to be readily removable from, the casing N, and to insure its correct location when put into the casing N, I secure to the side of the clock case a fin m^1 to enter a vertical slot *n*, Figs. 1 and 3, in the casing N. I prefer to secure to the periphery of the clock case distance pieces m^2 to support the clock movement at a proper distance from the bottom of casing N, and to bear tightly against the walls of said casing, which are more or less yielding and elastic because of the presence of the slot *n*. A cover N^1 is fitted over the open top of the cylindrical casing N, and this cover may bear on the top of the clock case and also at one edge upon the fin m^1, and the friction of the cover upon the case and of the casing N upon the distance pieces m^2 of the clock movement will suffice to support the clock against the pressure of the punch H when raised by the rotation of the cam disk G.

The switch may be operated by a button, if desired, but I prefer, as I have said, to mount the device upon the inner face of the door of the containing box, and in that case I provide the support A, with a bearing *a* protruding through the front door, said bearing containing a slotted cylinder R for the reception of a key R^1, Figs. 1 and 4, in the cam disk G, whereby the switch can be turned only by inserting the key through the front door. Each time the switch is turned the cam G will be actuated to cause the marking punch to indent the dial P at the

graduated part then in line with the punch. Each day an inspector will go the rounds, take out the clock movements, replace the marked dials with new record dials and put the clocks back again.

I claim as my invention—

1. The combination of a time recorder and a marker therefor with an electric switch and means whereby the switch mechanically actuates the marker, substantially as described.

2. The combination of a time recorder and a marker therefor, with a rotary snap switch and a cam disk upon the moving spindle of the switch and acting on the marker, substantially as described.

3. The combination of a time recorder and a marker therefor, with a rotary snap switch means whereby the latter mechanically actuates the marker, an inclosing box for all said parts and a key to actuate the switch from the outside of the box.

4. The combination of a rotary snap switch and a cam on its spindle with a casing over the said switch, a clock movement time recorder removably contained in said casing and a marker actuated by said switch to mark the dial of the time recorded.

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

JOSEPH G. SWALLOW.

Witnesses:

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DRAKE V. SMITH.