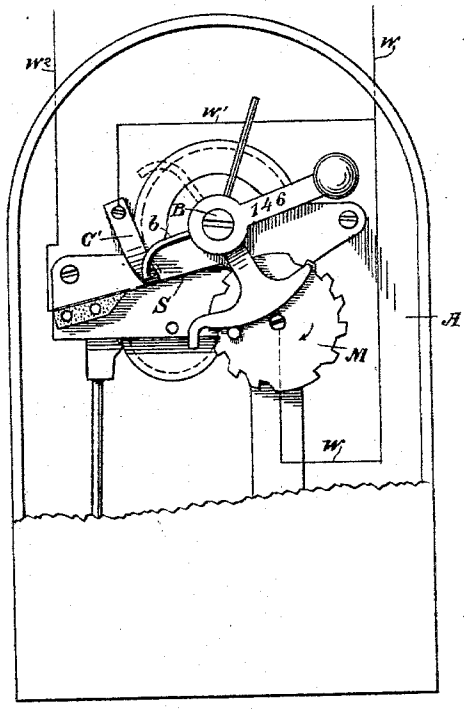
(No Model.)

A. C. ROBBINS.

SIGNAL BOX.

No. 589,617. Patented Sept. 7, 1897.



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UNITED STATES PATENT OFFICE.

ARTHUR C. ROBBINS, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO EDWARD C. HUGHES, OF SAME PLACE.

SIGNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 589,617, dated September 7, 1897.

Application filed March 26, 1897. Serial No. 629,344. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR C. ROBBINS, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Attachments for Automatic Electric Signal-Boxes; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to automatic signal-boxes such as are commonly used for the transmission of signals, as in fire, police, and messenger service; and it consists generally of a device for automatically cutting the mechanism of the box out of the main circuit when not in use.

Referring to the accompanying drawing, the figure is a front view of the box and partial section, showing the method of applying the shunt directly to the mechanical movement.

In automatic signaling-boxes such as above described the current is usually allowed to pass through a train of clockwork and on the periphery of a segmental disk or notched wheel to make conduction through a frictional spring or brush. It sometimes happens, from continued disuse or other causes, that this spring or brush and the clockwork-bearings become non-conductive, and this results in an interruption which disables the entire circuit and renders all the other boxes thereon non-operative until the fault has been remedied.

It is the object of my invention to remove the liability of such interruption, and this I effect by means of suitable apparatus, which shunts or cuts out the box when not in use by providing a passage for the current outside of and around the mechanism.

The advantage of my improvement is that with decreased risk of interruption a corresponding increase in a number of boxes on each circuit may be made, thus both insuring against interruption and lessening the cost of operation.

A is an ordinary automatic signal-box with the shunt attachment, consisting of the contact-spring C′, attached to the back of the box independently of the clockwork, and a lever *b*, attached to the shaft B of the clockwork. In the position of rest or the normal condition, as shown in the drawing, the spring contact C′ is pressed against the brush S by the lever *b*, and in this position the current will pass through the wires W W′, springs C′ and S, and thence through the wire W^2, without reference to the conducting condition of the clockwork.

When a signal is set, the lever 146 is drawn downward, revolving the shaft B, which winds the spring of the clockwork. This operation also lifts the lever *b*, thereby releasing the spring C′, which separates from the brush S, thus transferring the current through the wire W, the clockwork, shaft of the notched wheel M, the brush S, and wire W^2. When the lever 146 is released, the clockwork revolves and as many breaks in the circuit are made as there are notches in the wheel M. When the signal has been fully transmitted, the lever *b* is again brought into contact with the spring C′ and forces it into contact with the brush S, thus cutting out or shunting the box mechanism, as before, until the next signal is desired.

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

In an automatic electric signal-box, and in combination with operating mechanism, a spring-plate secured to the box independent of said mechanism, a brush with which said spring-plate normally contacts, a lever connected with the mechanism and adapted to hold the spring-plate in normal contact with the brush and the wires leading to the spring-plate, brush and clockwork whereby the electric current is transmitted through the plate and brush and independently of the operating mechanism, or any part thereof, when the said mechanism is in a normal or rest position, and is shunted through the operating mechanism when the latter is placed in operative condition.

In witness whereof I have hereunto set my hand.

ARTHUR C. ROBBINS.

Witnesses:

S. H. NOURSE.

JESSIE C. BRODIE.