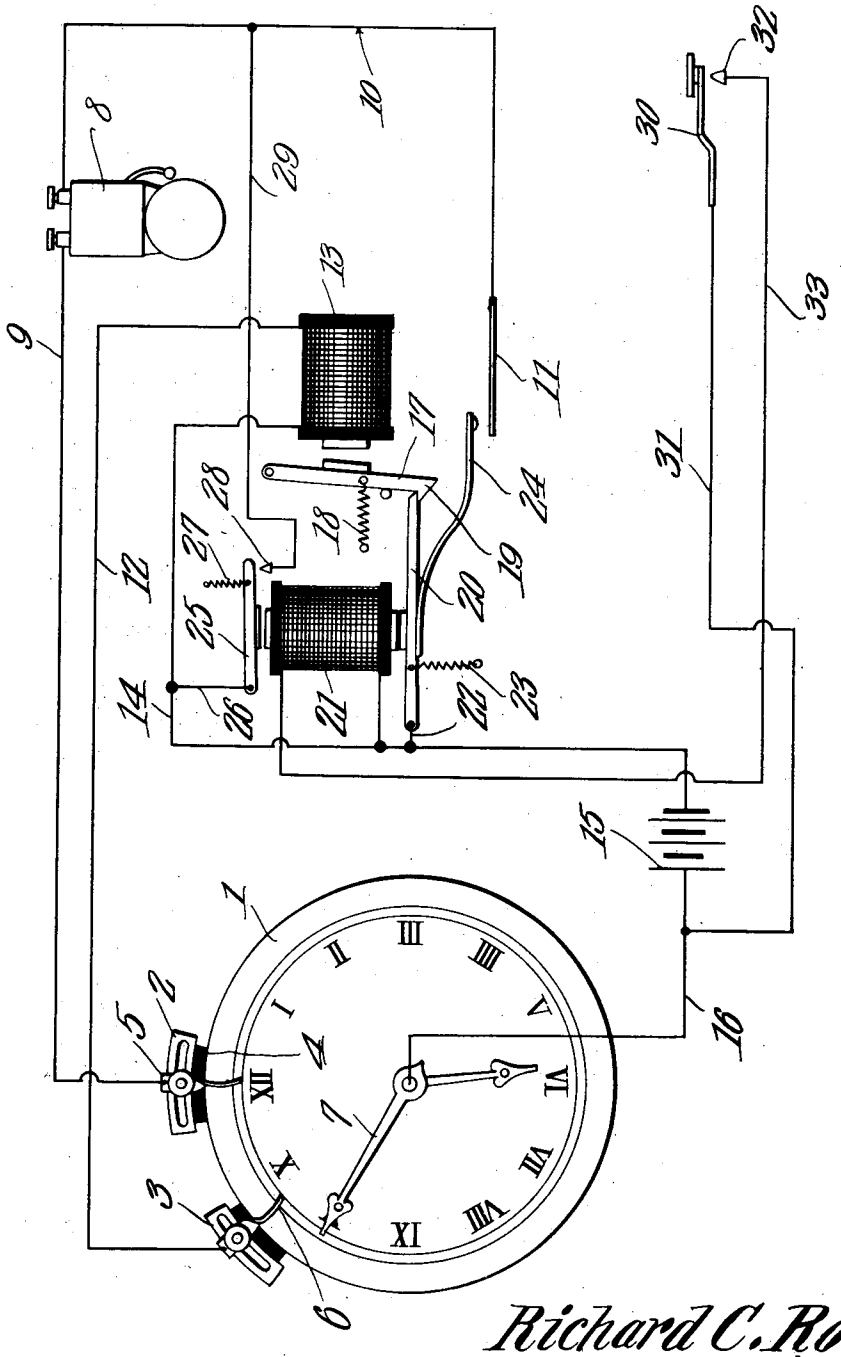
R. C. ROSE.

WATCHMAN'S CLOCK.

APPLICATION FILED JAN. 18, 1911.

999,874. Patented Aug. 8, 1911.



Witnesses.

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UNITED STATES PATENT OFFICE.

RICHARD C. ROSE, OF OSCEOLA, ARKANSAS.

WATCHMAN'S CLOCK.

999,874. Specification of Letters Patent. Patented Aug. 8, 1911.

Application filed January 18, 1911. Serial No. 603,351.

To all whom it may concern:

Be it known that I, RICHARD C. ROSE, a citizen of the United States, residing at Osceola, in the county of Mississippi and State of Arkansas, have invented a new and useful Watchman's Clock, of which the following is a specification.

This invention relates to watchman's clocks and is more particularly an improvement upon the structures disclosed in Patents Nos. 971,309 and 971,310, issued to me on April 27, 1910.

One of the objects of the invention is to provide a clock system wherein all of the mechanism, exclusive of contacts mounted on the clock, is located at points remote from the clock.

Another object is to provide means whereby, should the wires of the circuit to the watchman's station become crossed or short circuited in any other manner, the alarm or signaling device constituting a portion of the apparatus, will be operated in the same manner as if the watchman should fail to perform his duty at the time and place required.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawing, which is a diagrammatical view of the complete apparatus, the preferred form of the invention has been shown.

Referring to the drawing by characters of reference 1 designates a clock which may be located at any point desired and may be of any preferred type. Guide plates 2 and 3 are mounted adjacent the clock and are insulated therefrom as indicated at 4. Adjustably connected to the plate 2 is a spring contact 5 while another similar contact 6 is adjustably connected to the plate 3. These two contacts are designed to project into the path of one of the hands 7 of the clock but the said contacts are so constructed as to offer no objectionable resistance to the movement of the hand.

An electrically operated bell 8 or other alarm or signal device is located at any desired distance from the clock and is connected, as by means of a conductor 9, to the contact 6. This alarm device 8 is also electrically connected, as by means of a conductor 10, to a contact 11. A conductor 12 extends from the contact 6 and connects it to an electromagnet 13 which is electrically connected, as by means of a conductor 14, to a battery 15 or other source of electrical energy, this battery, in turn, being connected, as by a conductor 16, to the hand 7.

The armature 17 of magnet 13 constitutes a catch, as hereinafter set forth, and is held, by a spring 18, normally removed from the magnet 13. Said armature has a beveled head 19 constituting means for normally supporting the armature 20 of a magnet 21, said armature being electrically connected, as by means of a conductor 22, to the conductor 14. A spring 23 is connected to the armature 20 and constitutes means for automatically shifting said armature away from its magnet 21 when it is released from the armature 17. A contact 24, preferably in the form of leaf spring, is secured to and extends from the armature 20 and is held away from the contact 11 as long as the armature 20 is supported by means of the armature 17 and in the manner shown in the drawing.

Another armature 25 is mounted adjacent the core of magnet 21 and is connected, as by means of a conductor 26, to the conductor 14, a spring 27 being provided for holding this armature normally removed from the magnet 21. A contact 28 is arranged in the path of armature 25 and is connected, as by means of a conductor 29, to the conductor 10. This contact 28 is adapted to be touched by the armature 25 when the magnet 21 is energized in the manner hereinafter set forth.

A key or push button or the like, designated generally at 30, is connected, as by means of a conductor 31, to the conductor 16 and the contact 32 of this circuit closer 30 is electrically connected, as by means of a conductor 33, to the magnet 21.

When the hand 7 of the clock is operated by the mechanism usually provided therefor, it ultimately comes against the contact 6 thus completing a circuit from battery 15 through conductor 16, hand 7 and contact 6 to the conductor 12 and thence through the magnet 13 and conductor 14 back to the battery 15, thus energizing the magnet and

causing it to attract its armature 17. The armature 20 is thus released and spring 23 shifts it away from its normal position and brings the contact 24 against contact 11. As soon as the hand moves past and away from the contact 6 the circuit through the magnet 13 is broken and spring 18 promptly shifts the armature 17 back to its initial position. If the watchman properly performs his duties, he will then close the circuit between the conductors 31 and 33 by actuating the closer 30 so as to bring it against the contact 32. This will cause the current to pass from the battery 15 through conductors 31 and 33 to the magnet 21 thence by way of the conductor 14 back to the battery, thus energizing the magnet 21 and causing it to attract its armature 20, thereby breaking the contact between the parts 24 and 11 and bringing said armature 20 back into engagement with the head 19 of the armature 17, this position of the parts being shown in the drawing. The hand 7, upon reaching the contact 5, will not close the circuit to the signal or alarm 8 because there is another break in said circuit between the contacts 11 and 24. If, however, the watchman should fail in his duty, the contact 24 would remain in engagement with the contact 11 and, when the hand 7 reaches the contact 5, a circuit would be completed from the battery 15 through conductor 16 and hand 7 to the contact 5 thence through conductor 9 to the bell or other alarm or signal device 8. The circuit continues from this element 8 through conductor 10 to contacts 11 and 24, thence by way of armature 20, and conductors 22 and 14 to the battery 15. The alarm or bell will thus be operated and a notice given of the fact that the watchman did not close the circuit between the parts 30 and 32 at the proper time. Should the wires become short circuited in any way, the magnet 21 will be energized and thus not only attract the armature 20 but also the armature 25, thereby completing the circuit from the battery and through conductors 14 and 26 to the armature 25 thence by way of conductors 29 and 10 to the bell or other alarm or signal 8. Obviously, therefore, when the hand 7 moves against the contact 5, a circuit will be completed to the alarm device and notice given either of the fact that the watchman has failed in his duty or that there is trouble on the circuit.

It will be apparent that by multiplying certain of the parts which have been described and shown, a watchman or other person may be compelled to cover a territory of any predetermined extent and it will be necessary for him to be at certain points in said territory at predetermined times in order to close the watchman's circuit at the proper times and thus prevent the actuation of the signal device.

What is claimed is:—

1. Apparatus of the class described including an electromagnet, armatures therefor, a support for one of the armatures, means under the control of a person for completing a circuit through said magnet to attract its armatures, an electrically operated element, one of said attracted armatures partly completing a circuit to said element, clock controlled means for completing said circuit through said attracted armature to the element, and for completing a circuit to said element through the other armature when released.

2. Apparatus of the class described including an electrically operated element, a magnet, an armature, a spring controlled catch for supporting the armature in set position, electrically operated means for shifting the catch to release the armature into electrical connection with said element, a second armature, means operated by the closing of a circuit for resetting the first mentioned armature to break said connection, and for shifting the second armature into electrical connection with said element, and time controlled means for first completing a circuit to said electrically operated means, and, subsequently completing a circuit to said element through either the second armature, if attracted, or through the unset armature.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

RICHARD C. ROSE.

Witnesses:

Mrs. C. L. Moore, Jr.,

J. W. Rhodes.