

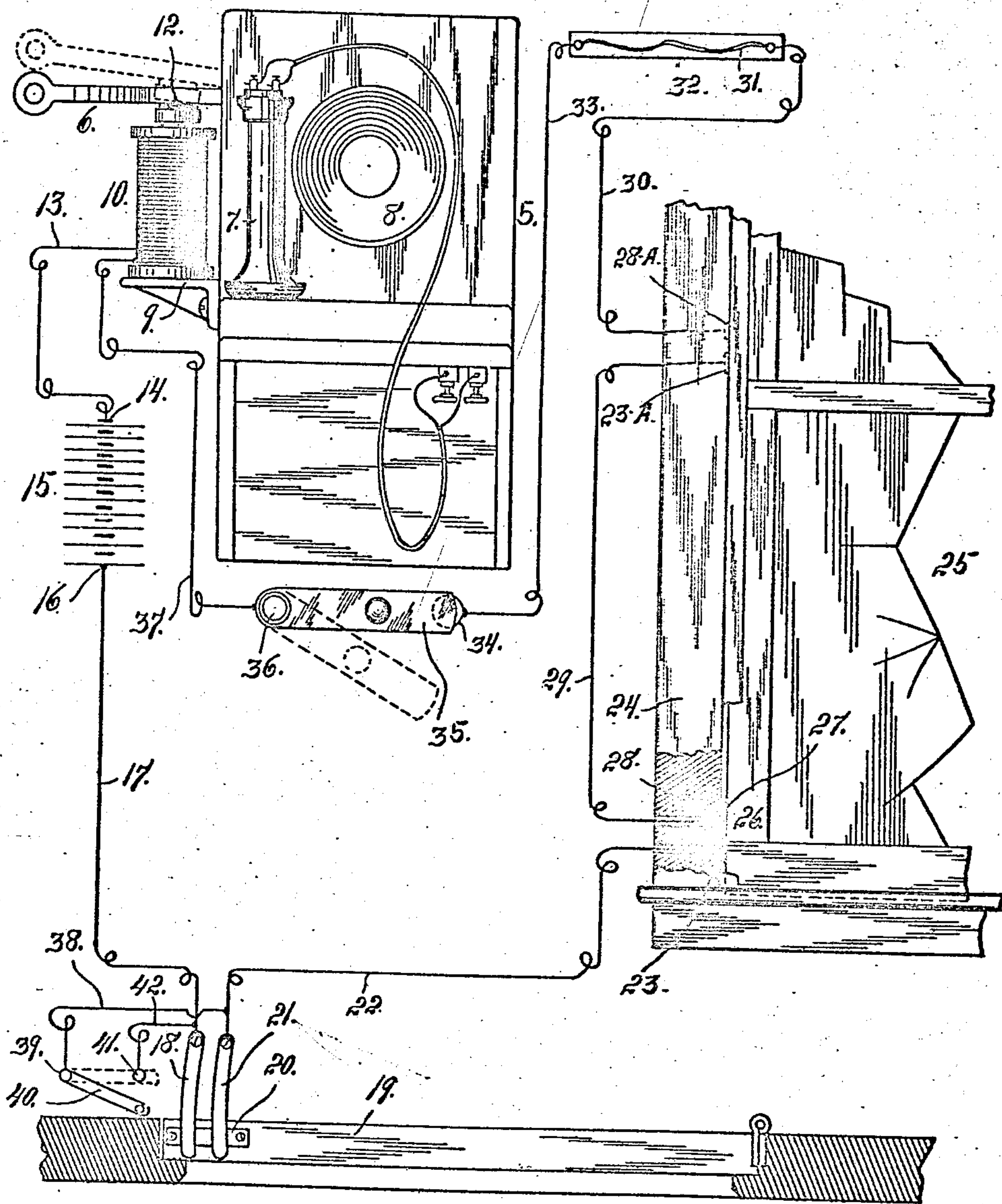
J. A. ROBINSON.

ALARM.

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898,992.

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JAY A. ROBINSON, OF DENVER, COLORADO.

ALARM.

No. 898,992.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAY A. ROBINSON, a citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Alarms; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in alarms and consists of an electro-magnet placed in an electric circuit and so located that when the circuit is closed which is its normal condition when the device is in use, the magnet acts to hold the hook of a telephone receiver in the depressed position. When the device is in use, the receiver is removed from the hook and placed to one side. When used as a burglar alarm, two contacts located in the magnet circuit are arranged to be bridged by a third contact attached to a door or window or other part which must be moved in order to permit access to the room. The opening of the door or window breaks the circuit, and deenergizes the magnet, allowing the receiver hook to move upwardly, thus ringing the central telephone office. Those in charge of the central office being cognizant of the fact that the telephones of the system are connected with the alarm, will know when they answer the call and do not receive any response, that something is wrong at that particular number and will therefore notify the police. The apparatus may also be used as a fire alarm, by placing a readily fusible part in the circuit, the same being so located that in the event that the temperature of the room should rise to a dangerous degree, the said part will melt or fuse, thus breaking the circuit and deenergizing the magnet as in the other case. A suitable switch or circuit-closing device is located in the circuit, for breaking the latter during the day when the telephone is in use, and when the alarm is not needed. When the occupants are about to leave the room for the night, this switch may be closed, and the telephone receiver removed from the hook,

the magnet then performing the function of holding down the hook.

Having briefly outlined my improved construction, I will proceed to describe the same in detail reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

This drawing which consists of a single view, illustrates the apparatus as a burglar alarm in connection with a door and window and also as a fire alarm.

In the drawing let the numeral 5 designate an ordinary telephone; 6 the receiver hook thereof; 7 the receiver and 8 the mouth piece of the transmitter. To the frame work of the telephone is attached a bracket 9 upon which rests an electro-magnet, 10 which when in this position is located directly beneath the hook 6 of the telephone, being preferably just in the rear of the bifurcated part of the hook. This hook which is ordinarily composed of brass, must be equipped with a piece of magnetic material 12 in order that the magnet may be operative in the manner just explained.

As shown in the drawing a conductor 13 leads from one terminal of the magnet 10 to a pole 14 of an electric source 15. From the opposite pole 16, a conductor 17 leads to a contact 18 located just above a door 19 and adapted to be engaged by a contact plate 20 attached to the upper end of the door. Located in suitable proximity to the contact 18 is a similar contact 21 which is also adapted to be engaged by the plate 20 when the door is in the closed position.

From the plate 21 leads a conductor 22, to a contact 23 attached to the frame work of a window 25. One of the sash rails 26 of this window is provided with a metal contact 27 adapted to bridge the space between the contact 23 and a similar contact 28 also mounted on the window frame. From the contact 28 leads a conductor 29 to a similar contact 23^a on the upper part of the frame, while from a contact 28^a leads a conductor 30. The two contacts 23^a and 28^a are so located as to be operative in connection with the upper sash of the window. A conductor 30 leads to one extremity of a fusible part 31 mounted on a stationary support 32; while from the opposite extremity of the part 31 leads a conductor 33 to a contact 34 adapted

to be engaged by one extremity of a switch arm 35 pivotally connected at 36 to a suitable support arranged in convenient proximity to the telephone. From the pivotal extremity of the arm 35, leads a conductor 37 to the opposite terminal of the coil of the electro-magnet.

From the conductor 22 leads a branch conductor 38 to the pivotal extremity 39 of a switch arm 40. This switch arm when in the closed position or that shown by dotted lines in the drawing, engages a contact 41 from which leads a branch conductor 42 to the conductor 17. The last named construction is so arranged that by closing the switch arm 40, the door 19 may be opened and closed without giving the alarm, since it will be necessary when the other parts of the mechanism are arranged to give the alarm, that the occupant or occupants of the room shall have a means of exit. The contacts 18 and 21 are of such length that after the door has been swung during its closing movement to engage the last named contacts, the door will still be open wide enough to allow the person leaving the room and being outside of the door, to reach through and throw the switch arm to the open position or that shown by full lines in the drawing. Again if an authorized person wishes to enter the room, it will also be necessary in order that the alarm may not be given, for him to close the switch arm 40 before he disengages the door from the contacts 18 and 21.

From the foregoing description the use and operation of my improved alarm will be readily understood. Assuming that the parts are all in the position illustrated in the drawing, it will be understood that the circuit is closed, the magnet 10 energized, and the receiver hook drawn down to the normal position when the receiver is in place. As shown in the drawing the receiver has been removed from the hook. Now if an unauthorized person should open the door 19, as soon as the contact 20 on the door leaves the contacts 18 and 21 mounted on a suitable stationary support, the electric circuit will be broken, and the magnet 10 deenergized. In this event the receiver hook of the telephone will rise to the dotted line position thus ringing central. If central should receive no response to the call, it will be understood that something is wrong and the proper parties will be notified. Now assuming that the door still remains closed but that an unauthorized person attempts to enter the window by opening either sash thereof, as soon as the sash is moved sufficiently to disengage its contact plate 27 from the contacts 23 and 28, the magnet circuit is again broken with the same result, namely the deenergizing of the magnet allowing the receiver hook to move upwardly. Again assuming that the door and both window sashes all remain in

the closed position, and a fire breaks out in the room whereby the temperature is raised to a sufficient degree to destroy the fusible part 31, the circuit will be again broken with the same result as before.

The terms "magnetic material" and "magnetic part" as used in the specification and claims are used to define material as soft iron capable of responding to or being attracted by magnetic influence or the influence of an electro-magnet.

It is evident that my improvement may be employed in connection with a normally open circuit as well as a normally closed circuit. The normally closed circuit only is illustrated in the drawing and herein described in detail. If a normally open circuit were used, the electro-magnet could be located above the receiver hook, the latter being normally held down by the receiver. When, however, the circuit was closed by the opening of the door or window, the magnet would be energized and act to lift the hook with the receiver thereon thus calling the central office in the same manner as heretofore described.

Having thus described my invention, what I claim is:

1. The combination with a telephone whose hook is provided with a magnetic part, of an electro-magnet located in suitable proximity to the receiver hook to hold the latter in the depressed position, the hook being equipped with a magnetic part, an electric circuit in which the magnet is located, and means for breaking the circuit whereby the magnet is deenergized, substantially as described.

2. The combination with a telephone having its receiver hook equipped with a magnetic part, of an electro-magnet located in such proximity to the hook that when the magnet is energized the hook will be drawn downwardly to its normal position as when the receiver is placed thereon, an electric circuit in which the magnet is located, and means for breaking the said circuit.

3. The combination with a telephone, of an electro-magnet located in such proximity to the receiver hook that when the magnet is energized, the hook is drawn downwardly to its normal position as when the receiver is thereon, an electric circuit in which the coils of the magnet are located, a pair of separated contacts located in the circuit, and a third contact mounted on a movable part and adapted to bridge the first named contacts whereby the circuit is kept closed when the said part is in the closed position, the arrangement being such that when the aforesaid part is moved to the open position the circuit will be opened and the magnet deenergized, substantially as described.

4. The combination with a telephone, of an electro-magnet located in such proximity to the receiver hook that when the magnet

is energized, it will act to draw the receiver hook downwardly, the latter being equipped with a magnetic part, an electric circuit in which the coils of the magnet are located, a movable part having a contact normally located in the circuit but arranged to break the circuit when the movable part is actuated, and a switch arm also located in the circuit whereby the same may be opened and closed at will independently of the aforesaid part, substantially as described.

5. The combination with a telephone, of an electro-magnet located in such proximity to the receiver hook, that when the magnet is energized the hook will be drawn downwardly, the latter being equipped with a magnetic part, a circuit in which the magnet coils are located, a pair of contacts mounted on a stationary support, a door having a third contact arranged to bridge the space between the first named contacts and close the circuit when the door is in the closed po-

sition, the first named contacts being of such length that the door may be partly opened, without breaking the circuit, and a switch arm located in the circuit and in such proximity to the door jamb, that the arm may be manipulated before the contact upon the door leaves the first named contacts for the purpose set forth.

6. The combination with a telephone having its receiver hook equipped with a magnetic part, of an electro-magnet located in such proximity to the hook that when the magnet is energized the hook will be actuated, an electric circuit in which the magnet is located, and means for making or breaking the said circuit.

In testimony whereof I affix my signature in presence of two witnesses.

JAY A. ROBINSON.

Witnesses:

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A. E. O'BRIEN.