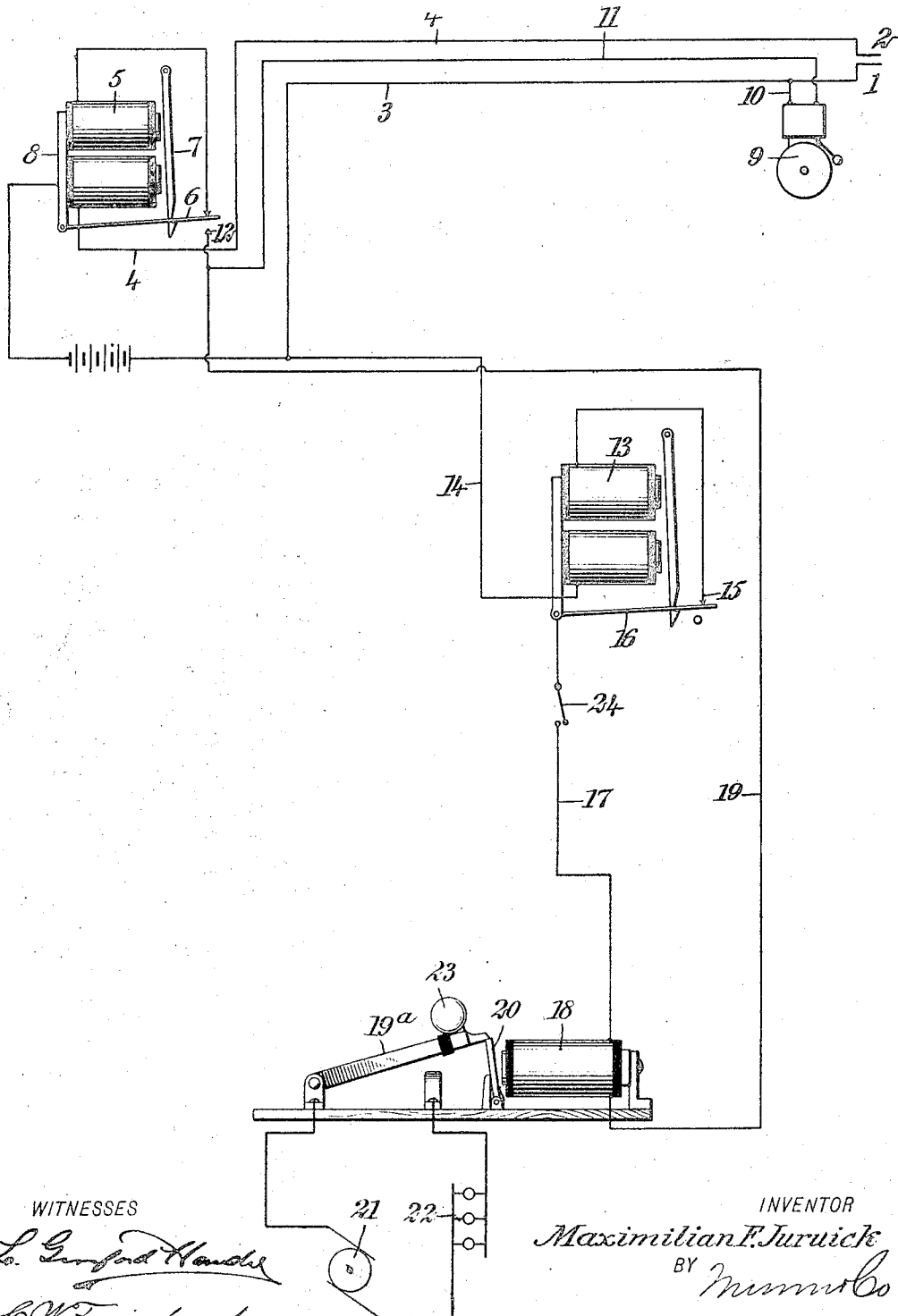


M. F. JURUICK.
ELECTRIC LIGHTING ATTACHMENT FOR BURGLAR ALARM SYSTEMS.
APPLICATION FILED AUG. 16, 1907.

942,964.

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WITNESSES

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MAXIMILIAN F. JURUICK, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS,
TO ELECTRIC BANK PROTECTION COMPANY, A CORPORATION OF DELAWARE.

ELECTRIC-LIGHTING ATTACHMENT FOR BURGLAR-ALARM SYSTEMS.

942,964.

Specification of Letters Patent. Patented Dec. 14, 1909.

Application filed August 16, 1907. Serial No. 388,789.

To all whom it may concern:

Be it known that I, MAXIMILIAN F. JURUICK, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Electric-Lighting Attachment for Burglar-Alarm Systems, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in burglar alarm systems, and more particularly to means whereby all or any portion of the electric lights of a building will be placed in circuit when anyone attempts to enter the building at night, or for any other reason the alarm bell is started in operation.

My invention further comprises means whereby after the electric light is turned on it will be impossible for the burglar to connect the electric lighting circuit to the burglar alarm circuit and ruin the batteries and thus stop the alarm bell.

Reference is to be had to the accompanying drawing forming a part of this specification, and which illustrates diagrammatically my improved apparatus.

In the drawing I have not illustrated all of the connections to the doors, windows and other points at which a burglar might close the circuit upon endeavoring to obtain admission to the building, but have merely illustrated two terminals 1 and 2, which may be located adjacent any window or door or adjacent the alarm bell, and so constructed that these terminals would be brought together should an intruder attempt to enter. One of these terminals connects directly to the battery by means of a wire 3, and although it is evident that this wire may connect to either side of the battery desired, the two sides will be hereinafter referred to as "the carbon side" and "the zinc side," and the wire 3, as shown, is connected to the carbon side. The terminal 2 is connected to the zinc side by means of a wire 4, and in this wire 4 is located the automatic drop, whereby the current is turned on to the electric bell when the two terminals 1 and 2 are brought together. The wire 4 from the terminal 2 passes first through the coils of an electro-magnet 5, and thence to a pivoted lever 6 normally held in place by the armature 7 of

the electro-magnet and having the pivoted end of the lever in connection with the frame 8 of the electro-magnet, which latter is electrically-connected to the zinc side of the battery.

An electric bell 9 is provided, one terminal of which is in direct communication with the carbon side of the battery, either by means of a wire extending direct to the battery or, as herein shown, by a branch wire 10 leading to the wire 3 above referred to. The opposite terminal of the electric bell communicates by means of a wire 11 with a terminal 12 adjacent the pivoted lever 6 and adapted to act as a stop for said lever when the same is released by the withdrawal of the armature 7 at the time the electro-magnet is energized.

It will be noted that as the terminals 1 and 2 are brought together, either by a person attempting to interfere with the action of the bell, by the opening of any door or window, the turning of any door knob, or in any other manner, the circuit is closed and the current passes through the wire 3, the terminals 1 and 2, the wire 4, the coils 5, the lever 6, and the frame of the magnet back to the battery. As soon as the coils are energized, the armature 7 is drawn to a position where it releases the lever 6, and as the latter drops down into contact with the terminal 12, a current may then pass from the carbon side of the battery directly to the electric bell and through the wire 11, through the terminal 12 to the lever 6, and thence to the frame of the electro-magnet and back to the battery. The circuit through the electro-magnet 5 is now broken, and even though the terminals 1 and 2 are immediately separated, this will not serve to stop the ringing of the electric bell, as the terminal 12 is now dead and not connected to the battery in any way. Furthermore, it will be impossible to ruin the battery by sending a strong electric lighting current in the terminals 1 and 2.

Arranged in parallel with the electric bell 9 are two electro-magnets, one of which serves as an automatic drop to break the circuit after it has performed the desired function, while the other electro-magnet serves to throw the electric lighting switch. The electro-magnet 13 is at all times in communication with the carbon side of the

battery through a wire 14, while the opposite end of the coil of this electro-magnet contacts at a point 15 with a pivoted lever 16 carried by the frame of the electro-magnet. A wire 17 connects the frame of the magnet with coils of the second electro-magnet 18, and the opposite ends of these coils communicate by a wire 19 with the terminal 12 of the alarm system. Adjacent to the electro-magnet 18 is a large weighted switch 19^a which is normally held open by the armature 20 of the electro-magnet 18 and which when closed serves to permit the passage of a current of high voltage from any suitable source 21 through all of the electric lights 22 of the building, or any desired portion thereof. The weight 23 of the switch is sufficiently heavy to insure the closing of the switch when the armature 20 is withdrawn, and as the electro-magnet 18 is in parallel with the electric bell 9, it will be seen that the electric lights are all lighted simultaneously with the ringing of the alarm bell. As soon as the current is permitted to pass through the electro-magnets 13 and 18 by the closing of the circuit at the terminal 12 and the lever 6, the current is almost instantly broken again by the dropping of the pivoted lever 16 and the separation thereof from the terminal 15.

Should a burglar enter the building and in so doing start the alarm bell and cause the illumination of the building, he might endeavor by the aid of a couple of short pieces of heavy wire or other conductor, to place the wires 17 and 19 leading to the electro-magnet 18 in communication with the opposite terminals of the electric lighting system, and thus endeavor to ruin the battery of the alarm bell and stop it from ringing; but, as it will be noted, this is impossible, as the wire 17 is no longer in communication with the battery, due to the breaking of the circuit at the terminal 15 and the pivoted lever 16. Should he discover the electric lighting switch and its operating mechanism before he had sounded the alarm and before said alarm was sounded endeavor to ruin the batteries by a strong current from the electric lighting circuit, he would be foiled first by reason of the fact that the wire 19 does not normally communicate with the battery as it is broken at the terminal 12, while even if it were in communication with the battery the current through the wire 17 would be broken as soon as the electro-magnet 13 was energized and before any damage could be done to the battery.

A suitable switch 24 is preferably provided in the wire 17, so that during the daytime this portion of the system is thrown out of circuit, and it will be possible for the electric bell to be controlled by any suitable clockwork, not shown, and thus serve to in-

dicate the hours of the day or to indicate the noon hour, for instance, without any danger of the electric lights being turned on.

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

1. In combination, a burglar alarm circuit having an alarm signal in operative connection therewith, a source of electrical energy and an automatic drop located therein, said circuit being broken at the drop upon the operation of said drop, a second automatic drop and an electro-magnet arranged in series with each other and in parallel with the alarm, and an electric lighting circuit having a switch controlled by said electro-magnet.

2. In combination, an alarm circuit, an electric lighting circuit independent of the alarm circuit, means whereby the electric lighting circuit is closed upon the operating of the alarm, and means for breaking that portion of the alarm circuit the operation of which closes the independent electric lighting circuit, as soon as the operation causes the closing of the electric lighting circuit, and for maintaining the said portion of the alarm circuit thereafter continuously broken, to prevent the connection of the electric lighting circuit with the alarm circuit after the electric lighting circuit is closed by the operating of the alarm circuit.

3. In combination, a low potential alarm circuit, a high potential electric lighting circuit independent of the alarm circuit, means whereby the electric lighting circuit is closed upon the operating of the alarm, and means for breaking that portion of the alarm circuit the operation of which closes the independent electric lighting circuit, as soon as the operation causes the closing of the electric lighting circuit, and for maintaining the said portion of the alarm circuit thereafter continuously broken, to prevent the connection of said high potential circuit with the low potential circuit after the high potential circuit is closed by the operating of the low potential circuit.

4. In combination, an alarm circuit, an electric lighting circuit, means whereby the electric lighting circuit is closed upon the operating of the alarm, and means for maintaining the alarm circuit continuously and at all times broken before and after the operation which causes the closing of the independent electric lighting circuit, whereby the connection of the electric lighting circuit with the alarm circuit is prevented either before or after the electric lighting circuit is closed upon the operating of the alarm.

5. In combination, a low potential burglar-alarm circuit, a high potential electric lighting circuit, said circuits being respectively independent of each other, means

whereby the closing of the low potential alarm circuit causes the closing of the high potential electric lighting circuit, and automatic means for maintaining the low potential alarm circuit continuously and at all times broken before and after the operation which causes the closing of the high potential electric lighting circuit, to prevent the connection of said circuits so that the high potential current will at any time pass through the source of the low potential current.

6. In combination, a burglar-alarm circuit, means for normally holding said circuit open, a branch circuit in parallel with the alarm circuit, an electric lighting circuit independent of said alarm circuit and branch circuit, means for normally holding said electric lighting circuit open, means in said branch circuit for operating said last-mentioned means to cause the closing of the electric lighting circuit, and means in said branch circuit for opening the same as soon as the operation causes the closing of the independent electric lighting circuit and for maintaining said branch circuit thereafter continuously open.

7. In combination, a burglar-alarm circuit, means for normally holding said circuit open, a branch circuit in parallel with the alarm circuit, an electric lighting circuit independent of said alarm circuit and branch circuit, means for normally holding said electric lighting circuit open, means in said branch circuit for operating said last-mentioned means to cause the closing of the electric lighting circuit, and means for automatically opening said branch circuit after the electric lighting circuit is closed and thereafter maintaining the same continuously open.

8. In combination, a burglar-alarm circuit, an automatic circuit-closer in said alarm circuit for normally holding said circuit open, a branch circuit in parallel with the alarm circuit, an automatic circuit-opener in said branch circuit for normally holding said circuit closed, an electro-magnet in said branch circuit and arranged in series with said circuit-opener, an electric lighting circuit independent of said alarm circuit and branch circuit, and an automatic circuit-closer in said electric lighting circuit for holding said circuit normally open, said circuit-closer of the electric lighting circuit being operated by the electro-magnet of said branch circuit.

9. In combination, a burglar-alarm circuit, means for closing said alarm circuit, means for normally holding said alarm circuit open, an electro-magnet operated by the alarm circuit, an electric lighting circuit independent of said alarm circuit, means for normally holding the electric lighting circuit open, said last means being operated by

the electro-magnet to close the electric lighting circuit, and automatic means located intermediate the electro-magnet and the means for holding the alarm circuit normally open and for opening the alarm circuit.

10. In combination, a burglar-alarm circuit, an electric lighting circuit independent of the alarm circuit, means in the alarm circuit for causing the closing of the electric lighting circuit, and automatic circuit-opening means in the alarm circuit for maintaining that portion of the alarm circuit the operation of which closes the independent electric lighting circuit continuously open after the operation causes the closing of the electric lighting circuit.

11. In combination, a burglar-alarm circuit, comprising a battery and an automatic drop holding the circuit normally open but serving to close the circuit upon the entrance of a burglar, an alarm signal in operative connection with said circuit, an automatic drop arranged in parallel with the alarm, an electro-magnet arranged in series with the last mentioned automatic drop, and an electric lighting circuit having a switch normally open and adapted to be closed by the electro-magnet upon the closing of the alarm circuit.

12. In combination, a normally open burglar-alarm circuit, an independent electric lighting circuit, and a branch circuit in the burglar-alarm circuit for closing the electric lighting circuit upon the closing of the alarm circuit, said branch circuit being provided with means for automatically opening itself upon the closing of the electric lighting circuit and for maintaining said branch circuit continuously open after the operation which causes the closing of the electric lighting circuit.

13. In combination, a normally open burglar-alarm circuit having a battery and an electric alarm signal in operative connection therewith, a branch circuit in parallel with the alarm signal, an electric lighting circuit, and means in said branch circuit for closing said electric lighting circuit upon the closing of the alarm circuit, said branch circuit being normally disconnected from the battery and adapted to break its own circuit upon the closing of the electric lighting circuit and thereafter maintain its own circuit continuously broken.

14. In combination, a circuit, including an automatic drop and an electro-magnet in series, and an electric lighting circuit, including a switch controlled by said electro-magnet, said first-mentioned circuit being broken at the drop upon the operation of said drop and thereafter continuously maintained in broken condition.

15. An improved mechanism of the class described, comprising a main circuit, a branch circuit in connection with said main

circuit and having an alarm signal, means for normally maintaining said alarm signal circuit open, said means being operated by the closing of the main circuit to close the alarm signal circuit, another branch circuit in connection with said main circuit and normally open at said means for retaining the alarm signal circuit open, an independent electric lighting circuit, means comprised in said last mentioned branch circuit for closing said electric lighting circuit upon the closing of said branch circuit, and means for opening said last mentioned branch circuit after it has operated to close the electric lighting circuit.

16. An improved mechanism of the class described, comprising a main circuit, a branch circuit in connection with said main circuit and having an alarm signal, an automatic drop comprised in said main circuit and operating to normally maintain the alarm signal circuit open, another branch circuit in connection with said main circuit and normally open at said automatic drop, an independent electric lighting circuit, means comprised in said last mentioned branch circuit for closing said electric lighting circuit upon the closing of said branch circuit, and another automatic drop comprised in said last mentioned branch circuit and operating to open said branch circuit after the closing of said branch circuit has operated to close the electric lighting circuit.

17. An improved mechanism of the class described, comprising a main circuit having an alarm signal in operative connection therewith, means for normally maintaining a portion of said main alarm signal circuit open, a branch circuit in connection with said normally-open portion of said main alarm signal circuit, an independent electric lighting circuit, means comprised in said branch circuit for closing said electric lighting circuit upon the closing of said branch circuit at said normally-open means, and means comprised in said branch circuit for opening the same upon the closing of said normally-open means.

18. An improved mechanism of the class described, comprising a main circuit having an alarm signal in operative connection therewith, an automatic drop comprised in said main circuit and operating to normally maintain a portion of said circuit open, a branch circuit in connection with said main circuit and normally open at said automatic drop, an independent electric lighting circuit, means comprised in said branch circuit for closing said electric lighting circuit upon the closing of said branch circuit at said au-

tomatic drop, and another normally-closed automatic drop comprised in said branch circuit and operating to open said branch circuit upon the closing of said first mentioned automatic drop.

19. An improved mechanism of the class described, comprising an alarm circuit, reversely-operating separate means for closing and opening said circuit, one of said means being normally open and the other of said means being normally closed, whereby when the circuit is normally open at one of said means it is closed at the other and the closing of said normally-open means opens the other, an independent electric lighting circuit, and means comprised in said alarm circuit between the independent electric lighting circuit and said normally-closed means, for closing said electric lighting circuit upon the closing of said normally-open means in the alarm circuit.

20. An improved mechanism of the class described, comprising an alarm circuit, a normally-open automatic drop comprised therein, a normally-closed automatic drop comprised therein, an independent electric lighting circuit, and means comprised in said alarm circuit between the independent electric lighting circuit and said normally-closed automatic drop for closing the electric lighting circuit upon the closing of said normally-open automatic drop.

21. An improved mechanism of the class described, comprising an alarm circuit, an independent electric lighting circuit, means for closing said independent electric lighting circuit upon the closing of said alarm circuit, and means comprised in said alarm circuit for normally and continuously maintaining the same open before and after the closing of the same to close the independent electric lighting circuit.

22. An improved mechanism of the class described, comprising an alarm circuit, an independent electric lighting circuit, an electro-magnet in the alarm circuit, a switch in the electric lighting circuit and controlled by said electro-magnet, a normally-open automatic drop in the alarm circuit, and a normally-closed automatic drop in the alarm circuit between said normally-open automatic drop and said electro-magnet.

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

MAXIMILIAN F. JURUICK.

Witnesses:

CLAIR W. FAIRBANK,
JNO M. RITTER.