No. 886,355. PATENTED MAY 5, 1908.

J. W. DAWSON.

INVISIBLE ELECTRIC BURGLAR AND FIRE ALARM.

APPLICATION FILED SEPT. 12, 1907.

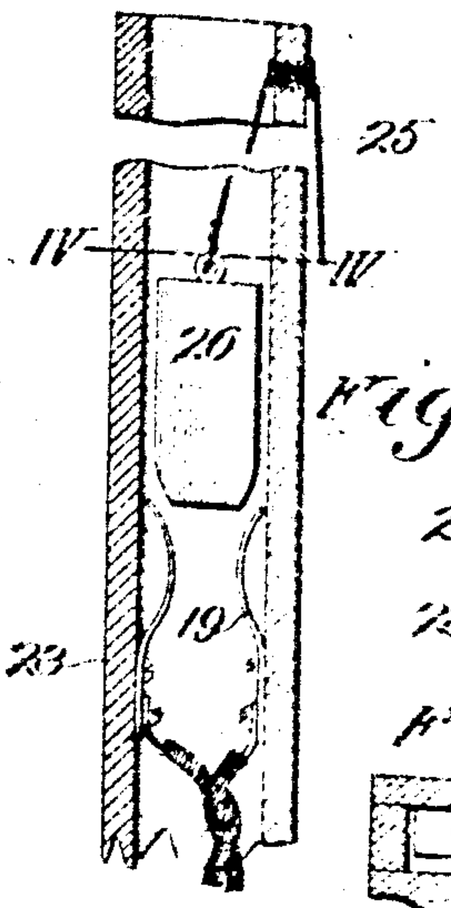


Fig. 3.

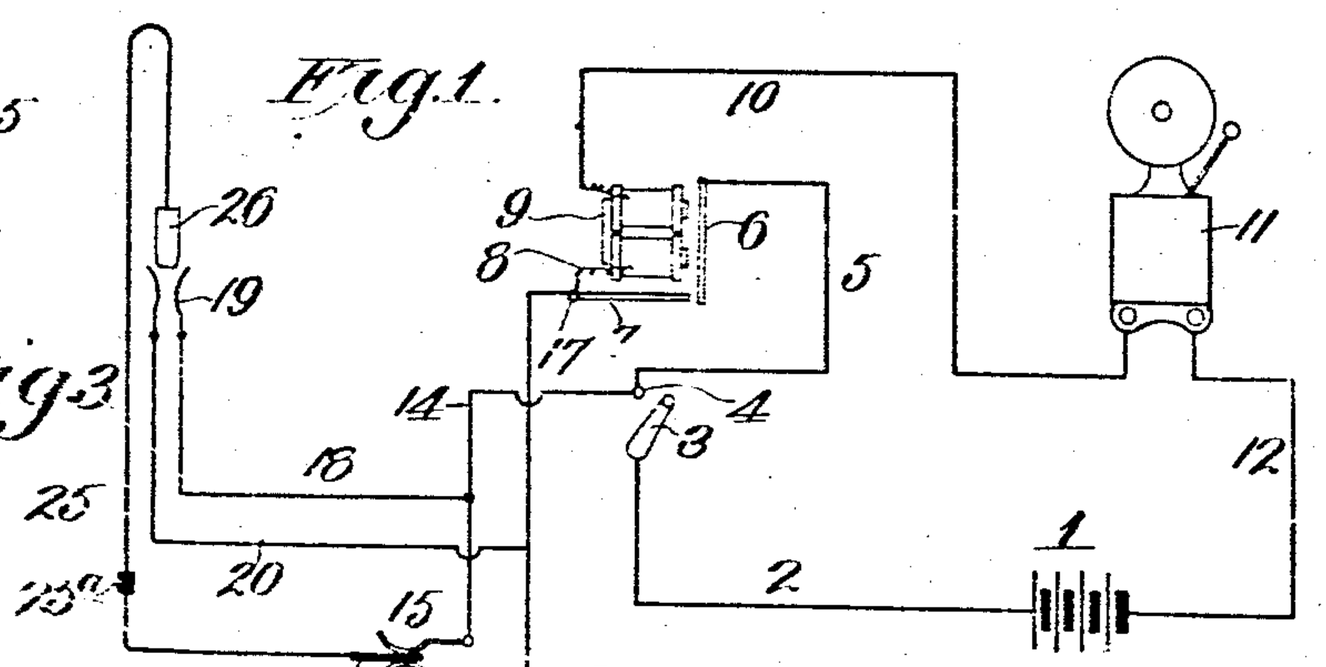


Fig. 4.

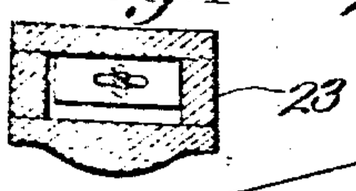


Fig. 5.

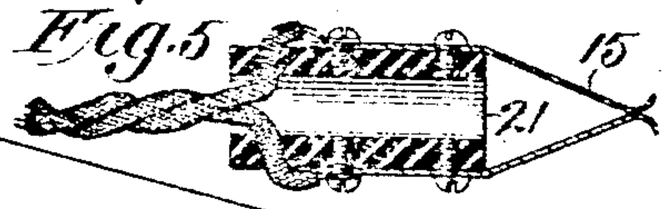


Fig. 2.

Witnesses:
Frank P. Glore.
H. C. Rodgers

Inventor.
J. W. Dawson
By George P. Glore Atty

UNITED STATES PATENT OFFICE.

JAMES W. DAWSON, OF KANSAS CITY, MISSOURI.

INVISIBLE ELECTRIC BURGLAR AND FIRE ALARM.

No. 886,355. Specification of Letters Patent. Patented May 5, 1908.

Application filed September 12, 1907. Serial No. 392,497.

To all whom it may concern:

Be it known that I, JAMES W. DAWSON, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Invisible Electric Burglar and Fire Alarms, of which the following is a specification.

This invention relates to electric alarms and more particularly to what is known as an invisible burglar and fire alarm system, my object being to produce apparatus of this character which will be operated through the opening of the door or by a person walking against a thread stretched in such position that it cannot be avoided by a person unaware of its existence.

A further object is to produce apparatus of this character having a local alarm circuit which when once completed will sound an alarm until such circuit is broken.

A still further object is to produce an efficient, reliable and cheap apparatus, which can be installed easily and expeditiously.

With these objects in view and others as hereinafter appear, the invention consists in certain novel and peculiar features of construction and organization as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawings in which

Figure 1, is a diagrammatic view of the electric alarm system. Fig. 2, is a perspective view of the interior of the room which is protected by my alarm apparatus. Fig. 3, is an enlarged vertical section partly broken away of a chute equipped with parts of my alarm apparatus. Fig. 4, is a cross section on the line IV—IV of Fig. 3. Fig. 5, is a sectional view of a spring snap forming a part of the apparatus.

In the said drawings 1 indicates a battery or other source of electric supply, 2 a conductor leading from the positive pole of the battery, 3 a switch connected to said wire, 4 a contact to be engaged by the switch, and 5 a conductor leading from the contact to armature or drop 6.

7 is a contact to be engaged at times by armature or drop 6 and connected to contact 7 is a conductor 8 leading to electro magnet 9 adapted at times to operate the armature or drop as hereinafter explained.

10 is a conductor connecting the magnets of an electro magnetic signal, shown in this instance as a bell 11 though it will be apparent that any other type of signal may be employed.

12 is a conductor connecting the signal with negative pole of the battery.

All of the parts thus far described are preferably carried by or arranged within a portable box or case 13 as shown in Fig. 2 which case will preferably be located in the apartment of the person who is in charge of the protected rooms or building as hereinafter referred to it being noted in this instance that if convenient the local circuit and signal mechanism is disposed in the room to which the protective apparatus is applied.

14 indicates a conductor leading from contact 4 to one member of a spring contact 15, the other member of said contact being connected by conductor 16 to a binding post 17 connected to contact 7.

18 is a branch conductor leading from conductor 14 to one member of a spring contact 19, the other member of said contact being connected by conductor 20 to conductor 16. In practice the members of contacts 15 are preferably carried by the insulated plate or collar 21 adapted to be secured rigidly to any suitable support, such for instance as a table 22 in the room to be protected. The contact 19 is preferably secured in a portable boxing 23 in the room protected which boxing will preferably be disposed at the opposite side of the door 24, of the room from the contact 15 or at the opposite side from said contact 15 of the path which a person must travel in order to reach the place desired.

24 is an insulating plate normally between the members of contact 15 so as to hold the same insulated from each other, and connected to said insulating plate is a thread or its equivalent 25, said thread being suitably guided and extending into the box 23 and having its end within said box attached to and supporting a circuit maker 26 above spring contact 19, the thread as hereinbefore suggested extending between said circuit breaker and circuit maker so as to be engaged by the door when opened or by a person moving about in the protected room. In the event of the opening of the door and the engagement thereof with the thread, the latter will either break or withdraw the circuit breaker from engagement with contact 15. If the thread breaks the circuit maker 26 will drop and complete an electric circuit as follows: it being of course understood that at night the switch will be thrown into en-

gagement with contact 4; from battery 1 through conductor 2, switch 3, contact 4, conductor 14, conductor 18, contact 19, circuit maker 26, conductor 19, conductor 20, conductor 16, binding post 17, through conductor 3, electro-magnet 9, conductor 10, the alarm mechanism 11 and conductor 12 back to the battery. The establishment of this circuit starts the operation of the alarm mechanism and the energization of the magnet attracts the armature or drop 6 until the same engages contact 7, the result being the conductors 14, 18, 19, 26, 20, and 16, are cut out of the circuit and the current follows the shorter or local circuit from the battery through conductor 2, switch 3, contact 4, conductor 5, armature or stop 6, contact 7, conductor 8, electro-magnet 9, conductor 10, alarm mechanism 11, conductor 12 back to the battery. It will thus be seen that this local circuit causes the ringing of the bell after being once established irrespective of the existence of conductors 14 and 16 and those connected with them. If the thread instead of breaking should effect the withdrawal of the circuit breaker 24 from between the members of contact 15, said arms will spring together and the circuit will be from contact 4, through conductor 14, contact 15 and conductor 16 or if anything should prevent the members of contact 15 from completing the circuit the circuit maker 26 will drop as hereinbefore explained and establish a connection between contact members 19. It will thus be seen that there is practically no danger of failure to complete a circuit from the battery in the event of the breaking of the thread or the pulling thereby of the circuit breaker from between the members of spring contact 15.

It will be understood of course that the breaking of the thread from any cause, such for instance as fire, will set the alarm in operation and in this case notice will be given to the person in charge before irreparable damage is done.

From the above description it will be apparent that I have produced a burglar and fire alarm mechanism possessing the features of advantage enumerated as desirable and I wish it to be understood that I do not desire to be restricted to the exact details of construction shown and described as obvious modifications will suggest themselves to one skilled in the art.

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

1. A signal system, comprising a battery, an alarm mechanism, a pair of spring contacts, a second pair of spring contacts one of each being electrically connected together and to the positive pole of the battery, conductors connecting the other pair of contacts with the alarm mechanism and the negative pole of the battery, a thread suitably guided and having an insulating plate between a pair of said spring contacts to hold them apart and provided at its opposite end with a depending circuit-maker held above and out of contact with the other pair of spring contacts and adapted in the event of the breaking of the thread or of the withdrawal of the insulating plate from the path of the first-named contacts to drop between and electrically connect said separated spring contacts.

2. In an alarm mechanism, a battery, an electro magnet, an alarm mechanism, a contact connected to the magnet and in uninterrupted circuit with the signal mechanism and one pole of the battery, an armature or drop connected to the opposite side of the battery and adapted when the magnet is energized to engage said contact and establish a local circuit through the alarm mechanism, contacts electrically connected respectively to the first-named contact and the pole of the battery to which the armature is connected, and a thread-supported means for effecting the completion of the circuit between said spring contacts.

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

JAMES W. DAWSON.

Witnesses:
H. C. RODGERS,
G. Y. THORPE.