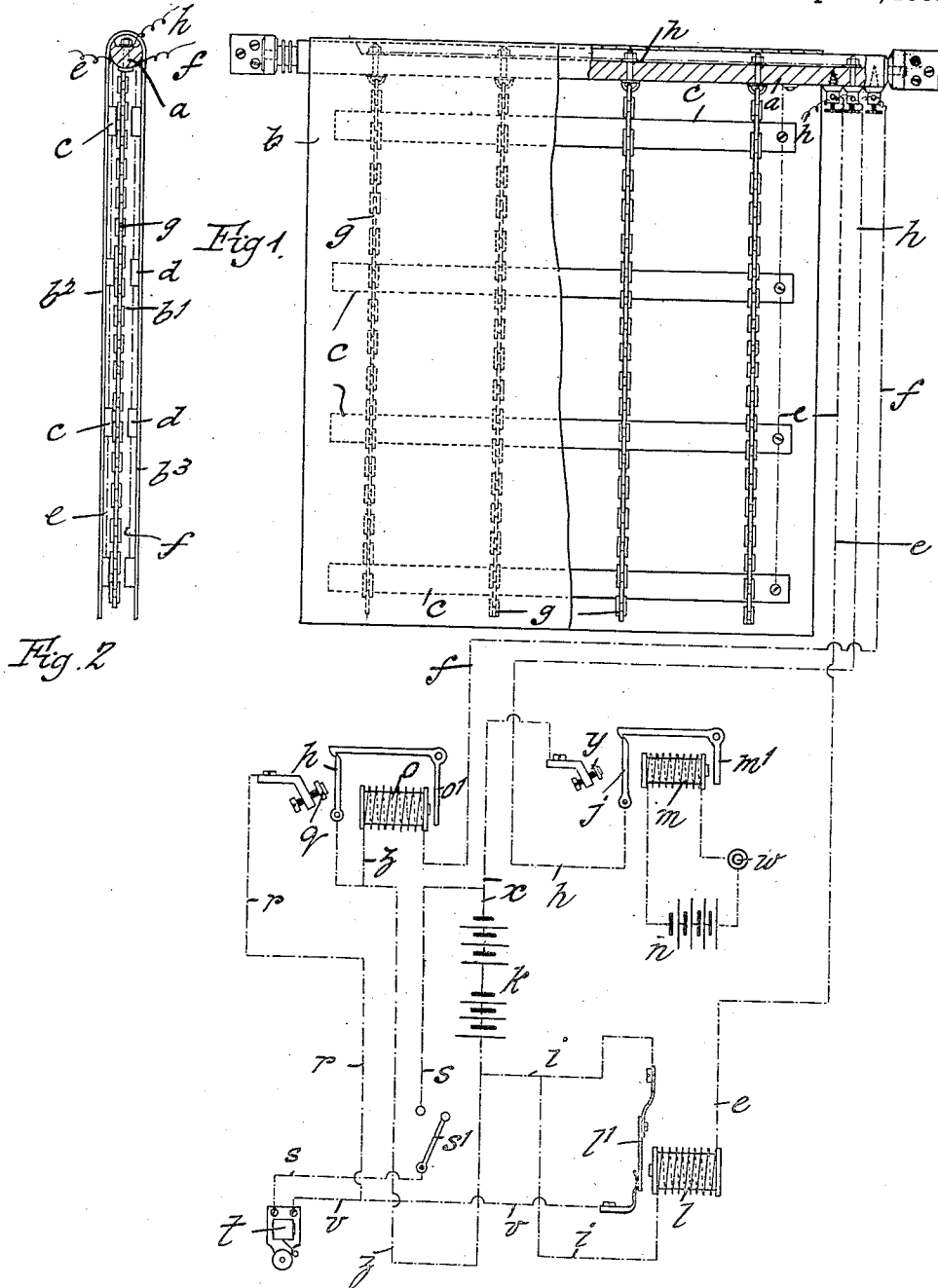


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ELECTRIC BURGLAR ALARM.
APPLICATION FILED NOV. 21, 1908.

934,108.

Patented Sept. 14, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

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ELECTRIC BURGLAR-ALARM.

934,108.

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

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To all whom it may concern:

Be it known that I, MAX TRAUTMANN, a subject of the German Emperor, residing at Dresden, in Germany, have invented certain new and useful Improvements in Electric Burglar-Alarms, of which the following is a specification.

This invention relates to electric burglar alarms of the type wherein a curtain or other swinging device suspended in front of the entrance or object to be guarded is so connected with operative and in-operative circuits that an alarm circuit is closed when said swinging object is disturbed.

A construction embodying the invention is illustrated in the annexed drawing in which—

Figure 1 shows an elevation of the swinging object and a diagram of the circuits and Fig. 2 a longitudinal section of part of the apparatus.

A double walled curtain *b* is so attached to a roller *a* provided with a winding device that at the front and rear thereof a portion of the curtain hangs down freely providing a space *b*¹ between the two curtain parts *b*² *b*³. Each of the latter has on the inside a plurality of contact bars *c* and *d* extending throughout the entire width of the curtain, the bars *c* being joined together by an electric circuit *e* and the bars *d* by a second electric circuit *f*. Between the said curtain parts a plurality of electrically conductive chains *g* are fastened to the roller *a* and joined together by a circuit *h*. The circuit wires *e* *f* and *h* lead through terminals on the roller *a* to remotely situated known drop switches; for example wire *e* passes to a relay *l* connected by a wire *i* to a battery *k*. Wire *h* passes to a switch *j*, the relay *m* of which is connected to a separate source of current *n*. Wire *f* leads to a relay *o* and through wires *z* to a battery *k*. An electric bell *t* connected by a wire *s* to the battery *k* is connected by wires *v* and *r* to the armature *l*¹ of relay *l* and to an adjustable contact *q* respectively in the path of the switch *p*.

The circuit *s* contains a normally open switch *s*¹ and is closed by pressure of a button *w*, which causes the switch *j* to drop by the relay *m* attracting its armature *m*¹.

The action of the apparatus is as follows:—The normally raised curtain is lowered when the entrance is to be protected. By pressing the button *w* the switch *j* is dropped on to contact *y* connected by wire *x*

to battery *k*, and closes a normally open circuit *e* *h*. A current then flows from chains *g* in contact with the contact bar *c* of one curtain part, through wire *h* to switch *j*, wire *x*, battery *k*, wire *i*, relay *l*, wire *e* and contact bar *c*. The relay *l* attracts its armature *l*¹ and breaks the bell-circuit. If subsequently the circuit of the relay *l* is broken, by disturbance of the curtain or by cutting the wires, the bell-circuit is closed and the bell rung. The chains *g* are attached to one side of the vertical plane of the longitudinal axis of the roller *a*, so that when the curtain is in its normal lowered position, as shown in Fig. 2, said chains will be in contact with the bars or elements *c* and out of contact with the bars or elements *d*. When the curtain is rolled up, it will be understood that the bell circuit is broken so that no alarm will be sounded. Movement of the curtain also closes a closed circuit by bringing the contact bars *d* against the chains *g*, so that current flows through wire *h*, switch *j*, contact *y*, wire *x*, battery *k*, wire *z*, relay *o*, wire *f*, contact bars *d* and chains *g*, thus causing the armature *o*¹ of relay *o* to be attracted and switch *p* to drop and make contact at *q*, to ring the bell *t*. The alarm is therefore actuated by removing one part of the curtain from the chains and also by moving the other part against the chains; also by cutting or damaging the wires leading to it.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. An electric burglar alarm comprising in combination a movable swinging member having two depending portions, conductively connected flexible members suspended between said depending portions, two series of contact elements carried by said swinging member one series being normally in contact with the flexible members and the other series out of contact therewith, a normally open circuit, electrical connections between one of the series of contact elements and said normally open circuit, a closed circuit and electrical connections between the other series of contact elements and said closed circuit.

2. An electric burglar alarm comprising in combination a double curtain, a winding roller from which said curtain is suspended in two depending portions, conductively connected chains suspended from said winding

roller between said depending portions, two series of contact bars on the interior surfaces of the curtain one series being normally in contact with the chains and the other series out of contact therewith, a normally open circuit, electrical connections between the series of contact bars in contact with the chains and said normally open circuit, a closed circuit and electrical connections be-

tween the series of contact bars out of contact with the chains and said closed circuit. 10

In witness whereof I have signed this specification in the presence of two witnesses.

MAX TRAUTMANN.

Witnesses:

MORITZ SPREER,
RUDOLPH FRICKE.