A. W. HALL.

Electro-Magnetic Burglar-Alarm Trunk.

No. 215,120. Patented May 6, 1879.

Fig.1.

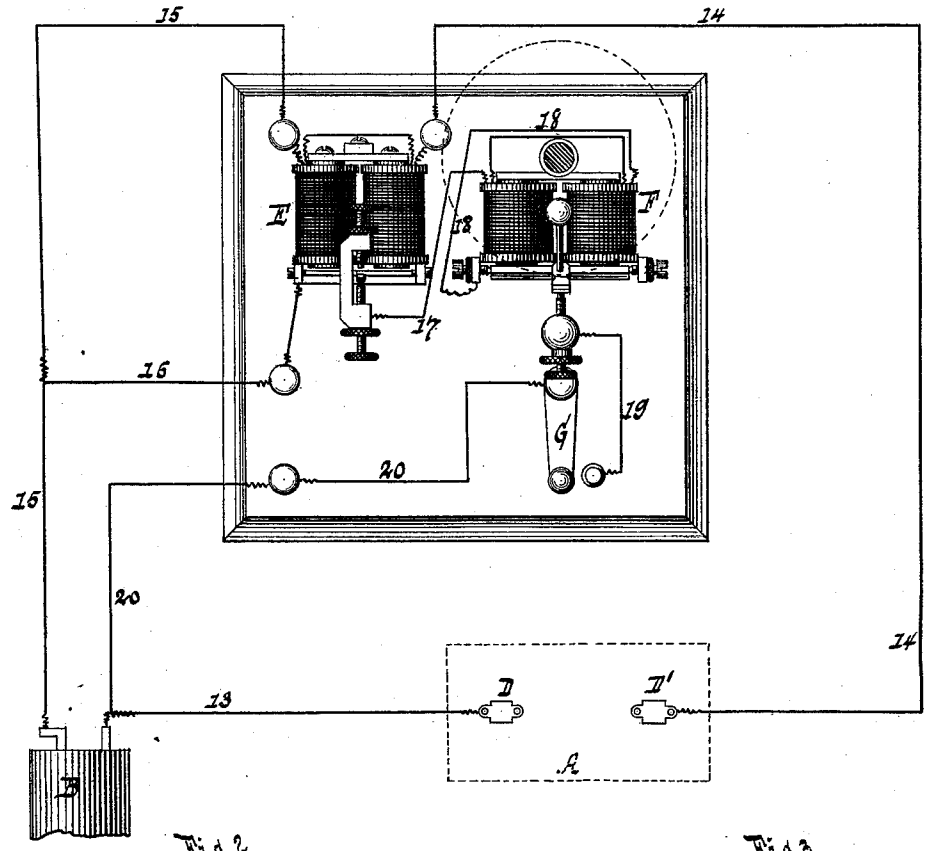


Fig.2.

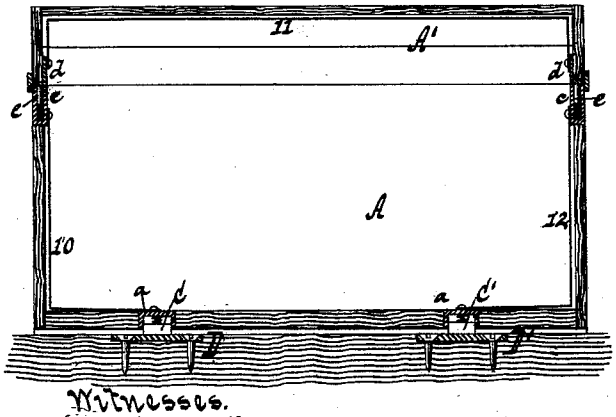
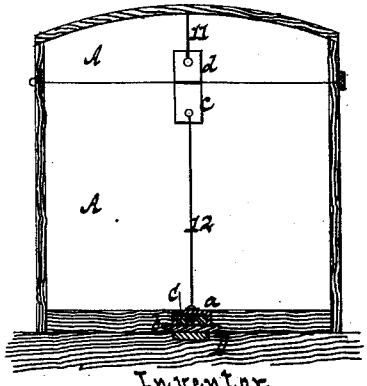


Fig.3.



Witnesses.
Otto Schuland.
W. C. Hauff

Inventor.
Alvah W. Hall
by Van Santvoord & Hauff
his attys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALVAH W. HALL, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF HIS RIGHT TO ALBERT C. HALL, OF SAME PLACE.

IMPROVEMENT IN ELECTRO-MAGNETIC BURGLAR-ALARM TRUNKS.

Specification forming part of Letters Patent No. **215,120**, dated May 6, 1879; application filed September 11, 1878.

To all whom it may concern:

Be it known that I, ALVAH W. HALL, of the city, county, and State of New York, have invented a new and useful Improvement in Trunks and other Similar Articles, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a plan view of an electro-magnetic alarm, showing its connections with metallic plates, forming one feature of my invention. Fig. 2 is a longitudinal vertical section of a trunk embracing my invention. Fig. 3 is a vertical cross-section of the same.

Similar letters indicate corresponding parts.

The object of my invention is to produce a trunk or other similar article or receptacle for valuables which, after being shut and when placed in a certain position, causes an alarm to be sounded when the same is surreptitiously opened or is moved out of place.

This invention consists in the combination, with a trunk or other similar article, of plates sunk in a floor or wall, and connected respectively with the opposite electrodes of an electro-magnetic alarm, and spring-actuated blocks arranged in metallic sockets, and forming automatic circuit-closing keys, all of which will be fully hereinafter described.

The invention also consists in certain other combinations of parts, which will be fully hereinafter described, and specifically pointed out in the claims.

In the drawings, the letters A A′ designate the body and the cover of a trunk, having combined therewith circuit-closing keys C C′ and wires 10 11 12. D D′ are metallic plates arranged in the circuit of an electro-magnetic alarm.

In the example shown the keys C C′ are arranged in the bottom of the trunk, and when they are so arranged the metallic plates D D′ are secured to the floor of the room in which the trunk is kept; but in some cases the keys are arranged on one of the sides of the trunk, when the plates D D′ are secured to the wall of the room. The keys C C′, moreover, have the form of blocks, which are fitted in metallic sockets *a*, and are forced outward by the action of springs, the same being held back against the action of these springs, and being protected during transportation of the trunk by a slide, *b*, working in a dovetailed groove in the bottom of the trunk, as shown in Fig. 3; but said keys may, if desired, be made of pieces of metal secured to the trunk, or made in various other ways. Either the keys C C′ or the plates D D′, moreover, may be sunken into the trunk or in the floor or wall, as the case may be, the same being, however, in all cases so arranged that they are exposed on the exterior of the trunk or other article to which my invention is applied.

The wires 10 12 are situated in the interior of the body A of the trunk, and are connected to the keys C C′ at one end, and connected to plates *c c*, attached to the edges of said body at their opposite ends. The wire 11 is located in the interior of the cover A′, and is connected to plates *d d* at its opposite ends, these plates being attached to the edges of the cover, and being so arranged that when the cover is closed the plates *c c* and *d d* are brought in contact with each other, and a metallic contact is produced between the keys C C′.

Either the plates *c c* or *d d* may be provided with a spring-impelled pin, *e*, to insure a contact between said plates.

The connection of the metallic plates D D′ with the alarm is as follows: The plate D is connected to one pole of a battery, B, by means of a wire, 13, while the plate D′ connects by means of a wire, 14, with an electro-magnet, E, connecting by means of a wire, 15, with the other pole of the battery. Now, if the trunk is placed over the plates D D′ in such a manner that the keys C C′ are in contact with said plates, the circuit through the magnet E is closed, and remains closed until the trunk is opened or removed.

The letter F designates an electro-magnet, by the direct action of which the alarm is operated. This alarm-magnet F, like the magnet E, is vitalized by the battery B, but remains inactive when the circuit through the magnet E is closed, while when the circuit through this magnet is broken, by moving or opening the trunk, the circuit through said alarm-magnet F is closed and the alarm is sounded,

The alarm-magnet F is connected to one pole of the battery B by means of wires 16 17, and connected to the other pole thereof by wires 18 19 20, a switch, G, being arranged in the circuit.

The operation of the electro-magnetic apparatus, briefly described, and as shown in the drawings, being well known, a detailed description thereof is deemed unnecessary; and it is obvious that the apparatus can be arranged in various different ways from the one shown.

It will be perceived that a trunk or other article provided with my invention can be left in the room of a hotel or dwelling furnished with the proper electro-magnetic appliances without danger of its being tampered with, inasmuch as when the trunk or other article is opened or moved out of the position in which it is placed, the fact is made known at a distance—as in the office of the hotel—in time to prevent the abstraction of any portion of the contents of the article.

My invention is applicable to trunks, chests, boxes, and similar articles having a cover, and also to drawers of bureaus, desks, and other similar articles. In applying my invention to a bureau or similar article, I attach the circuit-closing keys C C′ to either or all of the drawers, and secure the metallic plates D D′ to the frame-work in such a manner that when the drawer or drawers are closed the keys are brought in contact with the plates, and vice versa. In some cases the trunk or other article is arranged in an open circuit, which is closed, so as to sound an alarm when the trunk is opened or displaced.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a trunk or similar article, of the plates D D′, sunk in a floor or wall, and connected, respectively, with the opposite electrodes of an electro-magnetic alarm, and the spring-actuated blocks C C′, arranged in metallic sockets *a*, and forming automatic circuit-closing keys electrically connected, substantially as described.

2. The combination, with a trunk or similar article, of the spring-supported metallic blocks C C′, fitting in recesses in said article, the wires 10 12, plates *c c*, attached to the edges of the body, the wire 11, and the plates *d d*, attached to the edges of the lid, substantially as described.

3. The combination, with a trunk or similar article, of the stationary plates D D′, the spring-supported metallic blocks C C′, attached to said article and fitting in recesses therein, the wires 10 12, plates *c c*, attached to the edges of the body, the wire 11, and the plates *d d*, attached to the edges of the lid, substantially as described.

In testimony that I claim the foregoing I hereunto set my hand and seal this 3d day of September, 1878.

ALVAH W. HALL. [L. S.]

Witnesses:
E. F. KASTENHUBER,
J. VAN SANTVOORD.