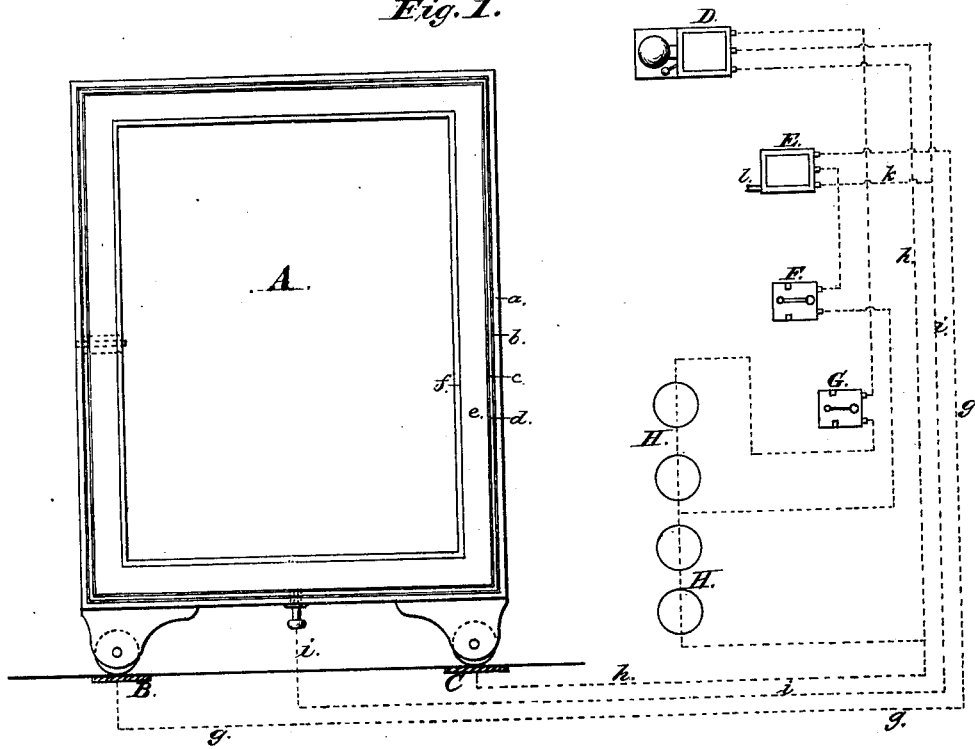


MAX KOLOSEUS.  
Electro-Magnetic Burglar-Alarm.

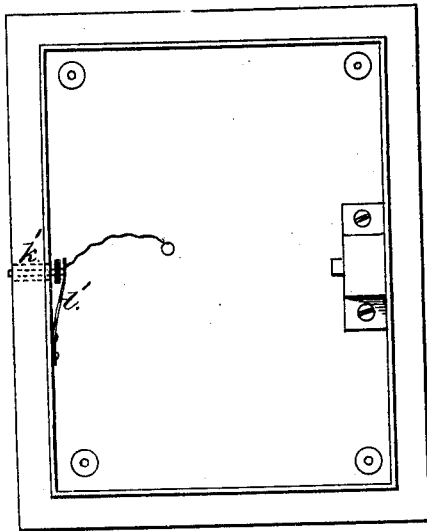
No. 206,182.

Patented July 23, 1878.

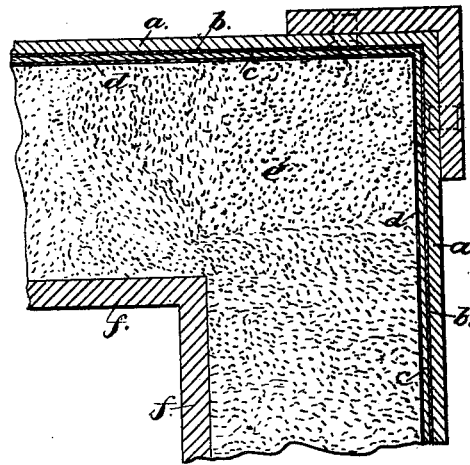
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:  
Ferd. Amend,  
Sam. C. Miles

Inventor:  
Max Koloseus.

# UNITED STATES PATENT OFFICE.

MAX KOLOSEUS, OF NEW YORK, N. Y.

## IMPROVEMENT IN ELECTRO-MAGNETIC BURGLAR-ALARMS.

Specification forming part of Letters Patent No. 206,182, dated July 23, 1878; application filed May 24, 1878.

*To all whom it may concern:*

Be it known that I, MAX KOLOSEUS, of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Electro-Magnetic Burglar-Alarm Safes; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 letters of reference marked thereon, which form a part of this specification.

The object of my invention is to improve the construction of burglar and fire proof safes or vaults used for the protection of valuables; and it consists in a certain construction and arrangement of safes or vaults, in connection with magnetic or electric wires, a battery, and an alarm apparatus, by which the drilling, forcible breaking, or opening, as well as removal, of safes is prevented, in connection with an insulating composition or plates, all of which will be more fully described hereinafter, reference being had to the accompanying drawing and the letters of reference marked thereon.

In the accompanying drawing, Figure 1 represents a safe in connection with suitable circuit-wires, battery, and alarm. Fig. 2 is an interior view of the safe-door. Fig. 3 is an enlarged sectional detail view of the same.

In the drawing, A represents a safe, constructed of alternate layers of chilled iron or steel, *a*, insulating plate or composition, *b*, iron or steel plate, *c*, insulating composition, *d*, filling of plaster, *e*, and inner lining of wood or iron, *f*.

The insulating composition is composed of water-glass, alum, powdered burned clay, fresh or unburned clay, and borax, in certain proper quantities; and this composition is an important feature of my invention.

The safe is placed upon metal plates B C, which are let into the floor, and to which the circuit-wires *g h* are connected that lead to an alarm apparatus, D, of the ordinary construction. To the central part of the safe, at the bottom, is attached a wire, *i*, which also leads to the alarm apparatus. This may be placed in any suitable place about the house, or it may

be arranged at the police-station, or any other place desired, where the alarm is to be given, if the safe is tampered with in any manner. At any desired place may be arranged suitable relays E, and these are connected to circuit-breakers F G, arranged wherever it is necessary to have them placed, so that the circuit may be broken whenever it is desirable. In connection with the devices above described, I arrange a suitable battery, H, of the ordinary construction.

On the inside of the door is arranged a spring-bolt, *k*, protected by rubber, horn, or other non-conducting material, and only when the door is opened or tampered with will the alarm apparatus be started by the connection or circuit becoming broken as the bolt is thrown back by the spring *l*. The circuit-wire *g*, connecting with the roller-plate C, or other outside part of the safe, leads to the connecting-piece F, as well as to the alarm apparatus, and the wire *h* connects with the roller-plate B, through the relay E, to battery H, by which the latter is closed with the wire *g*, and the circulating current holds the anchor in contact with the relay.

To save the battery as much as possible, a current-breaker, G, is interposed between the relay E and the battery, by which the circuit is opened during the day-time. Any other insulating material may be used, however, instead of the one described above. Instead of the plate, a pin, tube, or screw may be employed and the wires connected thereto.

The object of arranging the relay E in the manner shown and described is to form a circuit with the safe or vault, the battery, and the alarm apparatus. The anchor *l* of the relay is held in contact by the electric current through the wires *h* and *g*, and in case any of the wires are cut or the vault is moved, the current will be broken, the anchor of the relay falls off, and closes by this the side current through the wire *k*, which then sets the alarm apparatus in motion.

The composition consists of one part ground alum, two parts burned clay, one part unburned clay, one-fourth part borax, all mixed with proper proportion of water-glass.

It will be readily understood that the moment it is attempted to drill or break a hole

into the safe, when the drill comes in contact with the isolated plate *c* through the insulating composition, the alarm apparatus is started, and will keep on ringing until released by the proper person; or, if a key is introduced into the key-hole, the connection is formed and the alarm apparatus will commence to ring; or, if the safe should be moved from the plates upon which it stands, or any of the connecting-wires are cut, the circuit is broken and the alarm apparatus is started.

Thus it will be seen, no matter what it is intended to do with or to the safe, the alarm apparatus is always set in operation, and will remain so until it is released.

The great advantages of my improvement are, that it is very simple in its construction; it can be very readily applied to any safe or place of deposit for valuables; it is positive and sure in its operation; it can be furnished at a very moderate cost; it is not liable to get out of order, and it can be arranged to give an alarm in any desired locality, whether in a bank, warehouse, police-station, or any other place.

I am aware that safes have been connected to alarm apparatus by electric wires, and therefore do not, broadly, claim such; but,

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a safe constructed substantially as described, the composition plates composed of water-glass, alum, powdered burned clay, fresh or unburned clay, and borax, as and for the purpose specified.

2. In combination with a safe or vault, the following elements, namely: an electric circuit, an alarm apparatus, floor-plates B C, a relay provided with an anchor, one or more circuit-breakers, and a battery, in connection with the insulating composition plates, composed of water-glass, alum, powdered burned clay, fresh or unburned clay, and borax, as herein described, arranged alternately between layers of metal plates, all substantially as and for the purpose herein described.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

MAX KOLOSEUS.

Witnesses:

FERD. AMEND,  
SAML. C. MILLS.