

(No Model.)

2 Sheets—Sheet 1.

T. M. MARTIN.
BURGLAR PROOF SAFE.

No. 469,971.

Patented Mar. 1, 1892.

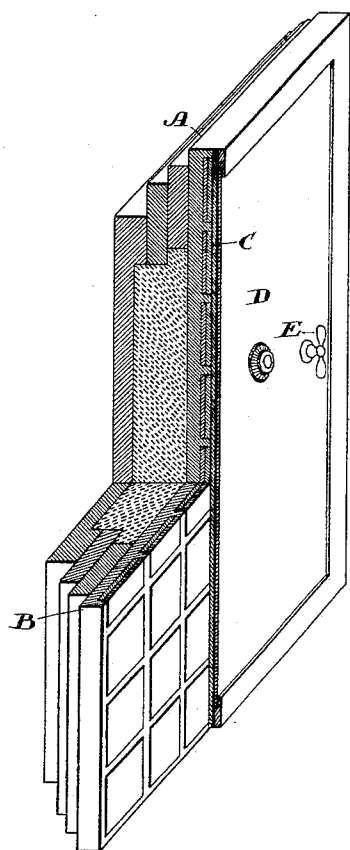


Fig. 1.

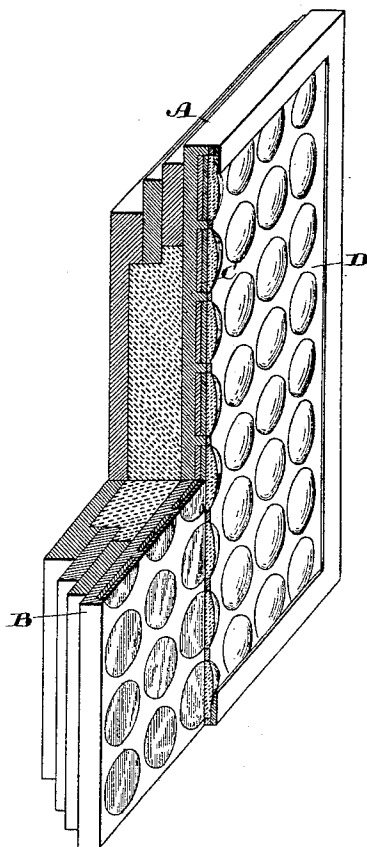


Fig. 2.

Witnesses.

Lewis R. Abell.

L. Foulds

Inventor

Thos. M. Martin

by
Fetherstonhaugh & Co
Attys.

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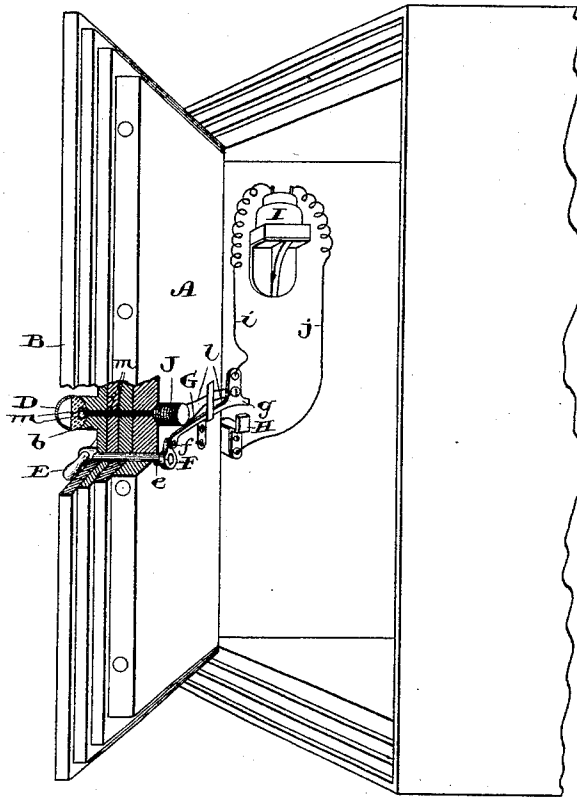


Fig. 5.

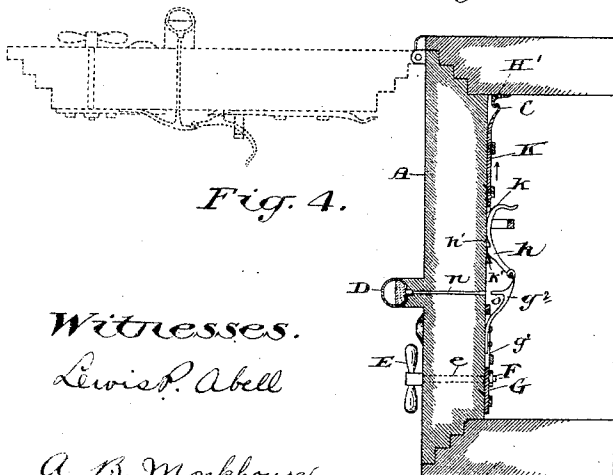


Fig. 4.

Witnesses.

Lewis P. Abell

A. B. Monkhouse

Inventor.

Thomas. M. Martin

by
Fetherstonhaugh & Co.
Attys.

UNITED STATES PATENT OFFICE.

THOMAS MOWER MARTIN, OF TORONTO, CANADA, ASSIGNOR OF ONE-HALF
TO WILLIAM HENDRY LAW, OF SAME PLACE.

BURGLAR-PROOF SAFE.

SPECIFICATION forming part of Letters Patent No. 469,971, dated March 1, 1892.

Application filed July 9, 1891. Serial No. 398,874. (No model.)

To all whom it may concern:

Be it known that I, THOMAS MOWER MARTIN, artist, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Burglar-Protection Devices for Safes, of which the following is a specification.

The object of the invention is to furnish a positive protection to be applied to the door or sides of safes, vaults, or strong rooms which will be extremely dangerous to burglars, even to the peril of their lives, if desired, should they tamper with the safe in any manner whatsoever with the object of effecting an opening; and it consists, essentially, of securing in or upon the thick outside walls of the doors or sides of the safe, vault, or strong room sheets, panels, or layers of explosive material or substances and in covering the said explosive material with a covering of glass, iron, composition, or other suitable material, so as to protect and entirely conceal the method of placing the explosive material, as hereinafter more particularly explained.

Figure 1 is a perspective view, partially in section, exhibiting one method of placing the explosive material. Fig. 2 is a perspective, also partially in section, showing another method of placing the explosive material. Fig. 3 shows still another form applied to a door and mechanism whereby it may be exploded electrically. Fig. 4 is a section showing the form exhibited in Fig. 3 and mechanism whereby it may be exploded by percussion.

In the drawings like letters of reference indicate corresponding parts in each figure.

As it is important that I provide a means for protecting the safe from being burglarized by every method, I show means whereby the explosive will be set off by the direct application of heat and by heat produced from friction, percussion, and electricity.

A is the door or side of the safe, which may be formed through and through in any approved manner. On the outer plate B, I form a series of recesses extending from side to side and from top to bottom of the plate. In these recesses are placed a layer or layers of explosive material or substances.

In Fig. 1 I cover the outside surface of the plate B by a plate or layer of composition or other suitable material C and plate-glass D.

In Fig. 2 I cover the outside surface of the plate B by a plate of iron, composition, or other suitable material and form therein circular recesses, which I fill with glass to cover the explosive substance or material behind it.

In Figs. 3 and 4 I show another form in which the explosive material is secured in the outer end of a projection *b*, extending from the outside plate B and having an outer covering or glass D, as shown, thus forming a shell. Although I show only one shell, it will be understood that several may be employed, if necessary. In these figures I show the shell applied to a door and so constructed as to their method of operation that should the burglar attempt to open the door without using the combination he would explode the shell.

In Fig. 3 I show a method of setting off the explosive shell by electricity. E is the handle of the door. The spindle *e* of the handle E extends through the door and has a crank F secured on its end, as shown. The crank F is connected at *f* to one end of the rod G. *g* is the spring end of the rod G, and H is a contact-plate, with which the spring end is designed to come in contact if the combination-lock has not been set, so that the handle E may be turned. I do not show any connection between combination and handle, as it is unnecessary in explaining the utility of my invention. I is the battery, *i* and *j* the wires leading therefrom. The wire *j* is connected to a binding-screw on the contact-plate H and the wire *i* to a binding-screw on the upward extension piece forming part of the rod G. J is an induction-coil secured on the back of the door. The two wires *l* of the induction-coil are connected to the binding-screw on the upward extension piece forming part of the rod G. The other two wires *m* of the induction-coil J run through the door into the explosive substance of the shell, as shown, the ends of the wires *m* being slightly separated, as indicated. It will now be seen that if the combination is operated and the handle turned into the position shown in Fig. 3 the spring end *g* of the rod G will be thrown sufficiently far back so that its spring end will

not touch the contact-plate H when the door is opened and there will be no explosion. Should, however, the handle not be manipulated in opening the door, the spring end *g* will be so close to the contact-plate H that it will strike it on any person attempting to open the door by any other means than by the combination. Consequently as the spring end *g* of the rod G passes the contact-plate H it will throw into circuit the induction-coil and instantaneously cause a spark at the ends of the wires *m* in the explosive material, thereby setting the shell off, to the great injury of the person tampering with the door.

In Fig. 4 I show a means for setting off the explosive shell by percussion. I use a percussion-cap at the inner end of the shell and provide a plunger *n* for exploding said cap. The rod G is connected by the crank F to the spindle *e* of the handle E. *g*² is a spring secured at one end to the inner side of the door and supported at the other by the adjustable catch *h*. *h*¹ is a tooth formed on the door A. *g*¹ is a slot in the bar G, within which the spring *g*² is secured. K is a bar sliding in bearings on the door and having a slot *k* formed therein, with an inclined side *k*¹ at one end of the bar, as indicated. The other end of the bar has a spring end *l*¹, which, when the door is closed, as shown by full lines in Fig. 4, engages the bracket H¹ on the inside of the safe. When the door is unlocked by manipulating the handle E, the end of the rod G is forced between the hammer *o* and plunger *n*, and on opening the door the bar K is drawn in the direction indicated by the arrow, so that the inclined side *k*¹ comes in contact with the adjustable catch *h* and lifts it from contact with the tooth *h*¹ on the door A. Consequently the spring *g*² is freed and the full force exerted, so as to force the hammer *o* inwardly; but as the end of the rod G intervenes between the hammer *o* and the plunger *n* the shell will not be exploded. Should, however, the combination not be operated and the handle consequently not be turned, nothing would intervene between the hammer *o* and plunger *n*, and the hammer *o* would be brought by the spring *g*² forcibly against the plunger *n*, which would strike the percussion-cap and set off the explosive shell.

Although I have shown and described in Figs. 3 and 4 my explosive set off by electricity and by percussion, it will of course be understood, on reference to Figs. 1 and 2, that it may be set off by forcibly striking, boring, and heat applied directly. This of course depends upon the explosive used, and in order to insure the explosive acting under all circumstances I make the explosive of such a substance as will be set off by any agency employed, or else place it in layers, each layer

of which will be set off by a separate means, so that it is extremely dangerous to make a hole through the safe at any point without exploding it and causing personal injury, if not death, to any person tampering with it. Again, although I show a series of recesses with corresponding explosive material, it will of course be understood that one single sheet of explosive material inserted between the plate B and the outer covering might be used.

I do not wish to limit myself to the use of any explosive, as there are many substances either in the form of dynamite, powders, gun-cotton, or fulminates, or a combination of them in powder, paste, or saturated substances, which might be used with equal facility.

What I claim as my invention is—

1. In combination with the walls or door of a safe, a charge of explosive material carried thereby and located on the outside thereof, and a covering for concealing said charge, substantially as described.

2. In combination with the wall or door of a safe having a recess, a charge of explosive material located therein and outside the said wall, and a covering for said charge, substantially as described.

3. In combination with the wall or door of a safe, a charge of explosive material carried thereby, and means for exploding said charge, substantially as described.

4. In combination with the wall or door of a safe, a recess having a charge of explosive material therein, and a suitable covering for concealing the same, said recess being formed in a projection on the door, substantially as described.

5. In combination with the door or wall of a safe, a charge of explosive material carried thereby, means for exploding said charge, and connections from said means to the handle of the door to render said means inoperative by the movement of the handle, substantially as described.

6. A wall or safe door provided with a projection having a layer of explosive and an outer covering of suitable material forming a shell, an induction-coil J, located on said door and connected by wire to the explosive shell, and rod G, attached by the crank *e* to the handle E and having a spring end *g*, in combination with a contact-plate H and battery I, connected to the contact-plate and rod G by the wires *i* and *j*, as and for the purpose specified.

Signed at Toronto this 30th day of June, 1891.

THOMAS MOWER MARTIN.

In presence of—

LEWIS P. ABELL,
A. B. MONKHOUSE.