

O. Marland,
Fire-Proof Safe.
N^o 10,661. Patented Mar 21, 1854.

Fig. 1.

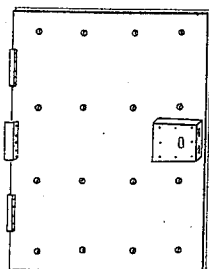


Fig. 2.

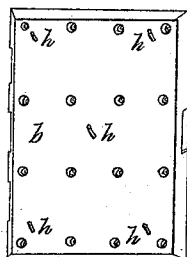


Fig. 3.

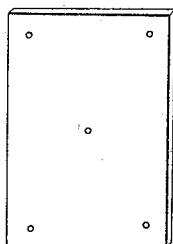


Fig. 4.

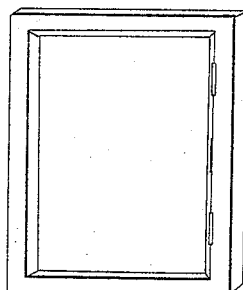


Fig. 5.

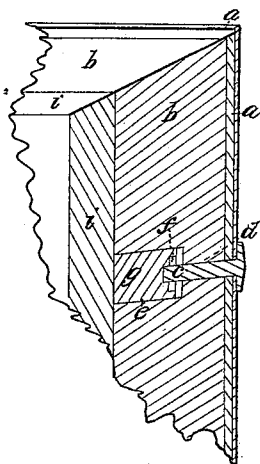
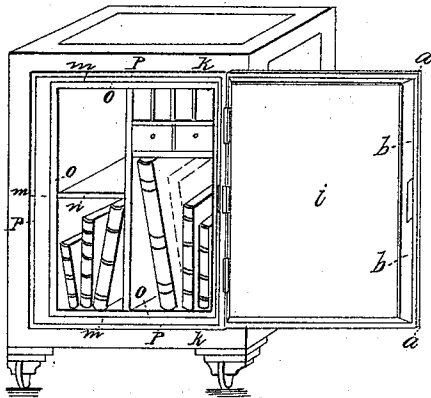


Fig. 6.



UNITED STATES PATENT OFFICE.

OBADIAH MARLAND, OF BOSTON, MASSACHUSETTS.

IRON SAFE.

Specification of Letters Patent No. 10,661, dated March 21, 1854.

To all whom it may concern:

Be it known that I, OBADIAH MARLAND, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Fireproof Safes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, and the letters of reference thereon marked, making a part of this specification, in which—

Figure 1 is the door plate; Fig. 2, the lining; Fig. 3, the backboard; Fig. 4, the inner frame; Fig. 5, a section of a fragment of a finished door; and Fig. 6 a finished safe.

The drawings are all in perspective, and the same letters refer to the same parts in all the drawings.

The object and advantage of my invention is to make the interior of fireproof safes more completely secure against the action of fire than they have ever before been made.

In the construction of the doors and the parts surrounding the doorways of all safes but mine, a considerable quantity of metal is used where its presence is very objectionable, and operates injuriously. The objectionable metal here alluded to is that portion which surrounds the doorway and occupies the space between the wooden "case" and "batten bar," and which safe-makers call the "frame around the door," but to which I give the name of inner frame; also all the metal which covers five sides of the "filling," or lining, attached to the door, and consisting (generally) of two pieces of iron, one of which is called the "door frame" and the other the "inner plate"; also all the metal bolts which pass from the outside of the "door plate" to the outer surface of the "inner plate", forming a direct and active communication for transferring the heat on the outside to the interior of the safe. All these pieces of metal conduct in, and throw off into the interior of the safe, a greater or less amount of caloric according to the heat on the outside—not unfrequently causing the destruction of books and papers in the wooden "case." Experience has abundantly shown that the combustion of the contents of a safe always commences on the side fronting the door; and this combustion is chiefly caused at this point, by the greater quantity of metal employed in the construction of these parts of the safe, and the proximity of the metal so employed to the wood

work and contents of the "case." It is plain to be seen that the removal of all the pieces of metal just enumerated, and which are good conductors of heat, and substituting in their places soap-stone, which is a poor conductor of heat, would materially improve the quality of the safe for resisting the effects of fire. In my safe all these pieces of metal are rejected. The top, bottom, sides and back of an ordinary safe are protected from heat by a thick lining made of some non-conducting material without any metal on its inside surface. My invention is intended to afford similar protection to the front side of the "case", opposite the door. To accomplish this I do not use, in my safe, any metal for the inner frame. Nor do I use any metal on five sides of the lining on the door—excepting only so much of its projecting surface as may be covered by the lock, dog, and hinges on the door plate. Neither do I have any metal bolts passing through the door plate and lining and communicating with the exterior and interior of the safe. I make the lining on the door, and the inner frame, out of soap-stone, clay, sandstone, fire-brick, plaster of Paris, marble, or any other suitable material. At present I prefer soap-stone. The lining on the door, and the inner frame may each be made in one or many pieces. On one side of the lining on the door I fasten a strong board in the position of the "inner plate" on an ordinary safe. The object of this board, which I call a back board, is to keep the lining in its place in case it should get broken by a fall in a burning building. This board is made to fit closely to the wood of the "case", when the door is locked, and thus performs another useful purpose in preventing the circulation of heated air between the outside and inside of the safe—and also to help sustain the weight of any blow or pressure on the door.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

With the exception of the work on the door and the inner frame, my safe is made in the customary way.

The door plate, Figs. 1, 5, and 6, letters *a*, is perforated with as many holes as it is intended to have bolts to secure the lining to it. The lock, dog, and hinges, having been fastened to it, as usual, and the bolts inserted in the holes made to receive them,

the door plate is then laid upon a level bed. The lining, Figs. 2, 5, and 6, letters *b*, is then laid upon the door plate—the shanks of the bolts entering as many corresponding holes, shown in Fig. 2, in the lining, previously drilled for their reception. The shanks of the bolts extend only from one third to one half the way through the lining—see Fig. 5, letter *C*. The first part of the holes in the lining, Fig. 5, letter *d*, is made only large enough to admit the shanks of the bolts,—the other part of the distance the holes, see Fig. 5, letter *e*, are large enough to admit the washers and nuts. The washers are next put on, and the nuts, Fig. 5, letter *f*, screwed home to the shoulder in the lining. The open space above the ends of the bolts, Fig. 5, letter *g*, is filled with Roman cement, plaster of Paris, or other suitable material, flush with the surface of the lining. The wooden pins, Fig. 2, letters *h*, intended to hold the back board in its place, are now placed in the holes, about half an inch deep, made for them in the lining, and are cemented in their places with the same material used to fill the space above the bolts. The back boards, Figs. 3, 5, and 6, letters *i*, is now put onto the lining—the projecting ends of the wooden pins, Fig. 2, letters *h*, entering as many corresponding holes, seen in Fig. 3, in the back board, which is finally secured to them by driving wedges into their centers. The door is now hung, as usual, on the “front hoop,” Fig. 6, letters *k*, of the safe. The inner frame, Figs. 4, and 6, letters *m*, is now put in its place around the lining on the door—the wooden “case” is placed in

its position on the inner frame and the remainder of the work, to complete the safe, is performed in the customary manner.

The vertical partitions, and shelves, Fig. 6, letters *n*, in the “case”, as well as the front of the “case” itself, Fig. 6, letters *o*, should be made to touch the surface of the back board when the door is shut.

The “batten bar” is seen in Fig. 6, letters *p*.

The back board may be hung, on hinges, to the wood work of the “case” and perform its office well,—but at present, I prefer attaching it to the lining.

Having thus fully described my invention, I would state that, I do not claim the lining of safes with soap stone, independent of the means of attaching it to the outer plate or shell, and of protecting it from breaking, as this has been done before; but what I do claim as of my invention, and desire to secure by Letters Patent is—

The combination of a lining of soap stone, or other suitable material, with the internal protecting plate on the inner surface of the door, when the said lining is constructed in the manner described, so as to dispense with any metallic connection between the outer metallic casing, and the internal surface of the door, whereby I am enabled to avoid the heat of conduction passing from the outer to the inner surface of the safe as set forth.

OBADIAH MARLAND.

Witnesses:

J. C. CROSMAN,
JOSEPH DUNIKLER.