(No Model.) 2 Sheets—Sheet 1.

W. B. MARVIN.

FIRE PROOF SAFE.

No. 263,930. Patented Sept. 5, 1882.

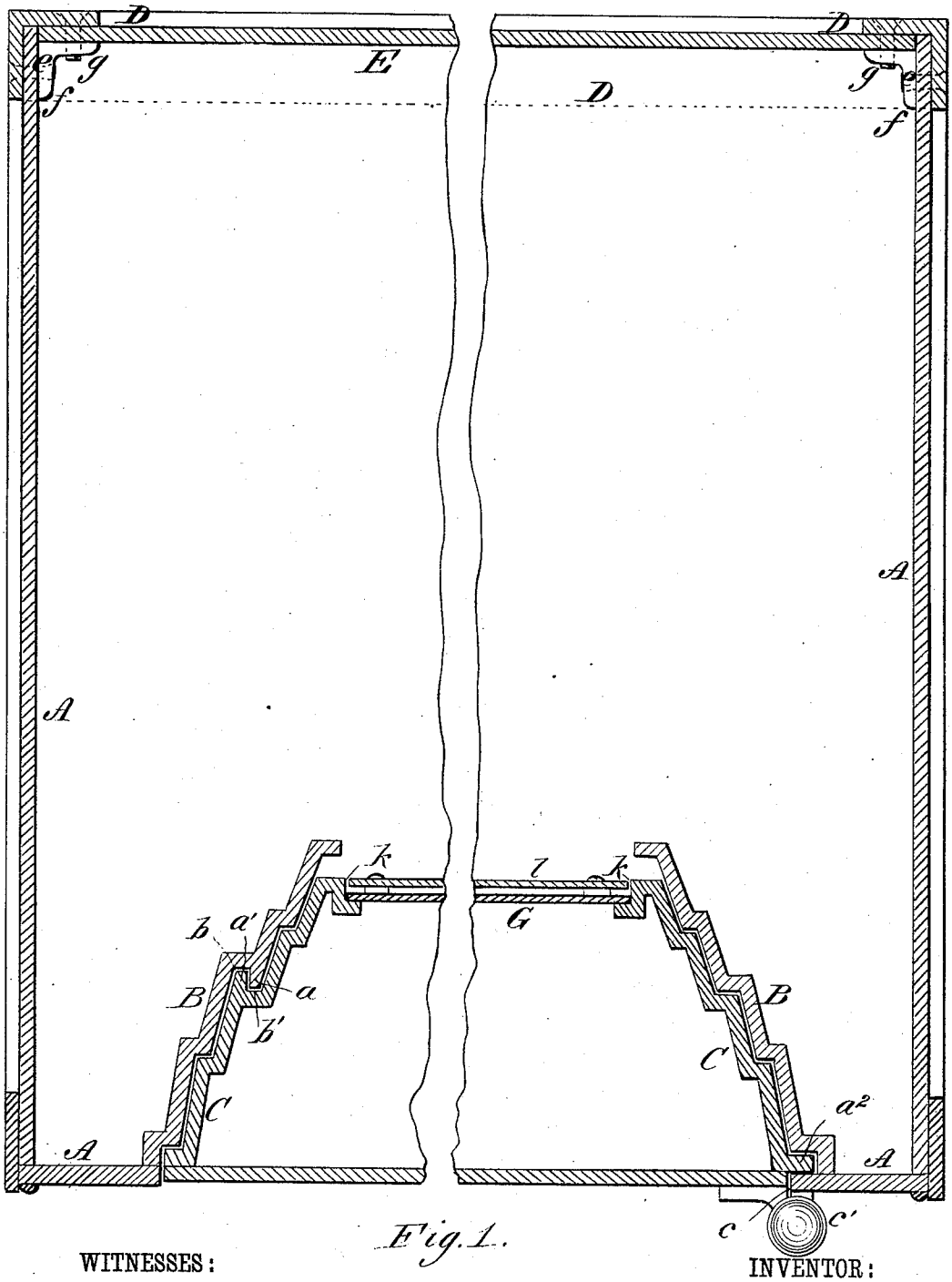


Fig. 1.

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Fig. 2.

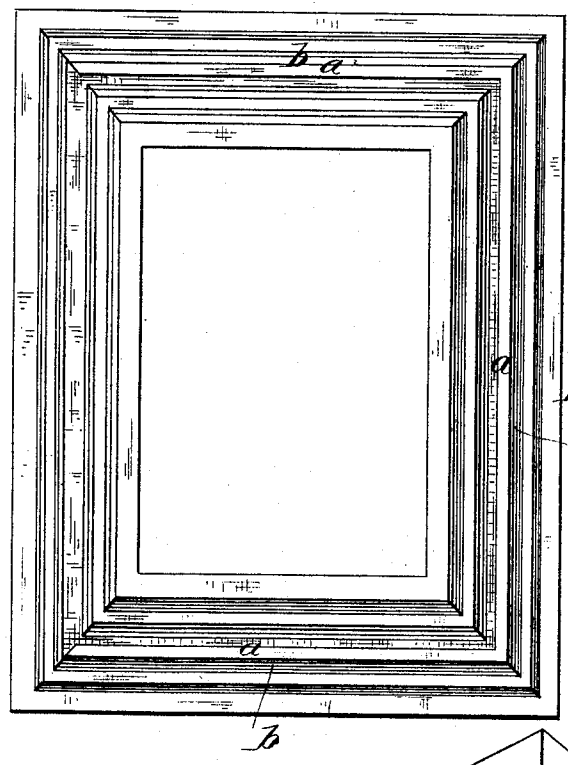


Fig. 3.

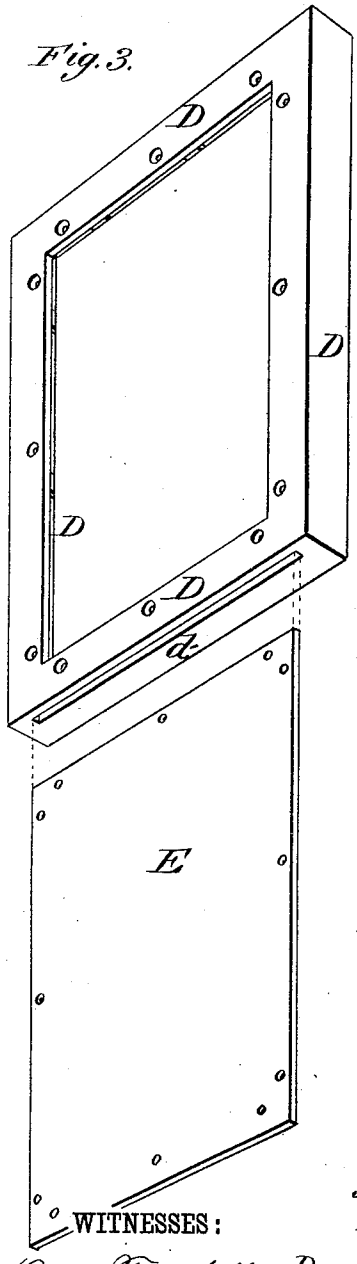


Fig. 4.

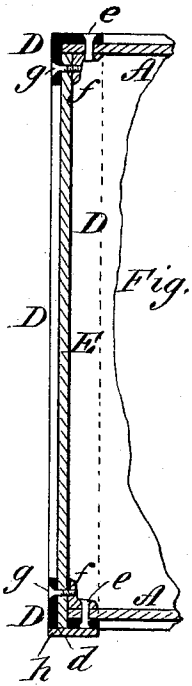


Fig. 5.

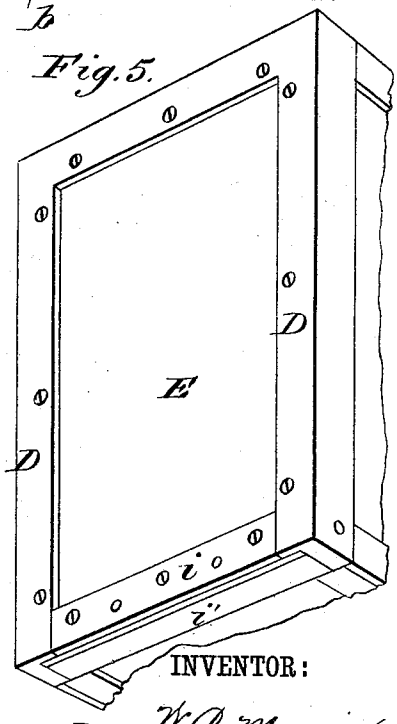
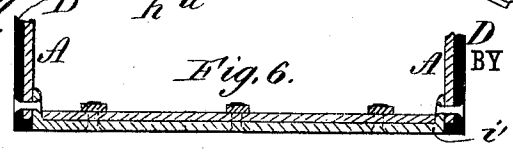


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIS B. MARVIN, OF NEW YORK, N. Y.

FIRE-PROOF SAFE.

SPECIFICATION forming part of Letters Patent No. 263,930, dated September 5, 1882.

Application filed February 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIS B. MARVIN, of the city, county, and State of New York, have invented certain new and useful Improvements in Safes, of which the following is a full, clear, and exact description.

This invention relates in part exclusively to fire-proof safes, and among other purposes or uses has for its object a better protection against the action of fire as regards the opening of the joints of the safe by the warping of its frame. It also has for its objects increased strength of construction and durability.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a horizontal section of a fire-proof safe in part with my invention applied. Fig. 2 is a view, as seen from the front, of that portion of the frame of the safe within which the outer door sits. Fig. 3 is a view in perspective of the angle-iron frame which is applied to and outside the back of the body-frame, said figure also showing a back plate, which, when fitted to its place, is slid up within the angle-iron frame; and Fig. 4 is a vertical section of said back plate as fitted within the angle-iron frame on the rear portion of the body-frame. Fig. 5 is a view in perspective, showing a modified construction of the angle-iron frame as fitted to the body-frame; and Fig. 6, a vertical section of the same in part. Figs. 2, 3, 4, 5, and 6 are upon a reduced scale as compared with Fig. 1 of the drawings.

In Figs. 1 and 2, A represents the outer walls or plates of the body-frame of the safe, and B its stepped front frame, in which the outer door, C, sits. This stepped front frame is similar to the front frames of safe-bodies now in use, excepting that it is constructed to form a tongue, *a*, and groove *b* within one of its steps, (here shown as the third one, but which may be the second one from the front.) This tongue and groove *a b* extends along or round the interior of the door-opening side and top and bottom of said stepped front frame, but not down the side against which the back or hinged side of the door sits, and the door C, which is similarly stepped, is made with a corresponding tongue and groove, *a' b'*, on like sides, so that the tongues of the frame and the door interlock by the fit of the tongue of either one in the groove of the other, said tongues breaking joint with the frame and its door. The back or hinged side of the door is alone tongued, as at a^2, which tongue is arranged to butt or bear up against and close or cross and break joint with the crack, joint, or opening *c* at the hinge *c'*, and to enter within the first or front step of the frame B—that is, when the door is closed. This arrangement of the tongue a^2 prevents fire from entering at the hinge-joint of the door, and the tongue-and-grooved construction of the door and frame within which it sits is such as not only to materially strengthen the structure, but, in case of an intense heat causing the front plates of the safe to buckle, by reason of their being bound at their ends, said tongues will break or close the joints made by the buckling of the plates.

D in Figs. 1, 3, and 4 represents a continuous four-sided frame of angle-iron shape or construction in the transverse section of its sides. This angle-iron frame is of a suitable shape and size to fit over and receive within it the back portion of the outer walls, A, of the body-frame, and has a slot, *d*, in its lower side to receive up within it a back plate, E, which, after being slid up to its place, may be secured by screws *g* passing through the angle-iron frame D, through said plate E, and entering knees *f* on the inside, to which knees the angle-iron frame may also be secured by rivets *e*. Such outer angle-iron frame materially strengthens the safe and dispenses with the knees usually employed to support the back and breaks or closes the joints. A metal strip or plate, *h*, may be arranged under the lower side of this angle-iron frame to prevent any of the safe fire-proof filling from working out through the slot *d* in said frame.

Instead of said angle-iron frame D being made solid or in one piece, it may be cut away on its bottom side, as shown in Figs. 5 and 6, and the outer back plate, E, be slid up to its place within said frame, and the gap in the bottom of the angle-iron frame be closed by separate bottom pieces, *i i'*, which may be secured by screws or rivets to the outer back plate and to the angle-iron frame and outer walls embraced by said frame. This virtually forms a continuous angle-iron frame receiving the outer

back plate up within it, but is not regarded as advantageous as the angle-iron frame made all in one piece, as shown in Figs. 3 and 4.

The outer door, C, is constructed with a rabbet or recess, *k*, on its inner face sufficiently deep to receive within it the usual or any other suitable facing-piece, G, the outer layer, *l*, of which may be made of incombustibly-prepared wood or other fire-proof material. Such facing has heretofore been exposed at its edges, and, when made of wood or other material liable to chip, has not unfrequently been mutilated or defaced at its edges by reason of the exposure of the same when the door is thrown open or when closing it violently. This is very liable to occur when two doors meeting, when closed, on their opening edges are used; and although the embedding of the inner facing-piece, including its outer layer, *l*, is here only shown as applied to a safe having a single outer door, it is equally applicable to one having two outer doors or half-doors, as above referred to. Such embedding of the facing piece or pieces within the metal of the door or doors to which they are applied effectually protects the marginal portions of the outer layers of the facing-pieces against being chipped or injured.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, in a safe, with the walls A and back plate, E, of the frame D, fitting over the edges of walls A, and having the slot *d*, through which the back plate, E, may be entered and attached to said frame and walls by means of screws *g* and rivets *e*, which enter knees *f*, as shown and described.

2. In a safe, the combination, with a safe door having the recess *k* on the inside of its front end, of facing-piece G and the incombustible layer *l*, as shown and described.

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