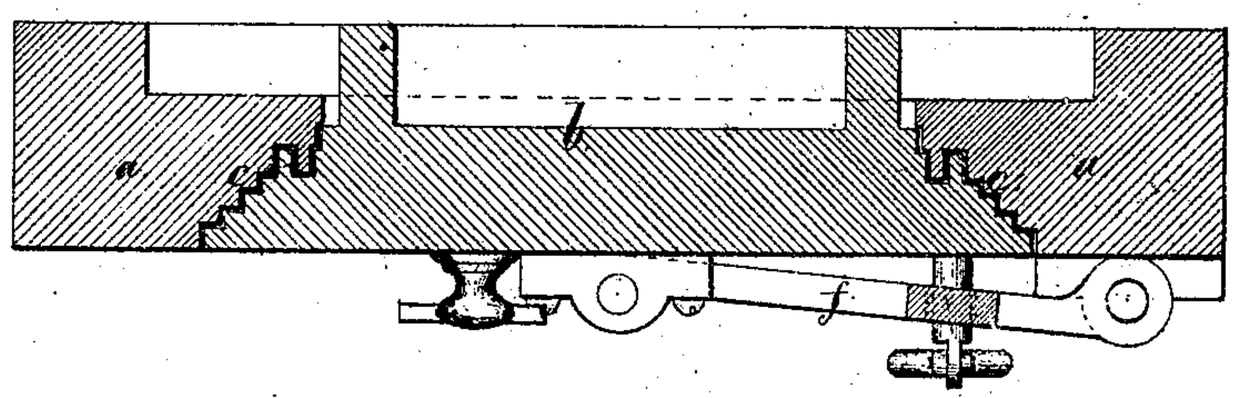
William Terwilliger,

Impt. in Doors-Burglar-proof Safes Vaults &c.

117016

Fig. 1.



PATENTED JUL 11 1871

Fig. 2.

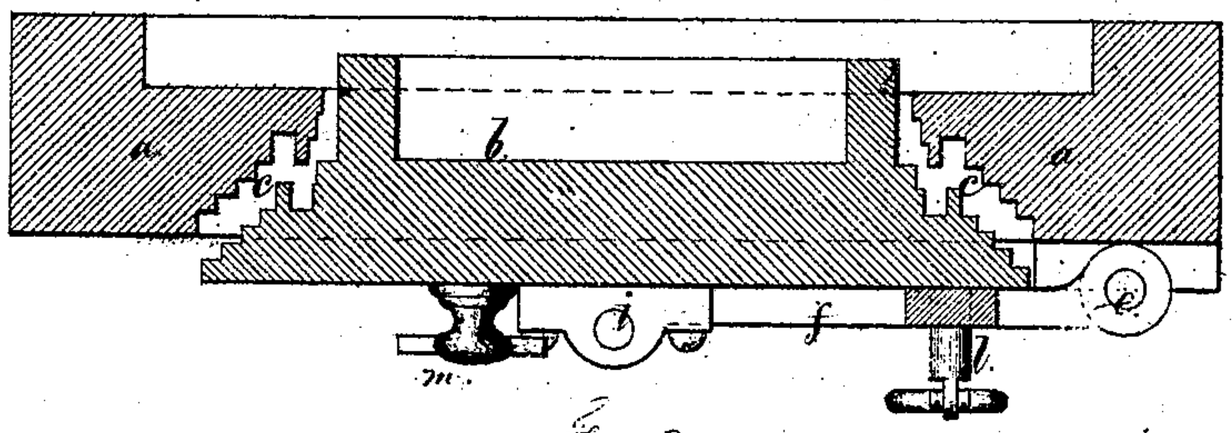
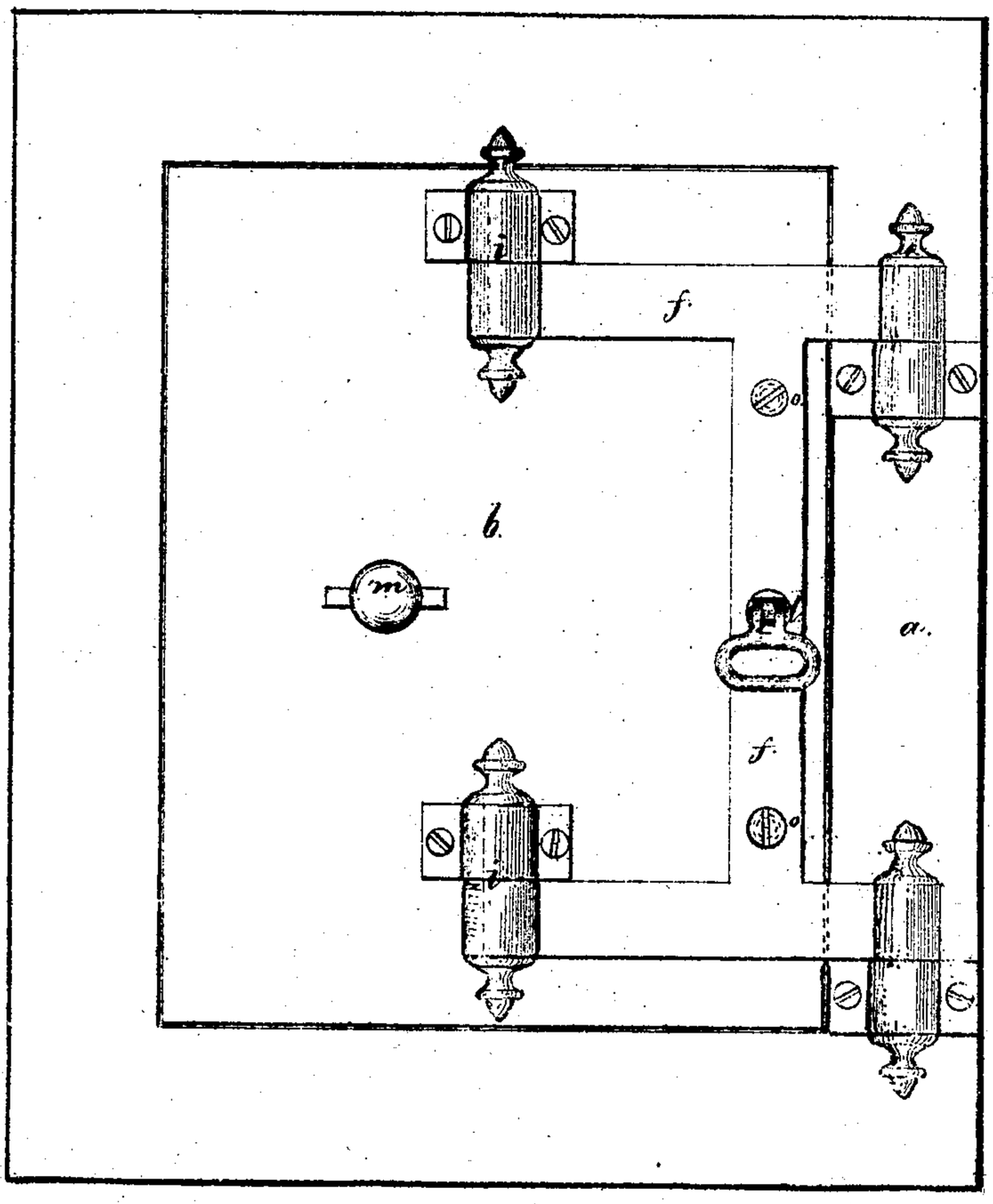


Fig. 3.



Witnesses

Chas. F. Smith

Geo. D. Baker.

William Terwilliger

Lemuel W. Serrell Atty

UNITED STATES PATENT OFFICE.

WILLIAM TERWILLIGER, OF NEW YORK, N. Y.

IMPROVEMENT IN DEVICES FOR OPERATING SAFE-DOORS.

Specification forming part of Letters Patent No. 117,016, dated July 11, 1871.

To all whom it may concern:

Be it known that I, WILLIAM TERWILLIGER, of the city and State of New York, have invented and made an Improvement in Doors for Burglar-Proof Safes, Vaults, &c.; and the following is declared to be a correct description of the same.

Doors for safes have been made with right-angled offsets, ribs, and grooves at the edge of the door, entering correspondingly-shaped parts around the inside of the door-frame, the object being to prevent the insertion of wedges or instruments to pry the door open. In safes of this character the door has to be drawn bodily out and remain parallel, or nearly so, to the closed position until the ribs and offsets clear each other before the door commences to swing upon its hinges. A variety of parallel bars and compound hinges has been made to allow of this motion.

My improvement relates to a frame interposed between the door and its hinges, said frame, at one end, resting upon the hinge-pins, and forming, with them, the hinges, and, at the other end, receiving the door by a hinge-connection, near the middle, at the top and bottom thereof, so that when the safe-door is closed there is a space between the frame and door, and, as the door is opened, the same is drawn bodily back against said frame, moving in a very slight arc of a circle described by the swinging ends of said frame, until the ribs, grooves, and offsets are clear of each other, so that the door can swing upon the hinges that are attached to the door-frame. By this construction the door is allowed the necessary movement in commencing to open the same, and then it swings in the usual manner, instead of the door or supporting-bars or compound hinges occupying considerably more space than usual, or being unwieldy and liable to get out of place.

In the drawing, Figure 1 is a horizontal section with the door closed. Fig. 2 is a similar view, partially open; and Fig. 3 is an elevation of the door and frame.

The door-frame *a* is of the desired size, and receives the door *b*, and in these parts I introduce the grooves, ribs, or offsets in the jamb, as at *c*, such parts being made at right angles, or nearly so, and arranged in any desired manner so as to afford the best security for the safe or vault. The hinge-pins *e* upon the frame *a* are of ordinary character, but they receive the ends of the secondary frame *f* that interposes between the hinge-pins *e* and door *b*, such frame *f* being also hinged at the other ends to the door *b* by the hinges *i*. This frame *f* is to be of any desired configuration, and may be ornamental. I have shown it in a plain I-form. The hinges *i* are upon the vertical central line of the door *b*, or nearly so, and the hinges *e* stand out sufficiently to allow a space between the frame *f* and the surface of the door when closed, as shown in Fig. 1, in order that the door may be moved bodily backward to the position shown in Fig. 2 for separating the offsets, ribs, and grooves sufficiently for the door *b* and secondary frame *f* to swing together upon the hinges *e*. It is preferable to employ a bolt, *l*, with a handle at the end, said bolt passing through the frame *f* and attached to the door *b* so as to limit the movement of the door upon the hinges *i*, and also to give a second handle, in addition to the usual handle *m*, for moving the safe-door in drawing the same forward or forcing it back into the frame *a*. The screw or bolts *o o* may also be employed to limit the movement of frame *f* and door at the hinges *i i*. The handle *l* may be made with a lever and cam thereon, so as to obtain the necessary power in moving the door toward or away from the frame *f* at this point.

I claim as my invention—

1. The secondary frame *f*, hinged at one end to the stationary door-frame *a* and at the other end to the safe-door *b*, near the vertical center thereof, and arranged, substantially as specified, so as to allow of the door *b* being drawn bodily out from the frame *a*, in the manner and for the purposes set forth.

2. The bolt or stop *o*, in combination with the secondary frame *f*, door *b*, and hinges *e i*, substantially as and for the purposes specified.

Signed this 12th day of May, A. D. 1871.

WILLIAM TERWILLIGER.

Witnesses:

CHAS. H. SMITH,

GEO. T. PINCKNEY.