J. Farrel,

Safe Door.

No. 107,023. Patented Sept. 6. 1870.

Fig. 1.

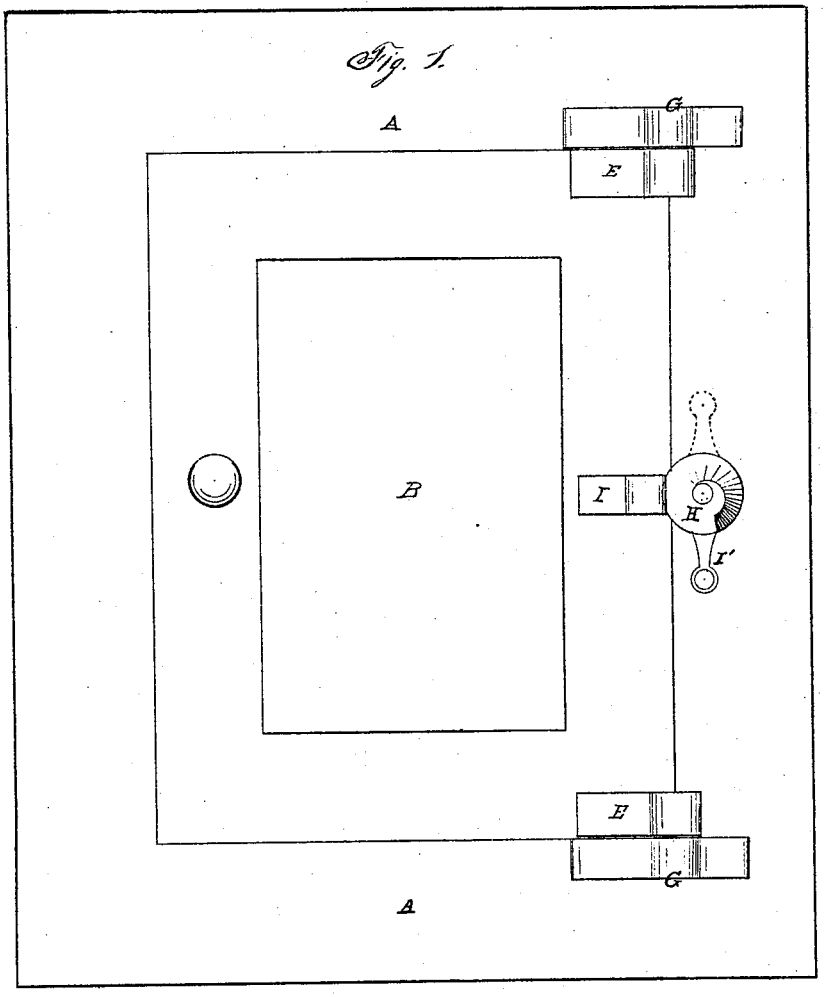
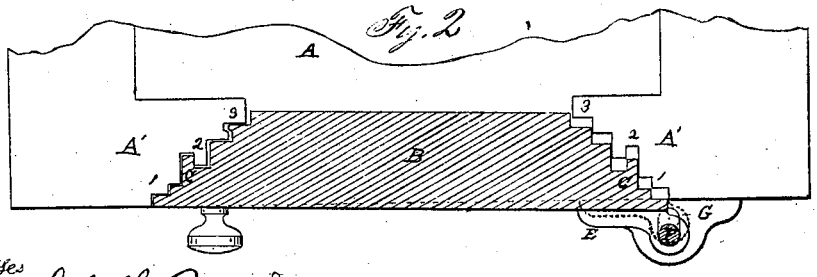


Fig. 2.



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JOHN FARREL, OF NEW YORK, N. Y.

IMPROVEMENT IN MECHANISMS FOR OPENING AND CLOSING SAFE-DOORS.

Specification forming part of Letters Patent No. **107,023**, dated September 6, 1870.

To all whom it may concern:

Be it known that I, JOHN FARREL, of the State, city, and county of New York, have invented an Improved Mechanism for Opening and Closing Safe-Doors; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing, which forms part of this specification.

The object of this invention is to provide a simple and economical means of opening and closing doors of fire-proof safes and vaults, particularly such as have a tongue and groove in the flanges and jambs of the door and frame, with the edges of the door and sides of the jambs perpendicular, or nearly so, with the front of the safe.

In the annexed drawing, Figure 1 is a front elevation of the door and frame, and Fig. 2 shows the same in horizontal transverse section.

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

A represents the body of the safe. A′ is the door-frame or jambs, and B is the door. These have several flanges, 1 2 3.

On one of the flanges there is a tongue, C, and a groove in the door-frame corresponding therewith. The sides of the tongue and groove are at right angles, or nearly so, with the face of the flange. The hinges E G of the door are placed at one side thereof, in the usual manner.

The hinges have a single pintle, F, upon which the door swings; but the movement of the door, in opening, being in a curve, while the edges of the flanges and the jambs are straight, I provide for starting out the door slightly at its hinged side first, then maintaining that side in that position. The front side of the door is readily drawn out and the door swung open.

To permit such motion, at the hinged side a slot is made in one part of the hinge equal in width to the diameter of the pintle, as seen at G in Fig. 2.

Between the hinges, pivoted to the safe, I have a worm, H, the edge of which enters a shallow groove in the end of a leaf, I, on the door. The worm is turned by a handle, I′, or otherwise. When the door is to be opened a half-turn of the worm H moves out the hinged side laterally to the position shown in full lines in Fig. 2, the pintles sliding in the slots or slotted sockets made therefor, as aforesaid, and the door is then opened in the usual manner.

It will be understood, from the above description, that the door is opened by a swinging motion between the jambs of the door-frame, one side only being released at a time, and the rear or hinged side being first withdrawn in opening and last returned to its place in the closing of the door.

I claim as my invention—

1. The combination, with a safe-door, of hinges E G E G, constructed to operate substantially as described and for the purpose specified.

2. In combination with a door and hinges, substantially such as described, the worm H and leaf I, for the purposes set forth.

JOHN FARREL.

Witnesses:

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