

W. R. PERRY.
Hinge for Safe-Doors, &c.

No. 160,616.

Patented March 9, 1875.

FIG. I.

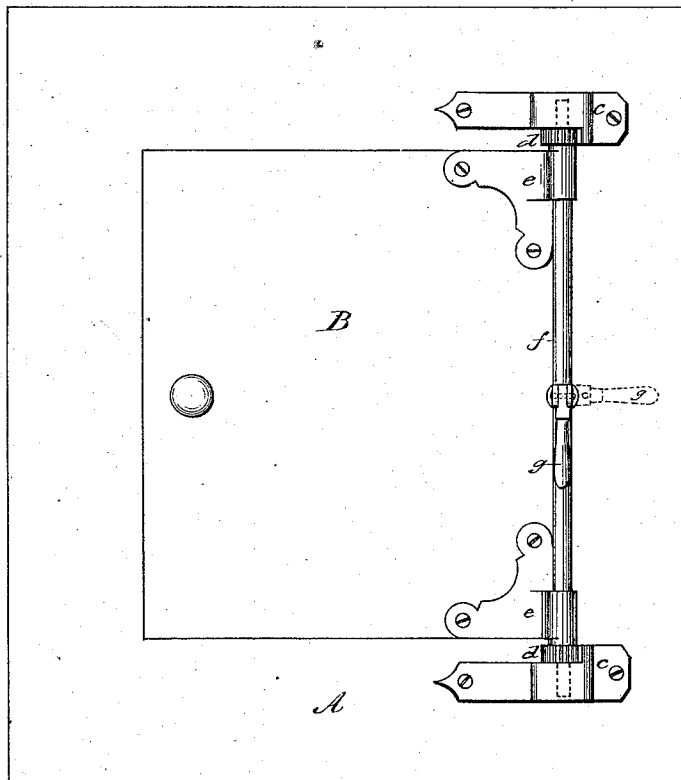


FIG. II.

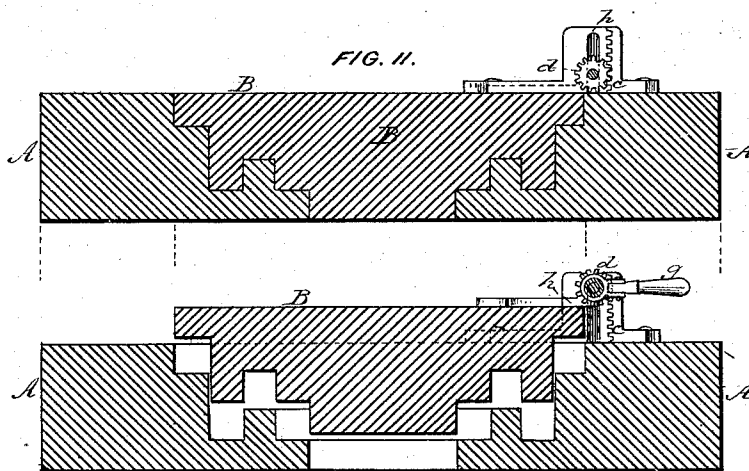


FIG. III.

WITNESSES:

William Mason
John Bellamy Jr.

INVENTOR:

Walter R. Perry.

UNITED STATES PATENT OFFICE.

WALTER R. PERRY, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF HIS
RIGHT TO DAVID W. THOMSON, OF NEW HAVEN, CONN.

IMPROVEMENT IN HINGES FOR SAFE-DOORS, &c.

Specification forming part of Letters Patent No. 160,616, dated March 9, 1875; application filed
January 27, 1875.

To all whom it may concern:

Be it known that I, WALTER R. PERRY, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Hinges for Safe and other Doors; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a front view, and Figs. 2 and 3 cross-sections.

My invention relates to that class of safe and other doors to which it is desirable to give to the door a movement in a right line in and out of its seat, that bringing it sufficiently clear of its jambs to allow of its being swung on its hinges and opened, and especially to those in which a combined square or right-angled tongue-and-groove construction is employed. It consists in the combination, with a safe or other door and its jambs, of a gear or gears and one or more rack-bars, the one being secured to the jambs, and the other to the door, whereby the door may be moved directly out to any desired distance, or may also be moved from the safe in any direction, which is especially advantageous when there are inner doors to be opened.

Heretofore, for moving the door directly out cams or eccentrics, double-jointed and sliding hinges have been employed; but their action has been, at best, limited.

By my invention the movement of the door is directly out, and to any desired distance, thus enabling perfectly-tight joints to be made, and permitting thick doors to be used. These results I accomplish by means of a gear or gears revolving upon one or more rack-bars, either of which may be attached to the safe, and the other to the door. I prefer the rack to be fixed upon the safe.

The following description will enable those skilled in the art to make and use my invention.

In the drawings, the gears *d d* work upon the rack-bars *c c*, and are connected by the

rod or bar *f*, which is provided with a handle or lever, *g*, for turning it. The door *B* is suspended from the bar *f*, which serves as a pin-*le* for the hinges *e e*. The rack-bars *c c* are secured to the safe *A* outside the door, so as not to interfere with its operation. The ends of the bar *f* fit in grooves *h h*.

By turning the bar *f* by its handle the gears work upon the ratchet-bars, and lift the bar, with the door suspended thereto by the hinges, out of its seat in a direction parallel to the rack-bars.

It is evident that this arrangement may be modified in various ways.

The weight of the door need not rest upon the bottom gear, which revolves, but may be sustained by an intervening stationary projection, or by other suitable means.

Instead of gears being fastened to the rod or bar, it may have teeth cut directly upon it.

Other means than a handle may be used to give motion to the gears, the number of which is not limited to two.

Especially is it to be noted that the rack-bars need not be straight; but while they should be straight for a sufficient distance to clear the door, and to allow it to be swung open, yet they may thereafter be curved in any direction, so as to carry the door to a considerable distance, thus getting it out of the way, if there be an inner door; also, that the rack-bars may be greater or less in length, and that they may be made in sections, which fit or are hinged together, or in a solid piece.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination, with a safe or other door and its jambs, of a gear or gears and one or more rack-bars, the one being secured to the jambs, and the other to the door, to withdraw the door from its seat, as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WALTER R. PERRY.

Witnesses:

WILLIAM MASON,
J. D. BROMER.