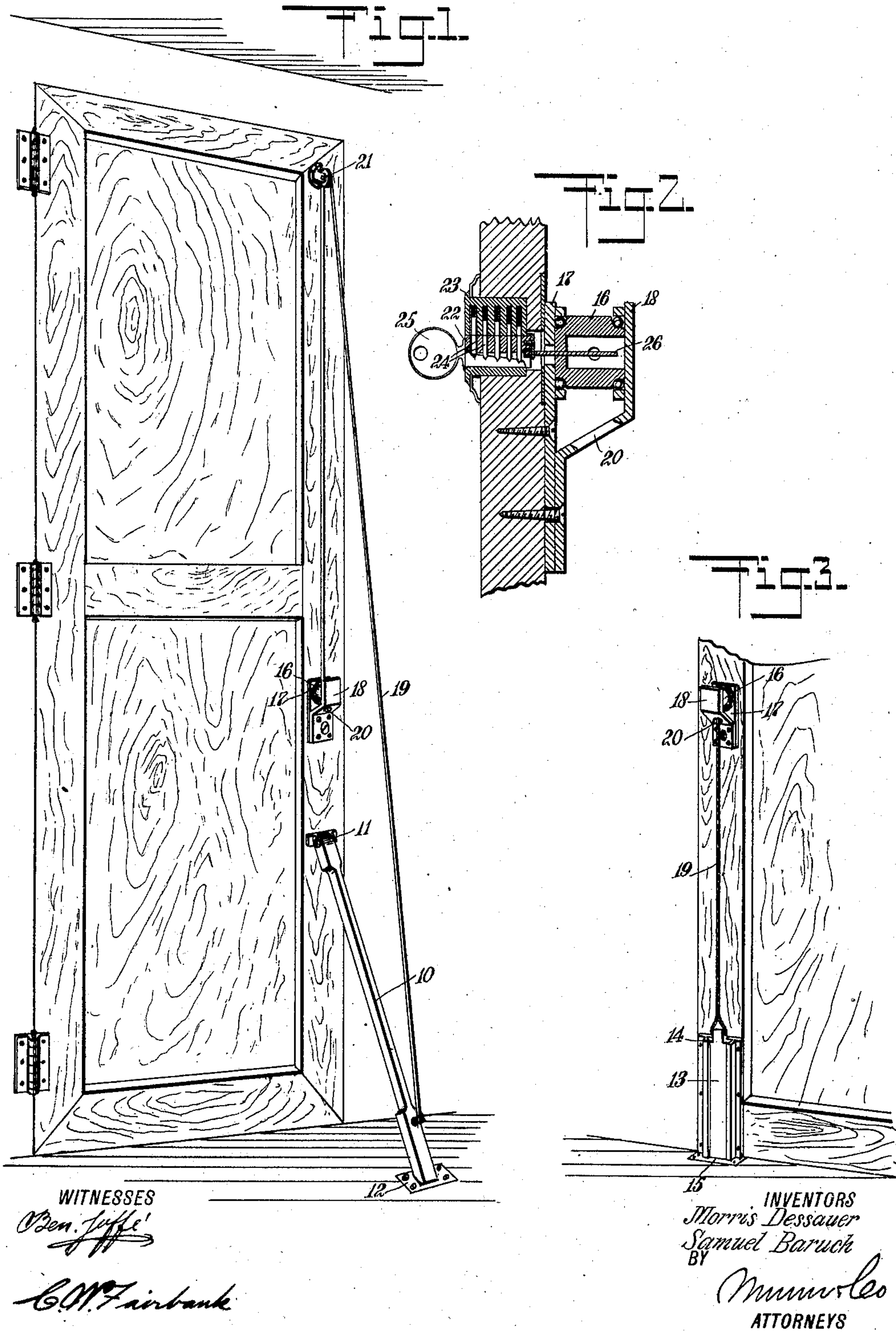


M. DESSAUER & S. BARUCH.
FASTENER FOR DOORS, SHUTTERS, AND THE LIKE.
APPLICATION FILED NOV. 2, 1909.

963,527.

Patented July 5, 1910.



UNITED STATES PATENT OFFICE.

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FASTENER FOR DOORS, SHUTTERS, AND THE LIKE.

963,527.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed November 2, 1909. Serial No. 525,860.

To all whom it may concern:

Be it known that we, MORRIS DESSAUER and SAMUEL BARUCH, both citizens of the United States, and residents of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Fastener for Doors, Shutters, and the Like, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in locking or bolting means for heavy doors, gates, windows, or other closures, and relates more particularly to the construction and arrangement of parts whereby the bolt or locking member is withdrawn to inoperative position. For fastening the door or other closure, we provide a very heavy, strong bolt or brace so mounted that it cannot possibly be broken or displaced by pressure from the opposite side of the door, and in combination therewith there is provided a bolt or brace-lifting or withdrawing means of such a character that it cannot be operated save upon the insertion of a key of peculiar formation, and this key after being inserted to release the controlling means operates as the handle for operating said controlling means and lifting or withdrawing the bolt or brace.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a perspective view of the inner side of a door provided with one form of our improved locking means; Fig. 2 is a vertical section through a portion of the door and the controlling means; and Fig. 3 is a perspective view of the inner side of a door provided with a bolt rather than a brace.

The details of the bolt, brace or locking member *per se* are not of very great importance, as far as our invention is concerned. It is only essential that a bolt, brace or bar be provided of such a character and such size and strength that when in operative position it will positively hold the door against being opened even though sufficient pressure be exerted upon the outer side of the door to break an ordinary lock.

In the specific form illustrated in Fig. 1, the locking bar takes the form of a brace 10, the upper end of which is pivotally secured

to any suitable form of bracket 11 on the inner side of the door at a distance above the bottom thereof. The lower end of the brace is adapted to engage with the floor at a distance from the threshold, and for receiving said lower end the floor is preferably provided with a plate or retainer 12, sunk therein so as to be flush with the floor, and having an opening of such size and form as to receive the lower end of the brace when the door is closed. The brace thus extends diagonally from the free edge of the door to the floor, and as neither end of the brace can slip, it is evident that the door cannot be opened when the brace is in position.

In the specific form illustrated in Fig. 3, the locking bar takes the form of a sliding bolt 13. This bolt is mounted to move vertically within a dovetailed groove in a plate 14 carried by the inner surface of the door adjacent the free edge thereof and adjacent the lower end. The bolt 13 and the supporting and guiding plate 14, are formed of heavy metal, so that the bolt cannot be sheared off by the opening of the door, and the bolt cannot escape from its guiding plate except by vertical movement. The floor closely adjacent the threshold is provided with a countersunk plate 15 having an opening therein to receive the lower end of the bolt, said plate being somewhat similar to the plate 14 but disposed in a different position.

For controlling the locking bar, irrespective of whether the same be a diagonal brace 10, a sliding bolt 13, or other movable locking member, we provide mechanism, a preferred form of which is illustrated in section in Fig. 2. This mechanism includes a drum or reel 16 mounted upon the inner surface of the door and connected to the locking member by a suitable cord, wire or chain 19. The drum or reel has its axis at right angles to the plane of the door, and its ends are supported by ball bearings carried by two parallel plates 17 and 18 of a supporting bracket. The plate 17 is directly secured to the inner surface of the door adjacent the free edge thereof and at substantially the same elevation as the ordinary door knob. The plate 18 has a portion parallel to the plate 17 and spaced from the door so as to support the drum or reel 16, and at one end the plate 18 extends diagonally to the plate 17 and is directly secured

to the latter by suitable screws. In the diagonal portion of the plate 18, there is provided an opening 20, so that the cord, chain or wire 19, hereinafter referred to as a "cord", may extend either upwardly or downwardly from the reel.

In the form shown in Fig. 1, the cord extends upwardly from the reel or drum to a sheave or pulley 21 adjacent the upper portion of the door, and thence downwardly to the lower portion of the brace, so that the cord in pulling upwardly on the lower end of the brace will pull more nearly vertically.

In the form shown in Fig. 3, the sliding bolt 13 is adapted to move vertically and is placed directly below the winding drum or reel 16, so that the cord 19 preferably extends downwardly from the reel and through the opening 20.

For rotating the winding reel, we provide a locking mechanism embodying certain features of what is commonly known in the trade as a "Yale lock". This includes a barrel 22 mounted to rotate within a sleeve 23 and to be normally held against rotation by a plurality of tumblers 24, movable radially in respect to the barrel. Upon the insertion of the proper key 25, the tumblers may be moved radially to such distances that they do not interfere with the rotation of the barrel and the barrel may then be rotated by the turning of the key. In our improved construction, the barrel 22 and the reel or drum 16 are in axial alignment, and a short bar 26 is secured to the inner end of the barrel and extends into the end of the reel 16. The bar is non-circular in cross section, so that a rotation of the barrel is accompanied by a corresponding rotation of the reel. The key thus operates not only to release the barrel 22 and the reel 16, so that they may rotate, but it also serves as the handle by means of which the drum and barrel are rotated.

In order to open a door or other closure which is provided with a lock constructed in accordance with our invention, it is merely necessary to insert the proper key and then turn it in one direction. The continued turning of the key in the same direction winds up the cord on the reel and lifts the locking bar, so as to release the door. After the door has been opened, the cord may be unwound before the key is withdrawn, so that the door may be locked without inserting the key or the key may be withdrawn with the cord partially wound upon the reel, and the locking bar will thus be held in inoperative position until the key is reinserted

for releasing the reel and permitting the unwinding.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. A locking device for closures, comprising a locking member, a rotatable reel, a flexible connecting member secured to said locking member and adapted to be wound upon said reel, and a key-controlled and key-operated member for rotating said reel.

2. A locking device for closures, comprising a locking bar secured to the closure and having one end thereof adapted to enter a socket or recess in the floor, a reel or drum secured to the closure, a cord secured to said bar and adapted to be wound upon said reel, and a key-controlled means for rotating said reel.

3. A locking device for closures, comprising two substantially parallel plates secured to the inner surface of the closure, a reel supported between said plates with its axis of rotation at right angles to the closure, a key-controlled and key-operated rotatable barrel extending into the closure from the opposite side thereof and in alignment with said reel and connected thereto, a locking bar carried by the closure and having one end adapted to enter a recess in the floor, and a cord connecting said locking member and said reel.

4. A locking device for closures, comprising a locking member, a reel having its axis substantially at right angles to the plane of the closure, a flexible connecting member secured to said locking member and adapted to be wound upon said reel, a rotatable member connected to said reel, and tumblers for normally preventing the rotation of said last-mentioned member and adapted to be moved to inoperative position upon the insertion of a key.

5. A locking device for closures, comprising two substantially parallel plates secured to the inner surface of the closure, a reel supported between said plates with its axis of rotation at right angles to the closure, a locking member for the closure, means connecting said reel and said locking member, and key-controlled means for rotating said reel to operate said locking member.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

MORRIS DESSAUER.
SAMUEL BARUCH.

Witnesses:

CLAIR W. FAIRBANK,
PHILIP D. ROLLHAUS.