

(No Model.)

W. TOFF.
SLIDING DOOR FASTENER.

No. 550,031.

Patented Nov. 19, 1895.

Fig. 1.

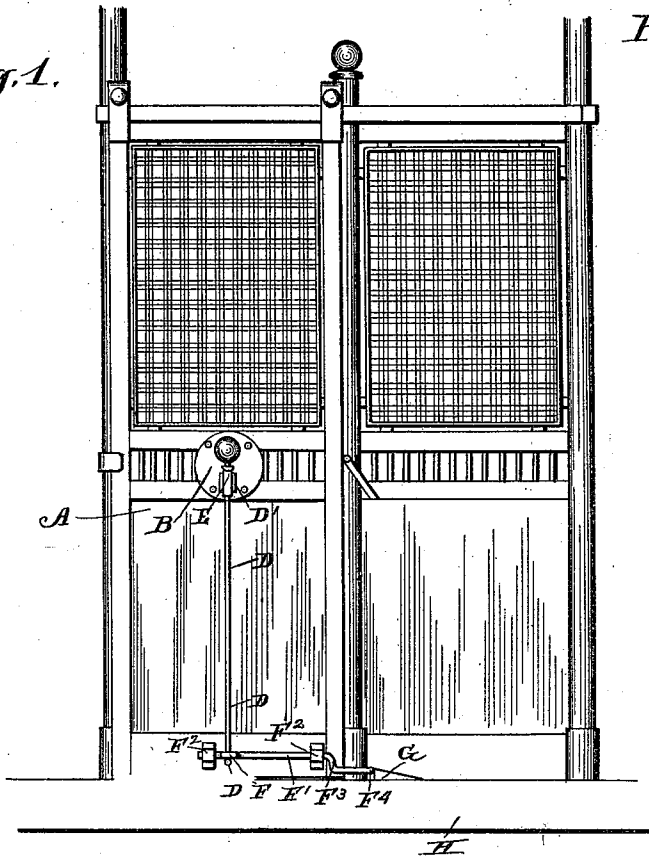


Fig. 2.

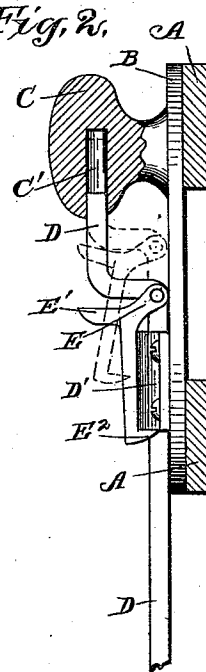
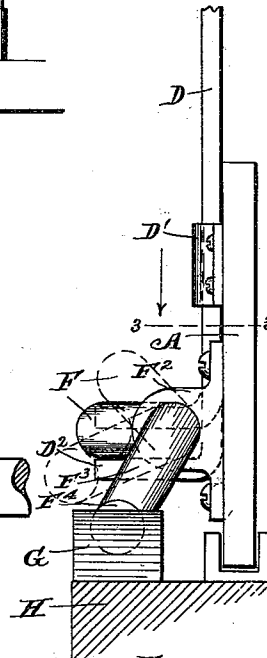
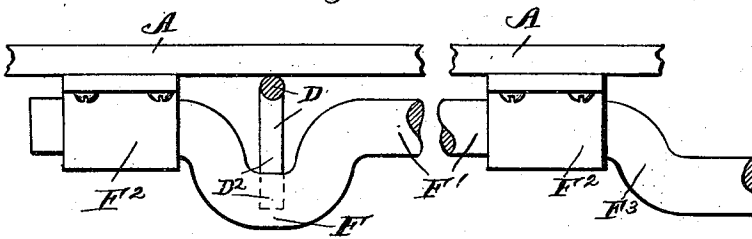


Fig. 3.



Witnesses,
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H. L. Harpin

Inventor,
William Toff,
By S. H. Brainerd,
His Attorney,

UNITED STATES PATENT OFFICE.

WILLIAM TOFF, OF CHICAGO, ILLINOIS.

SLIDING-DOOR FASTENER.

SPECIFICATION forming part of Letters Patent No. 550,031, dated November 19, 1895.

Application filed April 12, 1895. Serial No. 545,444. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM TOFF, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain Improvements in Locks for Elevator-Doors and the Like; and I declare the following to be a full, clear, and concise description of same, reference being had to the accompanying drawings and specification.

The object of my invention is to produce a lock that will be simple, durable, easily operated, and one that will be automatic in its locking action.

Referring to the drawings, Figure 1 shows an elevator-door and adjoining frame in elevation, looking from the shaft or elevator side toward the same. Fig. 2 is a full-size detailed side view of my device, showing the knob cut away to disclose the hole adapted to receive the plunger-rod. Fig. 3 is a sectional plan on the line 3 3 of Fig. 2, designed to particularly show the form of the locking-bolt.

Similar letters of reference indicate like parts throughout the specification and drawings.

Mounted upon the door A is a plate B, having secured thereto a knob C. The knob C is provided at its lower end with a central vertical opening C'. Placed within this opening and adapted to move vertically therein is a downwardly-extending plunger-rod D. The rod D is secured to the face of the door A by means of the brackets D', suitably secured thereto. Pivoted to the rod D at a little distance below the knob C is a latch E, the upper part of which has formed thereon a finger or thumb piece E' and has its lower end E² formed in the shape of a hook. The extreme lower end of the rod D is turned outwardly at right angles to the main portion of said rod.

The hook portion D² of the plunger-rod D passes under and engages the crank F of the locking-bolt F', secured horizontally to the lower end of the door A by means of the journal-bearings F². The locking-bolt F' has constructed therein another crank F³, formed at a different angle from the crank F. The extreme right end F⁴ of the locking-bolt F, as shown in the drawings, is adapted to engage the block G, secured rigidly to the floor H of the building.

The operation of my invention will be read-

ily understood. It will be seen that if the operator will raise the latch E, by placing his thumb or finger against the portion E' of the said latch, that the hook portion E² will be thrown outwardly, and thereby released from its locking position under the bracket D', secured to the plate B of the door A. This will allow the plunger-rod D to be raised upwardly to the limit of its stroke in that direction. This will cause the cranks F F³ of the locking-bolt F' to be raised to the position shown in dotted outline of Fig. 2. The end F⁴ of the said locking-bolt F' will now clear the inclined block G, secured to the floor H, and the door will be free to be drawn back at the will of the operator. It will be seen that as the door is closed that the crank portion F³ of the locking-bolt F' will strike the inclined face of the block G and will be carried upwardly thereby until such time as it has passed beyond same, when the end F⁴ of said locking-bolt will drop beyond the vertical portion of the block G and bear against same, securely locking the door A, and against being opened from without.

For purpose of illustration I have shown the plunger-rod and connected parts placed centrally of the door; but the location of same might vary to suit convenience.

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

A lock for elevator doors and the like, consisting of a locking bolt secured horizontally to the bottom of the door, said locking bolt having formed therein suitable cranks, a plunger rod, adapted to engage one of said cranks and impart motion thereto, a latch, pivoted to said plunger rod near its upper portion and adapted to lock said plunger rod when in normal position, a knob secured to the door at the upper end of said plunger rod, and an inclined block adapted to be secured to the floor of the building, all substantially as set forth and shown.

In witness whereof I have hereunto set my hand, in the presence of two witnesses, this 29th day of March, 1895.

WILLIAM TOFF.

Witnesses:

B. H. LICHTER,
E. T. RICHEY.