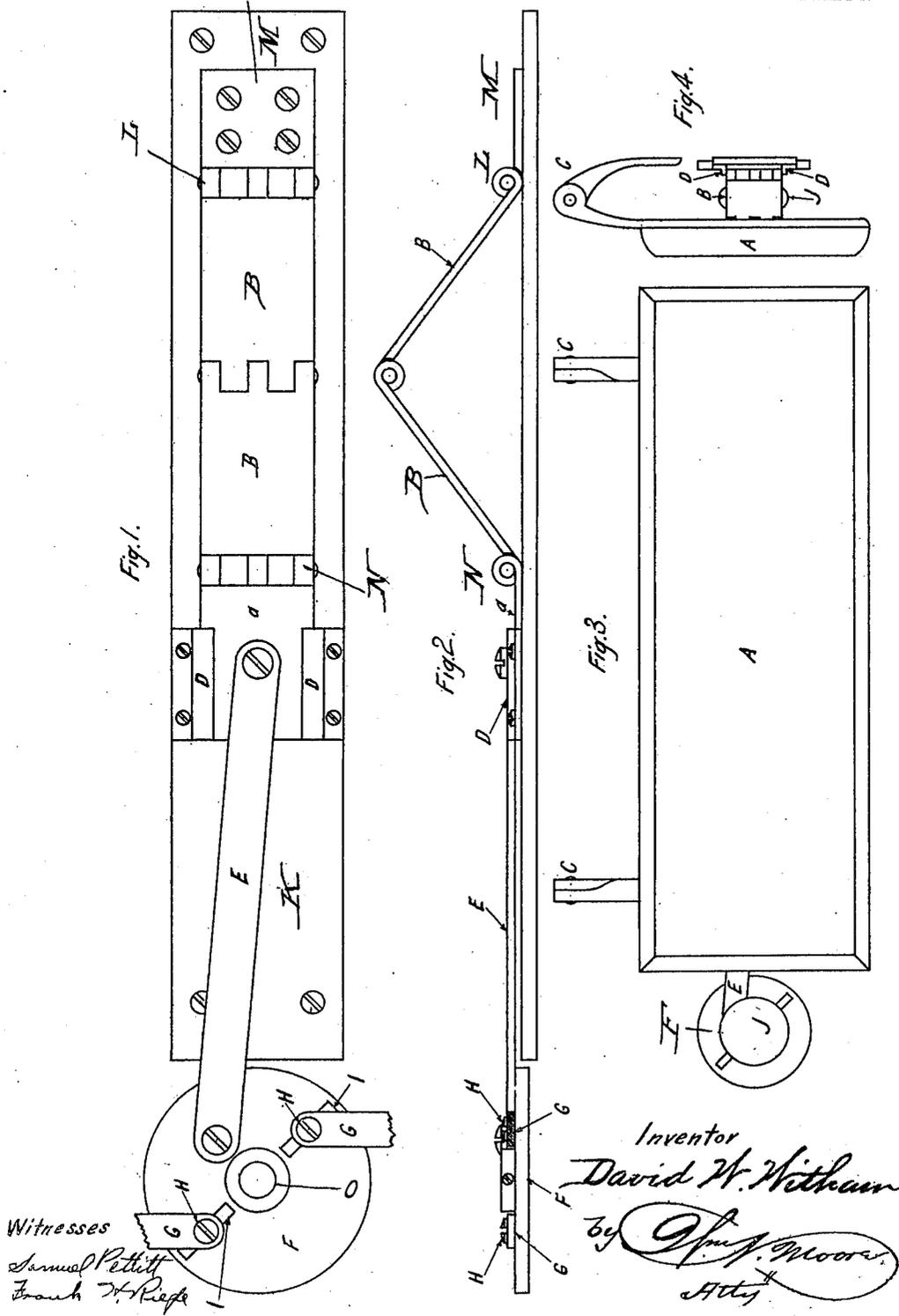


D. W. WITHAM.
 DOOR OPENER.
 APPLICATION FILED APR. 16, 1908.

984,458.

Patented Feb. 14, 1911.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

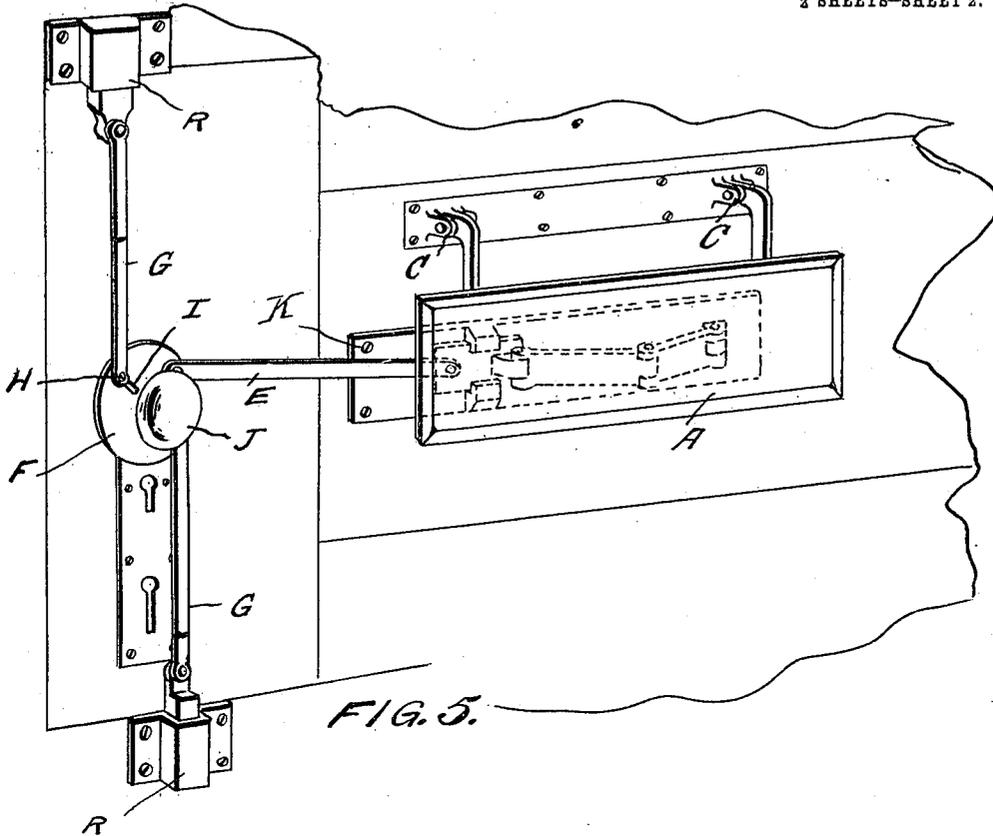


FIG. 5.

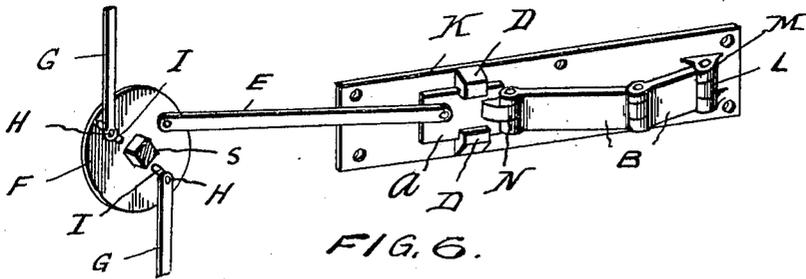


FIG. 6.

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WITNESSES
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UNITED STATES PATENT OFFICE.

DAVID WILLIAM WITHAM, OF SPERRY, IOWA, ASSIGNOR OF ONE-HALF TO JOHN W. MARTIN, OF NUMA, IOWA.

DOOR-OPENER.

984,458.

Specification of Letters Patent. Patented Feb. 14, 1911.

Application filed April 16, 1908. Serial No. 427,360.

To all whom it may concern:

Be it known that I, DAVID WILLIAM WITHAM, a citizen of the United States, residing at Sperry, in the county of Des Moines and State of Iowa, have invented certain new and useful Improvements in Door-Openers, of which the following is a specification.

My invention relates to improvements in door openers, and has for its object the provision of a device of this character for automatically releasing or unlocking the door to permit opening thereof. The invention is therefore particularly adaptable for the exit doors of theaters and other public buildings, where it is desirable at times to quickly open the doors and allow a speedy exit to avoid panic.

Another object of the invention is to provide means for securely locking and holding the door or other barrier closed, and means actuated by simple pressure thereon for releasing the locking means to permit free opening of the door or barrier.

A further object is the provision of a device of the character stated of simple and practical construction and which shall be efficient for the purposes intended.

With the above and other objects in view, my invention consists essentially of a member yieldingly carried by the door, outstanding link members to be engaged by the yielding member and a sliding bolt actuated by the members, a rotary member actuating locking elements, and connections between the rotary member and the sliding bolt, so that as the yielding member is actuated, the rotary member is operated to withdraw the locking elements and release the door.

The invention further comprises a door securing and opening device embodying certain other novel features of construction, combination and arrangement of parts substantially as disclosed herein and as illustrated in the accompanying drawings, in which:

Figure 1, is a front elevation of that part of the invention which is usually concealed behind the actuating panel, the locking bolts or tumblers being broken off. Fig. 2, is an edge view of the same. Fig. 3, is a front elevation of the invention, the panel or push board being in position in this view and the invention being connected with the spindle

of the door knob. Fig. 4, is an end view of the same taken from the right hand side of Fig. 3. Fig. 5 is a perspective view of a portion of a door illustrating the invention applied thereto, and Fig. 6 is a similar view with portions omitted.

In the drawings: the letter A, designates a panel or push board which is pivotally hung from outstanding brackets C, secured on the inside of the door or other closure. A base plate K, is fastened to the door behind the yielding push board and a pair of pivoted hinge links B, are mounted upon the base plate, the outer end of the outermost link being pivoted at L, to the stationary part M, on the base board. To the free end of the other link is hinged at N, the sliding bolt a , which is slidably held between the guides D.

If the invention is used in connection with an ordinary door lock as in Fig. 3, in which view J, represents the door knob, the disk F, is mounted upon the spindle and in Figs. 5 and 6 is mounted on spindle S of the knob, and a link E, connects the sliding bolt a , with the disk F, this connection between the two parts being better shown in Fig. 1.

In Figs. 1 and 2, the disk F, is pivoted at O, and locking rods G, have their ends adjustably secured at opposite sides of the disk or rotary member, the opposite ends of the locking rods being pivoted to bolts which engage in keepers R at the top and bottom or at the sides of the door (not shown). The ends of the locking rods are preferably adjustably secured to the rotary member, either by means of the clamping screws H, engaging in the radial slots I, or otherwise, so that the throw of the locking rods may be adjusted to suit.

The push board or panel is positioned on the door at the proper height so that by simply pressing on the panel, the hinge links are flattened out and the sliding bolt extended, which by means of the connecting link, causes a partial rotation of the rotary member. If the locking rods and bolts are used, this partial rotation of the rotary member causes the bolts to be withdrawn and the door is thereby released for opening.

The locking bolts may be dispensed with as in Fig. 3, in which case the rotary disk is mounted on the spindle S of the door knob and the connecting link secured direct to

the disk, so that when the push board is actuated, the door knob is turned and the door is free to open.

From the foregoing description taken in connection with the drawings, it will be evident that I have produced a device of the character set forth which is entirely practical and which accomplishes all the objects aimed at.

I claim:

1. In a door opener, the combination with the door and casing, locking means connected with the knob and operated by the rotation of said knob, and means secured to the door and connected with said knob, said means on the door being operated by pressure toward the face of the door to rotate the knob and release the locking mechanism.

2. The combination with a door, its rotary knob and spindle and a rotatable member on the spindle, of a slidable bolt, a link connecting said bolt and rotary member, a pair of angularly hinged links connected to said slidable bolt and to a plate on the door, and means for distending said links to rotate the spindle in the manner described.

3. The combination with a door, its rotary knob and spindle and a rotatable member on the spindle, of a slidable bolt, a link connecting said bolt and rotary member, a pair of angularly hinged links connected to said slidable bolt and to a plate on the door, and a panel pivoted on the door adapted to contact with said links for distending them to rotate the spindle as described.

4. The combination with a door, its rotary knob and spindle and a rotatable member on the spindle, of a slidable bolt, a link connecting said bolt and rotary member, a pair of angularly hinged links connected to said slidable bolt and to a plate on the door, rods adjustably connected to said rotatable member and to locking bolts, and means for distending said links to rotate the spindle in the manner described.

5. The combination with a door, its rotary knob and spindle and a rotatable member on the spindle, of a slidable bolt, a link connecting said bolt and rotary member, a pair of angularly hinged links connected to said slidable bolt and to a plate on the door, rods pivoted to said rotatable member and to locking bolts.

6. The combination with a door, its rotary knob and spindle and a rotatable member on the spindle, of a slidable bolt, a link connecting said bolt and rotary member, a pair of angularly hinged links connected to said slidable bolt and to a plate on the door, ra-

dial slots in said rotatable member, rods pivoted in said slots and connected to locking bolts.

7. In a door opener, the combination of a pressure-plate, a pair of levers adapted to be engaged by said pressure-plate to be forced inward, a door knob, locking means connected therewith, and a connection between the door knob and levers for turning the knob and releasing the locking mechanism.

8. The combination with a door, of a member mounted on pivots on said door and adapted to swing on said pivots toward and from the door, a sliding bar mounted on the door and adapted to have movement thereon in a direction parallel with the face of the door, keepers for holding the bar to the door and for guiding its movement thereon, contacting parts on said bar and said member for sliding the bar when the member is swung toward the door, a bolt for the door, and a connection between the said bar and the said bolt for removing the latter when the said member is swung toward the door.

9. The combination with a door, of a member pivoted thereto on a horizontal axis, a longitudinally movable bar secured to the door and moving parallel to said door, contacting parts carried by the bar and member for moving said bar when the member is moved toward the door, a plate pivoted to the door, connections between the bar and plate for rocking the latter as the bar is moved longitudinally, a pair of locking bolts on said door, and connections between the said plate and said bolts for moving the latter when the plate is rocked.

10. The combination with a door, of a substantially flat member mounted upon said door by means of pivots along the upper side of said member and adapted to swing on said pivots toward and from the door, a sliding bar mounted on the door and adapted to have longitudinal movement thereon, members for holding the bar to the door and for guiding its movement thereon, contacting parts on said bar and said member for sliding the bar when the member is swung on its pivots toward the door, a bolt for the door, and a connection between the bar and the said bolt for moving the latter when the member is swung toward the door.

In testimony whereof I affix my signature, in presence of two witnesses.

DAVID WILLIAM WITHAM.

Witnesses:

T. G. HARPER,
EDNA MILLER.