

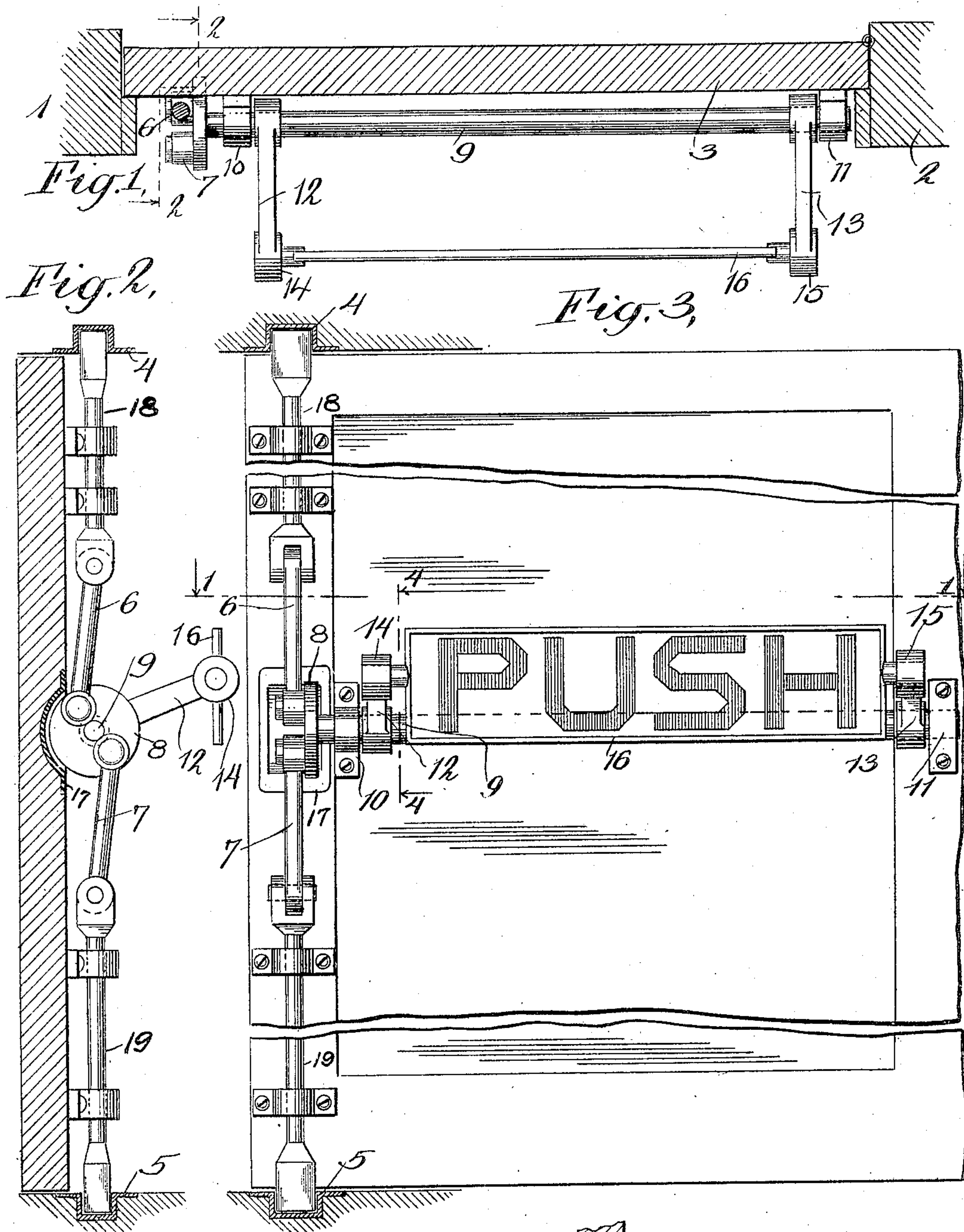
No. 808,673.

PATENTED JAN. 2, 1906.

W. B. MOREWOOD.

DOOR BOLT AND MEANS FOR OPERATING THE SAME.

APPLICATION FILED OCT. 31, 1904.

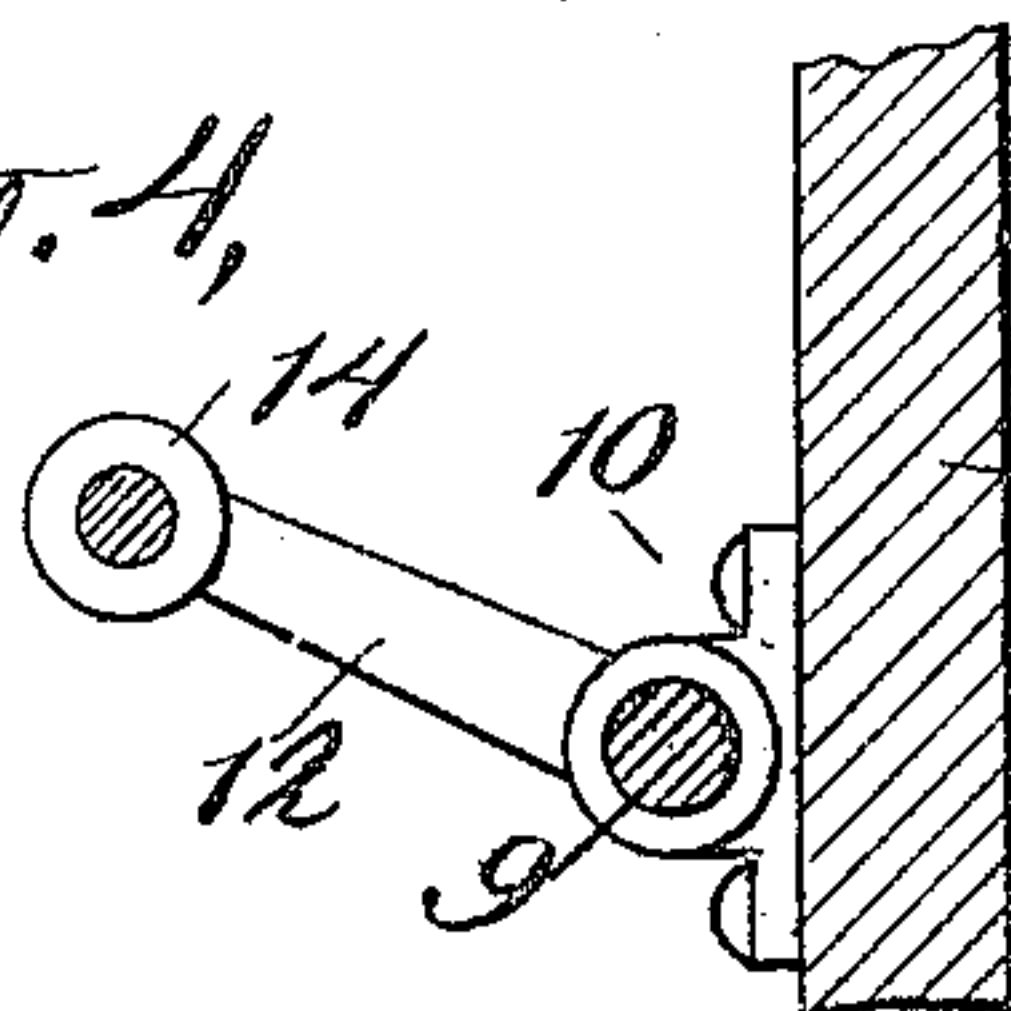


WITNESSES:

Cliff Blair

Palmer Coolidge

Fig. 4,



INVENTOR

William B. Morewood

BY

Nicholas M. Goodlett
his ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM B. MOREWOOD, OF ELIZABETH, NEW JERSEY.

DOOR-BOLT AND MEANS FOR OPERATING THE SAME.

No. 808,673.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed October 31, 1904. Serial No. 230,650.

To all whom it may concern:

Be it known that I, WILLIAM B. MOREWOOD, a citizen of the United States, and a resident of Elizabeth, Union county, New Jersey, (whose post-office address is No. 13 Park Row, New York city,) have invented certain new and useful Improvements in Door-Bolts and Means for Operating the Same, of which the following is a specification.

This invention relates to door-bolts, and more particularly to bolts designed for doors which serve as exits for auditoriums, theaters, and other places of assemblage.

The purpose of the invention is to provide a bolt of such construction and arrangement that in case of fire or other emergency a crowd of people pushing against the door to make their exit will involuntarily operate the bolt to unfasten the door.

In the drawings forming part of this specification, and in which like numerals of reference indicate corresponding parts of the figures, Figure 1 is a sectional plan view of a door and lock embodying this invention and taken on the line 1 1 of Fig. 3. Fig. 2 is a sectional elevation on the line 2 2 of Fig. 1. Fig. 3 is a front elevation showing the inner side of the door and lock. Fig. 4 is a section in detail on the line 4 4 of Fig. 3.

1 and 2 are the door-jambs, between which is hinged the door 3.

4 and 5 are upper and lower sockets to receive the heads of the bolts 18 and 19, the inner ends of which have pivotally connected thereto links 6 and 7, respectively. The inner ends of the links are in turn pivotally connected to a circular rotatable plate 8, forming a crank-plate, rigidly fixed on the end of the rotatable shaft 9 and located over the face-plate 17, which is countersunk into the door. When the plate 8 is rotated in one direction, the bolts are thrust outward to engage their sockets, and when the plate 8 is rotated in the opposite direction the bolts are retracted.

9 is a transverse rotatable rod fixed to the plate 8, preferably supported in bearings 10 and 11, secured to the door.

12 and 13 are two swinging arms fixed on the rod 9 and extending upward and outward therefrom. These arms support a thrust-piece which is so arranged as to be held away from the door when the bolts are in locking position, as shown in the drawings. When

the thrust-piece is pushed inward, the arms 12 and 13 are swung inward and rod 9 is rotated so that the bolts are retracted and the door may be thrust open. In the preferred arrangement the thrust-piece constitutes a sign-plate which consists of a metal frame 16, having trunnions supported in bearings 14 and 15 on the outer ends of the arms 12 and 13. This metal frame may bear the word "Push," so as to indicate the manner of unlocking the door. The trunnions on the frame are preferably arranged above the horizontal axis of the frame, as shown. This insures the upright position of the frame, so that the sign which it bears may be easily read.

The weight of the arms 12 and 13, together with the thrust-piece, is preferably such that when the door is swung to from the outside the bolts will automatically move to locking position, so as to fasten the door. This is the arrangement shown in the drawings.

It will be seen that by this invention exit-doors may be securely locked and yet in case of fire or other sudden emergency a crowd of people pushing against the door from within will thereby operate the bolt and press open the door. Thus the presence of attendants to open the door in case of emergency is not necessary, and the certainty of throwing open exit-doors without delay in case of emergency is secured.

What I claim, and desire to secure by Letters Patent, is—

1. In a door-lock, the combination of a shaft parallel to and extending across the door; said shaft rotatably mounted in bearings which are fixed to the door; a push-plate to rotate the shaft extending across the door and carried by outwardly and upwardly extending arms fixed to said shaft; a circular plate rigidly fixed to the end of the shaft; one or more links pivotally connected to said circular plate outside the axis of the shaft; a bolt pivotally connected with each of said links; and guides on said door for said bolts.

2. In a door-lock, the combination of a shaft parallel to and extending across the door; said shaft rotatably mounted in bearings which are fixed to the door; a push-plate to rotate the shaft extending across the door and carried by outwardly and upwardly extending arms fixed to said shaft; a circular plate rigidly fixed to the end of the shaft and having

its rim extending within the face of the door
into a countersunk opening provided there-
for; one or more links pivotally connected to
said circular plate outside the axis of the shaft;
5 a bolt pivotally connected with each of said
links; and guides on said door for said bolts.
In testimony whereof I have signed my name

to this specification in the presence of two sub-
scribing witnesses.

WM. B. MOREWOOD.

Witnesses:

NICHOLAS M. GOODLETT, Jr.,
FRANK TRENHOLM.