

J. JACKSON.  
DOOR BOLT OPERATING MEANS.  
APPLICATION FILED OCT. 17, 1908.

912,379.

Patented Feb. 16, 1909.

Fig. 1.

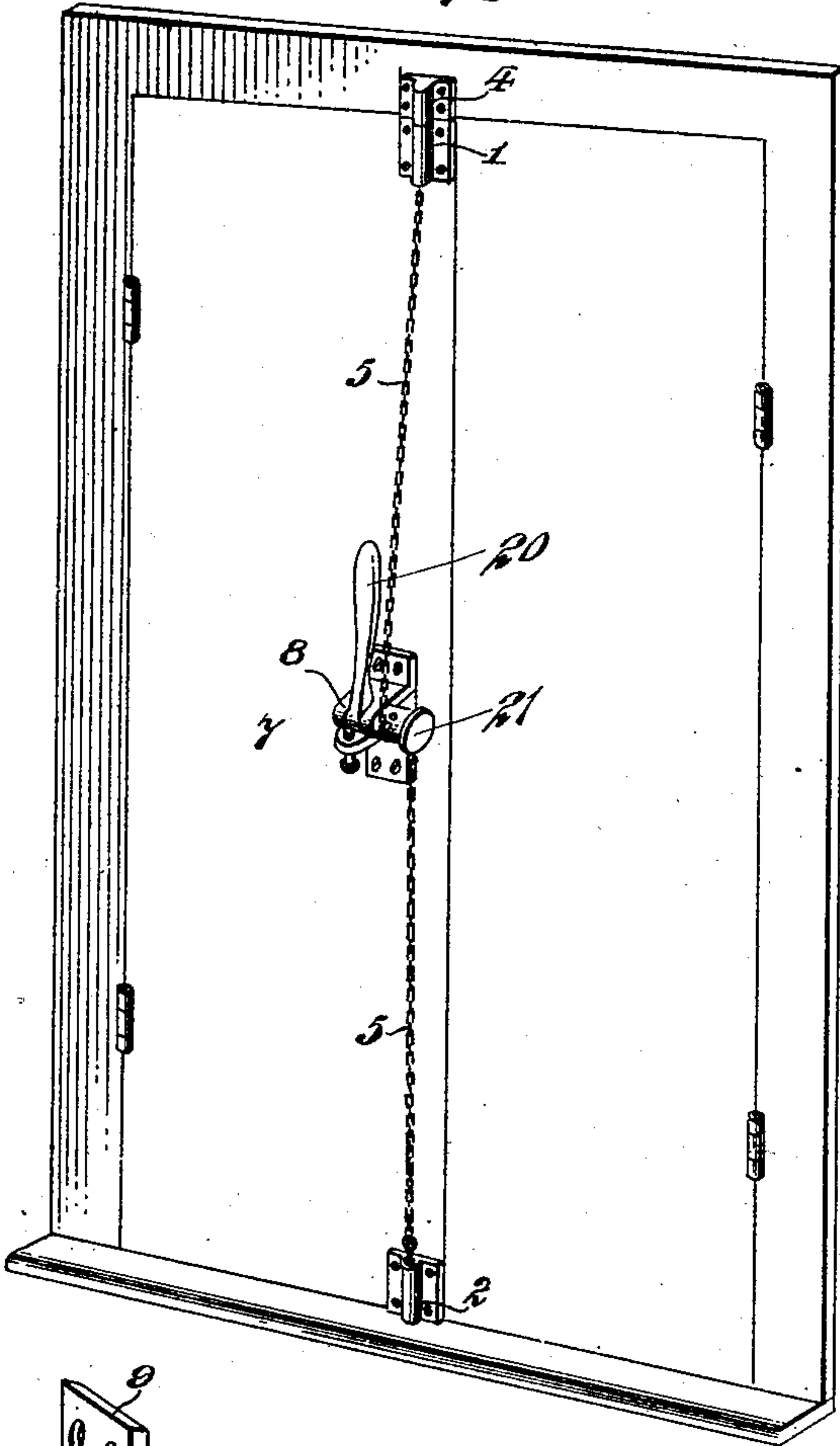


Fig. 2.

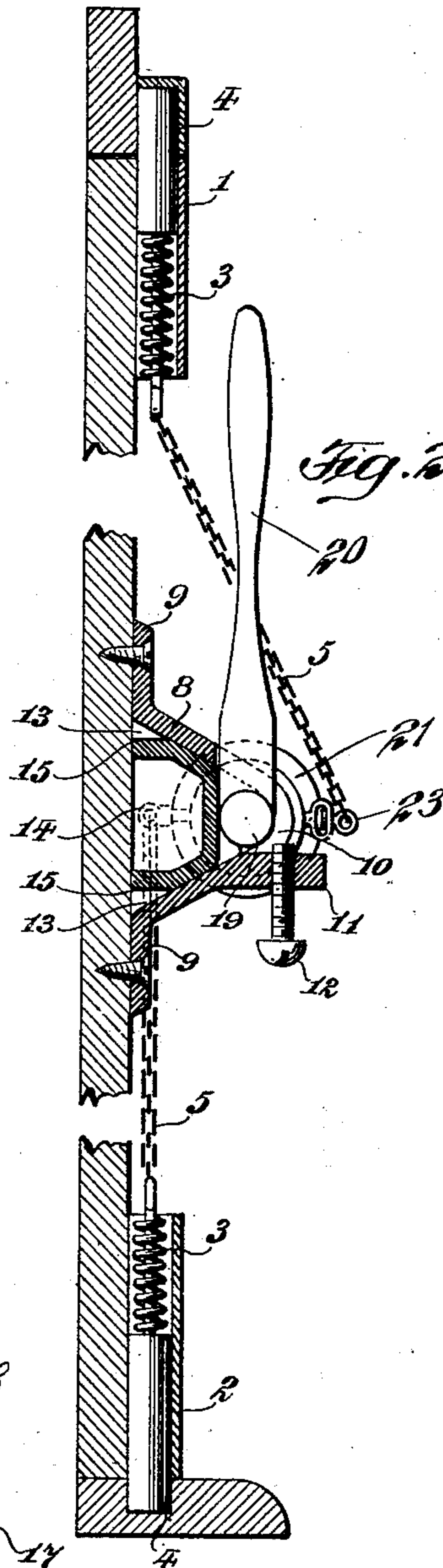


Fig. 3.

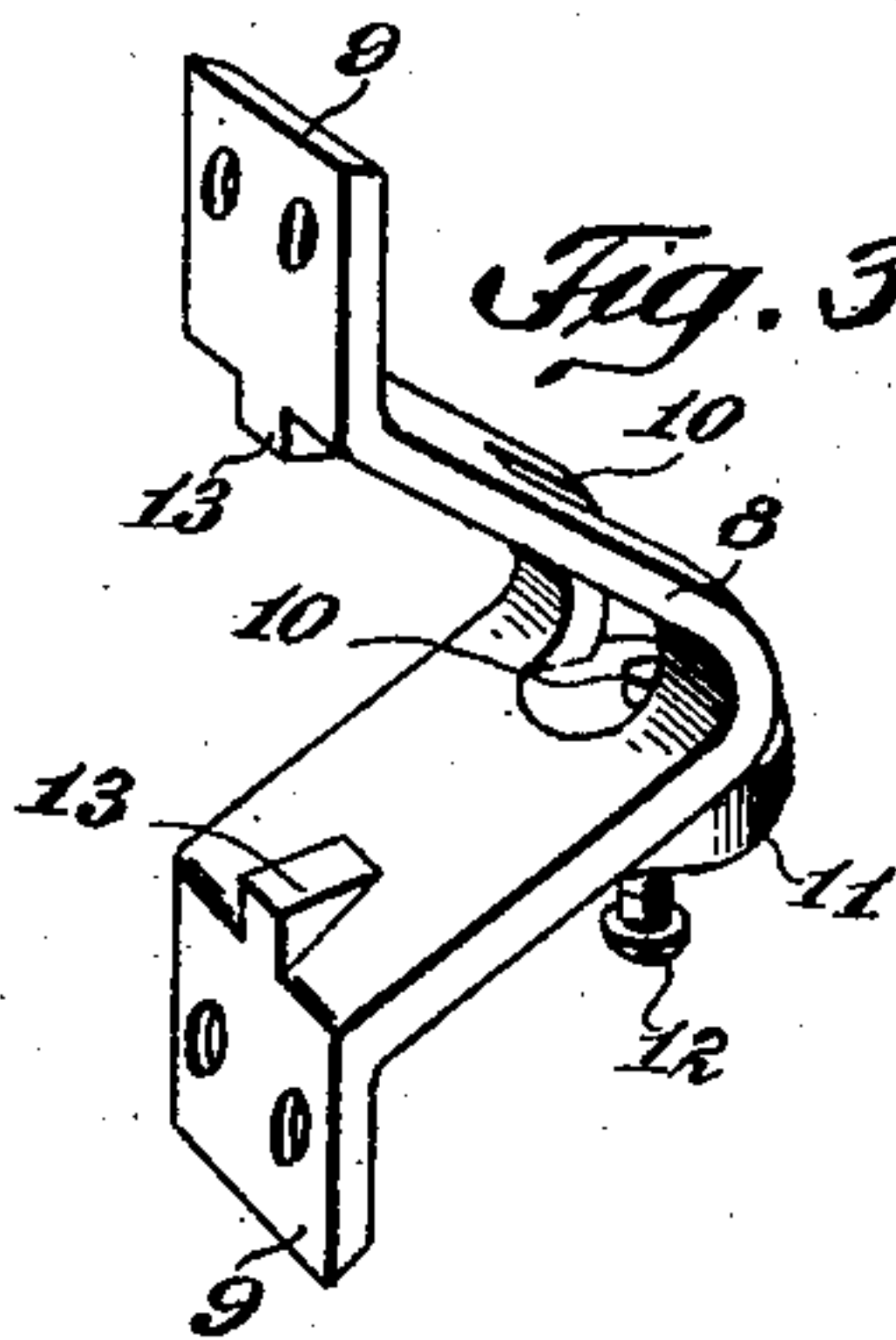


Fig. 5.

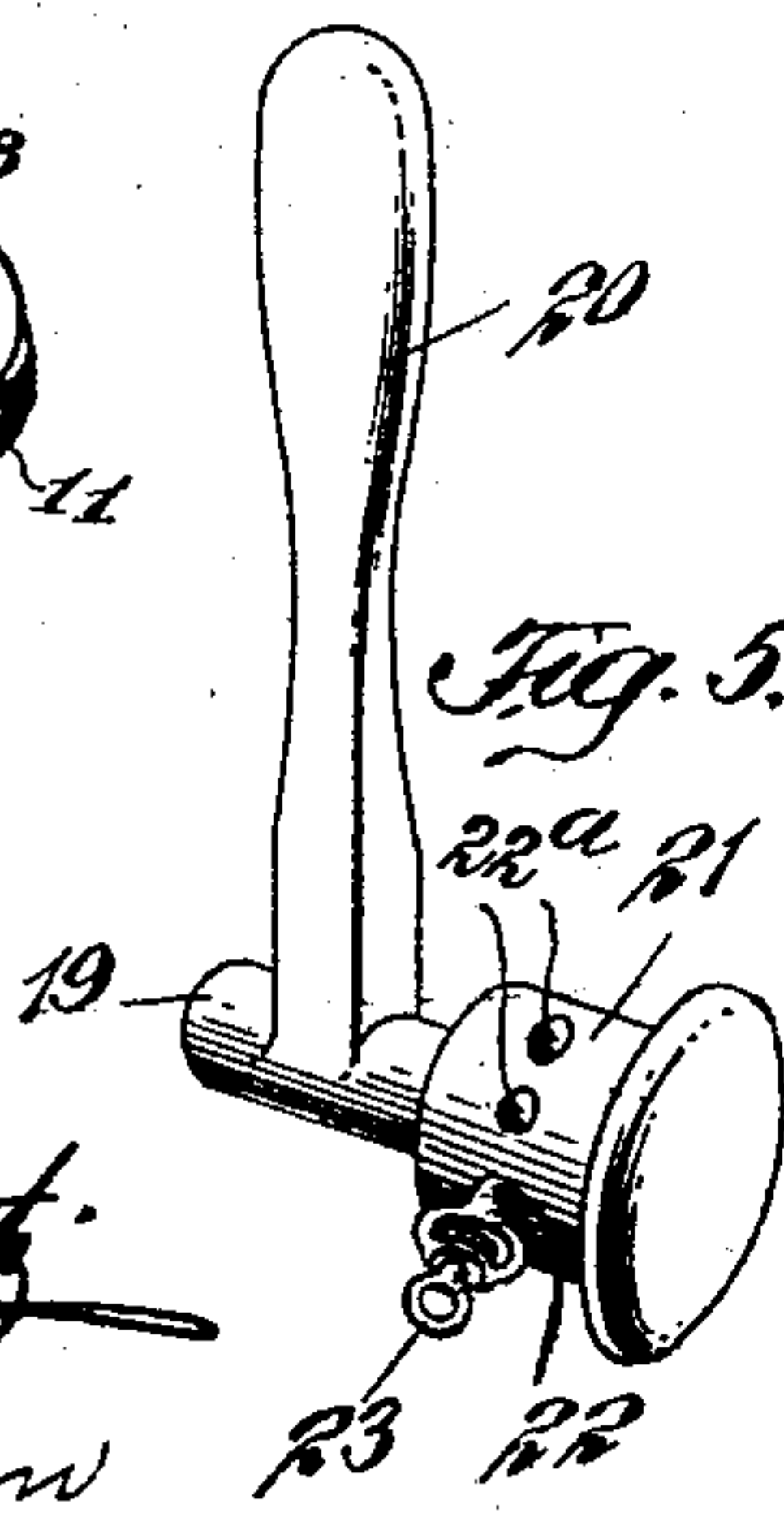
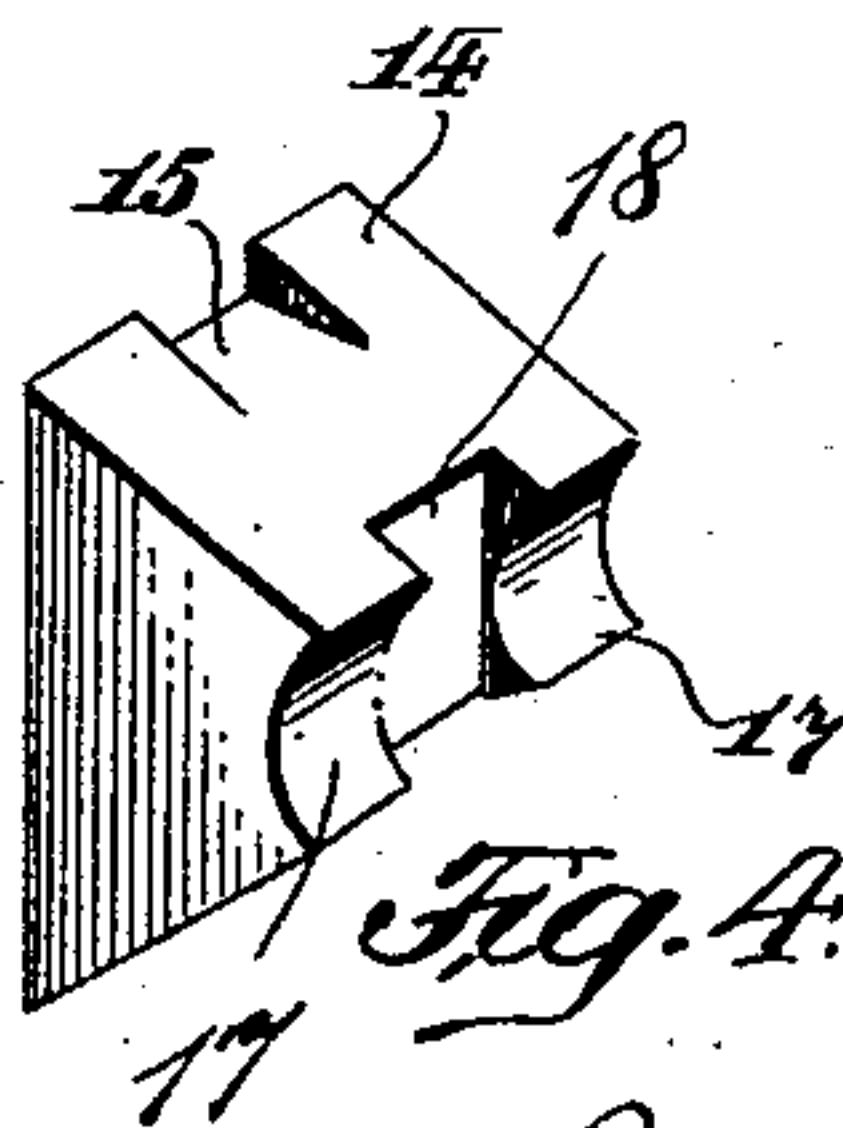


Fig. 4.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

JAMES JACKSON, OF HUNTER, NEW YORK.

## DOOR-BOLT-OPERATING MEANS.

No. 912,379.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed October 17, 1908. Serial No. 458,167.

*To all whom it may concern:*

Be it known that I, JAMES JACKSON, a citizen of the United States, and resident of Hunter, Greene county, and State of New York, have invented certain new and useful Improvements in Door - Bolt - Operating Means, of which the following is a specification, reference being had therein to the accompanying drawing, in which—

Figure 1 is a perspective view of a door showing my invention in operative position thereon; Fig. 2 a vertical sectional view of the door and the bolt-operating means; Fig. 3 a detail perspective view of the bearing; Fig. 4 a similar view of the bearing block; and Fig. 5 a similar view of the bolt-operating shaft and handle.

The main object of this invention is to provide a bolt-operating means primarily adapted for use on emergency exits, such as those used in schools, theaters and other public places, where, in case of fire, or panic, or other disturbance necessitating a rapid escape from the building by the persons therein it is necessary to open additional means of escape.

The invention consists in providing a simple, readily operable device which may be easily secured in place and which will not be liable to accidental operation.

A further object of the invention is to provide a device the operation of which will be obvious to even an unskilled person, or to a person highly excited; and one which may be instantly operated to release both the upper and lower bolts of a door.

A further object of the invention is to so construct the bolt-operating means that it will not be liable to breakage when it is operated with considerable force by either an unskilled or highly excited person.

Other objects of the invention relating more particularly to the features of construction will be fully hereinafter set forth.

Referring to the various parts by numerals, 1 designates the upper door bolt and 2 the lower bolt. These bolts may be of any suitable construction, the bolt being connected to the door and the keeper being secured to the frame or to the door sill. As seen in the drawing these bolts are pressed outwardly by springs 3 which normally hold them in engagement with their keepers 4. Connected to the bolts are operating chains 5 which extend to the bolt-operating means hereinafter described. It will, of course, be

understood that any suitable devices may be used for connecting the bolts to the bolt-operating mechanism.

Secured to the door carrying the bolts is a bolt-operating means 7. This consists of the substantially V-shaped bearing piece 8 formed with the perforated flanges 9 by which it is connected to the door, the fastening screws or other attaching means passing through the perforations in said flanges. This bearing piece is formed with a slot 10 at its apex and with a horizontal outwardly extending lug 11 at the lower end of said slot. This lug is vertically perforated to receive an adjustable stop 12, the purpose of which will be hereinafter set forth. On the inner sides of the arms of the V-shaped bearing piece are formed the inwardly extending lugs 13. Within the bearing piece is fitted a bearing block 14, said block being formed at its inner edges with recesses 15 to receive the lugs 13 of the bearing piece. These lugs hold the bearing block in position within the bearing piece. The outer end of the bearing block is concave as at 17 to form the inner wall of the bearing for the operating shaft, which will be hereinafter described. This bearing block is also formed with the transverse recess 18 at its outer end to receive the operating handle carried by the operating shaft, as will be presently described.

Journaled in the bearing formed by the bearing piece and the bearing block is a transverse horizontal operating shaft 19. Formed integral with this shaft is an operating handle 20 which extends outwardly through the slot in the bearing piece, its inner end entering the recess 18 in the bearing block. Formed on one end of the operating shaft is an enlarged head or drum 21 which is provided at diametrically opposite points with threaded openings 22, said openings being in a plane perpendicular to the axis of the handle 20. In these threaded openings are screwed swivel eyes 23.

When the device is in its operative position with the doors closed and the bolts engaged with their keepers the handle 20 is vertical, as shown in Figs. 1 and 2 and the swivel eyes 23 are horizontally disposed as shown in Fig. 2. The inwardly extending eye is connected by its chain 5 to the lower bolt, and the outwardly extending eye is connected by its chain to the upper bolt. The lever in its vertical position is out of



the way and is not liable to accidental operation. When it is desired to release the bolts it is obvious that the lever is to be swung outwardly and downwardly. The adjustable stop is so positioned that the lever will contact with it when the bolts are free of their keepers. By this means it will be impossible to break the bolts or their chains by the operating lever.

10 The head 21 of the operating shaft is provided with a series of holes 22<sup>a</sup> adjoining the holes 22 so that the swivel eyes may be placed in the proper holes to secure the accurate adjustment of the bolt chain to insure the proper operation of the device when the lever is thrown downwardly.

By providing the bearing piece 8 and constructing it as described the operating mechanism may be attached to the door by simply securing the bearing piece in position. This makes the device easily and readily attachable to and detachable from the door.

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

25 1. A door bolt operating means comprising a bearing frame adapted to be secured to a door, a shaft journaled in said frame, a door bolt, means connecting said bolt to the operating shaft whereby when the shaft is rotated the bolt will be withdrawn, a handle connected to said shaft, and an adjustable stop to limit the rotation of the shaft in the operation of withdrawing the bolt.

35 2. A door bolt operating means comprising a bearing frame adapted to be connected to a door, an operating shaft mounted therein, bolt-operating means connected to said shaft at diametrically opposite points, a handle connected to said shaft, and an adjustable stop adapted to limit the rotation of said shaft and to stop said shaft when the bolts are withdrawn.

45 3. A door bolt operating means comprising a slotted bearing frame, a bearing block within said frame, an operating shaft ex-

tending through said frame and held therein by said bearing block, a handle formed on said shaft and extending through the slot in the bearing frame, an enlarged head formed on said shaft outside of the bearing frame, bolt-operating chains connected to said head at diametrically opposite points, one of said chains extending upwardly and the other downwardly, door bolts connected to said chains and adapted to be moved thereby when the operating shaft is rotated, and an adjustable stop to limit the rotation of the operating shaft.

4. A door bolt operating means comprising a slotted bearing frame, a bearing block within said frame, lugs on the frame adapted to extend into recesses in the bearing block to hold the bearing block in position against lateral movement, an operating shaft extending through said frame and held therein by said bearing block, a handle formed on said shaft and extending through the slot in the bearing frame, an enlarged head formed on said shaft outside of the bearing frame, chain-connecting devices extending outwardly from the enlarged head at diametrically opposite points, said connecting devices being in a plane perpendicular to the longitudinal line of the handle, whereby when the handle is in a vertical position said chain-connecting devices will be in a horizontal plane, bolt-operating chains connected to said connecting devices, one of said chains extending upwardly and the other downwardly, an adjustable stop carried by the bearing frame and adapted to limit the downward movement of the handle, and door bolts connected to the chains and adapted to be operated thereby.

In testimony whereof I hereunto affix my signature in the presence of two witnesses this 9th day of October, 1908.

JAMES JACKSON.

Witnesses:

NANNIE A. FERRIS,  
HOWARD V. VEDDER.