No. 831,584. PATENTED SEPT. 25, 1906.

J. M. VINCENT.

FOOT OPERATED DOOR OPENER.

APPLICATION FILED JULY 9, 1906.

Fig. 1.

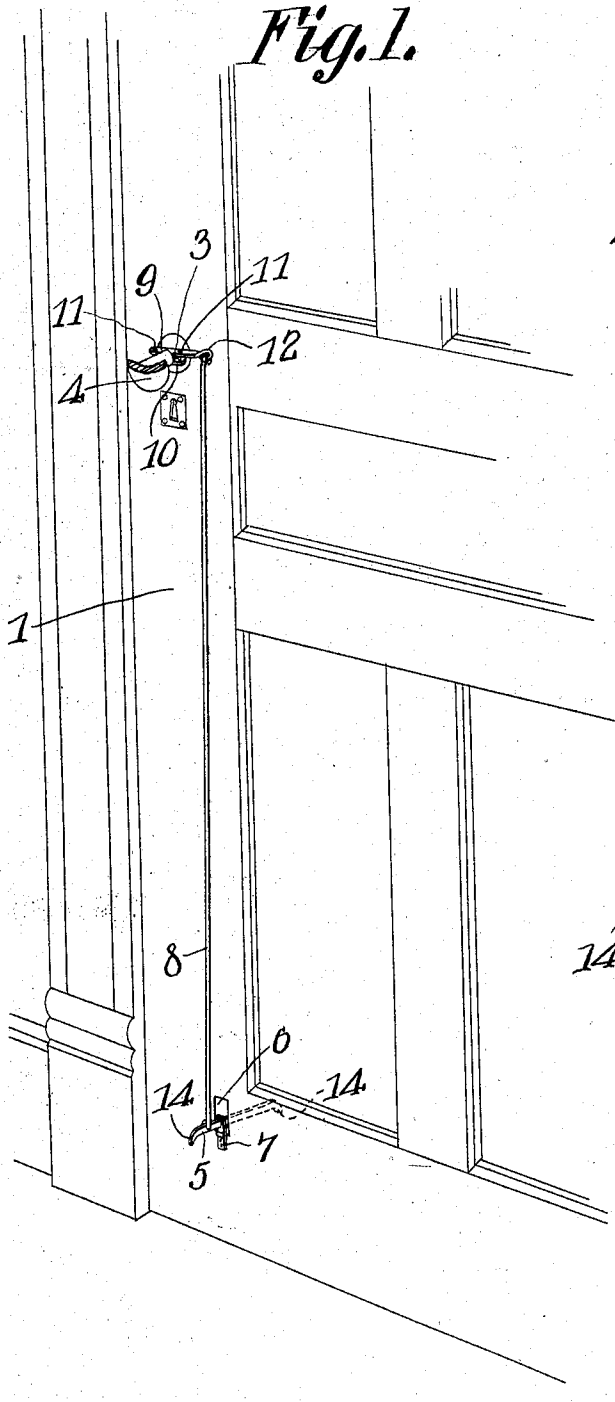



Fig. 2.

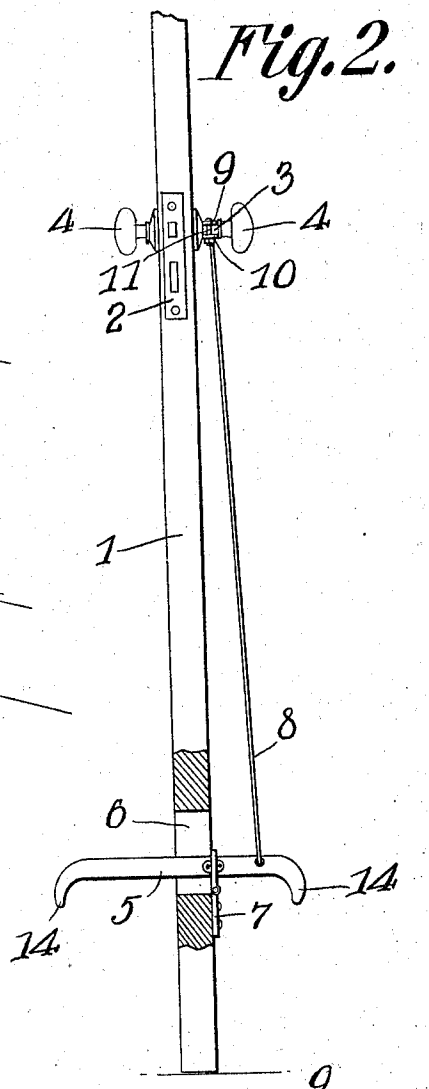
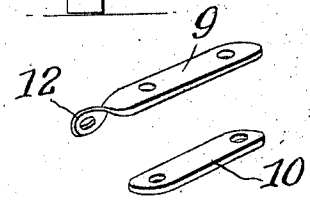



Fig. 3.




WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN M. VINCENT, OF GIRARD, KANSAS.

## FOOT-OPERATED DOOR-OPENER.

No. 831,584. Specification of Letters Patent. Patented Sept. 25, 1906.

Application filed July 9, 1906. Serial No. 325,355.

*To all whom it may concern:*

Be it known that I, JOHN M. VINCENT, a citizen of the United States, residing at Girard, in the county of Crawford and State of Kansas, have invented a new and useful Foot-Operated Door-Opener, of which the following is a specification.

This invention relates to foot-operated door-openers.

The object of the present invention is to provide an extremely strong, simple, durable, inexpensive, and thoroughly efficient mechanism of the character described which is adapted to be carried entirely by the door and to project from both sides thereof, so as to enable the door to be opened from either side, and which is so balanced that the ordinary bolt-spring of the door-lock will be sufficient to maintain the door-opening mechanism always in proper position to be engaged by the foot in the operation of unlocking the door and at the same time pulling or pushing the same to open position.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of the following claims without departing from the spirit of the invention or sacrificing any of its advantages.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of a door equipped with the improvements of the present invention. Fig. 2 is a side elevation, partly in section; and Fig. 3 is a detail perspective view of the two clamping members constituting the lateral arm to be secured to the spindle of the door-lock.

Like reference-numerals indicate corresponding parts in the different figures of the drawings.

The reference-numeral 1 indicates a door, which may be of any suitable size, shape, and proportions. The door 1 is provided with any suitable kind of lock 2, having an internally-arranged spring-actuated bolt, which it is not deemed necessary to illustrate. The spring-actuated bolt of the lock 2 is adapted to be retracted in the ordinary way by the spindle 3, which is provided at the opposite ends thereof with the door-knobs 4, it being understood that by rotating the door-knobs 4 in one direction or the other the spring-actuated bolt of the door-lock will be retracted so as to permit the door to be opened.

The improved mechanism which I have provided for opening the door from either side thereof consists of a foot member 5, extending through a narrow vertical slot 6, formed in the door 1 adjacent the lower end thereof. The foot member 5 is pivotally mounted in the slot 6 in any suitable manner—such, for example, as by means of the hinge 7, one leaf of which is rigidly connected with the foot member 5, while the other leaf is suitably screwed or otherwise secured to the door. It will be apparent that the hinge 7 permits either end of the foot member 5 to be rocked either upward or downward by the foot. The hinge 7 preferably is connected with the foot member 5 at a point located away from the center thereof for the purpose of balancing the door-opening mechanism, as will hereinafter appear. Pivotally connected with the short end of the foot member 5 is an operating-rod 8, the upper end of which is suitably connected with a lateral arm upon the spindle 3, so that when the operating-rod is moved either upward or downward the spindle will be rotated so as to retract the spring-actuated bolt, and thus unlock the door. The preferred form of lateral arm upon the spindle 6 consists of a pair of parallel clamping-plates 9 10, which are fitted against the opposite flat surfaces of the spindle 3 and are held firmly thereagainst by means of bolts or other devices 11. The upper clamping-plate 9 has the end 12 thereof extended beyond the adjacent end of the lower plate 10 and twisted at a right angle, so as to receive the upper end of the operating-rod 8, which extends through a suitable perforation in said twisted end 12, as shown. This form of lateral arm, consisting of the clamping-plates 9 and 10, is extremely simple and inexpensive in construction and is also adapted to be readily applied to any ordinary form of lock-spindle.

As before intimated, the long end of the foot member 5 preferably is of sufficient weight to counterbalance the operating-rod 8, so that the bolt-spring inside the lock 2 will be enabled to hold said operating-rod 8 normally in operative position without the necessity of using any separate or individual spring for this purpose. It will be obvious, therefore, that by engaging either end of the foot member 5 with the toe and either push-

ing the same downward or raising it upward the spindle 3 will be rotated sufficiently to retract the bolt, and thus unlock the door. As soon as the foot-pressure shall be removed from the foot member the accurate balance between said foot member and said operating-rod will permit the bolt-spring in the lock 2 to restore the same readily to their central operative position.

In order to provide means for drawing the door open with the foot after it has been unlocked, I form the foot member 5 with downwardly-bent ends 14. When a person approaches the door from the side which will necessitate his drawing the same toward him, he engages his toe beneath the adjacent bent end 14 of the foot member, and by raising the same he unlocks the door. It is then only necessary to move his foot backward so as to draw the door open. In approaching the door from the opposite side it will be only necessary to push the foot member downward and then shove it forward, so as to swing the door open. It will be understood, however, that the door can be opened from either side by engaging the toe beneath the foot member and raising it upward.

A great advantage of the present form of door-opening mechanism resides in the fact that it can be easily and quickly applied to practically any form of door by merely cutting the slot 6 in the lower end thereof and attaching the hinge 7, after which the clamping-plates 9 and 10 can be readily secured to the spindle 3 and the operating-rod 8 placed in position.

What is claimed is—

1. The combination of a door having a slot, a hinge having one leaf connected with the door and the other leaf disposed at one end of said slot, a lever connected with the last-mentioned leaf of said hinge and extending through said slot, and door-opening mechanism operated by said lever.

2. The combination of a door having a slot and a spring-actuated lock, an operating-rod connected with said lock, and a foot-lever pivotally connected with said operating-rod, said foot-lever extending through said slot and being pivotally mounted at one end thereof, said foot-lever and rod being so balanced as to be held in proper position by said spring-actuated lock.

3. The combination of a door having a spring-actuated lock, a spindle connected with said lock, a lateral arm connected with said spindle and consisting of a pair of clamping-plates secured in parallel position against the opposite sides of said spindle, one of said plates having a twisted end, an operating-rod connected with said twisted end, a foot member pivotally connected with said operating-rod and extending through a slot in said door, said foot member having downward-bent ends, and a hinge connected with said door and with said foot member at a point away from the center thereof, whereby the long end of said foot member counterbalances the weight of the operating-rod so as to permit the same to be held in proper position by the spring-lock.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN M. VINCENT.

Witnesses:

G. FRED BECK,

J. F. JONES.