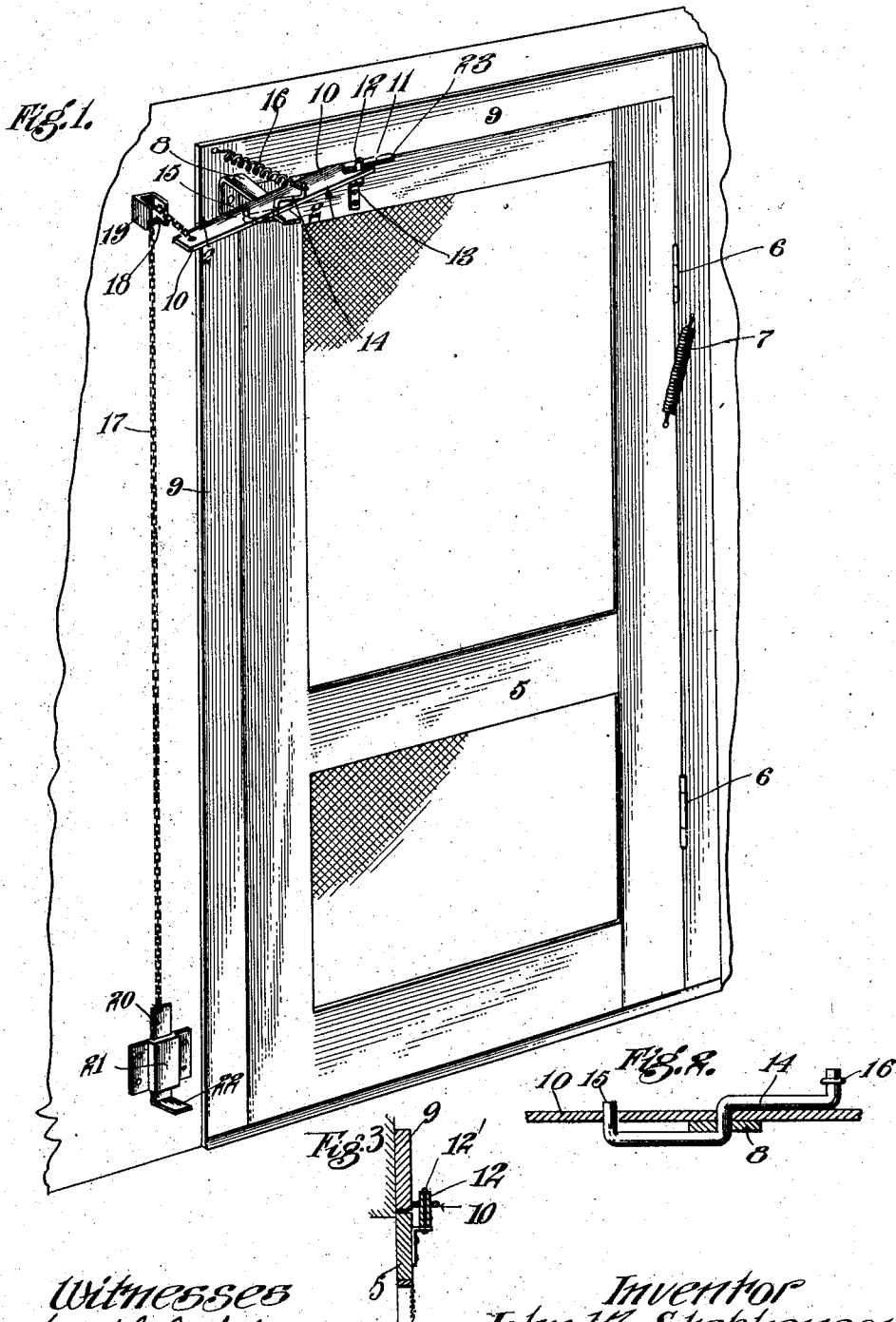


No. 839,330.

PATENTED DEC. 25, 1906.

J. M. STEPHENSON.
DOOR OPENER.

APPLICATION FILED SEPT. 14, 1906.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN M. STEPHENSON, OF NORDHOFF, CALIFORNIA.

DOOR-OPENER.

No. 839,330.

Specification of Letters Patent.

Patented Dec. 25, 1906.

Application filed September 14, 1906. Serial No. 334,573.

To all whom it may concern:

Be it known that I, JOHN M. STEPHENSON, a citizen of the United States, residing at Nordhoff, in the county of Ventura and State of California, have invented new and useful Improvements in Door-Openers, of which the following is a specification.

My invention relates to improvements in door-opening devices, and has for its object to provide such a device that can be conveniently and easily operated by the foot. I accomplish this object by means of the device described herein and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a screen-door equipped with my improved device. Fig. 2 is a detailed section taken on line 2 2 of Fig. 1. Fig. 3 is a sectional detail of the roller.

Referring to the drawings, 5 is a screen-door hinged at 6 in the usual manner and provided with a coiled closing-spring 7. Adjacent to the top of the door is a bearing 8, which is secured to the casing 9. Pivotaly secured to this bearing is a lever 10, which has a slot 11 in the outer end thereof, in which slot is a roller 12 on pin 12', which is secured to the top of the door, as at 13. The pivot which unites lever 10 to the bearing 8 has an upper arm 14 and a lower arm 15, the outer end of the latter arm being turned upward to engage an aperture in the lever 10, thereby uniting the pivot securely to the lever, so that when one moves the other moves. To the outer end of arm 14 is secured a spring 16, the other end of which is fastened to the casing at such a point that when the arm is in the position shown in the drawings the tension of the spring tends to pull the lever which has the slot toward the door, thereby causing it to bear against roller 12 to keep the door closed. Fastened to the other end of the lever 10 is a chain 17, which passes over a pulley 18, revolubly mounted in bearing 19, secured to the casing. This chain passes downwardly and is fastened to the slide-bar 20, which is mounted in guide 21. The lower end of the slide-bar is bent at right angles to the casing and projects outwardly therefrom and provides a foot-piece 22, by means of which the door-opener is operated.

In the operation of the device, when it is desired to open the door the person places his foot on the foot-piece 22 and pushes downwardly. This causes the end of the lever 10 to which the chain is attached to move to the

pulley, thereby causing the door to move open by the power exerted thereon through the arm 14 and the other end of the lever. By a quick push on the foot-piece the door may be thrown entirely open, the roller 12 leaving the slot 11 in the lever 10. When the lever 10 has the end to which the chain is attached drawn back to pulley 18, the arm 14 has moved so that the end thereof to which the spring is attached lies on the other side of the pivotal connection between the lever and the bearing, so that the lever is retained in what I call the "open" position. As the screen-door swings back to its closed position roller 12, which is secured to the door, strikes the projecting end 23 of the lever and moves it back to its closed position, with the pin in slot 11 and the end of arm 14 thrown to the position shown in the drawings, in which the power of the spring is exerted to keep the door closed.

It will be seen from the foregoing description that I have provided a highly-efficient device by which a door may be thrown partially or fully open with only a slight exertion on the part of the one who opens it.

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

1. A device of the class described, comprising an operating-lever pivotally mounted on the door-casing, said lever having a slot in one end thereof; a pin secured to the door adapted to enter the slot in the operating-lever; spring-operated means attached to said lever whereby its slotted end is held in or out of engagement with said door-casing; and means to operate said lever.

2. A device of the class described, comprising a bracketed arm secured to the casing above the door and on the side opposite the hinges; an operating-lever having a slot in one end thereof pivotally secured to said bracket; a pin secured to the door adapted to enter the slot in the operating-lever; spring-operating means attached to said lever whereby its slotted end is held in or out of engagement with said door-casing; and means to operate said lever.

3. In a device of the class described, the combination with a bracket-arm secured to the casing above the door and on the side opposite the hinges; an operating-lever having a slot in one end thereof secured to said bracket by a pivot having an upper and a lower arm, the lower end of said arm at-

tached to and adapted to move with said lever; a pin secured to the door and adapted to enter the slot in the end of the operating-lever; a coiled spring secured to the upper
5 arm of the pivot and to the casing; and means to operate said lever.

4. In a device of the class described, the combination with a bracket-arm secured to the casing above the door and on the side opposite the hinges; an operating-lever having
10 a slot in one end thereof secured to said bracket by a pivot having an upper and lower arm, the lower arm of said pivot attached to and adapted to move with said lever; a pin secured to the door and adapted
15 to enter the slot in the end of the operating-lever; a coiled spring secured to the upper

arm of said pivot and to the casing; a pulley revolubly mounted in bearings, said bearings being secured to the wall adjacent the
20 outer end of said lever; a slide-bar having a foot-piece mounted in a bearing, said bearing being secured to the wall adjacent the lower corner of the door on the side opposite
25 the hinges; and a flexible connection between said operating-lever and slide-bar.

In witness that I claim the foregoing I have hereunto subscribed my name this 1st day of September, 1906.

JOHN M. STEPHENSON.

Witnesses:

EDMUND A. STRAUSE,
G. E. HARPAM.