No. 751,825. PATENTED FEB. 9, 1904.

J. K. ADAMS.

COMBINED DOOR STOP AND SPRING.

APPLICATION FILED AUG. 26, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig: 1.

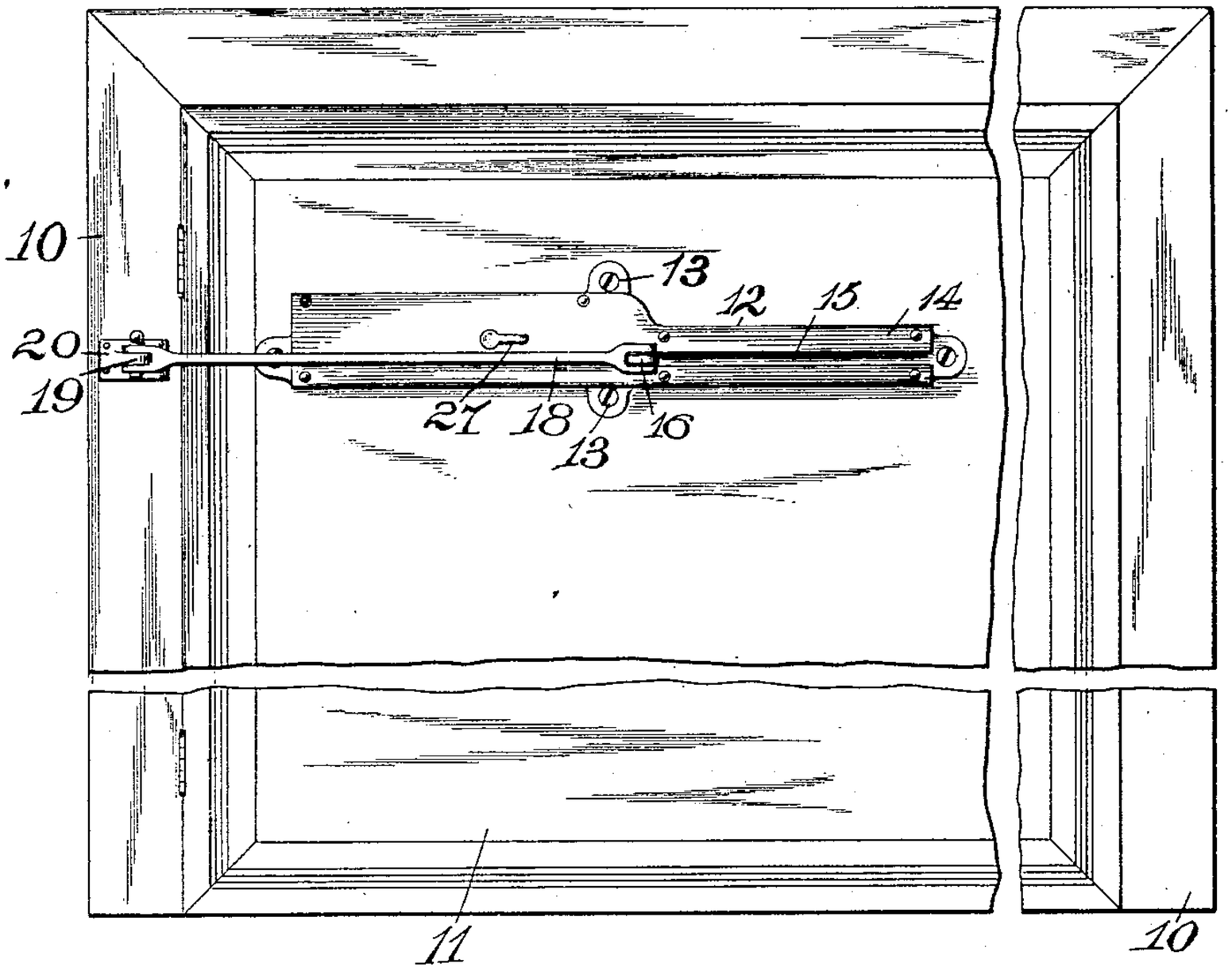



Fig: 2,

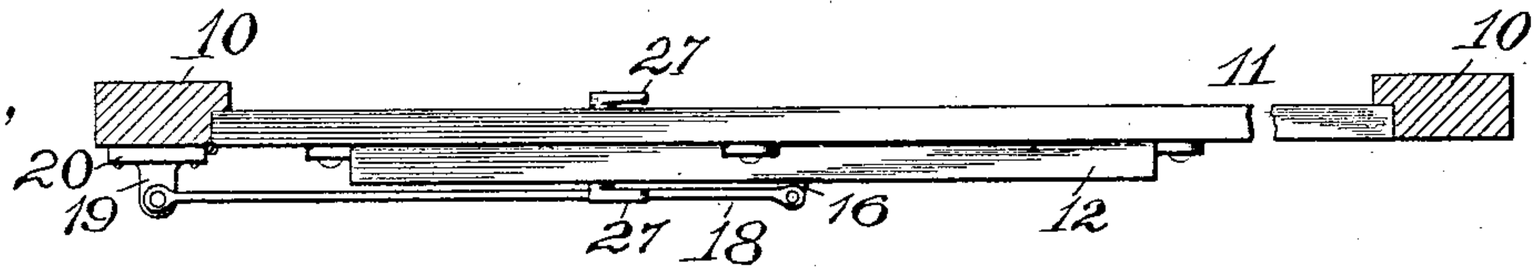
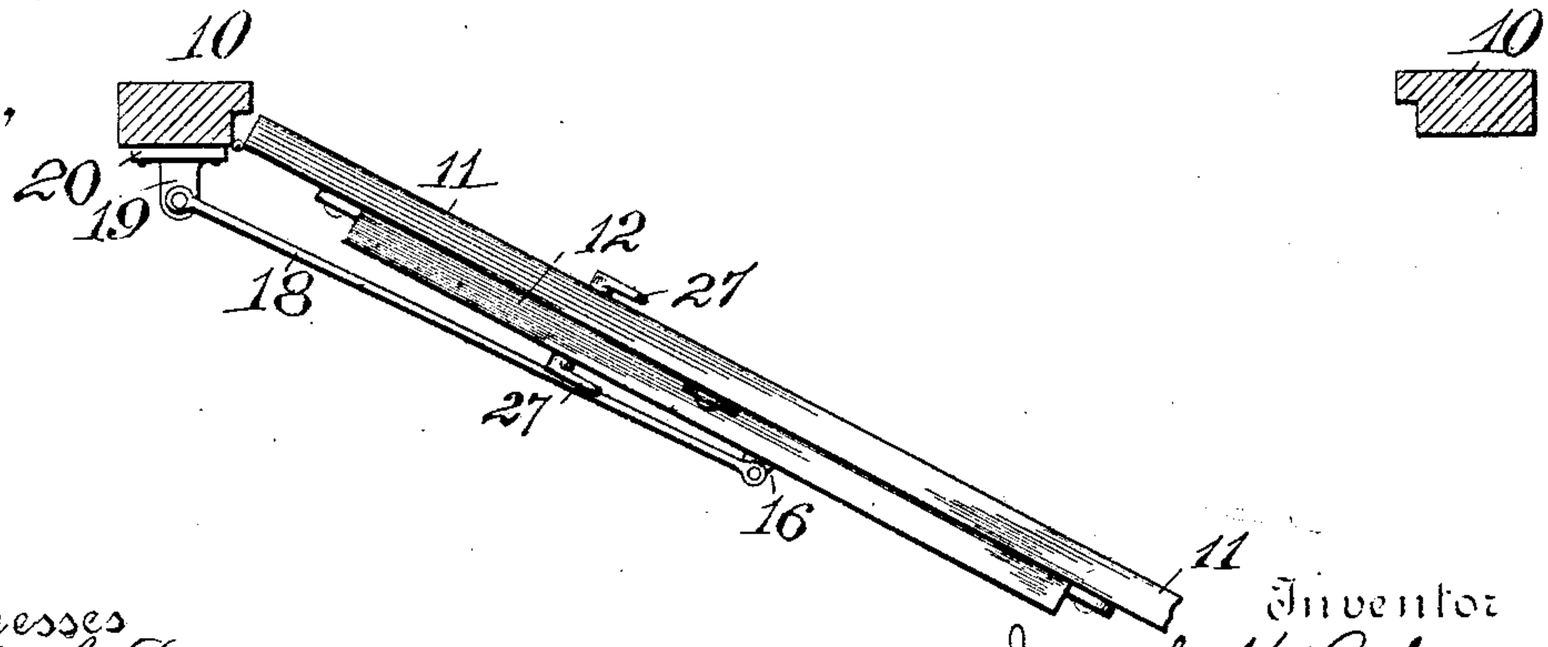



Fig: 3,




Witnesses
Max B. A. Doring
Wm H. Campfield.

Inventor
Jacob K. Adams
By his Attorney W. B. Hutchinson,

No. 751,825. PATENTED FEB. 9, 1904.

J. K. ADAMS.

# COMBINED DOOR STOP AND SPRING.

APPLICATION FILED AUG. 26, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

Fig: 4,

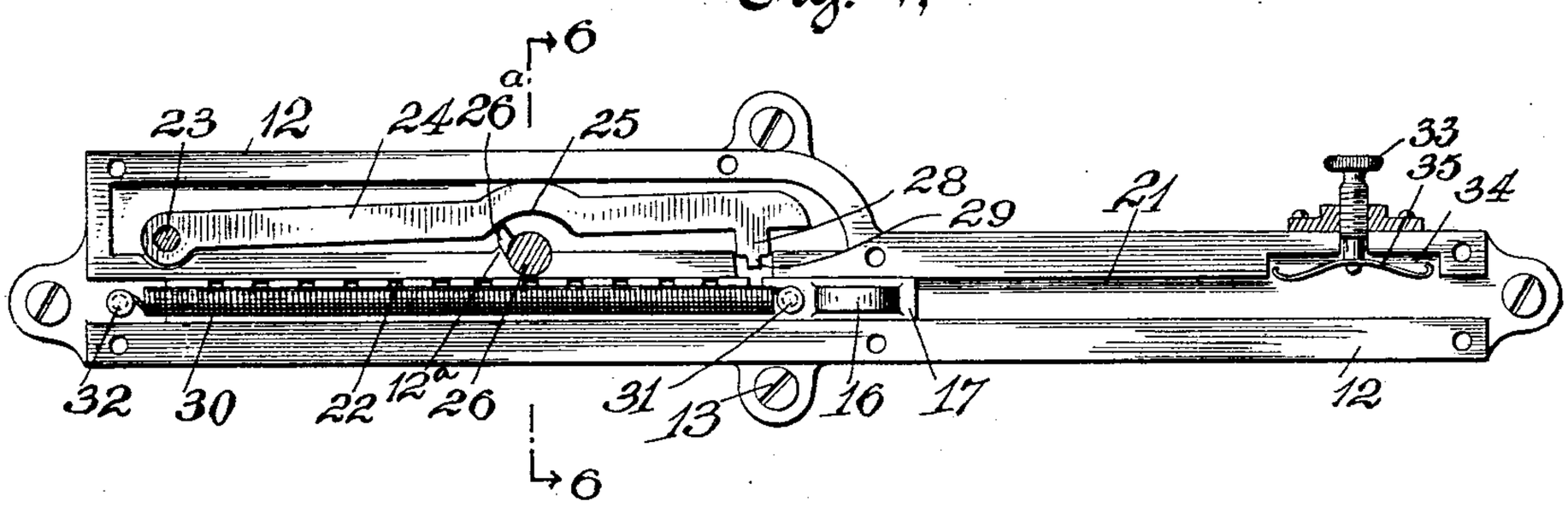



Fig: 5,

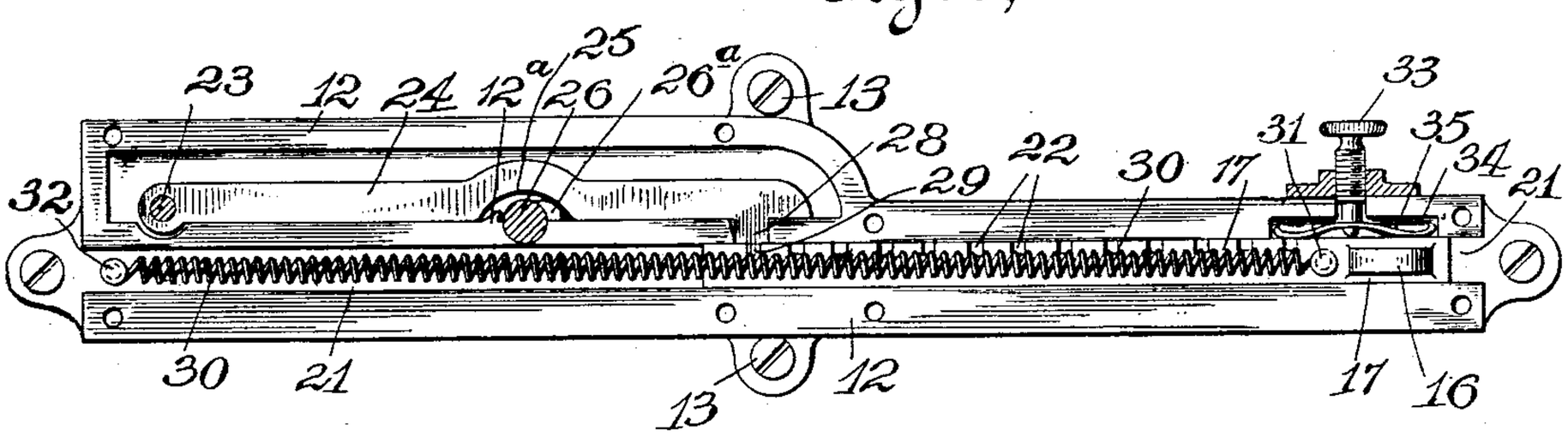
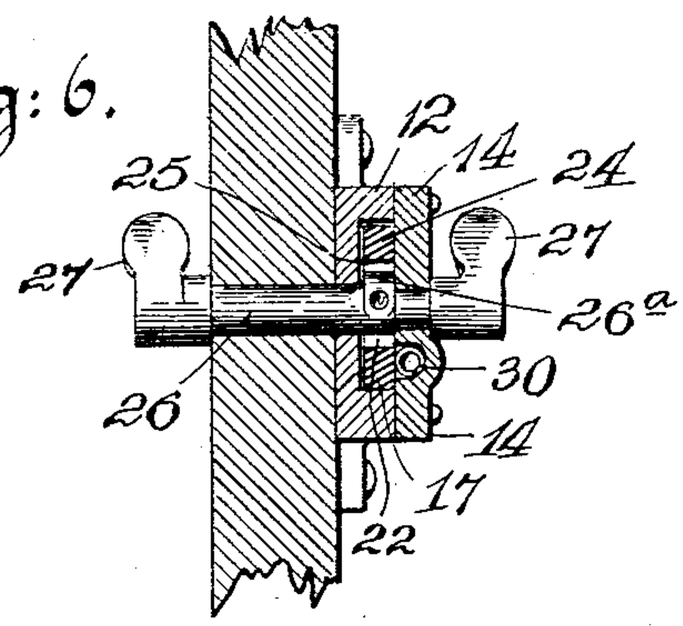



Fig: 6.




Witnesses
Max B. A. Doring.
Wm H Canfield

Inventor
Jacob K. Adams.
By his Attorney A. B. Hutchinson.

No. 751,825. Patented February 9, 1904.

# UNITED STATES PATENT OFFICE.

JACOB K. ADAMS, OF HOOPESTON, ILLINOIS.

## COMBINED DOOR STOP AND SPRING.

SPECIFICATION forming part of Letters Patent No. 751,825, dated February 9, 1904.

Application filed August 26, 1903. Serial No. 170,797. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB K. ADAMS, of Hoopeston, in the county of Vermilion and State of Illinois, have invented a new and Improved Combined Door Stop and Spring, of which the following is a full, clear, and exact description.

My invention relates to improvements in door springs and locks; and the object of my invention is to produce a simple and easily-operated device which can be used as an ordinary door-spring to close the door and hold it shut or which can be adjusted from either side of the door so as to lock it at a desired point.

The invention further provides a means operated from both sides of the door to cause the operation of the holding means or their release when they are in operation.

Another object is to provide a presser-bar that will engage with the slide-bar, so that when the spring is at its highest tension it is somewhat retarded and the door is not allowed to go shut with too much force.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a broken view of a door and door-frame provided with my improved device. Fig. 2 is a top view of the door with the door-frame in section, showing the door in its closed position; and Fig. 3 is a similar view with the door partly open. Fig. 4 is a face view of the portion of the apparatus that goes on the door with its face-plate removed and the mechanism arranged as a door-spring with the parts in their normal positions. Fig. 5 is a similar view, but with the parts extended as they would be if the door were open and with the door-holding means in its operative position to hold the door open. Fig. 6 is a section on line 6 6 in Fig. 4.

In the drawings, 10 is the door-frame, and 11 is the door. On the door is placed a casing 12, which can be suitably secured by means of the screws 13 or in any other usual manner and is provided with a face-plate 14, this face-plate having a slot 15 therein which allows an ear 16 of a slide-bar 17 to project. To the ear 16 is pivotally connected a bar 18, the other end of which is in pivotal connection with a lug 19 on a plate 20, this plate being suitably fastened to the door-frame.

The bar 17 slides in a groove 21 in the casing 12 and is provided with suitably-disposed notches 22, the office of which will be described hereinafter. At a suitable point toward the inner end of the casing 12 is a pivotal screw or pin 23, on which is pivoted the bar 24, which is provided with a curved recess 25, under which is rotatively arranged the bar 26, which passes directly through the casing and through the door and has on either end the operating-pieces 27, as will be seen more particularly from Fig. 6. On the end of this pivoted bar 24 is a nose-piece 28, provided with a finger 29, this finger being arranged to occupy any one of the notches 22 in the slide-bar 17.

On the rod or bar 26 is a nose $26^a$, that is arranged to be thrown around by the rotation of the bar 26, and thus raise the bar 24 to bring the finger 29 away from the slide-bar 17, so that it cannot engage the notches in said slide-bar, as will be seen from Fig. 4. A small projection $12^a$ operates as a stop to the nose-piece $26^a$ and limits the rotative movement of the same in its backward direction.

A spring 30 is arranged so as to be secured at one of its ends, as at 31, to the slide-bar 17 and at its other end, as at 32, to the casing 12. This spring has a tendency to draw the slide-bar back in the groove 21 and in this way by means of the bar 18 close the door.

It will be evident from this description that when the finger-grips 27 are thrown back the finger 29 is raised away, as in Fig. 4, and the device operates simply as a door-spring to hold the door shut and to carry it shut when it is open.

A thumb-screw 33, arranged near the end of the casing 12, projects down through into the cut-away part 34 and has thereon a presser plate or spring 35, which is adapted to come in engagement with the upper edge of the slide-bar 17 and act to retard it when the spring is under its greatest tension, thereby acting to equalize the spring action and prevent the door receiving too much momentum on its closing; but when it is desired to hold

the door in any position the door is approximately arranged where it is desired to be kept, and by manipulation of the finger-grips 27 the nose-piece 26ª is brought down as it is shown in Fig. 5, when the bar 24, with the engaging finger 29, rests on the top edge of the slide-bar 17, and as the door is swung in either direction to a slight extent unless a notch is directly under the finger 29 the finger will engage with the next adjacent in either direction. This bar 24 is arranged to drop of its own weight; but any suitable spring arrangement can be incorporated to force the engagement with the notches.

It will thus be seen that I have devised a combination door stop and spring that can be quickly changed from one to the other and is adapted to be operated from either side of the door; but this feature is not essential, as it can be arranged to be operated from one side only, as will be understood.

Instead of the spring as shown in the drawings there may be employed a weight secured to a cord that might be attached to the slide-bar 17 and run over a pulley that could be placed at 32. This construction will be desirable in case of doors in factories or places where they are frequently and violently swung open and shut.

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

1. A door stop and spring comprising a casing, a notched spring-pressed slide-bar held to move therein, a connecting-bar pivoted to the slide-bar and having means for connecting with the door-frame, a swinging latch-bar arranged above the slide-bar and having a finger to engage the notches of the slide-bar, and means for raising the latch-bar from either side of the door.

2. A door stop and spring comprising a casing having means for securing it to a door, a spring-pressed slide-bar movable in the casing and provided with notches on its upper edge, a connecting bar or rod pivoted to the slide-bar and having means for attachment to a door-frame, a latch-bar pivoted above the slide-bar and provided with a finger to engage the notches of the slide-bar, and a manually-operated cross-shaft pivoted in the door and casing and extending through both said cross-shaft having a cam or nose-piece to engage and raise the latch-bar.

3. In a device of the kind described, the combination of the spring-pressed slide-bar having means for supporting and guiding it on a door, the connecting rod or bar pivoted to the slide-bar and having means for attachment to a door frame or support, and a presser-plate arranged to engage the slide-bar and retard its movement as it nears the end of its stroke.

4. A door stop and spring comprising a casing, a slide-bar arranged in the casing having notches in one of its edges, a pivoted bar adapted to be held away from the notches in the slide-bar, means for releasing the locking-bar to engage the notches in the slide-bar, a bar pivotally connected to the slide-bar and to the door-frame, means for drawing the slide-bar within the casing to close the door when the notch-engaging means are withdrawn, and a presser-bar arranged on the end of the casing to engage the slide-bar at its most outward point of travel to retard its movement.

JACOB K. ADAMS.

Witnesses:
DALE WALLACE,
J. S. CATHERWOOD.