

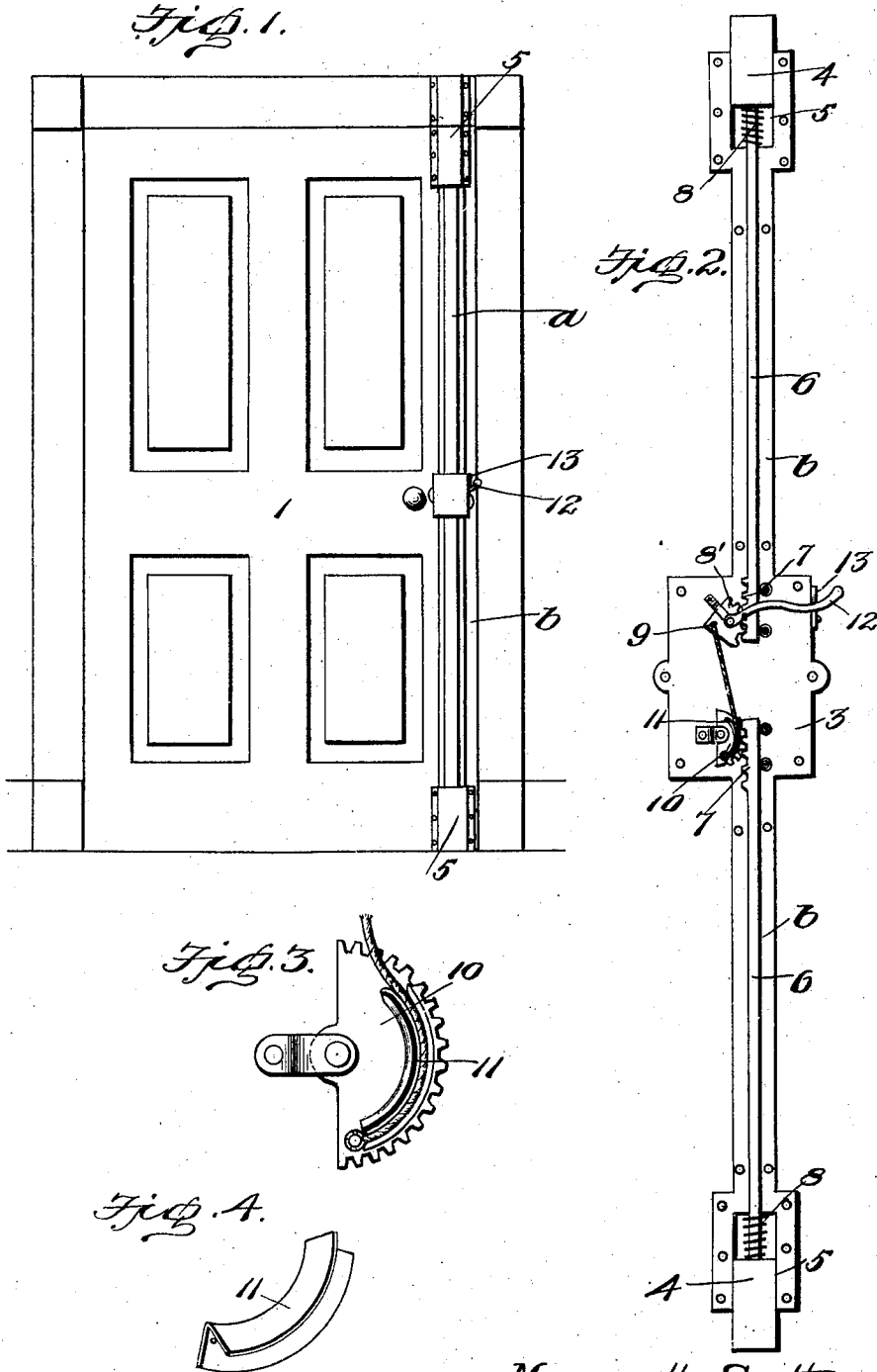
No. 660,403.

Patented Oct. 23, 1900.

M. SUTTON.
LATCH.

(Application filed June 23, 1900)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

MAXWELL SUTTON, OF WELCH GLADE, WEST VIRGINIA.

LATCH.

SPECIFICATION forming part of Letters Patent No. 660,403, dated October 23, 1900.

Application filed June 23, 1900. Serial No. 21,305. (No model.)

To all whom it may concern:

Be it known that I, MAXWELL SUTTON, a citizen of the United States, residing at Welch Glade, in the county of Webster and State of West Virginia, have invented certain new and useful Improvements in Double-Acting Door-Latches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to a double-acting door-latch.

The object of the invention is to provide a latch of this character which will lock the door at the top and bottom and which shall be simple of construction, durable in use, and comparatively inexpensive of production and one which may be easily operated.

To these ends the invention consists in certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a front elevation of my improved double-acting latch, showing it attached to a door. Fig. 2 is a similar view with the front of the casing removed to more clearly illustrate the invention. Fig. 3 is an enlarged view of the segmental rack for actuating the lower bolt. Fig. 4 is a detail perspective view of the rope-guide flange.

In the drawings the same reference characters indicate the same parts of the invention.

1 denotes a door.

2 denotes the casing, which consists of the two parts *a b*. The part *b* is provided midway its length or thereabout with an integral plate 3.

4 denotes the bolts, and 5 their keepers. 6 denotes bars connected to said bolts and having their adjacent ends provided with rack-teeth 7. Springs 8 are coiled around these bars and exert their energy to shoot the bolts into their respective keepers.

8' denotes a toothed segment which is pivoted to the plate 3 and engages the upper rack-bar and is provided with an extension 9 at the rear of its pivot.

10 denotes a toothed segment pivoted to said plate 3 below the segment 8 and meshing with the lower rack-bar. This segment is provided on its side with a V-shaped rope-guide flange 11. A rope extends from the ex-

tension 9 of the upper segment around the rope-guide flange and is secured to the lowest point of the lower segment.

12 denotes an operating-lever which is connected to the upper segment and extends out through a longitudinal slot in the front of the box-casing that covers the plate and its mechanism and is adapted to engage a spring-catch 13. When the lever is in engagement with the spring-catch 13, the bolts are held retracted. When the door is closed and it is desired to lock the same, by releasing the lever from the spring-catch 13 the springs will shoot the bolts into their respective keepers. Now by depressing upon the lever the toothed segments will draw the rack-bars toward each other and retract the bolts from their keepers.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my device will be readily apparent without requiring an extended explanation. It will be seen that the device is simple, may be manufactured at small cost, and is exceedingly well adapted for the purpose for which it is designed, and it will of course be understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

The combination with an inclosing frame adapted to be secured to a door; of two toothed segments pivoted within said frame, spring-actuated bolts having a sliding engagement through the opposite ends of said frame, rack-bars extending from said bolts and having their racked portions in engagement with the toothed segments, a rope-guide secured to the face of one of the toothed segments, a rope connecting said toothed segments, and a lever connected to one of said toothed segments and extending out through a slot in the frame, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MAXWELL SUTTON.

Witnesses:

W. F. HOLLISTER,
E. P. HOLLISTER.