E. CROMPTON, JR.

DOOR LATCH.

APPLICATION FILED JULY 1, 1915.

1,179,614.

Patented Apr. 18, 1916.

Fig. 1.

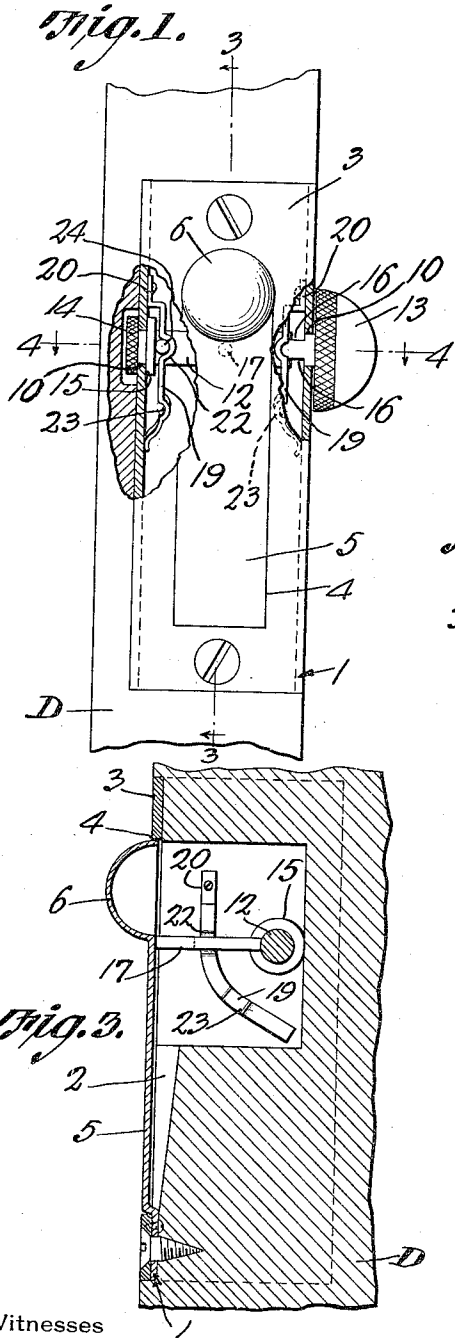


Fig. 2.

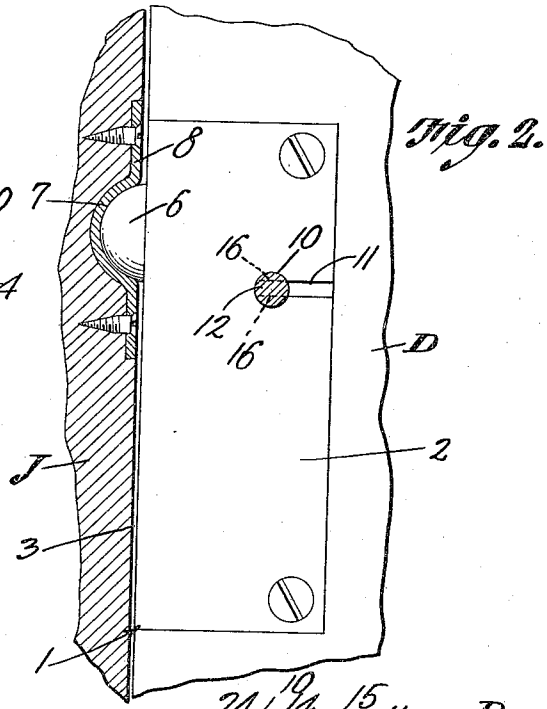


Fig. 3.

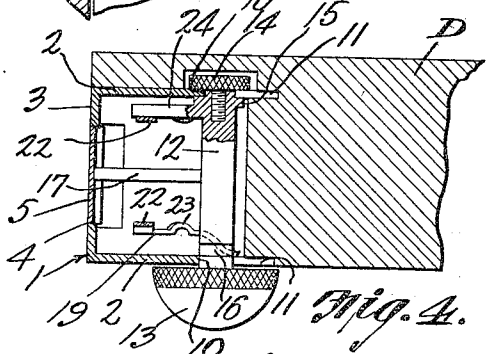


Fig. 4.

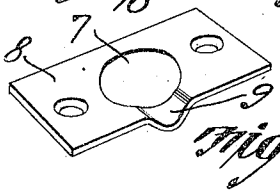


Fig. 5.

Witnesses

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EDWIN CROMPTON, JR., OF PUEBLO, COLORADO.

DOOR-LATCH.

1,179,614. Specification of Letters Patent. Patented Apr. 18, 1916.

Application filed July 1, 1915. Serial No. 37,549.

To all whom it may concern:

Be it known that I, EDWIN CROMPTON, JR., a citizen of the United States, residing at Pueblo, in the county of Pueblo and State of Colorado, have invented a new and useful Door-Latch, of which the following is a specification.

The present invention appertains to door latches or fasteners, and is particularly an improvement over the latch disclosed in my former Patent No. 1,132,705, issued March 23, 1915.

This invention has for its object the provision of novel and improved means for controlling the spring latch member whereby the same may be held in projected position or may be released at will from one side of the door, and it is also the object of the invention to assemble said means with the casing or frame in a unique manner, whereby the parts may be readily assembled and separated, and whereby the device may be applied to various doors, the device being reversible to this end.

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 the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, wherein:—

Figure 1 is a face view of the device, portions being broken away. Fig. 2 is a side elevation of the device, portions being shown in section. Fig. 3 is a vertical section taken on the line 3—3 of Fig. 1. Fig. 4 is a horizontal section taken on the line 4—4 of Fig. 1. Fig. 5 is a perspective view of the keeper or strike plate.

In carrying out the invention, the casing or frame 1 comprises a plate of U-shaped section whose limbs form the sides 2 of the casing or frame, and whose intermediate portion forms the face plate 3 of the casing. The casing or frame 1 is adapted to be secured in any suitable manner to the free edge portion of the door D and may be fastened by means of screws or other suitable securing elements, as usual.

The face plate 3 is provided with a vertical slot or opening 4 in which a flat or leaf spring 5 is disposed, the same forming the latch or catch proper, the same as in the latch disclosed in the said patent *supra*. One end of the spring 5 is secured to one end of the face plate 3 at the respective end of the slot 4, and the free end of the spring 5 is provided with an outstanding semi-spherical knob 6 to snap into the depression 7 of the keeper or strike plate 8 which is secured to the jamb J of the door casing or frame. The keeper or strike plate 8 has a channel portion 9 extending to the depression 7 for leading the knob 6 into and out of the depression when the door is closed and opened, respectively. When the spring 5 is released, the depression or concavature 7 allows the knob 6 to move out of the same when the door is pushed open in the proper direction. When the door is closed, the knob 6 snaps into the depression 7 for holding the door in closed position.

The sides 2 of the casing are each provided with an aperture 10, and a slot 11 extending from said aperture to the rear or inner edge of said side, the slots 11 being narrower than the diameter of the apertures 10. A spindle or rock shaft 12 is journaled for rotation within the apertures 10 whereby the spindle may be oscillated or rocked by means of a knurled knob or handle 13 provided upon one end thereof and bearing against the respective side 2 of the casing. The knob 13 is disposed at the inner side of the door, or at that side of the door where it is desired to permit the spring 6 to be controlled, the spindle 12 being inaccessible from the other side of the door whereby when the spring 5 is in projected position, it cannot be released from the last mentioned side of the door. The knob 13 closes the respective slot 11, and the spindle 12 has a collar 15 bearing against the opposite side 2 of the casing, and a retaining screw 14 is threaded into the respective end of the spindle 12 and bears against the last mentioned side of the casing to hold the spindle in place. The spindle 12 has diametrically opposite transverse grooves 16 adjacent the knob 13 and normally spaced inwardly slightly from the respective side of the casing, whereby the spindle 12 may be removed and reapplied to the casing as will hereinafter appear.

The spindle 12 is provided between its ends and within the casing with a radially

projecting finger 17 adapted to be swung against the free portion of the spring 5 for holding the knob 6 in projected position within the depression 7 of the keeper, when it is desired to prevent the door from being opened. This finger 17 may be swung into and out of engagement with the spring 5 by turning the knob 13 properly. As a means for holding the finger 17 against either in or out of engagement with the spring 5, a pair of opposite arcuate leaf springs 19 are disposed within the casing adjacent the opposite sides thereof, and have their upper ends offset and secured to the sides of the casing, as at 20. The lower or free ends of the springs 19 are curved toward and bear against the sides of the casing, whereby the intermediate portions of said springs 19 are spaced from the sides of the casing. Each of the leaf springs 19 has a pair of bulged or notched portions 22 and 23. The spindle has a second radially projecting finger 24 adjacent that end remote from the knob 13 and coöperating with the corresponding springs 19, the finger 24 being disposed between said springs 19 and the respective side of the casing, and being adapted to enter the notched portions 22 and 23 under the tension of the springs 19. The finger 24 projects in the same direction as the finger 17, and the portions 22 and 23 are so arranged, that when the finger 24 is engaged to the portion 22, the finger 17 will be held in engagement with the spring 5, and when the finger 24 is engaged to the portion 23, the finger 17 will be held away from the spring 5 to allow said spring 5 to flex or bend freely. When the knob 13 is turned to bring the finger 17 upwardly against the spring 5, the finger 24 will be engaged to the portion 22 of the respective spring, for holding the finger 17 in position whereby the spring 5 cannot be pressed back within the casing 1, and this will hold the door closed until the spring 5 is released. When the knob 13 is turned to release the finger 17 from the spring 5, the finger 17 will be held in released position due to the engagement of the finger 24 with the portion 23 of the respective spring 19. The spindle 12 is thus held at either position to which it is turned. The two springs 19 are provided in order that the spindle 12 may be reversed according to the position which the device occupies with respect to the door, and to enable the device to be applied to doors swinging in either direction. To reverse the spindle 12, considering the casing 1 detached from the door, the screw 14 is removed, which allows the spindle 12 to be pulled outwardly sufficiently to bring the grooves 16 into alinement with the edges of the respective slot 11. The spindle 12 may then be slid along the said slot 11, since the remote end of the spindle is withdrawn from the remote aperture 10, and in this manner, the spindle may be removed from the casing. The spindle may then be turned around end for end, and may be applied in a reversed position to the casing, due to the fact that each side of the casing has an aperture 10 and slot 11, as well as a spring 19. It is thus apparent that the spindle 12 may be assembled with the casing in either position, according to the side of the door at which it is desired to locate the knob 13.

Having thus described the invention, what is claimed as new is:

1. A latch comprising a casing, a spring carried thereby having a keeper engaging knob, a spindle journaled through the casing and having a finger adapted to be swung into engagement with said spring for holding the knob projected, and a second spring carried by the casing and having a notched portion, the spindle having a second finger coöperable with the second spring and engageable in said notched portion when the first mentioned finger is swung into engagement with the first mentioned spring.

2. A latch comprising a casing, a spring carried thereby having a keeper engaging knob, a spindle journaled through the casing and having a finger adapted to be swung into engagement with said spring for holding the knob projected, and an arcuate leaf spring having one end offset and secured to the casing and having its free end curved toward and bearing against the casing, the arcuate leaf spring having a pair of notched portions, and the spindle having a second finger coöperable with the arcuate leaf spring and engageable with said notched portions when the first mentioned finger is swung into and out of engagement with the first mentioned spring.

3. A latch comprising a casing embodying a face plate and sides, each side having an aperture and slot extending therefrom to the edge of the side, a spring carried by the face plate and having a keeper engaging knob, a spindle journaled through said apertures and having a finger adapted to be swung into engagement with said spring for holding said knob projected, the spindle having diametrically opposite transverse grooves adapted to aline with the edges of one of said slots when the spindle is pulled out of the opposite aperture, and to allow the spindle to be shifted through the respective slot out of the casing.

4. A latch comprising a casing embodying a face plate and sides, each side having an aperture and slot extending therefrom to the edge of the side, a spring carried by the face plate and having a keeper engaging knob, a spindle journaled through said apertures and having a finger adapted to be swung into engagement with said spring for holding said knob projected, the spindle

having diametrically opposite transverse grooves adapted to aline with the edges of one of said slots when the spindle is pulled out of the opposite aperture, and to allow the spindle to be shifted through the respective slot out of the casing, the spindle being reversible, and spring means within the casing coöperable with the spindle at either position thereof for holding said finger in or out of engagement with said spring.

5. A latch comprising a casing embodying a face plate and sides, each side having an aperture and a slot extending therefrom to the edge of the side, a spring carried by the face plate and having a keeper engaging knob, a spindle journaled through said apertures and having a finger adapted to be swung into engagement with said spring for holding said knob projected, the spindle having diametrically opposite transverse grooves adapted to aline with the edges of one of said slots when the spindle is pulled out of the opposite aperture, and to allow the spindle to be shifted through the respective slot out of the casing, the spindle having a second finger adjacent that end remote from said grooves, and a pair of springs carried by the sides of the casing and having notched portions for the engagement of the second mentioned finger when the first mentioned finger is swung into and out of engagement with the first mentioned spring.

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

EDWIN CROMPTON, JR.

Witnesses:
CHARLES L. CROOKS,
NAPOLEON BARKER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."