F. H. ERICKSON.

DOOR LATCH.

APPLICATION FILED OCT. 4, 1913.

1,091,644. Patented Mar. 31, 1914.

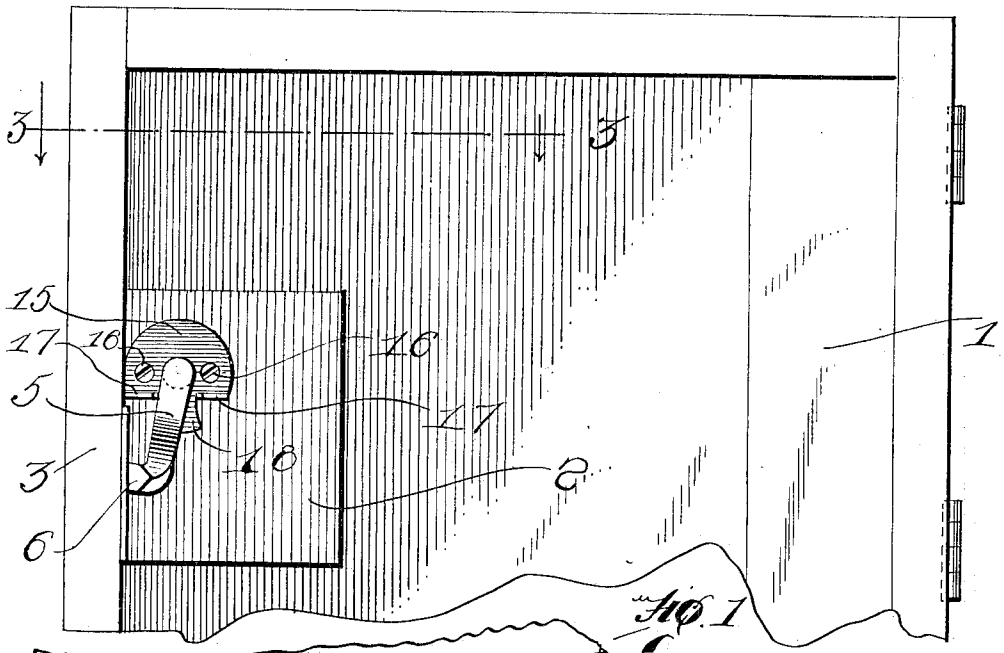


Fig. 1.

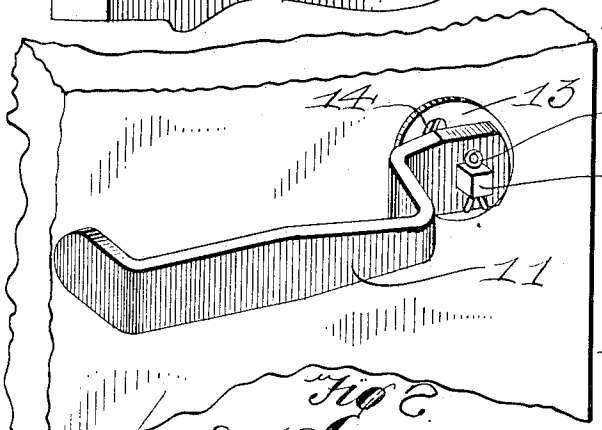


Fig. 2.

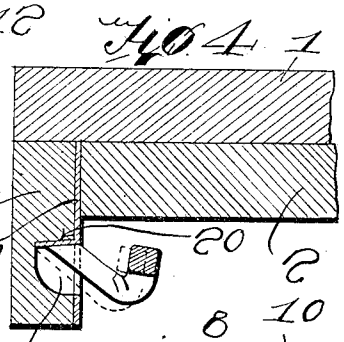


Fig. 4.

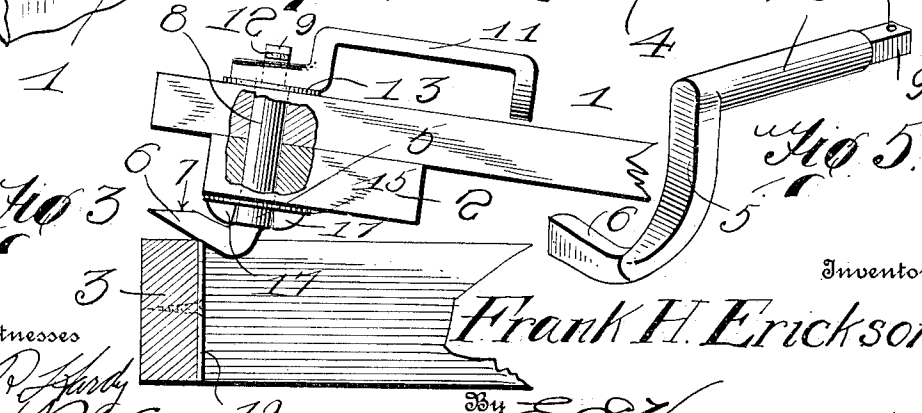


Fig. 3.

Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

FRANK H. ERICKSON, OF HOLDREGE, NEBRASKA.

DOOR-LATCH.

1,091,644. Specification of Letters Patent. Patented Mar. 31, 1914.

Application filed October 4, 1913. Serial No. 793,447.

To all whom it may concern:

Be it known that I, FRANK H. ERICKSON, a citizen of the United States, residing at Holdrege, in the county of Phelps and State of Nebraska, have invented certain new and useful Improvements in Door-Latches, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a door latch and has for its object the production of a simple and efficient means for automatically latching and holding the door in a closed position after the same has been swung to a closed position.

Another object of the invention is the production of a latching finger which is so formed as to draw the door to a closed position provided the same has become warped or does not fit the casing.

With these and other objects in view this invention consists of certain novel combinations, constructions and arrangements of parts as will be hereinafter fully described and claimed.

In the accompanying drawings:—Figure 1 is a side elevation of the interior of the door showing the same in a latched position. Fig. 2 is a side elevation of the outer portion of the door showing the operating arm carried thereby. Fig. 3 is a section taken on the line 3—3 on Fig. 1 looking in direction of the arrows, the door being shown in an open position and portions of the device being shown in section. Fig. 4 is a sectional view taken through the door and casing illustrating how the latching finger holds the door in a closed position. Fig. 5 is a perspective view of the latching finger.

Referring to the accompanying drawing by numerals, 1 indicates the usual door having a supporting block 2. This door 1 is used in combination with a casing 3 in which there is formed a pocket 4. The block 2 is reduced so as to allow the door 1 to rest evenly upon the casing 3 when the same is in a closed position. The latching finger 5 is bowed outwardly toward its lower portion and is provided with an angularly bent lip 6 which is beveled, as indicated at 7. The face of the beveled portion 7 extends diagonally across the end of the lip 6 so as to be formed angularly relative to the sides of the lip 6 for the purpose herein set forth. The upper portion of this finger 5 is provided with the round shaft 8 terminating in a squared body 9 having an aperture 10 formed therein. This shaft 8 extends through the block 2 and door 1 so as to be engaged by the operating lever 11 which fits upon the squared body 9 and is held thereon by means of the cotter pin 12 passing through the aperture 10. It will be noted that the outer portion of the door is provided with a wearing plate 13 which is held in position by means of the usual screws 14 while the supporting block 2 is provided with the bearing plate 15 which is held in position by means of the screws 16. This bearing plate 16 is provided upon one side with the upwardly bent ears 17 and with an extending tongue 18. The finger 5 extends so as to rest upon the tongue 18 and passes between the ears 17, whereby the rotary movement of the finger 5 will be limited.

When the door is in an open position, as illustrated in Fig. 3 one of the ears 17 will hold the finger in a set position so as to allow the lip 6 to be engaged by the casing 3. As this lip 6 is formed angularly it will swing the finger 5 so as to allow the point of this lip 6 to ride upon the metal plate 19 which extends into the pocket 4. As the door is closed sufficiently, the lip 6 will be swung into the pocket 4 by the weight of the lever 11 and the beveled portion 7 of this lip 6 will strike against and rest evenly upon the inclined surface of the pocket as indicated at 20. If the door is not closed sufficiently the lever 11 may be moved or swung downwardly whereby the beveled portion 7 of the lip 6 will ride upon the incline portion 20 as indicated by the dotted lines in Fig. 4 and will in this manner draw the door into firm engagement with the casing 3.

From the foregoing description it will be seen that a simple and efficient door latch has been produced which is provided with a simple and efficient bearing plate for holding the device in a set position for closing a door, and which is also provided with a simple means for drawing the door into firm engagement with the casing.

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

In a door latch of the class described the combination with a door and a casing, said casing provided with a pocket having an inclined side, of a latching finger carried by said door, said latching finger provided with

a shaft extending through said door and with an operating lever upon the outer end of said shaft, said finger curved outwardly at its lower end and terminating in an angularly bent lip, said lip provided at its outer end with a beveled portion, said lip adapted to rest within the pocket formed in said casing when the door is closed, and said beveled portion of said lip adapted to ride upon the incline side of said pocket for drawing the door into firm engagement with said casing.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

FRANK H. ERICKSON.

Witnesses:
FRANK A. ANDERSON,
H. A. WAREBURG.

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