Oct. 26, 1948. A. J. HARRIS 2,452,461

DOOR LATCH

Filed Jan. 11, 1946

Fig. 1.

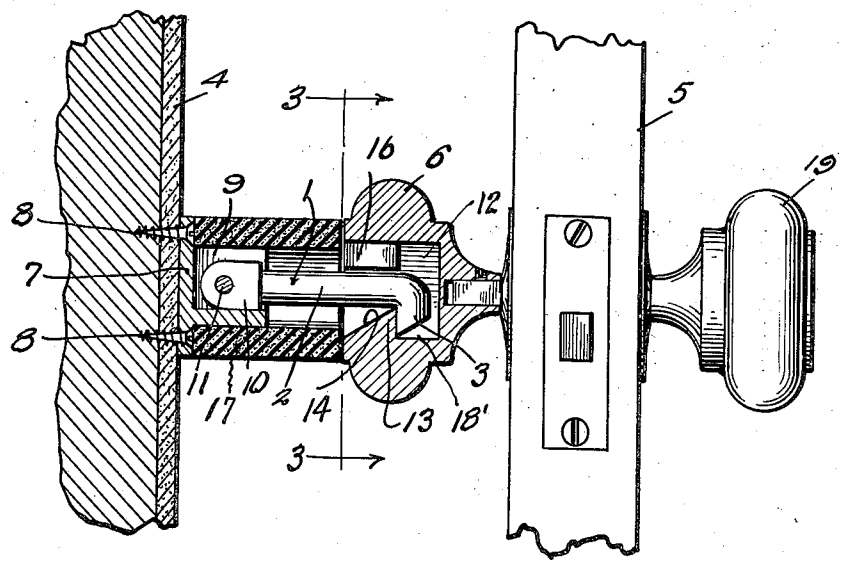


Fig. 2.

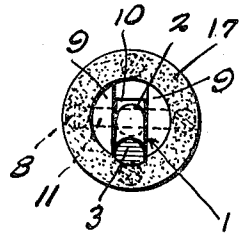


Fig. 3.

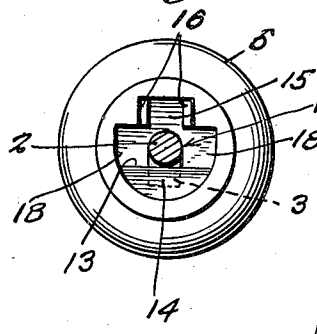
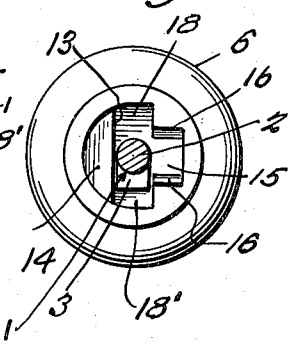


Fig. 4.



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2,452,461

DOOR LATCH

Asa J. Harris, Long Beach, Calif.

Application January 11, 1946, Serial No. 640,437

1 Claim. (Cl. 292—130)

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My invention relates to improvements in door latches, the primary object in view being to provide means of simple form and inexpensive construction for automatically latching the usual hinged door open.

Another object is to provide an automatic door latch for holding a door open and latched to a wall, and which is operative to unlatching position by turning of the door knob in opposite directions, respectively.

Still another object is to provide means of the character and for the purpose above set forth which is quiet in operation and is equipped to function as a door bumper.

To the accomplishment of the above, and subordinate objects presently appearing, a preferred embodiment of my invention has been illustrated in the accompanying drawing, set forth in detail in the succeeding description, and defined in the claim appended hereto.

In said drawings:

Figure 1 is a view partly in vertical section and partly in side elevation illustrating my improved door latch in the preferred embodiment thereof,

Figure 2 is a view in front elevation of the latching member and the mounting therefor together with the bumper sleeve,

Figure 3 is a view in transverse section taken on the line 3—3 of Figure 1 with the parts shown in latching position, and

Figure 4 is a similar view with the parts shown in unlatching position.

Referring to the drawing by numerals, according to my invention, as illustrated, a vertically swingable latch member 1, with a straight shank 2 and a downturned hooked end 3 is mounted on the wall 4 toward which a conventional hinged door 5 opens, and so that said member extends normally from said wall endwise and in horizontal alignment with the inside door knob 6 when said door in fully open.

The mounting for the latch member 1 comprises a wall plate 7, preferably circular, and attached to the wall 4 by screws 8, and a trough-like axial lug 9 extending forwardly from said plate 7 horizontally and in which an enlarged, flat bottomed boss 10 on the rear end of the latch member 1 is pivoted by a transverse pin 11, so that the boss 10 coacts with the bottom of the lug 9 to maintain the latch member 1 horizontal, normally, while, at the same time, said latch member is swingable upwardly on said pin.

A recess 12 is provided in the inside door knob 6, in the center thereof, with a bottom keeper ledge 13 extending, in the normal position of said

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knob 6, horizontally across the entrance to the recess 12 and which is provided with a forwardly and upwardly inclined front cam face 14. Above the ledge 13, the recess 12 is of inverted T-shape providing a center top notch 15, with inwardly converging side walls 16, and a pair of diametrically opposite side notches 18, 18'.

A resilient bumper sleeve 17, of rubber, or the like, is fitted at one end over the lug 9 to extend forwardly from said lug and be engaged by the inside knob 6.

The manner in which the described invention operates, will be readily understood. When the door 5 is opened and the inside knob 6, and consequently the outside knob 19, are in normal position, the hooked end 3 of the latch member 1 enters the recess 12, is engaged by the cam face 14 of the ledge 13 and said member is cammed upwardly by said face to fall, when the door is fully opened, behind the ledge 13, so that the door 5 is latched open and to the wall 4. As the latch member 1 falls, the inside knob 6 abuts the bumper sleeve 17, it being understood that said sleeve is properly dimensioned for that purpose, and said knob 5 is confined between said sleeve and the hooked end 3 of the latch member 1. The bumper sleeve 17, as will be clear, operates in silence latching of the door 5 open. The bevel sided notch 15 provides a clearance for the hooked end 3 of the latch member 1 when said member is cammed upwardly in the recess 12, and in cooperation with said end 3 functions to hold the knob 5 against being turned so as to move the ledge 13 out of operative position until the latch member 1 falls. By turning the knob 5 in either direction, through manipulation of the outside knob 19, in the usual manner, the ledge 13 may be moved to one side or the other of the hooked end 3 and one or the other of the notches 18, 18', as the case may be, rotated into alignment with the hooked end 3 so that the latch member 1 is in unlatching position and the recess 12 may be moved from over said end 3 by movement of the door 5 toward shut position.

The foregoing will, it is believed, suffice to impart a clear understanding of my invention without further explanation.

Manifestly, the invention, as described, is susceptible of modification without departing from the inventive concept, and right is herein reserved to such modifications as fall within the scope of the appended claim.

What I claim is:

In a door catch for latching a door open and to a wall, a hollow door knob adapted to be mount-

ed on the door for turning in opposite directions and forming a recess in said knob, a latch member having a hook end adapted to enter said recess when said door is opened, and a mounting for said latch adapted to be attached to said wall and in which the other end of said member is pivoted for vertical swinging of said member, said recess having a bottom camming ledge therein over which said hook end may ride upwardly to drop behind the same and latch said door open, and said recess having a front top notch fitting said hook end when the same rides upwardly whereby turning of said knob is prevented until said hook end drops behind said ledge, said

recess being widened between said ledge and notch to permit said hook end to be withdrawn from said recess when the knob is turned in opposite directions.

ASA J. HARRIS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
389,110	Roselius	Sept. 4, 1888
711,696	Cook	Oct. 21, 1902