July 13, 1926. 1,592,488

H. M. GURISCH

DOOR LATCH

Filed Feb. 11, 1925

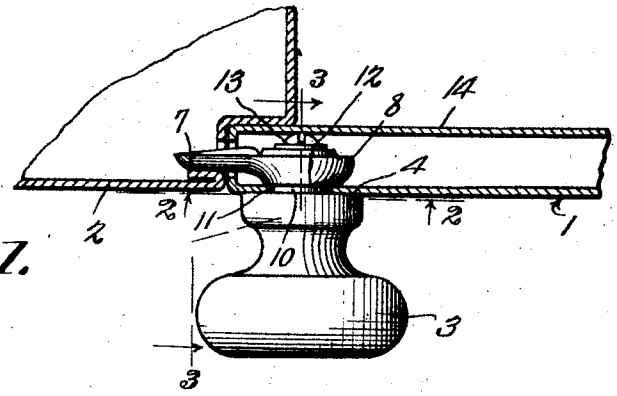


Fig. 1.

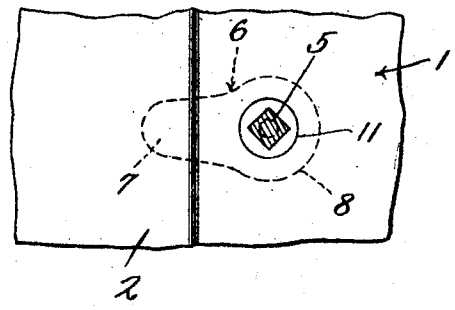


Fig. 2.

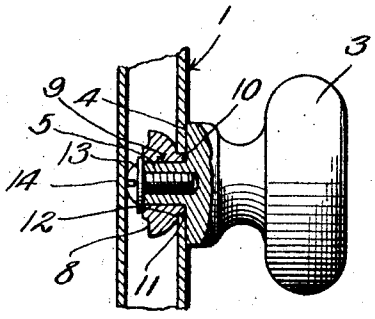


Fig. 3.

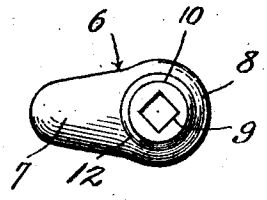


Fig. 4.

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UNITED STATES PATENT OFFICE.

HUGO M. GURISCH, OF BALTIMORE, MARYLAND.

DOOR LATCH.

Application filed February 11, 1925. Serial No. 8,410.

This invention relates to door fastening devices and has for its object the provision of a latch composed of few parts, which is simple in construction, strong and durable and easily manufactured.

In the present embodiment of the invention, it has been shown applied to a sheet metal door, it is however to be understood that a mechanic working within the scope of what is claimed, may make changes in the device without departing from the spirit of the invention or sacrificing any of the advantages thereof.

In the drawing Figure 1 is a sectional view through a door and its adjacent frame, depicting the latch in elevation and in locking position.

Figure 2 is a sectional view on line 2—2 of Figure 1.

Figure 3 is a sectional view on line 3—3 of Figure 1, and

Figure 4 is a view in elevation of the latch arm.

In the maufacture of doors for sheet metal cabinets and the like, it has heretofore been the practice to extend a square shank from the knob through an opening in the metal panel of the door and mount the arm of the latch on said square shank, the opening in the panel serving as a bearing for the square shank.

In this construction, rotation of the sharp edges of the square shank against the thin sheet metal soon enlarge the opening and permit inefficient operation of the latch.

In the device forming the subject matter of this application, the weakness of former structures has been eliminated and a latch produced, which, even after long continued use, will rotate about a fixed axis at right angles to the panel of the door. The result is that the effectiveness of the device is not impaired by a loosely operating latch on the one hand, nor is the appearance of the cabinet detracted from by a wabbling knob on the other.

Referring to the drawing, it will be noted a fragment of door is indicated by the numeral 1 and the door frame is shown at 2. A knob 3 is provided with a shoulder 4, from which shoulder projects a polygonal shank 5, in axial alignment with the knob.

A latch arm 6 having a convex striking face 7 is provided with a head 8. An opening 9 is formed in the head 8 and is shaped to fit the shank 5. A cylindrical boss 10 is formed on the head 8 about the opening and fits an opening 11 in the outer panel of the door 1.

The boss 10 is defined, at its juncture with the head 8, by a shoulder 12. The extent of the boss 10 from the shoulder 12 being practically equivalent to the gauge of the metal from which the door is made. It will be observed that support for the latch is provided having three bearing surfaces on the relatively thin door material and wear thereon is therefore reduced to a minimum.

A screw 13 is threaded into the shank 5 and abuts the head 8 securely fastening the same to the shank.

Further it may be stated, retractile movement of the screw is prevented by association therewith of the rear panel 14 of the door.

I claim:—

1. In a device of the class described, a door having an opening of common diameter from end to end; cooperating members comprising a latch provided with a head having a reduced boss journaled in the opening, and a knob having a transverse shoulder; one of said cooperating members being provided with a shank of polygonal cross section, and the other of said cooperating members being provided with a socket corresponding in cross section to the shank and receiving the shank closely to prevent relative rotation and relative transverse movement between the knob and the latch, an integral part of the door being located between the head and the shoulder and the head and the shoulder coacting directly with opposite surfaces of said integral part of the door to limit the movement of the knob and the latch transversely of the door, and means for holding the shank in the socket.

2. In a device of the class described, cooperating members comprising a knob having a shoulder, and a latch having a head provided with a reduced boss; one of said cooperating members being provided with a shank of polygonal cross section, and the other of said cooperating members being provided with a socket corresponding in cross section to the shank and receiving the shank closely to prevent relative rotation and relative transverse movement between the knob and the latch, the inner end of the boss abutting against the shoulder to space the head from the shoulder, and means for holding the shank in the socket.

3. In a device of the class described, coop-

erating members comprising a knob having a shoulder, and a latch having a head provided with a reduced boss; one of said cooperating members being provided with a shank of polygonal cross section, and the other of said cooperating members being provided with a socket corresponding in cross section to the shank and receiving the shank closely to prevent relative rotation and relative transverse movement between the knob and the latch, the inner end of the boss abutting against the shoulder to space the head from the shoulder, and means for drawing the knob and the latch toward each other, to hold the inner end of the boss in abutment with the shoulder.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

HUGO M. GURISCH.