

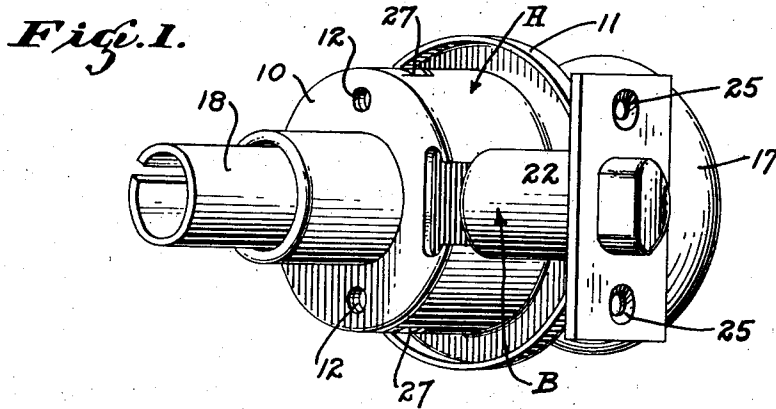
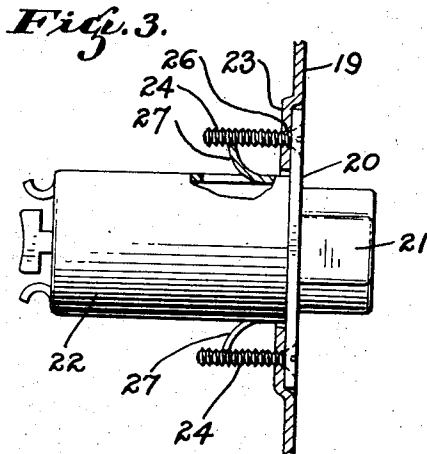
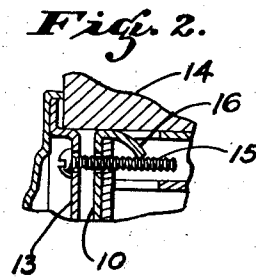
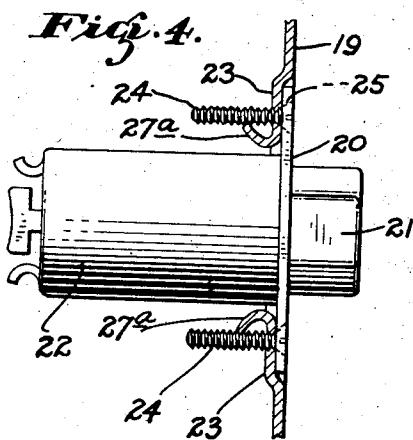
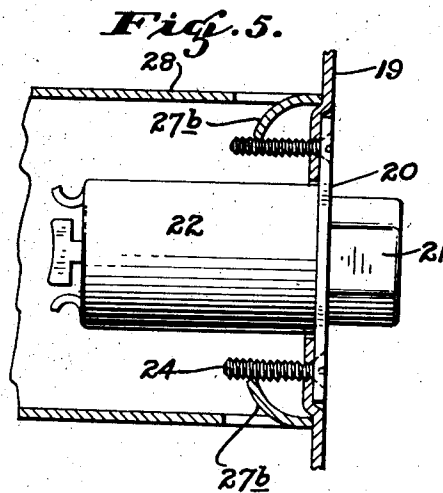
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**W. R. SCHLAGE**

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SCREW SECURING MEANS FOR DOOR LATCHES AND THE LIKE

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## UNITED STATES PATENT OFFICE

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## SCREW SECURING MEANS FOR DOOR LATCHES AND THE LIKE

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This invention relates to screw securing means for door latches and the like and certain parts thereof are found in my co-pending application entitled "Door latches" Serial Number 327,114, filed December 19th, 1928, which has become Patent No. 1,845,197.

Door latches or locks usually comprise two or more parts. The two main parts consist of a latch or lock unit mounted in the edge of the door in co-operative relation to the door jamb, and an actuating unit mounted in the face of the door engaging the latch unit and usually extending through the door. It is common practice to assemble the units with machine screws and in many instances such screws have been found more desirable than the ordinary wood screw for maintaining the units in the door. The latter is particularly true when metal doors are used which provide no material into which a wood screw may be inserted.

Owing to the construction of the better types of latches it is usually very impractical, if not impossible, to provide the ends of the machine screws with nuts and lock washers or other similar means for preventing them from becoming loose. The frequent manipulation to which door latches are subject and the jars and shocks that they receive through the slamming of doors contribute materially to the tendency of the screws to become loosened. The loosening of the screws permits improper engagement of the operating parts of the latch with the result that undue friction and binding causes excessive wear of the parts. If the latch does not come to pieces altogether it becomes inoperative and is often unjustly condemned as having been poorly constructed in the first place.

It is therefore the object of my present invention to provide means for securing screws used in door latches and the like against undesired rotation and consequently to provide means for generally improving and simplifying the manufacture of such articles.

I attain my object by the provision of a yieldable lug or tongue formed adjacent the proposed path of a screw and projecting into the path whereby insertion of the screw in its

proper position will cause it to strike the lug and be frictionally engaged thereby.

A better understanding of my invention may be had from the following specification and accompanying drawing in which I have shown a preferred form thereof.

In this drawing—

Fig. 1 is a perspective view of a latch and latch actuating unit of a type to which my invention may be applied,

Fig. 2 is a fragmentary view in section of a part of the latch actuating unit shown in Fig. 1,

Fig. 3 is a plan view of the latch unit shown in Fig. 1,

Fig. 4 is a modification of the device shown in Fig. 3, and

Fig. 5 is a further modification of the same.

Referring more particularly to the drawing and especially to Fig. 1, I show a latch actuating unit A and a latch unit B. The internal construction of these units may be of any conventional type as the same has no bearing upon the present invention. A knob 17 and a spindle 18 shown are likewise of little importance to this invention. A housing 10 is shown as enclosing the latch actuating unit. The housing 10 has a flange or an escutcheon 11 secured to its outer end and threaded screw holes 12 are formed in its inner end. When the latch actuating unit is mounted in a door its removal is prevented by a clamping plate shown at 13 in Fig. 2, in which figure a portion of the door is shown in section at 14. The clamping plate is drawn into position and held by means of screws 15 passing through holes in the clamping plate and being retained by the threaded holes 12 in the housing 10.

A lug 16 is disposed adjacent each of the screws 15. This lug is formed by stamping or pressing a portion of the housing 10 into the path of the screw. Only a small segment of the lug is directly in the path of the screw and as the screw is inserted it strikes the lug, which being formed of metal is slightly resilient, and forces it aside. The lug, due to its resiliency, then bears against the threaded side of the screw with sufficient

force to prevent the loosening of the screw by jiggling or shock.

In Fig. 3 the latch unit B is shown as mounted in a metal door, a portion of which is indicated at 19. The latch unit comprises a face plate 20, a latch 21 extending there-through and a housing 22 surrounding the latch. The door has a depression 23 formed therein for the reception of the face plate 20 and the housing 22 extends through a hole formed centrally of this depression and into the door. Screws 24 pass through holes 25 in the face plate (see Fig. 1) and are engaged by threaded holes 26 formed in the depression 23 of the door 19. Lugs similar to the lugs 16 shown in Fig. 2 are formed on the latch housing 22 and engage the screws 24 identically as set forth in the description of the screws 15 and the lugs 16.

A modification of the above structure is shown in Fig. 4 in which lugs 27a are formed in the metal door 19 instead of in the housing 22 as in Fig. 3. A further modification is illustrated by Fig. 5. In this figure a main latch housing 28 is attached to the door 19 and a lug 27b corresponding to the lugs 27 and 27a is pressed from the latch housing 28.

It should be stated that while the use of my invention will prohibit any undesired loosening of the screws to which it is applied the screws may be removed as usual by the proper application of a screw driver. A slight additional force applied to the screw driver is all that is necessary to overcome the friction produced by the contact of the lug with the screw.

While I have shown a preferred form of my invention it should be understood that it is adaptable to various devices and that many variations may be resorted to in its structure and application without departing from the scope of the appended claim.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

In combination with a housing member having a threaded opening formed therein, a perforated face plate member, a machine screw extending through the perforated face plate member and through the threaded opening in the housing member to clamp the members with relation to each other, and a lug struck out of the housing member and bent into the path of the screw to frictionally secure the screw against rotation.

WALTER R. SCHLAGE.