Oct. 9, 1928. 1,686,805

F. E. FORG

DOOR CATCH

Filed Feb. 24, 1923

Fig. 1.

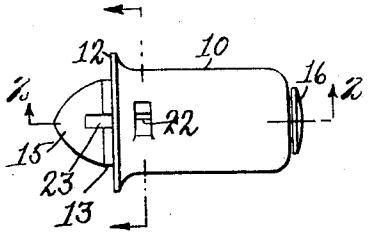


Fig. 2.

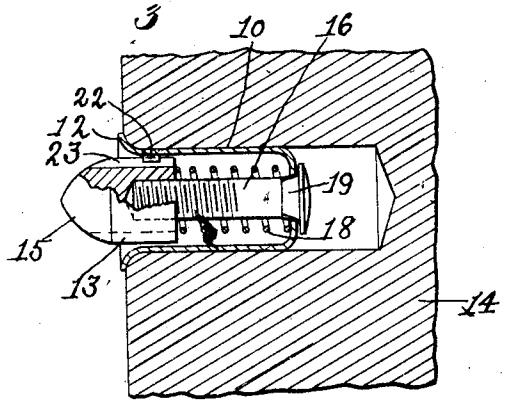
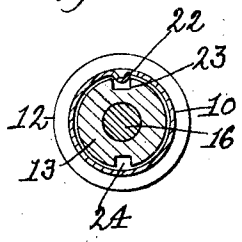


Fig. 3.



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UNITED STATES PATENT OFFICE.

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DOOR CATCH.

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This invention relates to a door catch of that character in which a catch member is located within a casing and has one end normally projected out therefrom by a spring within the casing.

The present invention has for its object to provide a novel, simple and efficient door catch of the character described, in which the reciprocating catch member is retained in its operative relation to the casing under all conditions of use, and is prevented from being projected beyond its predetermined normal position by unintentional movement of the catch member with respect to the casing.

The particular features of the invention will be hereinafter pointed out in the claim at the end of this specification.

In the drawings illustrating the preferred embodiment of the invention, Fig. 1 is an elevation of the improved door catch;

Fig. 2, a vertical section showing the door catch applied to a door; and

Fig. 3, a cross section on line 3—3 of Fig. 1.

Referring to the drawing, the door catch comprises a metal casing or shell 10 having an open end or mouth 12 and a catch member 13 supported within the casing 10 to normally project from the mouth 12. The casing is adapted to be inserted into a hole in the face of a door 14 so that the open end or mouth of the casing is substantially flush with the face of the door.

In the illustrated construction, the catch member 13 comprises a plunger having a conical shaped nose 15. The plunger is screwed upon the threaded end of a bolt 16 projecting rearwardly through the rear end of the casing 10. The plunger 13 is yieldingly urged in a forward direction into a position in which the conical nose 15 projects from the mouth 12 of the casing, by a coiled spring 18 embracing the bolt 16 and having its opposite ends abutting the rear face of the plunger 13 and the rear end of the casing 10.

Provision is made for retaining the catch member 13 and also the bolt 16 in operative relation to the casing 10 in order to prevent the plunger from becoming unscrewed from the bolt 16 during the use of the door catch. For this purpose, the rear end of the bolt may and preferably will be squared as at 19 and arranged to slide in a square hole in the rear end of the casing, to thereby prevent rotation of the bolt 16 with relation to the casing. In order to prevent rotation of the plunger 13 with relation to the casing and bolt, the casing 10 is provided with a finger or lug 22 arranged to extend into an axial slot 23 in the surface of the door catch or plunger 13. The plunger may also be provided with a second slot 24 which, together with the slot 23, may be employed for the reception of a spanner or similar tool for screwing the plunger onto the threaded end of the bolt 16. The axial slot 22 while effectively preventing rotation of the plunger 13 upon the threaded bolt 16 does not interfere with the reciprocation of the plunger during the operation of the door catch.

The finger 22 may and preferably will be stamped directly from the casing into the shape illustrated in Fig. 3 to form a yielding pawl engaging the axial slot 23 with sufficient force to prevent unintentional rotation of the plunger during the use of the door catch by frictional contact with the jamb of the door in opening and closing the same, but which at the same time enables a workman to adjust the compression on the coiled spring by inserting the spanner into the slots 22, 24 and rotating the plunger, the spring pawl yielding sufficiently to permit such rotation.

In assembling the door catch, the plunger or catch member 13 is screwed onto the threaded end of the bolt 16 until the desired compression is set up in the coiled spring 18 to cause the door catch to operate at maximum efficiency. The locking device comprising the lug 22 projecting from the casing 10 and the axial slot 22 in the surface of the plunger, serves to retain the coiled spring 18 at the compression at which the door catch operates with maximum efficiency, and in addition, as has been pointed out, prevents the plunger from becoming unscrewed and the parts of the door catch separated after continued use of the door catch.

Having thus described the invention, what is claimed is:

In a door catch of the character described, in combination, a casing, a catch member having in its outer surface an axially extended slot and insertible into said casing from one end thereof and capable of being reciprocated in said casing and of being manually rotated therein to adjust it with relation

to the end of the casing, means within the casing for supporting said catch member and upon which it may be rotated, and a yielding member carried by said casing and movable into and out of said slot, said member being normally extended into said slot in operative relation to the catch member to restrain the latter from being unintentionally rotated and being moved out of said slot and into inoperative relation to the catch member by manual rotation of the latter.

In testimony whereof, I have signed my name to this specification.

FREDERICK E. FORG.