

July 15, 1941.

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2,249,294

DEVICE FOR PREVENTING THE UNINTENTIONAL SHUTTING OF DOORS

Filed Feb. 9, 1940

Fig.1

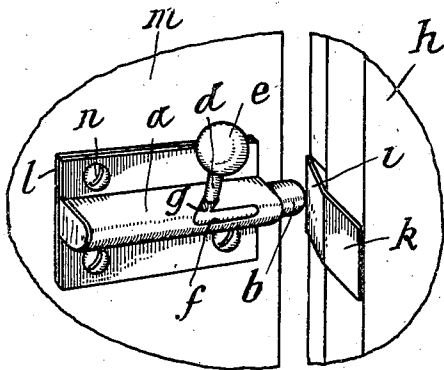


Fig.2

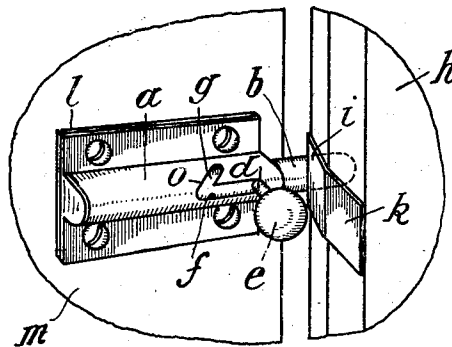
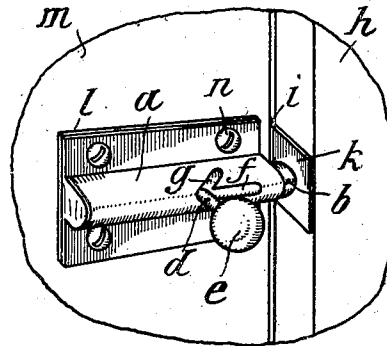


Fig.3

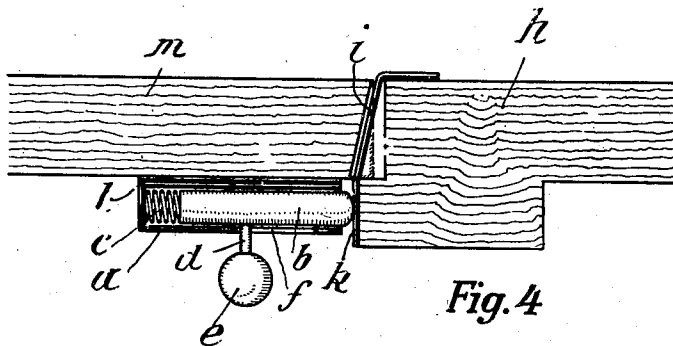


Fig.4

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UNITED STATES PATENT OFFICE

2,249,294

DEVICE FOR PREVENTING THE UNINTENTIONAL SHUTTING OF DOORS

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Application February 9, 1940, Serial No. 318,133

1 Claim. (Cl. 292—1)

The invention relates to a device for preventing the unintentional shutting of doors.

A device destined for this purpose has already become known, which consists of a push bolt controlled by a spring and which, when the door is opened, is automatically released and suddenly jumps forward. When the door is to be shut, this bolt has to be pulled back by hand and secured in this position so that the door can be shut. This device possesses the inconvenience that it must be sunk into the door wing, this causing certain difficulties and requires the aid of an expert. The push bolt and the pushing device must be worked very accurately to ensure a perfect function and, if in the course of time dust settles on the oiled movable elements, as is impossible to avoid, these movable elements will no longer have the desired effect but stick.

These inconveniences are avoided in the device according to the invention, which is characterised in that the push bolt, controlled by a spiral spring, has a pin guided in a slot of the casing. The slot has at its inner end an oblique extension and a pin having a handle projects from the slot. The pin serves to secure the push bolt in the pushed back position and with this object in view it is pulled back and pushed upwards into the oblique portion of the slot. When the door is to be shut the push bolt is pushed back by means of the handle of the pin in compressing the spiral spring and the pin is inserted into the oblique slot. On the door post opposite the casing a striking plate is fixed which consists of a straight portion and of an inclined portion standing at an angle to the straight portion. By the inclined running-on surface of the striking plate the spring-controlled push bolt is pushed back at the shutting of the door and bears on the straight portion of this plate so that it can jump forward as soon as the door is opened.

The device according to the invention can be easily mounted on every door or door frame and is very cheap to produce. By this device a secure operation is ensured, which is not the case in the devices of known type, in which two springs are necessary, whereas the device according to the invention requires only one spring.

The new device for preventing the unintentional shutting of doors is illustrated by way of example in the accompanying drawing, in which Fig. 1 shows the device in perspective view, the push bolt being pushed back and secured in this position, the door being opened,

Fig. 2 is a perspective view similar to Fig. 1, the push bolt being pushed back and released,

Fig. 3 shows in perspective view the device when the door is open and the bolt pushed forward,

Fig. 4 is a cross-section through a door frame and a door in closed position the device being shown in longitudinal section.

The device is constructed as follows: In a sheet metal casing *a*, fixed by means of a plate *l* and by screws *n* on the inner face of the door frame *m*, a bolt *b* is located. A spiral spring *c* is enclosed between the inner end of bolt *b* and the closed inner end of the casing. From the push bolt *b* extends a pin *d* and a handle *e*. This pin projects through slot *f*. From the inner end of slot *f* extends an upwardly directed oblique slot *g*, into which the pin *d* is moved when the bolt *b* has been pushed so that the bolt *b* is securely held in its pushed back position, the spiral spring *c* being compressed.

The push bolt *b* pushed back and secured in this position projects, as shown in Fig. 1, such a distance from the open end of the casing *a* that, when the door is being shut, the push bolt *b* is pushed back still farther to the end of slot *f*, as shown in Fig. 2 and released and slightly turned as the pin *d* slides along the edge *o* of the oblique slot *g*, so that the bolt is turned back and released and can jump forward as soon as the door is opened.

On the door *h* a striking plate *i*, *k* is fixed on which the end of push bolt *b* slides when the door is being opened or closed. The part *i* of the striking plate is at an angle to the part *k* and, when, at the closing of the door, the bolt *b* slides along this inclined portion *i* it is pushed back so that the pin *d* slips along the inner edge of the oblique slot *g* into the inner end of the longitudinal slot *f* in turning the bolt *b* and the spring *c* being compressed by the backward movement of the bolt, the free end of the bolt bears on the straight portion of the striking plate. The push bolt *b* is guided in its casing *a* and on the striking plate *i*. I claim:

A device for preventing unintentional shutting of open doors, comprising in combination a casing fixed on the door post and having a longitudinal slot and an upwardly directed outwardly inclined slot extending from the inner end of the longitudinal slot, a bolt shiftable in said casing, a spiral spring between the inner end of said bolt and the inner end of said casing, a pin projecting from said bolt and extending through said slot, a handle on the outer end of said pin, and a striking plate on the edge of the door opposite said casing and composed of an inner straight portion and of an outer inclined portion the end of the bolt bearing against this plate.

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