Jan. 24, 1928. 1,657,423

W. W. VAN DUZER

DOOR LATCH

Filed July 2, 1926

Fig. 1.

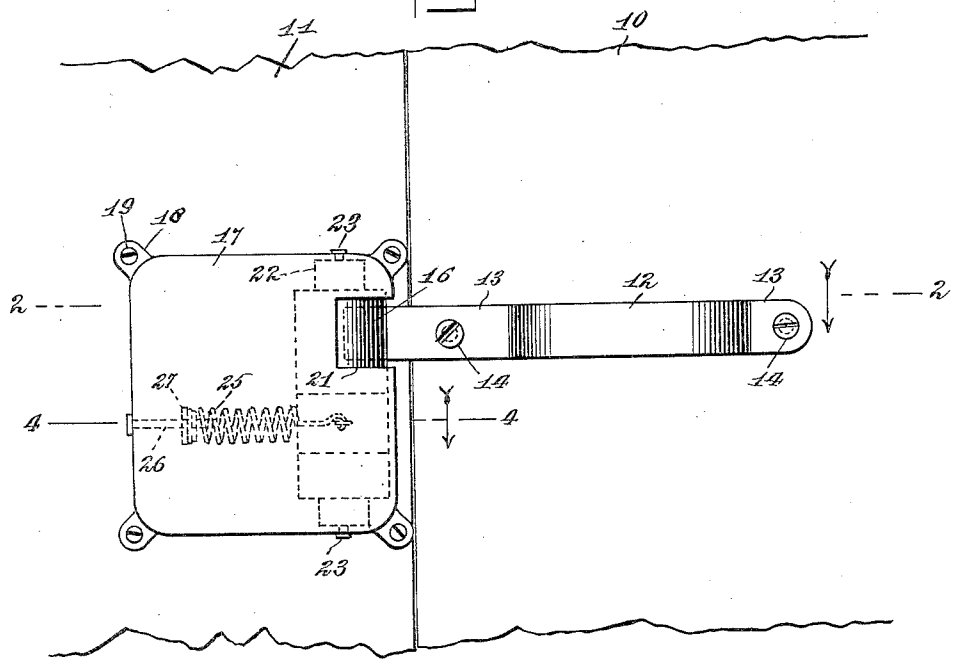


Fig. 2.

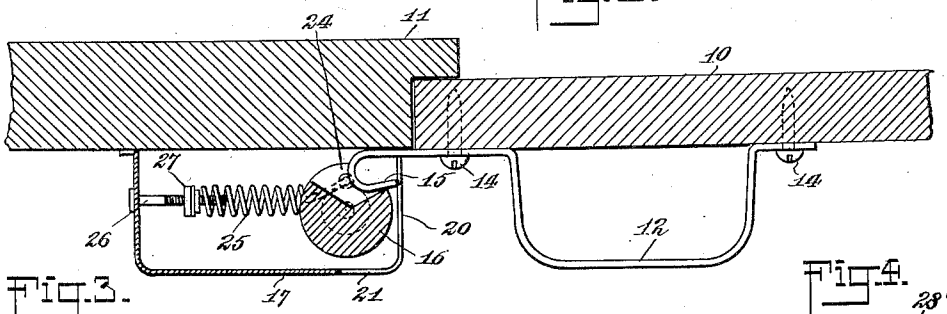


Fig. 3.

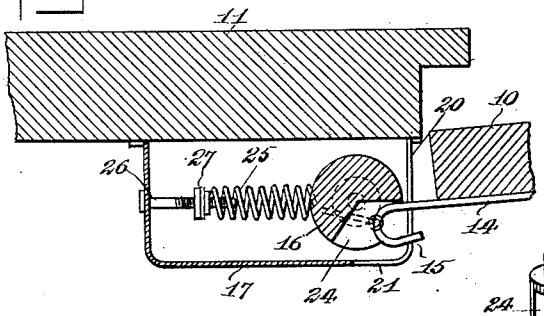


Fig. 4.

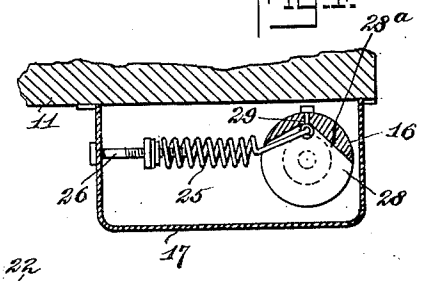
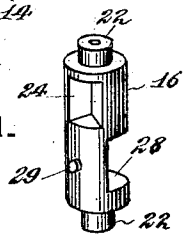


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILSON WELLING VAN DUZER, OF WARWICK, NEW YORK.

DOOR LATCH.

Application filed July 2, 1926. Serial No. 120,145.

The present invention is concerned with the provision of a latch for doors or other swinging closures which finds its preferred embodiment in a fastening means for spring closed screen doors or similar light swinging closure members.

An object of the invention is to provide a latch automatically acting to latch the closure member as it swings to closed position under the influence of its spring, and a latch which may be conveniently secured to the outer face of a closure frame without the necessity for boring or pocketing either the closure or the frame.

More specifically, the device is in the nature of a notched spring-pressed roller coacting with a latch on the door and acting as a keeper therefor. As the roller is rotated by the latch when the door is moved to open or closed position, a roller spring will be shifted past dead center, and will retain the notch in the roller in proper position for actuation by the door latch upon subsequent movement of the door.

Other objects of the invention are to provide a device of this character of simple, practical construction, which will be rugged, durable and efficient in use, neat and attractive in appearance and well suited to the requirements of economical manufacture.

With the above noted and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter set forth and pointed out in the claim. The invention may be more fully understood from the following description in connection with the accompanying drawings, wherein—

Fig. 1 is a fragmentary view in front elevation of a door and frame showing the door closed and latched by my improved latching mechanism.

Fig. 2 is a transverse sectional view on the line 2—2 of Fig. 1.

Fig. 3 is a generally similar view, but showing the door open.

Fig. 4 is a transverse sectional view on the line 4—4 of Fig. 1.

Fig. 5 is a perspective view of the roller.

In the drawings I have used reference character 10 to designate a closure such as an ordinary screen door, and the numeral 11 to represent the frame or jamb with which the free edge of the door coacts. Secured to the door is a generally U-shaped handle member 12 provided with feet 13 screwed at 14 to the door. One of the feet is extended beyond the free edge of the door and turned backwardly upon itself to define a spring latch member 15 adapted for coaction with a roller 16 mounted in a casing 17 secured to the door jamb.

Casing 17 is in the nature of a box-like member provided with apertured attaching lugs 18 through which the attaching screws 19 are passed. The side wall of the casing adjacent the door 10 is provided with a slot 20 registering with a notch 21 in the front face of the casing to expose the portion of the roller 16 which coacts with the latch 15.

The roller may be of wood, metal or any other suitable material, and its reduced ends 22 are received by pivot studs 23 journalled in the top and bottom of the casing 17. The roller is provided with a substantially V-shaped notch 24, the walls of which are approximately radially disposed. This notch coacts with the latch 15, as best seen in Figs. 2 and 3. Latch 15 engages one or the other of the walls of the notch to slightly rotate the roller as the door is swung to open or closed position.

A past center locking spring 25 of the coiled contractile type is anchored to a screw 26 within the casing, there preferably being a pair of nuts 27 on the screw which clamp the end convolution of the spring and permit adjustment thereof. A second approximately V-shaped notch 28 in the roller 16 extends well inwardly beyond the center of the roller, and in the bottom of this notch there is provided an anchorage 29 for the end of the spring 25. It will be noted that as the roller 16 swings from the position of Fig. 2 to the position of Fig. 3, or vice versa, the spring 25 will be moved past its dead center and will lock the roller in either position. With the roller in the position of Fig. 2, further rotation of the roller under the influence of its spring 25 is prevented by the engagement of the wall of the notch 24 with the latch 15. With the roller in the position of Fig. 3, further rotation of

the roller under the action of its spring 25 is prevented by the engagement of the spring 25 with the wall 28ª of the notch 28.

It will be obvious that numerous latching means might be mounted on the door for coaction with the roller. I prefer to use the type of device shown, in which the door handle is provided with an extension constituting a latch, and in which the latch is springy, so that when the top is in closed position, there will be no vibration, or no rattling under the influence of the wind.

Obviously, various changes and alterations might be made in the general form and arrangement of parts described without departing from the invention. Hence I do not wish to limit myself to the details set forth, but shall consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claim.

I claim:

A door latch including a box-like casing adapted to be attached to a door frame, a roller journalled in the casing and having a notch therein for coaction with a latch member secured to the door, said notch extending approximately to the center of the roller, said roller having also a second notch therein, extending well inwardly beyond the center of the roller, a past center securing spring secured at one end of the casing and at its other end to the bottom of the second mentioned notch.

WILSON WELLING VAN DUZER.