No. 612,528. Patented Oct. 18, 1898.

C. M. PERRIER.

DOOR FASTENER.

(Application filed May 21, 1898.)

(No Model.)

Fig. 1.

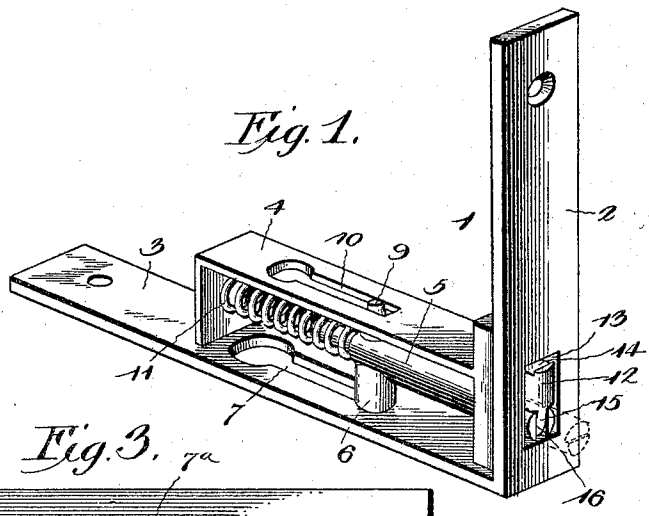
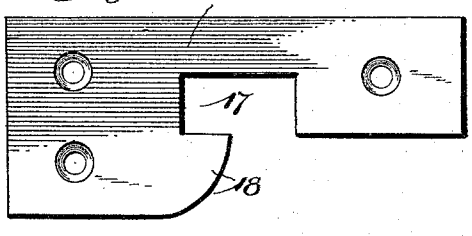


Fig. 3.



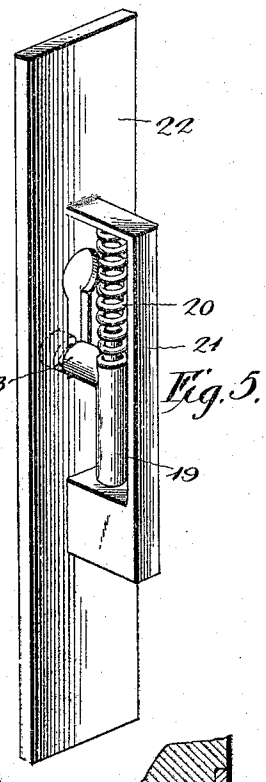


Fig. 5.

Fig. 6.

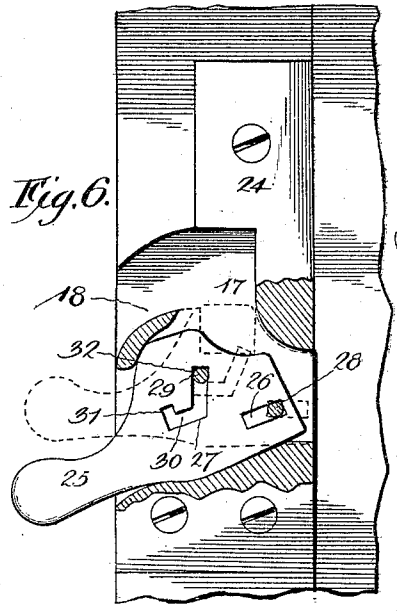


Fig. 4.

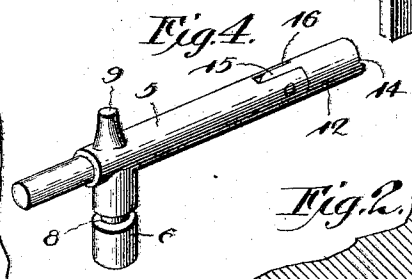


Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES MELLEN PERRIER, OF BROCKTON, MASSACHUSETTS.

DOOR-FASTENER.

SPECIFICATION forming part of Letters Patent No. 612,528, dated October 18, 1898.

Application filed May 21, 1898. Serial No. 681,331. (No model.)

To all whom it may concern:

Be it known that I, CHARLES MELLEN PERRIER, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented a new and useful Door-Fastener, of which the following is a specification.

The invention relates to improvements in door-fasteners.

The object of the present invention is to improve the construction of door-fasteners and to provide a simple, inexpensive, and efficient one adapted to be mounted on a door at the top or bottom thereof similar to the ordinary sliding bolt and capable of automatically locking a door when the latter is closed and of being readily manipulated to unfasten the door.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a door-fastener constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view showing the same applied to a door. Fig. 3 is a detail view of the keeper. Fig. 4 is a detail view of the sliding spring-actuated bolt. Fig. 5 is a perspective view of a spring-actuated bolt and its casing designed for single doors. Fig. 6 is a detail view of a portion of a door-frame, illustrating the arrangement of the keeper of a single-door fastener and showing the arrangement of the cam-lever.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a substantially L-shaped frame designed to be mounted on a door at the upper or lower corner thereof and composed of a vertical plate or arm 2 and a horizontal plate or arm 3, which is provided with a longitudinal casing 4, extending from the angle of the frame. Within the horizontal casing is mounted a sliding spring-actuated bolt 5, extending through an opening of the front or vertical arm of the frame and the adjacent end of the casing and provided near its inner or rear end with a depending arm 6, which is adapted to engage a keeper 7^a. The arm 6 of the spring-actuated bolt is arranged at right angles to the same and extends through a keyhole-slot 7 of the horizontal arm of the frame, and is provided with a groove 8, which receives the edges of the arm 3 at the contracted portion of the keyhole-slot, the larger portion of the slot being of a size to permit the arm of the bolt to pass readily through it in assembling or separating the parts.

The spring-actuated bolt is provided with a projection 9, located opposite the arms 6 and arranged at right angles to the bolt, and this projection is guided in a slot 10 of the inner side of the casing 4. The inner end of the spring-actuated bolt is reduced and fits into one end of a coiled spring 11, which is interposed between the bolt and the inner end of the casing. The bolt is provided at its outer end with a hinged section 12, arranged to extend beyond the frame and the door when the bolt is in its normal position, and adapted to be pushed inward to reciprocate the bolt and disengage it from the keeper 7^a, and designed to be folded upward into a recess 13 of the frame when it is desired to close the other door of the pair. The hinged section, which is provided at its outer end with a notch 14 to enable it to be readily engaged by the finger in swinging it downward from the recess, has its inner end reduced to form a tongue 15, which is pivoted in a bifurcation 16 of the body portion of the bolt.

The keeper 7^a consists of a plate designed to be secured to the sill of a door and the top of a casing and provided with a recess 17, adapted to be engaged by the end of the arm 6, which projects beyond the frame 1, and the keeper is provided at one end of the recess with a beveled projection 18, forming an entrance-opening and providing a shoulder adapted to be engaged by the arm of the bolt. When the door closes, the arm of the bolt engages the beveled edge of the keeper which draws the bolt inward until the arm passes the projection 18, when the spring forces the bolt outward and carries the arm into engagement with the shoulder of the projection at the closed end of the recess. When it is desired to unfasten the door, the bolt is pushed inward to carry the arm 6 opposite the entrance to the recess and the door is permitted to open.

The door-fastener is applied to one of a pair of doors and may be arranged at the top and bottom thereof similar to the ordinary sliding bolt, and when arranged at the top and bottom one of the fasteners may be operated by the foot and the other by hand.

In Figs. 5 and 6 of the accompanying drawings is illustrated a modification of the invention, and a construction is shown adapted for use on ordinary single doors. The bolt 19, which is actuated by a spring 20, is constructed substantially the same as that heretofore described with the exception that the hinged section is omitted and it is arranged vertically on the free edge of the door, being mounted in a casing 21, having a face-plate 22. The engaging portion or arm 23 of the bolt extends horizontally from the free edge of the door and is adapted to engage a keeper-plate 24, constructed the same as that before described and arranged vertically on the frame of the door, as clearly shown in Fig. 6 of the accompanying drawings. The recess of the keeper is arranged vertically and the beveled projection is located at the lower end of the recess. The spring-actuated bolt 19 engages the keeper automatically when the door closes and the arm 23 is disengaged from the shoulder of the beveled projection by a cam-lever 25, mounted beneath the keeper and provided at its outer end with a knob. The cam-lever, which is adapted to swing upward, is provided with an enlarged end or head located beneath the arm 23 of the bolt and adapted to engage and raise the same, and when the cam-lever is in its raised position the arm 23 is prevented from engaging the keeper, so that the door may be opened freely without manipulating the fastener. In order to lock the cam-lever in its elevated position, it is provided with a longitudinal slot 26 and a substantially L-shaped slot 27. The longitudinal slot 26 is disposed at an inclination when the lever is in its closed position, as shown in Fig. 6 of the accompanying drawings, and it receives a pin or stud 28. The substantially L-shaped slot 27 has one branch arranged in substantially a vertical position when the lever is down, and its branch 30 is disposed at the same inclination as the slot 26 and is provided at its outer end with an upward extension 31, adapted when the lever is raised, as shown in dotted lines in Fig. 6 of the accompanying drawings, to receive the pivotal stud 32, whereby the lever is locked against downward and outward movement. In order to lower the lever, it is necessary to elevate it sufficiently to disengage the stud or pivot 29 from the notch formed by the extension 31, and it may then be drawn outward and downward.

The invention has the following advantages: The door-fastener, which is simple and comparatively inexpensive in construction, is positive and reliable in operation, it is applicable to single and double doors, and is capable of operating automatically to lock the door when the same is closed. It is adapted to take the place of the ordinary sliding bolt usually employed on double doors and is capable of being easily operated to release a door when desired. The hinged section of the bolt is adapted to swing or fold into the recess of the frame, and it is arranged out of the way to permit a pair of double doors to close, and it may be readily brought into position for use.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What I claim is—

1. In a device of the class described, the combination of a frame or casing having a recess at its abutting face, and a spring-actuated bolt adapted to engage a suitable keeper and provided with an outer hinged section arranged to fold within the recess and adapted to be swung downward to enable the bolt to be operated, substantially as described.

2. A device of the class described, comprising a substantially L-shaped frame provided in one of its arms with a longitudinal casing and having guide-slots in the casing and the adjacent arm of the frame, the slot of the frame being enlarged at one end, and a spring-actuated bolt arranged within the casing and provided with a projection to engage the guide-slot thereof, and having an arm arranged in the guide-slot of the frame, said arm being grooved to receive the edges of the frame at the contracted portion of the slot, substantially as described.

3. A device of the class described comprising a frame provided with a longitudinal casing and having a guide-slot enlarged at one end, a spring-actuated bolt disposed longitudinally of the casing and provided with a rigid arm extending from its inner portion at right angles to the same, arranged in the guide-slot and provided with grooves to receive the edges of the frame, said arm having its outer end arranged to engage a suitable keeper, and a spring interposed between the inner end of the bolt and the adjacent end of the casing, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES MELLEN PERRIER.

Witnesses:
NATHAN MARSHALL,
MORRESS COOPER.