April 23, 1929. E. C. OSBECK 1,710,319

DOOR LATCH

Filed Oct. 1, 1926

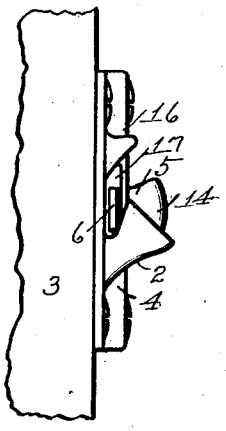


Fig. 2.

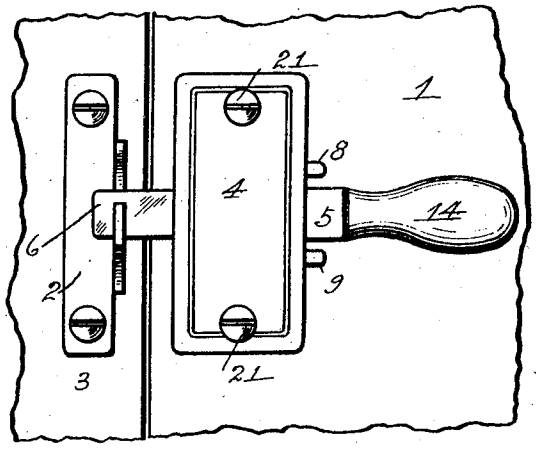


Fig. 1.

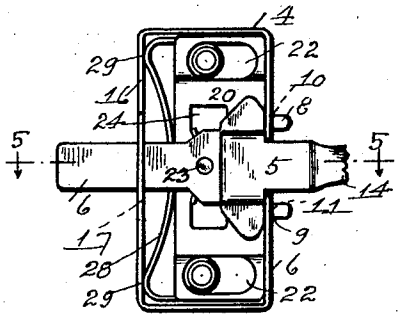


Fig. 3.

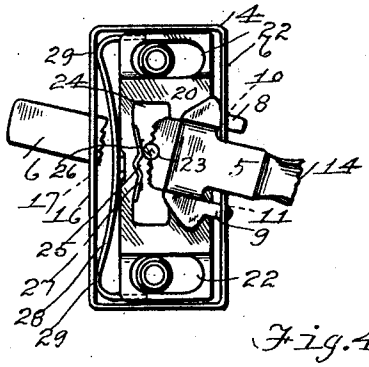


Fig. 4.

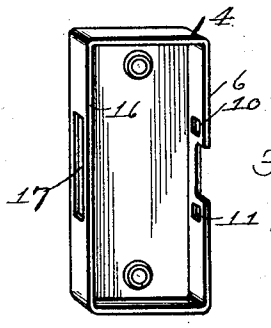


Fig. 6.

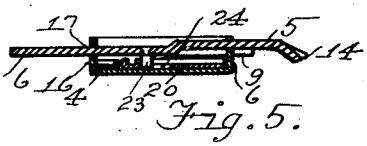


Fig. 5.

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Patented Apr. 23, 1929. 1,710,319

UNITED STATES PATENT OFFICE.

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DOOR LATCH.

Application filed October 1, 1926. Serial No. 138,836.

The present invention relates to door latches; and its object is to provide such a latch which shall be simple in construction, comprising parts readily assembled, and having a latching bolt swingable in either direction into and out of latching engagement with its keeper and held yieldingly in operative or retracted position.

These and any other objects hereinafter appearing are attained by, and the invention finds preferable embodiment in, the door latch hereinafter particularly described in the body of this specification and illustrated by the accompanying drawings, in which:—

Figure 1 is a face view of a door latch;

Figure 2 is a left-hand side view thereof;

Figure 3 is an inner side view of the latch casing, showing operative parts therein, the latching bolt being in operative or latching position;

Figure 4 is a like view, but showing the latching bolt in a retracted position and a portion thereof broken away;

Figure 5 is a sectional view of the same taken on line 5—5 of Figure 3; and

Figure 6 is a view in perspective of the latch casing's inner side.

In the embodiment of the invention illustrated by the accompanying drawings, a door latch is shown mounted adjacent the left-hand free edge of a swinging door 1, the latch's keeper 2 being mounted an the door frame 3. The latch has a casing 4, inside which a latching bolt 5 is mounted to swing into and out of operative position in which its outer end 6 latchingly engages the keeper. This bolt 5 has members 8, 9 spaced apart in the bolt's transverse direction, which members turn and slide in bearings 10, 11 respectively in the right-hand wall 6 of the casing, through which bearings the ends of these members extend. The opposite wall 16 of the casing, adjacent the keeper, has a bearing orifice 17, the keeper-engaging end 6 of the bolt projecting through, and sliding in, this bearing. The bolt is held in position in the casing by its said end 6 and members 8, 9 extending through the bearings 17 and 10, 11 respectively.

It will be seen that, when the handle portion 14 of the bolt is moved downwardly to disengage the end 6 from the keeper, the upper member 8 turns on its bearing 10 while the lower member 9 slides in its bearing 11; and that, if the latch be mounted adjacent the right-hand free edge of a swinging door, so that the ends of the casing be now reversed in position, the downward movement of said handle portion to disengage the bolt from the keeper causes the member 9 to turn on its bearing 11 while the member 8 slides in its bearing 10. It will thus be seen that the same latch may be mounted either at the right-hand or left-hand edge of a swinging door.

An element 20 has a movement in the casing toward and from the keeper, being slidably mounted as by the casing's attaching screws 21 extending through slots 22 in said element. The bolt 5 has a lateral extension, such as the lug 23 extending through an opening 24 in said element 20 and adapted to seat in any one of a plurality of recesses or seats in said element adjacent the outer wall of said opening and arranged transversely to the direction of its movement. The middle one, 25, of these recesses receives this extension 23 of the bolt to hold the same in latching position, and the upper recess 26 receives said extension to hold the bolt retracted to the position seen in Figure 4, while the lower recess 27 receives said extension to hold the bolt in its other retracted position.

A spring 28 abutting at 29 on the wall 16 of the casing, presses said element 20 rearwardly or toward the casing's wall 6, to yieldingly hold said extension 23 in said recesses respectively and to press the bolt's members 8, 9 in their bearings 10, 11.

The invention being intended to be pointed out in the claims, is not to be limited to or by details of construction of the particular embodiment thereof illustrated by the drawings or hereinbefore described.

I claim:

1. A latch comprising: a bolt provided with a lateral extension and having a swinging movement into and out of latching position about an axis offset from the direction of the pressure of the hereinafter-mentioned spring; an element having a movement in the longitudinal direction of the bolt and provided with a plurality of recesses arranged transversely to the direction of its movement receiving said extension in the bolt's latching and retracted positions respectively; a spring pressing said element to yieldingly hold said extension in the recesses respectively.

2. A latch comprising: a bolt provided with a lateral extension and having a swinging movement into and out of latching position about axes offset from the opposite sides of the direction of the pressure of the hereinafter-mentioned spring; an element having a movement in the longitudinal direction of the bolt and provided with a middle recess and recesses spaced from its opposite sides transversely to the direction of said element's movement; a spring pressing said element to yieldingly hold said extension in the middle recess in the bolt's latching position and in the other recesses respectively in the bolt's retracted positions.

3. In a door latch: a pair of spaced bearings; a bolt having a swinging movement into and out of latching position in the keeper and provided with a lateral extension and a pair of members spaced in the bolt's transverse direction, one of said members being movable slidably and the other of said members being movable turnably in the bearings respectively in the bolt's movement; an element having a movement in the longitudinal direction of the bolt and provided with a plurality of recesses arranged transversely to the direction of its movement receiving said extension in the bolt's latching and retracted positions respectively; a spring pressing said element to yieldingly hold said extension in the recesses respectively.

4. In a door latch: a casing having adjacent the free edge of the door a bearing and having a pair of spaced bearings disposed oppositely to the first-mentioned bearing; a bolt having a swinging movement into and out of latching position, said bolt extending through the first-mentioned bearing and provided with a lateral extension and a pair of members spaced in the bolt's transverse direction and extending through said pair of bearings respectively, one of said members being movable slidably and the other of said members being movable turnably in said pair of bearings respectively in the bolt's movement; an element having a movement in the longitudinal direction of the bolt and provided with a plurality of recesses arranged transversely to the direction of its movement receiving said extension in the bolt's latching and retracted positions respectively; a spring pressing said element to yieldingly hold said extension in the recesses respectively.

In testimony whereof I have hereunto set my hand at Grand Rapids, Michigan, this 25th day of September, 1926.

ELMER C. OSBECK.