A. BREITHAUPT.

DOOR LOCK.

APPLICATION FILED MAR. 31, 1913.

1,070,580. Patented Aug. 19, 1913.

Fig. 1,

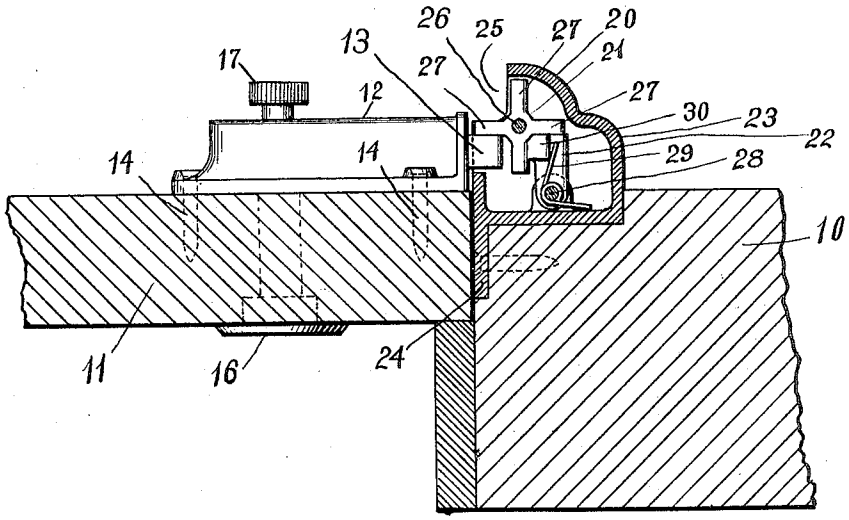
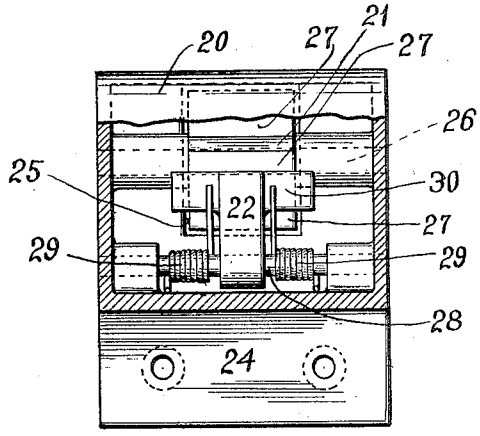


Fig. 2,



WITNESSES

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DOOR-LOCK.

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To all whom it may concern:

Be it known that I, ALWIN BREITHAUPT, a subject of the Emperor of Germany, residing at Hoboken, New Jersey, United States of America, have invented certain new and useful Improvements in Door-Locks, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to door locks, and particularly to such as are known as "latch locks" and are adapted to lock automatically when the door is shut.

One object of my invention is to provide a lock of the character above indicated that shall have the advantages of a non-yielding bolt lock in addition to those incident to the use of latch or spring locks as heretofore constructed.

Other objects of my invention will be set forth hereinafter.

In order that my invention may be thoroughly understood I will describe my invention in the following specification and point out the novel features thereof in appended claims.

Referring to the drawings: Figure 1 is a plan view of a lock constructed in accordance with my invention, a part of the lock and the door casement being shown in section. An end elevation of one of the lock members with its casing broken away is shown in Fig. 2.

Like characters of reference designate corresponding parts in all the figures.

10 designates a portion of a door casing to which a door 11 is hinged on the opposite side in the usual manner.

A lock 12 having a rectangular bolt 13 is secured to the door 11 by screws 14. The bolt is not beveled as has hitherto been necessary for locks of this kind and may be arranged so that it is positively fixed in its locked position instead of being pressed out by a spring, although a spring-pressed bolt may be used if desired. It thus is impossible for any one to pick the lock and press the bolt back from the outside except by the use of a suitable key inserted in a key slot 16. On the inside, the lock has a knob 17 by which the bolt can be withdrawn.

Instead of being secured to the door as shown, the lock may be set into the door in a well-known manner.

The structure of the lock mechanism *per se*, for operating the bolt, forms no part of my present invention and any well-known structure may be employed.

The bolt coöperates with a keeper 20 which is secured to or set into the casing 10, and comprises a rotatable member 21, a pawl 22, and a casing 23. The casing 23 of the keeper has a projecting flange 24 by which it is secured to the side of the door casing, and a hollow body having an opening 25. The member 21 is rotatable on a pivot 26 as an axis and has a plurality (preferably four) of radial striker plate projections 27. The pawl 22 is pivoted on a pin 28 and is pressed into the space between two adjacent striker plate projections by springs 29, which are coiled about the pin 28 and act upon lateral projection 30 of the pawl. One spring is located on each side of the pawl and one end of each spring reacts against the casing. Any suitable means for pressing the pawl against the rotatable member of the keeper may be employed in lieu of the springs shown. The parts are so arranged that the pressure of the pawl 29 against the rotary keeper holds the latter in such a position that one of its striker plates will project outward as shown, in position, to hold the bolt 13 if the door is shut. If the door is open the bolt may be set in its locked position and the door shut, the bolt then so engaging the striker plate as to rotate the member 21 pushing the pawl back into the position in which it is shown in dotted lines in Fig. 1 and to bring another striker plate into position to hold the bolt, when the pawl will be forced back into its original position. The bolt must obviously be withdrawn before the door can be opened since the pawl prevents the rotation of the member in one direction. The pawl not only limits the rotation of the striker member to one direction, but also fixes the various positions of the member and insures a positive movement from one step to the next irrespective of the speed at which the door swings in closing. The pawl is arranged to act on a diametrically opposite striker plate from that which is depended upon for holding the bolt, and is so positioned and constructed, with its axis directly opposite the reacting surface of the striker plate, and its projection 30 extending over the full width of the striker surface as to withstand large faces tending to push the door open when locked.

Various modifications in structural de-

tails may be effected within the spirit and scope of my invention, and I intend that only such limitations be imposed as are indicated in the appended claims.

What I claim is:

1. A keeper for a door lock comprising a hollow body having an opening, a rotatable member within the body having four plane radial striker plate projections arranged to successively extend through the opening in a position parallel with the door, a spring-pressed pawl in the hollow body adapted to yieldingly fit into the angular space between two adjacent striker plate projections in order to position said rotatable member and to rigidly engage a striker plate which is opposite the one extending through the opening in order to prevent the rotation of said member in one direction whereby the keeper is adapted to permit the closure of a door having a coöperating bolt of uniform rectangular section fixed in its locked position.

2. The combination with a door and a lock secured thereto and having a rectangular bolt adapted to be fixed in its extended or locked position, of a keeper comprising a relatively stationary casing having an opening therein, a rotatable member having an axis parallel to the door axis and four uniformly spaced plane radial striker plate projections, and a spring-pressed pawl pivoted with its axis parallel to the axis of the rotatable member and directly opposite the reacting surface of one of the striker plate projections, said spring-pressed pawl being adapted to yieldingly fit into the angular space between two adjacent striker plate projections in order to position said rotatable member and to rigidly engage one of the striker plate projections in order to prevent the rotation of said member in one direction, whereby the keeper is adapted to permit the closure of the door with said lock in its extended or locked position.

In witness whereof, I have hereunto set my hand this 28th day of March in the year 1913.

ALWIN BREITHAUPT.

Witnesses:
WM. O. HEFFEMAN,
WILLIAM H. WHITE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."