Aug. 7, 1928. 1,679,873

E. C. OSBECK

LATCH FOR REFRIGERATOR DOORS AND THE LIKE

Filed May 16, 1924

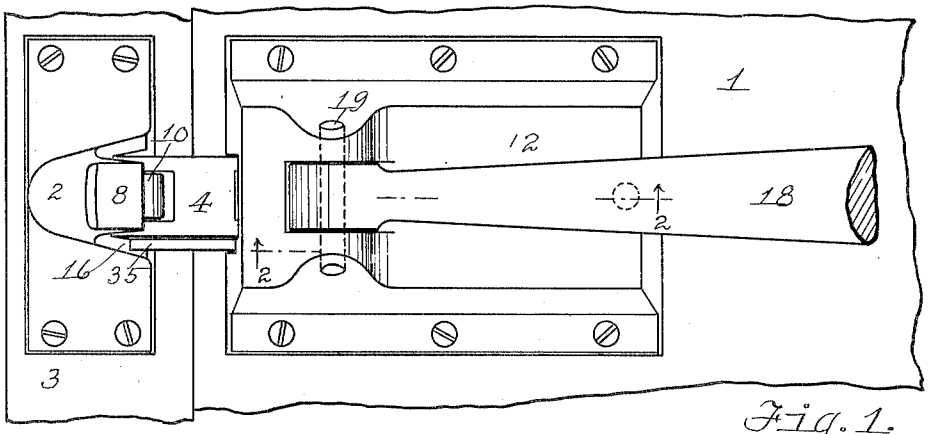


Fig. 1.

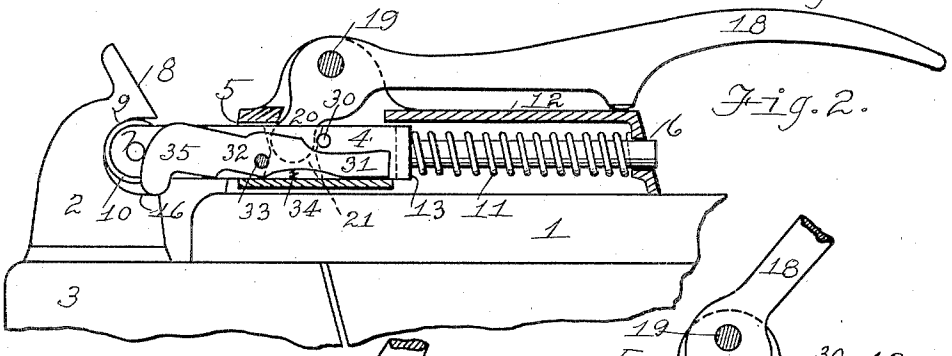


Fig. 2.

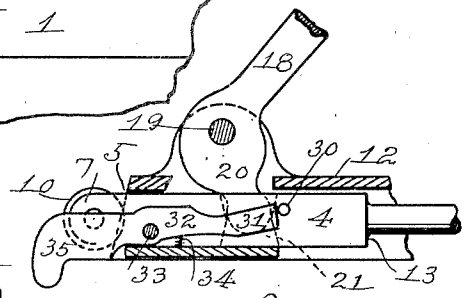


Fig. 3.

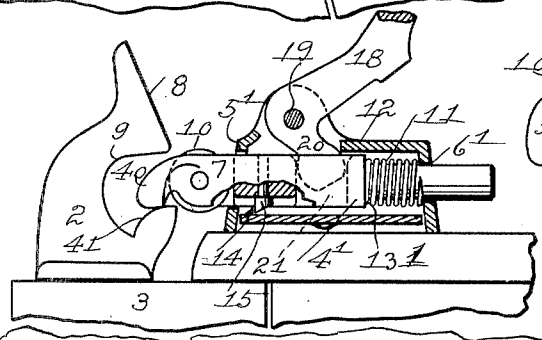


Fig. 5.

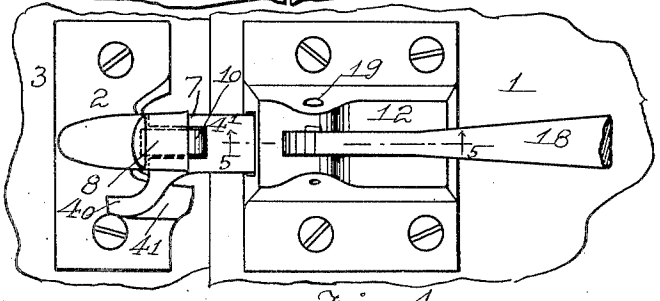


Fig. 4.

Witness:
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UNITED STATES PATENT OFFICE.

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LATCH FOR REFRIGERATOR DOORS AND THE LIKE.

Application filed May 16, 1924. Serial No. 713,644.

The present invention relates to latches for refrigerator doors and the like; and its object is, generally, to provide an improved device of that character whereby such doors may be securely and tightly held shut, and may nevertheless be easily opened.

This and any other and more specific objects hereinafter appearing are attained by, and the invention finds preferable embodiment in, the structure or structures hereinafter particularly described in the body of this specification and illustrated by the accompanying drawings, in which:

Figure 1 is a front view of a latch carried by a swingable door and a keeper therefor carried by the jamb of the door;

Figure 2 is a plan view thereof, certain parts being sectioned on line 2—2 of Figure 1;

Figure 3 is a like view of a portion of the same, certain parts being sectioned on the same line, and showing the bolt in retracted position;

Figure 4 is a face view of a latch carried by a swingable door and a keeper therefor carried by the door's jamb, and illustrating a modified construction; and

Figure 5 is a plan view of the same, certain parts being sectioned on line 5—5 of Figure 4.

In the drawings, my improved latch is shown mounted adjacent the free edge of a swingable refrigerator door 1, the keeper 2 of the latch being mounted on the jamb 3 of the door. The bolt 4 has a longitudinal latching and unlatching movement in bearings 5, 6 its outer end portion 7 being adapted to ride up on the inclined front face 8 of the keeper as the door is swung to nearly its closed position, and to move to a position wherein it wedgingly engages latchingly the inclined inner face 9 of the keeper, said end portion 7 being preferably provided with an anti-friction roller 10. This bolt 4 is yieldingly moved into and held in this wedgingly latching position by a spring 11 pressing between the inner surface of the casing 12 of the latch and the shoulder 13 of the bolt.

In the construction shown in Figures 1, 2 and 3, the bolt has a pin or projection 30 adapted to abut against the inner arm 31 of detent 32 swingably mounted at 33 extraneously of the bolt, when the bolt is retracted to the position seen in Figure 3, the detent being pressed to the position shown in said view to retain the bolt in said retracted position, by a spring 34.

When however, the door is swung toward shut position, the end of the detent's other arm 35 strikes the face portion 16 of the keeper and the detent is swung oppositely, to the position seen in Figure 2, thus releasing the pin 30, whereupon the spring 11 presses the bolt outwardly, thus causing the roller to wedgingly engage the inner face 9 of the keeper to hold the door tightly closed.

The bolt 4 may be retracted against the pressure of the spring 11 by a lever handle 18 fulcrumed at 19 on the door or the latch casing 12 and having an arm 20 engaging in a notch or bearing 21 extending transversely of the bolt.

In the modified construction shown in Figures 4 and 5, the bolt 4^1 moves longitudinally in bearings 5^1 and 6^1. The casing 12 has a bolt-retaining member—the lug or projection 14—and the bearings 5^1, 6^1 (particularly the bearing 5^1) are sufficiently wide in the bolt's lateral direction, i. e. the direction at right angles to the door's outer surface, that the bolt may move thus laterally therein sufficiently to permit the bolt's portion 15, i. e. the pin 15, to be holdingly engaged by said member 14, when the bolt is retracted to the position seen in Figure 3, in which the roller 10 is held from latching engagement with the keeper. When however, the door is swung toward shut position, the bolt's laterally disposed extension 40 strikes and slides along the keeper's laterally disposed bearing 41 and the bolt is thus moved laterally sufficiently to release its pin 15 from the bolt-retaining member 14, whereupon the spring 11 presses the bolt outwardly, thus causing the roller to wedgingly engage the inner face 9 of the keeper to hold the door tightly closed.

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 or embodiments thereof illustrated by the drawings or hereinbefore described.

I claim:

1. In combination with a keeper therefor, a door latch comprising: a slide bearing; a bolt movable longitudinally therein and spring-pressed into latching engagement

with the keeper; a detent mounted in its middle extraneously of the bolt swingably to extreme swung positions within the bearing and spring-pressed into engagement at one of its ends with the bolt to hold the same in non-latching position, and adapted to be swung by its opposite end striking the keeper to a position disengaging the bolt.

2. In combination with a keeper therefor, a door latch comprising: a slide bearing; a bolt movable longitudinally therein and spring-pressed into latching engagement with the keeper; a detent mounted in its middle extraneously of the bolt swingably to extreme swung positions within the bearing and spring-pressed into engagement at one of its ends with the bolt to hold the same in non-latching position, and adapted to be swung by its opposite end striking the keeper to a position disengaging the bolt; a handle swingably mounted extraneously of the bolt and having an arm engaging the bolt for moving the same.

In testimony whereof I have hereunto set my hand at Grand Rapids, Michigan, this 14th day of May, 1924.

ELMER C. OSBECK.