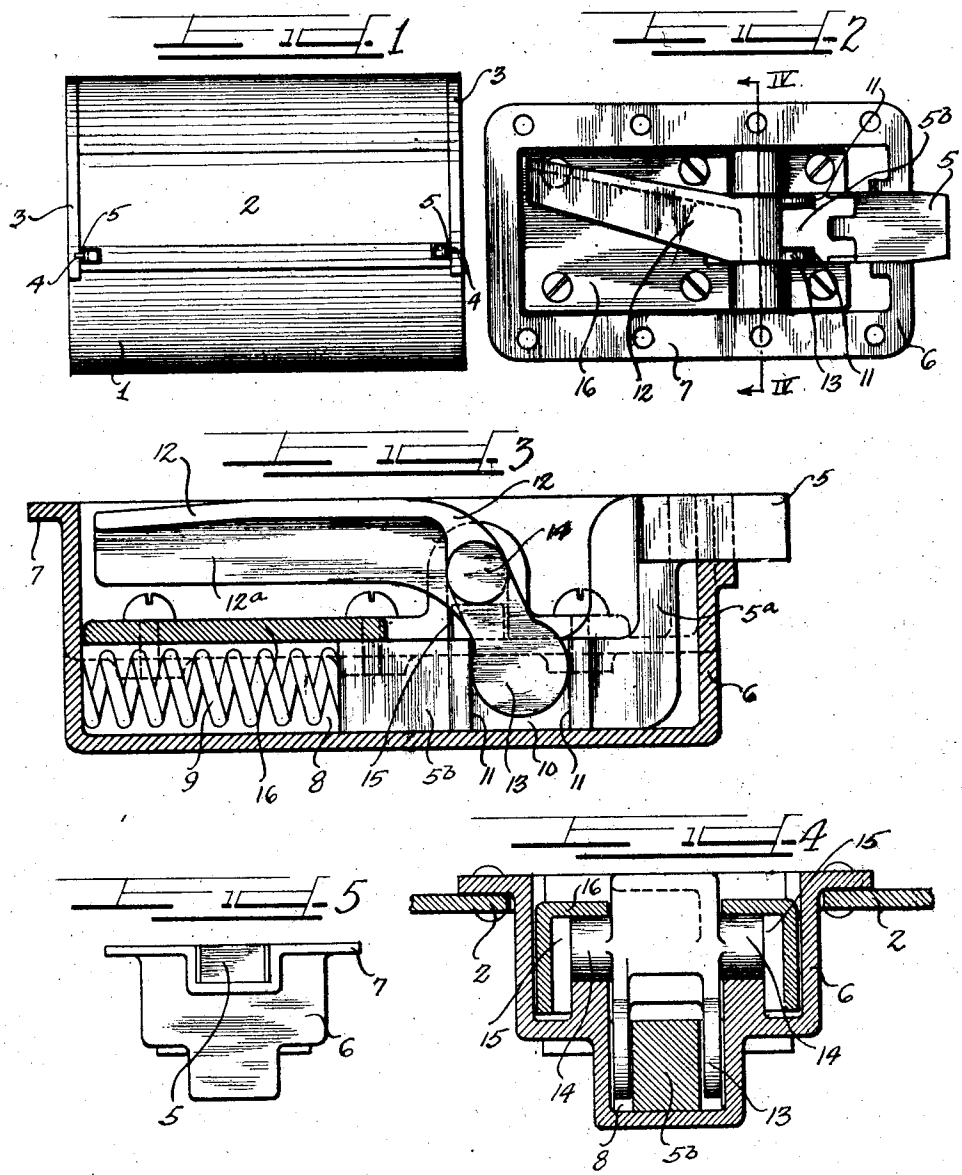
Oct. 18, 1927. 1,645,849

D. BELL

DOOR LATCH

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UNITED STATES PATENT OFFICE.

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DOOR LATCH.

Application filed March 13, 1926. Serial No. 94,428.

This invention relates to a door latch primarily designed for locking or latching the sliding doors of washing machines, but susceptible for use in connection with other doors.

The object of this invention is to provide a simple and readily operable latching mechanism that may be applied to a sliding door on a washing cylinder for locking or latching the same in closed position.

The invention comprises the novel structure and combinations hereinafter described and more particularly pointed out and defined in the appended claims.

In the accompanying drawings which illustrate a preferred embodiment of this invention and in which similar reference numerals refer to similar features in the different views:

Figure 1 is an elevational view of a washing cylinder having a sliding door that is latched in closed position by mechanism involving this invention;

Fig. 2 is a top plan view of the latching mechanism with parts in elevation;

Fig. 3 is an enlarged sectional view of the latching mechanism with parts in elevation;

Fig. 4 is an enlarged sectional view upon the line IV—IV of Figure 2; and

Fig. 5 is a front elevational view of the latching mechanism.

As shown on the drawings:

Referring to the drawings, there is shown a washing machine cylinder 1 having a sliding door 2 which slides under the arcuate members 3 on the cylinder. The members 3 are provided with suitable notches or mortises 4 for receiving the nose of a latch bolt 5 slidably supported in a casing 6 which fits in a suitable aperture in the cover 2 and which is provided with an upper flange 7 secured to the cover.

The bolt 5 has a depending neck 5^a terminating in a horizontal portion or shank 5^b slidably mounted in a guideway comprising a groove or channel formed in the bottom of the casing. A coil spring 9 positioned in said groove is confined between the end wall of the casing and the rear end of the shank of the bolt and is normally effective for projecting the bolt into operative position. The shank of the bolt 5 is provided with an intermediate reduced portion 10 whereby opposed shoulders 11 are formed.

A lever 12 is provided with a downwardly extending bifurcated end 13 which straddles the reduced portion 10 of the shank of the bolt as shown in Figure 4. This bifurcated end is confined between the shoulders 11 as shown in Figure 3. Just above the bifurcated end, the lever 12 is provided with laterally projecting trunnions 14 positioned in downwardly opening bearing slots 15 in a plate 16 secured in the bottom of the casing and covering the groove 8. The forward end of the plate 16 is bifurcated as shown in Figures 2 and 3 to receive the lever 12.

The power arm of the lever 12 extends to the rear of the casing at an oblique angle to the axis of the casing and is provided upon its far-side with a downwardly extending flange 12^a. This structure allows the operator to readily put his fingers under the lever for elevating the same.

As before related, the spring 9 normally projects the latch bolt 5 into latching position. When it is desired to withdraw the bolt, the operator will raise the lever 12 whereby the bifurcated end of the lever will engage the rear shoulders 11 of the reduced portion 10 and retract the bolt 5.

I am aware that many changes may be made and numerous details of construction may be varied through a wide range without departing from the principles of this invention and I therefore do not purpose limiting the patent granted hereon otherwise than necessitated by the prior art.

I claim as my invention:

1. In a door latch, a casing having a groove in its bottom, a latch bolt having a depending neck terminating in a shank slidable in said groove, a spring for impelling said bolt, a lever fulcrumed intermediate its ends, the power arm of said lever extending obliquely to the axis of said casing, the weight arm of said lever being bifurcated and at an angle to the power arm, said shank having a reduced portion in engagement with the bifurcated end of said lever.

2. In a door latch, a housing grooved at its bottom, a latch bolt slidable in said groove and having a reduced portion and a depending neck, a spring within the groove for expelling said bolt, a plate having a bifurcated end and holding said latch and spring in position, a lever pivoted on said plate intermediate the ends of said latch bolt comprising a short bifurcated end ex-

tending through the bifurcated end of said plate and engaging the reduced portion of said latch bolt, and a long member bent to lie obliquely to the axis of and within the housing when the bolt is in locking position.

3. In a door latch, a casing adapted to be secured to the surface of a door and having a groove in its bottom substantiallly the entire length thereof, a bolt comprising an offset nose portion extending outside the casing wall and a shank slidable in said groove and having a reduced portion, a coil spring in the end of said groove to cause movement of said bolt, a plate secured within the housing to hold the spring and bolt in said groove, and a lever pivoted on and extending through said plate comprising a bifurcated end to straddle the reduced portion of the slidable bolt, and a longer arm portion bent to lie within the casing when the latch is in locking position.

4. In a door latch, the combination of a flanged casing having a groove in its bottom, a bolt slidable in said groove and having a reduced portion, a spring in said groove for expelling said bolt, securing means to hold said spring and bolt in position, a lever fulcrumed on said securing means intermediate the ends thereof comprising a short bifurcated end member adapted to straddle the reduced portion of said slidable bolt, and a longer bent member adapted to lie within the casing when the bolt is in locking position.

In testimony whereof I have hereunto subscribed my name.

DANIEL BELL.