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E. J. PERRY

1,636,069

LATCH

Filed Sept. 5, 1925

Fig. 1.

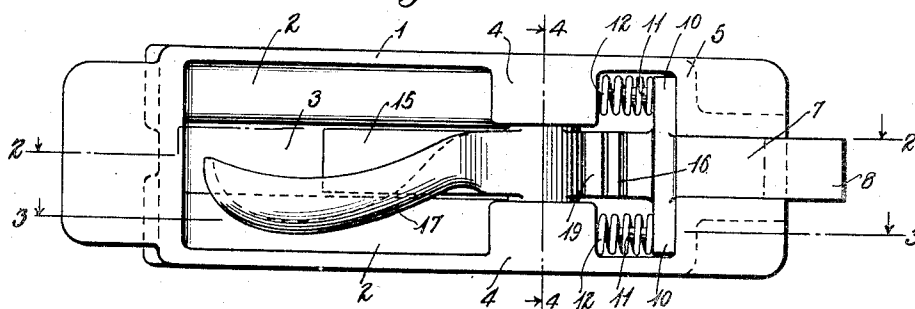


Fig. 2.

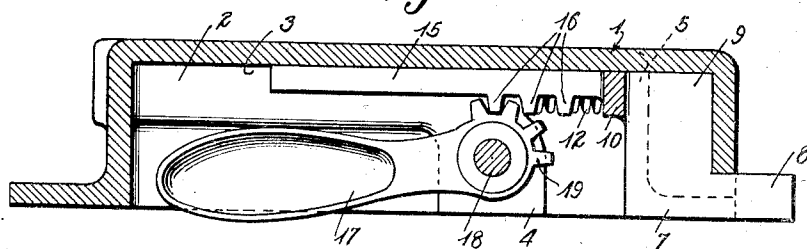


Fig. 3.

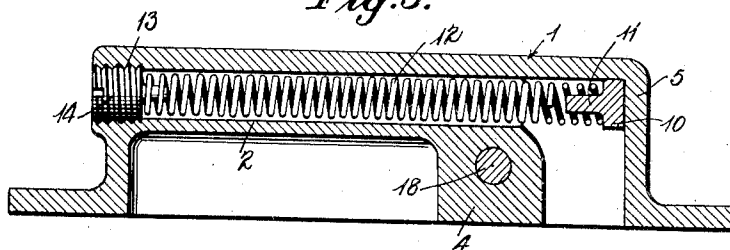
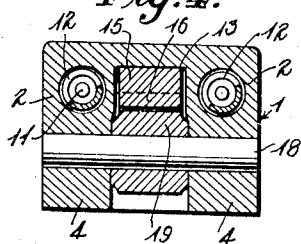


Fig. 4.



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LATCH.

Application filed September 5, 1925. Serial No. 54,706.

The invention relates to improvements in a latching device, and is primarily adapted for use in connection with washing machines for rotating cylinders.

It is an object of the invention to provide a latch having a bolt which will normally remain in an operative position, and one in which the elements are entirely housed in a casing so that the latch may be carried by a rotating part without danger of being injured.

It is a further object of the invention to provide a latch structure with efficient means for urging the latch bolt into a locked position and for retaining the operating handle in a suitable housing when the latch bolt is in such a position.

In the accompanying drawings,

Fig. 1 illustrates a view looking at the under side of the latch,

Fig. 2 is a section on line 2—2 of Fig. 1,

Fig. 3 is a section on line 3—3 of Fig. 1, and

Fig. 4 is a section on line 4—4 of Fig. 1.

Referring now more particularly to the drawings, wherein like reference characters indicate corresponding parts, the numeral 1 designates a housing. This housing is preferably composed of metal or the like. The housing 1 is formed with a pair of separated elongated chambers 2 extending along each side thereof with a suitable space 3 therebetween. The housing furthermore has integral lugs 4 projecting at right angles to the chambers 2 near the terminus of said chambers. The chambers terminate short of the forward end 5 of the housing which receives a suitable reciprocating latch bolt 7 to be later described. The latch bolt 7 has a locking head 8 which passes through a slot in the forward end 5 of the housing, the lower surface of the head lying flush with the bottom walls of the housing. The latch bolt is provided with an extension 9 disposed at right angles to the head 8 at the upper end of which there projects lateral lugs 10 lying in alinement with the chambers 2. Each lug carries a centering pin 11 to receive a centering and coil spring 12, one of these springs being disposed in the chambers 2 and serving to normally urge the latch bolt in a locked position, that is, in a position in which the head 8 is projected from the housing. These springs may be con-

structed of any desired metal and each spring is preferably introduced to its chamber 2 by providing in the housing at its rear ends openings 13 receiving removable closures 14 threaded therethrough. Obviously, by removing these closures springs may be inserted in the chambers 2.

The latch furthermore has an elongated slidable bar 15 which reciprocates in the guide-way 3 formed between the walls of the chambers 2. This bar may be termed a "rack" bar inasmuch as it has, on its outer face, a series of teeth 16 which are engaged by an operating lever to be later described when the rack bar is to be moved to operate the latch.

Journalled in the shoulders 4 of the housing and above the rack bar 15 is an operating lever 17 mounted on suitable pivots 18 carrying a gear segment 19 which is adapted to mesh with the gear teeth 16. The springs disposed within the chambers 2 serve to normally urge the latch bolt forwardly. This movement is transmitted to the handle 17 by reason of the rack and pinion connection between this handle and the latch bar. Such movement normally holds the handle within the plane of the housing so that the handle will engage no obstructions though placed on a movable element. To release the latch bolt, however, it is only necessary to grasp the handle 17 and lift the same about its pivot 18 from the housing, which movement shifts the latch rearwardly by reason of the coacting gears 16 and 19. This rearward movement of course takes place against the tension of the springs in the chambers 2, and the minute the handle 17 is released the springs again urge the latch bolt forwardly.

Having thus described my invention, what I claim is:

1. A latching device comprising a housing, a pair of separated chambers therein, a guideway between said chambers, springs disposed within said chambers, a reciprocating bolt in said housing having a locking head normally urged into an operative position by the springs in said chambers, a handle disposed in said housing, and a connection between said handle and said bolt for drawing the bolt to an inoperative position against the tension of said springs.

2. In a latch, the combination with a hous-

ing, of a pair of separated longitudinal chambers therein, a guideway between said chambers, a bolt disposed within said housing and having a portion riding in said guideway, springs in said chambers coacting with said bolt for urging the same forwardly, a handle pivotally mounted in said housing adjacent said bolt, and an operative connection between said handle and said bolt for retracting the bolt upon the operation of the handle.

3. In a latch, the combination with a housing, of a pair chambers therein, a guideway between said chambers, a sliding latch bolt disposed within the housing and having a head adapted to project through an opening in the housing, springs in said chambers normally urging said bolt forwardly, said bolt having disposed thereon a series of teeth, an operating handle pivotally connected to the housing, and a pinion on said handle cooperating with said teeth on said latch element, substantially as described.

In testimony whereof I affix my signature.

EMANUEL J. PERRY.