June 21, 1932. C. C. BATINA 1,864,177

LATCH

Original Filed May 31, 1928

FIG. 3

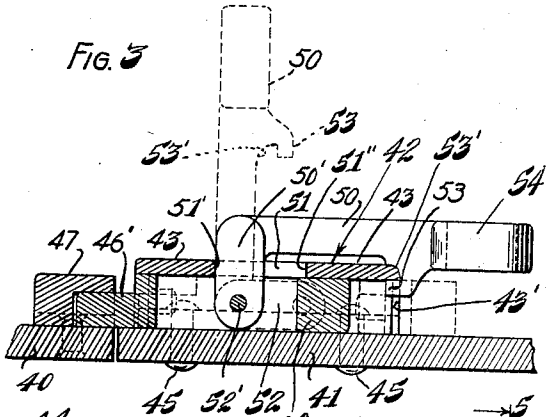


FIG. 2

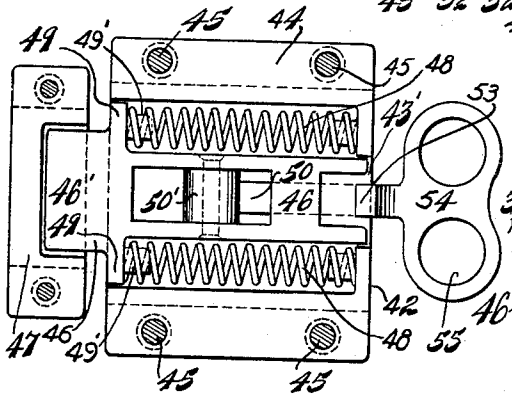


FIG. 1

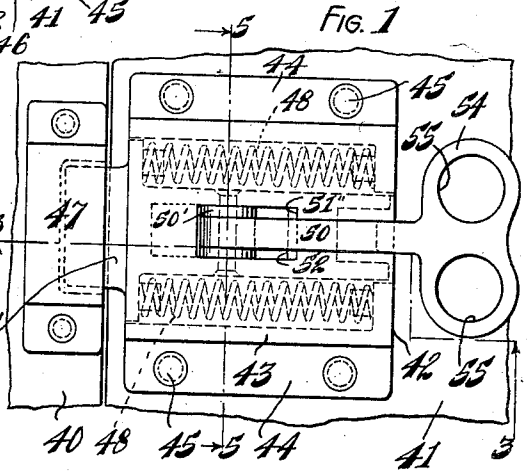


FIG. 4

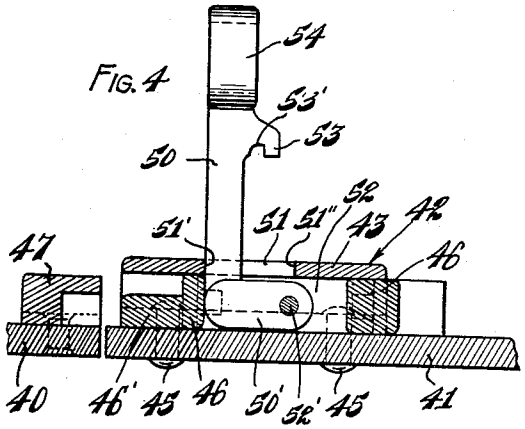
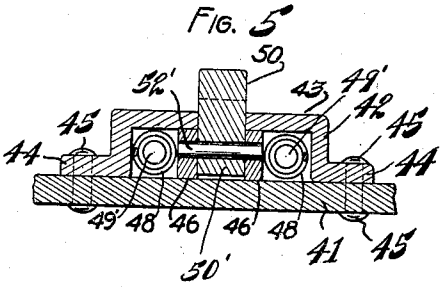


FIG. 5



WITNESSES:
R. G. Larsson
F. C. Appleton

INVENTOR:
CHARLES C. BATINA,
By Joshua R. H. Potts
HIS ATTORNEY.

Patented June 21, 1932 1,864,177

UNITED STATES PATENT OFFICE

CHARLES C. BATINA, OF CHICAGO, ILLINOIS

LATCH

Original application filed May 31, 1928, Serial No. 281,653. Divided and this application filed April 6, 1929. Serial No. 353,126.

This invention relates to latches and the particular subject matter thereof embodied in this application constitutes a division of applicant's copending application for patent Serial Number 281,653, filed May 31, 1928, for improvements in washing machines, issued as Patent No. 1,805,862, dated May 19, 1931.

The present invention has for its principal objects to improve generally upon latches or locking devices of the spring-pressed type; to provide a structure which will securely hold in its locking relation and yet is easily released at the will of the operator and having provision for releasably securing the bolt element in retracted position; and to attain certain advantages as will more fully appear in the following description.

The invention consists in the novel construction and in the parts and combinations and arrangements of parts hereinafter described and claimed.

In the accompanying drawing,

Fig. 1 is a top plan view illustrating an adaptation of a latch to the meeting portions of two parts to be locked according to the present invention;

Fig. 2 is an inverted plan view of the latch detached;

Fig. 3 is a longitudinal section taken on or about the line 3—3 of Figure 1;

Fig. 4 is a view similar to Figure 3 showing the latch bolt in retracted position and the handle member in the relative position for holding the latch bolt retracted; and

Fig. 5 is a cross-section taken on or about the line 5—5 of Figure 1.

Referring now to the drawing, the numerals 40 and 41 designate the meeting portions of two members to be locked together. Said members 40 and 41 respectively represent cooperating meeting portions corresponding to the guide member 30 on the washing machine cylinder 23 and the cooperating cover member 29 in the structure set forth in the said copending application Serial No. 281,653, but, obviously, as far as the present invention is concerned, these meeting portions 40 and 41 may be parts of various other devices or structures.

The latch body as designated generally by the numeral 42 comprises a rectangular raised housing 43 having the base flanges 44 which are riveted or otherwise secured to the member 41 as at 45. Slideable within the housing 43 is the bolt element 46 having the forwardly extending lug 46′ which is adapted to engage in the socket portion of a keeper 47 secured on the adjacent portion of the member 40. The rearward main body portion of the latch bolt is restricted in width and is slidably fitted to an opening 43′ in the rear wall of the housing 43.

The bolt element 46 is normally maintained in a forwardly extended or closed position by means of compression springs 48 whose end portions respectively abut the rear wall of the housing 43 and lateral shoulders 49 a the forward portion of the bolt element 46, said springs being held in place by bosses 49′ provided therefore on said wall portions and lateral extensions. A handle member 50 having an L-shaped extension 50′ is inserted through a slot 51 in the top wall of the housing 43 and into a slot 52 provided in said latch bolt 46, said portion 50′ of the handle member 50 being pivoted on the pin 52′ which extends transversely of said latch bolt.

The handle member 50 is provided with a lug 53 which is undercut or notched as at 53′ so as to engage the edge portion of the top wall of the housing 43 when the latch bolt 46 is in its forwardly extended or closed position as shown in Figures 1 to 3 inclusive.

Preferably, the handle member 50 has a widened end portion 54 in which apertures 55 are provided for the engagement of the operator's fingers in manipulating the latch bolt as will be now described.

As hereinbefore stated, latch bolt 46 is normally pressed forwardly by the springs 48, whereby the extention 46′ is yieldably held in engagement with the keeper 47, at which time the notched lug 53 of the handle member 50 is engaged with the adjacent edge portion of the top wall of the housing 43, as best shown in Figure 3. By the peculiar construction and arrangement herein illus-

trated and described, the springs 48 function not only to press the latch bolt 46 with its portion 46′ in engagement with the keeper 47, but said springs also act to hold the handle member 50 with its notched lug 53 in engagement with the marginal portion of the housing 43, which is of material advantage in that the liability of the handle member becoming accidentally moved is minimized.

When it is desired to release the latch bolt from engagement with the keeper 47, it is readily retracted by grasping the apertured end portion 54 of the handle member 50 and moving it longitudinally a distance sufficiently to disengage the notched lug 53 from the marginal portion of the housing 43 and then swinging said handle member away from the member 41 on which the latch is mounted and thereby bringing the corner portion of the handle member into engagement with the end portion 51′ of the slot 51 in the top wall of the housing 43, said handle member, of course, having been first moved longitudinally until its angular extension 50′ had engaged or nearly engaged the opposite end portion 51″ of said slot 51, and by a continued swinging movement of said handle member 50 on its pivot 52′ and with its corner portion in slidable engagement with the end portion 51′ of said slot 51 the latch bolt 46 is moved further into retracted position; and in the final retracted position of said latch bolt, as shown in Figure 4, said handle member 50 has been moved through approximately an angle of 90 degrees, or at substantially right angles to its normally closed position as shown in Figure 3, in which final position of the parts they are releasably locked by the action of the compressed springs 48 exerting their force to hold the portion of the handle member 50 in the region of its right angular extension 50′ in engagement with the end portion 51′ at the slot 51 in the housing 43.

A latch of the character of the present invention is of material advantage, particularly in cases where a multiplicity of latches are required and have to be opened or released by a single operator. That is to say, it is an easy matter for the operator to grasp the handle member to retract the latch bolt and then shift the handle member into position to retain the latch bolt in its retracted position and continuing these operations until all of the respective latches have been opened. To the same advantage the latches may obviously be closed.

While a preferred construction has been illustrated and described for carrying the present invention into effect, it is understood that this is capable of considerable variation and modification without in the least departing from the spirit and scope of the invention as defined by the appended claim. The invention, therefore, is not limited to the specific details of construction shown in the accompanying drawing.

Having described my invention, which I claim as new and desire to secure Letters Patent;

A latch comprising a casing, a bolt slidable longitudinally within said casing and being normally projected in locking position, said bolt being provided with lateral shoulders adjacent its forward end, a pair of compression springs disposed on opposite sides of said bolt and interposed between the respective shoulders and the opposed inner wall surfaces of said casing, said bolt and said casing being provided with cooperatively coincident longitudinal slots, and a substantially L-shaped handle member, the end of one leg portion of which is pivotally secured within the slotted portion of said bolt and said leg being normally projected through the slot in said casing, the other leg of said handle member extending normally substantially parallel with the longitudinal axis of said bolt with its end projected beyond said casing and being provided with a widened end portion having finger engaging apertures, a notched lug on said handle member for releasable interlocking engagement with said casing when said bolt is in normally projected locking condition, said first mentioned leg portion of said handle member being located entirely within the longitudinal slot of said bolt in the retracted position of the latter, and the second mentioned leg portion of said handle member engaging the end of the slot in said casing to hold said bolt in retracted position.

In testimony whereof I have signed my name to this specification.

CHARLES C. BATINA.