July 9, 1929. W. E. WREAD 1,720,641

LATCH STRUCTURE

Filed Sept. 4, 1926

Fig. 1

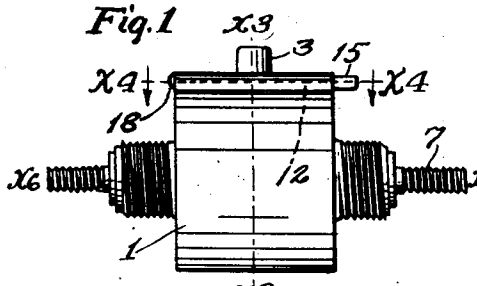


Fig. 2

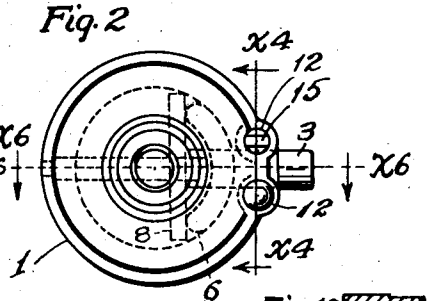


Fig. 3

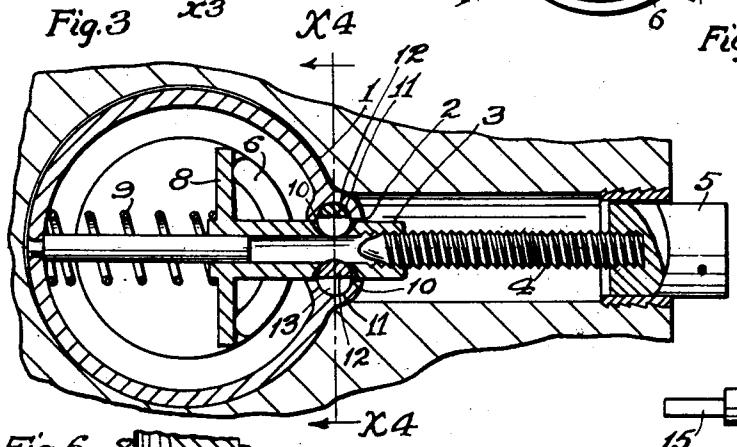


Fig. 10

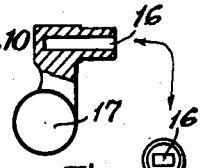


Fig. 9



Fig. 5



Fig. 6

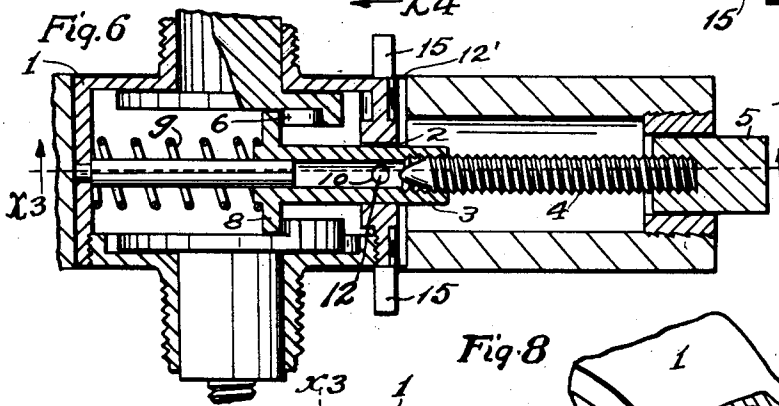


Fig. 7

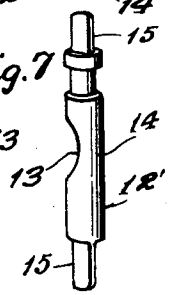


Fig. 8

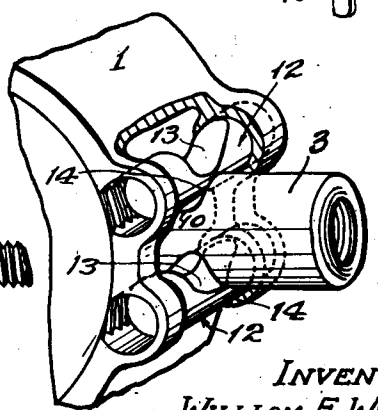
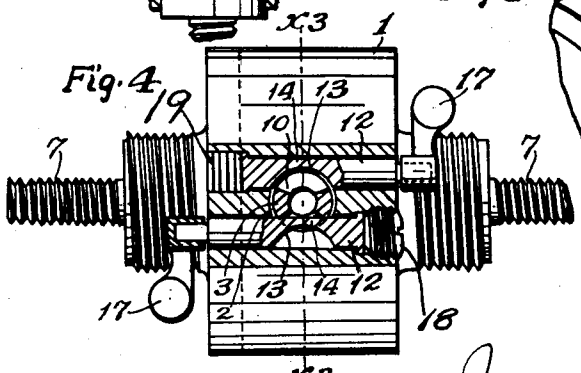


Fig. 4



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Patented July 9, 1929. 1,720,641

UNITED STATES PATENT OFFICE.

WILLIAM E. WREAD, OF LOS ANGELES, CALIFORNIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO McKINNEY MANUFACTURING COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

LATCH STRUCTURE.

Application filed September 4, 1926. Serial No. 133,631.

One object of the invention is to make simple and certain provision whereby a bolt may be positively dogged and whereby with a slight change the latch can be made to serve the various purposes.

I provide a notched element or connection to which the bolt is fixed and notched pins which in one position are outside the notch of such element, so that the bolt member may be positively dogged from either side of the closure, and when turned is inside the notch of such element.

Another object is to construct a fastening device of this character which will be easy to assemble, and which is adapted to be certain in its operation for the particular use to which it may be applied.

In carrying out this invention, I employ elements of construction and features of arrangement that are described and claimed in my application, Ser. No. 53,548; filed August 31, 1925 and certain applications filed on the 4th day of September, 1926, to wit:—Serial No. 133,627; Serial No. 133,628; and Serial No. 133,632.

Other objects, advantages and features of invention may appear from the accompanying drawing, the subjoined detailed description and the appended claims.

The accompanying drawing illustrates the invention.

Figure 1 is a side elevation of a latch constructed in accordance with this invention in one of its forms, omitting one of the pins and showing no pin operating handle.

Fig. 2 is an end elevation of a latch of the character or form shown in Fig. 1 with two pins in place; no pin handle being shown.

Fig. 3 is a section on a line indicated at x^3, Figs. 1, 4 and 6 of a latch with two pins, one of which is in bolt dogging position and the other in bolt freeing position.

Fig. 4 is a broken section mainly on line indicated at x^4, Figs. 1, 2 and 3, showing the pin latch as arranged for a pass door or division door.

Fig. 5 is a view of one of the pins shown in Figs. 1, 2, 3 and 4.

Fig. 6 is a broken section showing a modification of the structure of Figs. 1, 2 and 3.

Fig. 7 is a detached view of the double headed pin shown in Fig. 6.

Fig. 8 is an enlarged fragmental perspective view of the housing and bolt connection in position to be dogged by pins, fragments of which are shown.

Fig. 9 is a view of one of the pin handles, looking into the socket thereof.

Fig. 10 is a side view of one of the handles sectioned to show the socket.

In Fig. 3 the latch is shown as installed in a door closure, a fragment of which is shown in vertical section.

The latch housing 1 is constructed with a way 2 for a bolt member 3 which is shown as threaded and adapted to receive a threaded shank 4 of the bolt 5. Said bolt member is mounted in its housing and adapted to be reciprocated therein by suitable means as a cam 6 operated by a shank 7, thereby operating the tappet 8 to retract the bolt member in one direction to be returned by a spring 9.

The bolt member 3 is provided with one or two side notches as at 10, and the housing is provided with two pin ways 11 arranged at right angles to the bolt member 2 and adapted to receive a rotary pin 12 that is notched as at 13 to accommodate the unnotched portion of the bolt member 3, so that when the pins are turned with their notches toward the bolt member, said member is free to be reciprocated axially in the way 11, and when the pin is rotated the dogging limb 14 of the pin will enter the notch 10 of the bolt member, thus preventing reciprocation of the bolt member.

Various arrangements of the invention may be made, as for instance, where it is desired to have a latch that can be latched and unlatched from only one side, as for instance the door of a closet, only one pin may be used if desired, and such pin will be mounted with its head or handle shank 15 projected from the side of the latch that is to be outside of the door when the door is fastened. This is indicated in Fig. 1, and the shank 15 of such dogging pin is shown in Fig. 2, and by reference to Fig. 4 it will be understood that one of the pins may be omitted without in any way interfering with the operation of the other pin, and it is also seen that where it is desired the structure is such as to allow the bolt member to be positively fastened from either side of the closure, so that the occupant of the room on one side of the door can fasten the door against the occupant of the room on the other side of the door, and no tampering

of the latch from one side of the door can affect the fastening from the other side of the door.

In the forms shown in Figs. 6 and 7, the pin 12′ is provided at each end with a handle shank 15 by which it may be revolved.

This form of pin latch shown in Fig. 6 is particularly applicable for the doors of bathrooms in which it is desired to have intentional privacy without excluding any person likely to be permitted to enter, as for instance a child can dog the bolt by turning the handle and thus rotating the pin, but the parent or nurse has the option of opening the door by operating the other handle.

The heads or shanks 15 of the pins nonrotatably fit in sockets 16 in the handle 17 so that by manipulating the handle, the pin may be turned axially to bring the notch 13 into position to allow reciprocation of the bolt connection.

The pins may be secured in the bolt member in various ways, as by the screw 18 or by the facing piece 19 fitted in the end of the latch.

In practical use with any of the latches, the dogging of the bolt is accomplished by turning the dogging pin so that its dogging limb 14 will be in the notch 13 of the bolt member.

I claim:—

1. A pin latch for bolts comprising in combination a closure housing having a way for a bolt member and transverse ways at each side of the bolt way, a bolt member in said bolt way provided with notches, pins in said pin ways each provided with a notch, each of said pins being rotatable to turn its notch into position to accommodate the unnotched portion of the bolt member, the unnotched portion of each pin being adapted to enter a notch of the bolt member thereby to prevent reciprocation of the bolt member from either side of the closure.

2. A latch unit comprising a body, a draw bolt comprising a crosshead member reciprocally mounted in said body, a sleeve extending from said crosshead, a latch member threaded to said sleeve; yielding means urging said crosshead and latch member outwardly from said body; a retracting member mounted in said body; means on said retracting member adapted to engage said crosshead to retract said draw bolt; means to actuate said retracting member; and rotatable means mounted in said body adapted to engage said draw bolt to prevent movement thereof and actuation of said retracting members.

3. A latch housing comprising a substantially cylindrical shell provided on one side with a way to receive a bolt connection and provided adjacent such way with an external rib adapted to be bored to receive a pin for dogging the bolt connection, the rib extending across one face of the shell.

4. A latch housing that is mainly cylindrical and provided on one side with a way to accommodate a bolt connection, and provided with ribs on opposite sides of the way adapted to be bored to accommodate dogging pins with which the latch may be provided for the purpose of dogging the bolt connection, the ribs being parallel to the axis of the housing and extending across one face thereof.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 28th day of July, 1926.

WILLIAM E. WREAD.