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REVERSABLE DRAWER AND DOOR PULLS AND LATCHES

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2 Sheets-Sheet 1

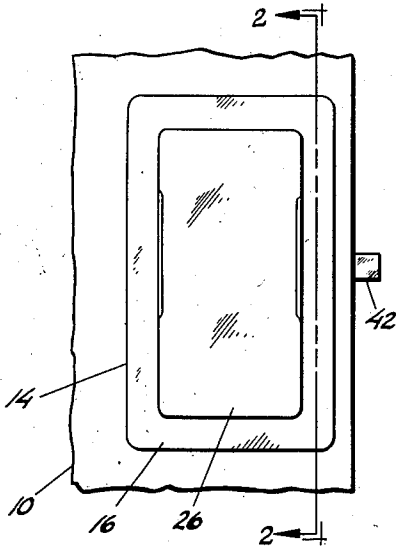


FIG. 1

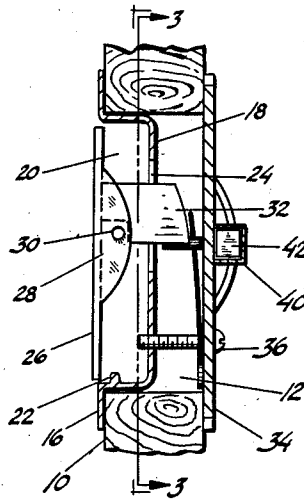


FIG. 2

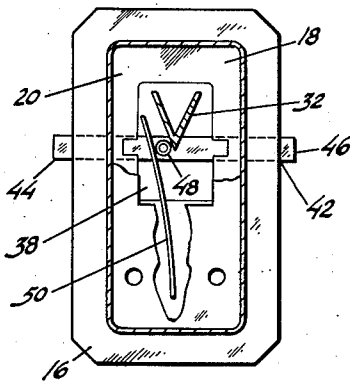


FIG. 3

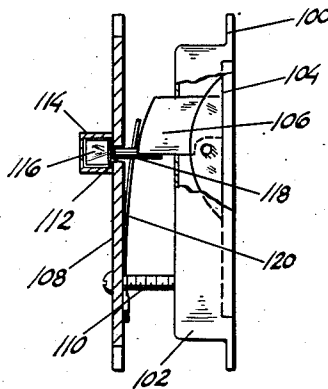


FIG. 4

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2 Sheets-Sheet 2

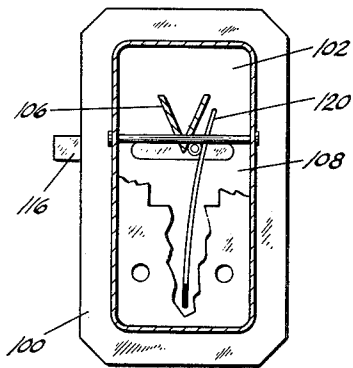


FIG. 5

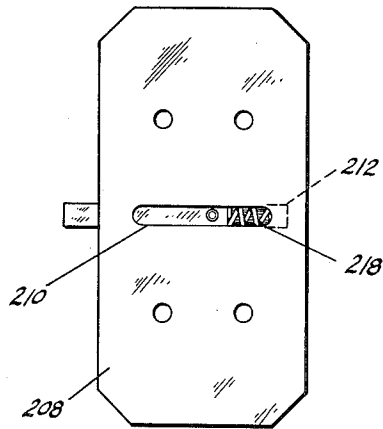


FIG. 6

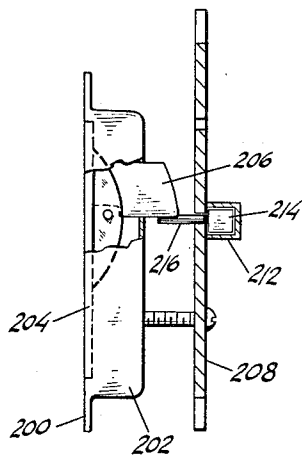
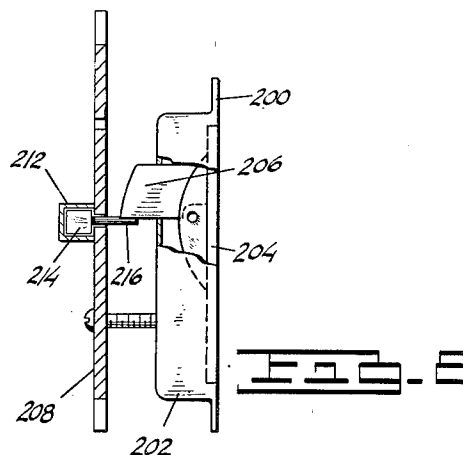


FIG. 7



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## REVERSABLE DRAWER AND DOOR PULLS AND LATCHES

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5 Claims. (Cl. 292—169)

This invention relates to door and drawer fittings and more particularly to door and drawer latches and pulls.

The invention comprehends a combined latch and pull for doors and drawers having a minimum of stamped parts which may be manufactured at low cost and quickly assembled and easily and quickly installed and in which the latch may be readily reversed for either right or left latching.

An object of the invention is to provide a combined latch and pull for doors and drawers characterized in that the pull serves as an actuator for the latch and that the latch is reversible for either right or left latching and further characterized in that when installed the pull is substantially flush with the face of the door or drawer on which used, hence eliminating projecting parts which would normally result in personal injury.

Another object of the invention is to provide a combined latch and pull having a minimum number of parts so connected to one another that slight movement of the pull serves to actuate the latch and to provide a finger grip for opening the door or drawer.

An additional object is to provide a combined latch and pull for a door or drawer characterized in that it will be simple and inexpensive in construction, highly efficient in use, durable in service and a general improvement in the art.

With these and other objects in view which may be incident to my improvements the invention consists in certain structural parts and combinations thereof as will appear from the following description when taken in connection with the drawings forming a part of this specification and in which:

Figure 1 is a front elevation of a fragmentary section of a door illustrating the invention as installed;

Figure 2 is a vertical sectional view taken substantially on line 2—2, Figure 1;

Figure 3 is also a vertical sectional view taken substantially on line 3—3, Figure 2;

Figure 4 is a vertical sectional view of a combined latch and pull illustrating a modification of the invention;

Figure 5 is a vertical sectional view taken substantially on line 5—5 of Figure 4;

Figure 6 is an elevational view of a retainer plate illustrating another modification;

Figure 7 is a side elevation of the modification employing the retainer plate illustrated in Figure 6; and

Figure 8 is a side elevation illustrating the reverse side of the structure shown in Figure 7.

Referring to the drawings for more specific details of the invention 10 indicates a fragment of a door having a cut-out section 12, the purpose of which will hereinafter appear.

A stamping 114 includes a substantial rectangular rim or flange 16 and a central portion 18 drawn to provide a deep rectangular recess or pocket having its wall 20 normal to the rim. One end of the wall is struck to provide a lug or stop 22 extended into the recess adjacent

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the rim and the bottom of the recess is cut away to provide an opening 24.

A rectangular plate 26 has oppositely disposed tabs 28 normal to the face of the plate. As shown, the tabs extend for a considerable distance along the side edges of the plate so as to lend strength and rigidity thereto and the tabs have aligned openings registering with corresponding openings in the side walls of the pockets and spaced considerably above the horizontal axis of the plate and a pintle 30 received by the openings in the tabs and the side walls of the pocket serves to pivotally support the plate in the opening of the pocket where it normally rests on the stop 22 in the same plane and/or flush with the rim 16 and fixedly secured to the back of the plate 26 is a V-shaped push arm or force transmitting member 32 extended through the opening 24 in the bottom of the pocket 20, the purpose of which will hereinafter appear.

A retainer plate 34 flapped against the back of the door 10 over the opening 122 and secured to the bottom of the pocket as by screws 36 serves to retain the pull and latch against displacement. The retainer plate has a central depression 38 the wall of which is transversely slotted to provide a rigid support for a rectangular housing 40 suitably secured to the retainer plate 40 for the reception of a slide bolt 42 characterized in that its opposite ends 44 and 46 are beveled reversely with relation to one another so that it may function as either a right or left hand latch, and a pin 48 carried by the slide bolt is located substantially central of the length of the bolt and extends laterally therefrom for cooperation with either side of the V-shaped arm or force transmitting member 32, and a leaf or wire spring 50 having one end secured to the retainer plate 34 and its other end in engagement with the pin 48 serves to maintain the pin against either side of the V-shaped arm or force transmitting member according to usage of the latch. To reverse the latching of the bolt it is only necessary to remove the back plate and shift the spring so as to press the pin against the reverse side of the arm 32.

A modification of the invention is shown in Figures 4 and 5. In this modification the rim 100, the pocket 102, the plate 104 and the V-shaped arm or force transmitting member 106 are identical to corresponding parts in the preferred embodiment. As shown, a retainer plate 108 secured to the bottom of the pocket 102 as by a screw 110 has therein a transverse slot 112 and a housing 114 over the slot for the reception of a bolt 116 carrying a pin 118 extended through the slot for cooperation with the V-shaped arm or force transmitting member, and a spring on the retainer plate serves to urge the pin against the arm. In this embodiment in order to reverse the catch it is necessary to remove the pin 118 and bolt 116 and turn the bolt so as to operate in the opposite direction.

A further modification of the invention is illustrated in Figures 6, 7 and 8. In this embodiment of the invention the rim 200, the pocket 202, the trip and pull 204 and the V-shaped arm 206 on the back of the trip and pull are of the same structure as that of the corresponding parts of the preferred embodiment. In this structure a retainer plate 208 has a transversely disposed slot 210 and a housing 212 over the slot has an open end and a closed end, and a bolt for cooperation with the V-shaped arm and a coiled spring interposed between the bolt 214 and the closed end of the housing serves to urge the pin against the V-shaped arm. This type of combined pull and latch is reversible for either right or left latching simply by turning the retaining plate 208 to position the bolt on the side desired.

In both the preferred and modified forms of the invention by pressing the pull trip plate the bolt is retracted as

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the plate is swung outwardly from the pocket to provide a finger grip for opening the drawer or door and when released the pull trip plate swings back against the stop and simultaneously the bolt is moved to latching position under the influence of the spring.

Although the invention has been described in connection with certain specific embodiments, the principles involved are susceptible of numerous other applications that will readily occur to persons skilled in the art. The invention is, therefore, to be limited only as indicated by the scope of the appended claims.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent is:

1. A reversible combined pull and latch comprising two parts pivotally connected to one another, a V-shaped force transmitting member carried by one of the parts, a retainer plate detachably secured to the other part, a bolt slidable on the retainer plate, a pin carried by the bolt for cooperation with either one or the other arms of the V-shaped force transmitting member and a spring urging the bolt outwardly.

2. A reversible combined pull and latch comprising a fixed part, a movable part pivoted to the fixed part, a V-shaped force transmitting member on the movable part, a retainer secured to the fixed part, a bolt slidable on the retainer, a pin carried by the bolt for cooperation with either one or the other arms of the V-shaped force transmitting member and a shiftable spring on the retainer for urging the bolt outwardly in either direction.

3. A reversible combined pull and latch comprising a stationary member, a movable member pivotally connected to the stationary member, a force transmitting member fixedly secured to the movable member having two force applying parts, a retainer secured to the stationary member, a bolt slidable on the retainer, a lateral pin carried by the bolt adapted to engage either one or the other of the force applying parts, and a shiftable

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spring on the retainer for urging the pin into engagement with either or the other of the force applying parts.

4. A reversible combined pull and latch comprising a rectangular member having a pocket and a marginal flange, a tiltable member in the pocket flush with the flange, a member having corresponding oppositely disposed force transmitting parts supported on the tiltable member and extended through the pocket, a retainer secured to the pocket, a reversible bolt slidable on the retainer, a pin carried by the bolt for cooperation with either one or the other of the force transmitting parts and a spring on the retainer shiftable to urge the pin against the force transmitting member for movement of the bolt in either direction.

5. A reversible combined pull and latch comprising a rectangular case having a pocket provided with an opening in the bottom thereof, a tiltable member pivoted in the pocket flush with the rim, member having two corresponding oppositely disposed force transmitting parts fixedly secured to the back of the tiltable member and extended through the opening in the bottom of the pocket, a reversible retainer secured to the bottom of the pocket, a bolt slidable on the retainer, a pin extended laterally from the bolt for cooperation with either one or the other of the force transmitting parts and a spring secured to the retainer for urging the pin against either one or the other of the force transmitting parts for movement of the bolt in either direction of movement.

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