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G. A. WELLMAN

2,038,462

CLOSURE FASTENER

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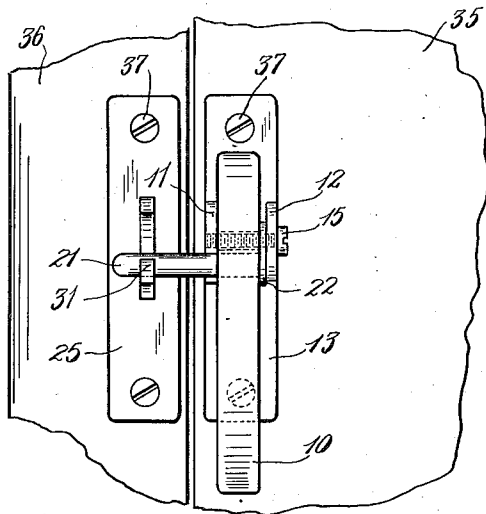


Fig. 1

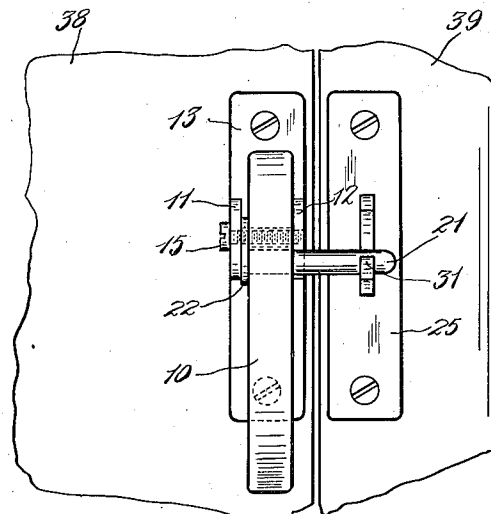


Fig. 2

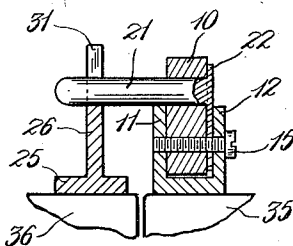


Fig. 3

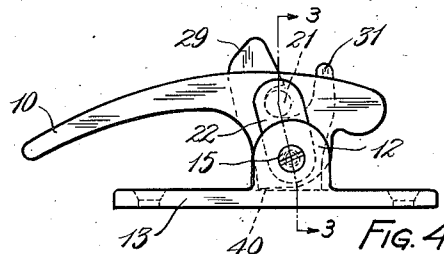


Fig. 4

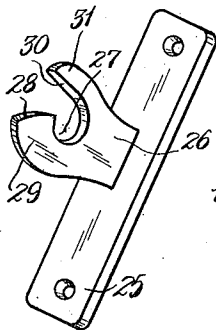


Fig. 5

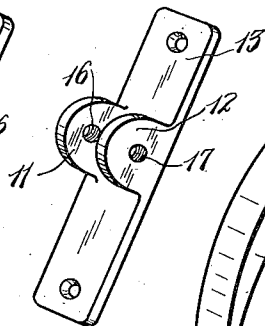


Fig. 6

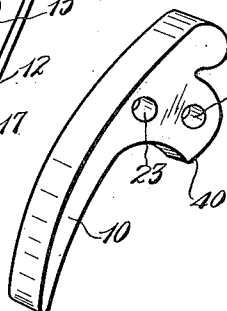


Fig. 7

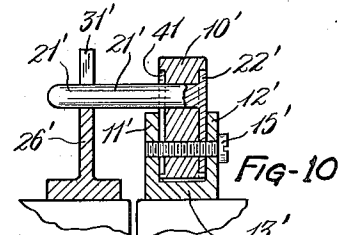


Fig. 10

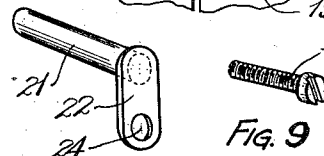


Fig. 9

Fig. 8

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2,038,462

CLOSURE FASTENER

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Application February 15, 1935, Serial No. 6,697

6 Claims. (Cl. 292—244)

The present invention relates to closure fasteners, and more particularly to door latches adaptable for use with either right-hand or left-hand doors.

Latches of the character referred to are generally not interchangeable for use on either right-hand or left-hand doors, which necessitates the carrying of a large stock of both types by jobbers, contractors, etc. Heretofore in the art attempts have been made to provide a latch which would be interchangeable for use on either right or left-hand doors, but the devices of the prior art have not been entirely satisfactory, either because they were too expensive to manufacture, would not stand up in service, or were objectionable in appearance, etc. The object of the present invention is the provision of a novel latch readily adaptable for use on either right or left-hand doors, which will be rugged and simple in construction, comprise a minimum of parts, and be inexpensive to manufacture, etc.

The invention resides in certain novel features, details of construction, and combinations and arrangements of parts, and further objects and advantages thereof will be apparent to those skilled in the art to which it pertains from the following description of the preferred embodiment of the invention described with reference to the accompanying drawing, in which

Fig. 1 is a front elevation of a latch embodying the present invention applied to a right-hand door;

Fig. 2 is a front elevation of the latch shown in Fig. 1 but applied to a left-hand door;

Fig. 3 is a section on the line 3—3 of Fig. 4;

Fig. 4 is a side elevation of the latch shown in Fig. 1, as viewed from the right;

Fig. 5 is a perspective view of the keeper for the latch;

Fig. 6 is a perspective view of the base member;

Fig. 7 is a perspective view of the latch lever;

Fig. 8 is a perspective view of the latch bolt;

Fig. 9 is a perspective view of the pivot screw; and

Fig. 10 is a section similar to Fig. 3 but showing a modified construction of latch lever.

Similar reference characters designate corresponding parts throughout the several figures of the drawing.

According to the provision of the present invention the latch bolt is removably supported in the latch lever and adapted to be projected therefrom in either direction to adapt the same for use on either right or left-hand doors. With the exception of the removable latch bolt the number

of parts employed is no greater than that of the conventional latch of the same type known to the prior art, and when the latch is assembled for either right or left-hand doors, the parts are securely held together in a simple convenient manner.

In the preferred embodiment of the invention shown, the latch lever 10 is pivotally supported between two upstanding lugs 11 and 12 on a base member 13 on a pintle pin carried by the lugs 11 and 12, which projects through a pintle aperture 14 in the latch lever. In the present instance the pintle pin comprises a screw 15 threaded into aligned apertures 16 and 17 in the lugs 11 and 12, respectively, for ease of assembly etc. The latch bolt 21 comprises a cylindrical member provided with a head member 22 preferably formed integral therewith but which may be formed separate and attached thereto if desired. The cylindrical member of the latch bolt is adapted to be projected through an aperture 23 in the latch lever either toward the left, as shown in Fig. 1, to adapt the latch for use with right-hand doors, or toward the right, as shown in Fig. 2, to adapt the same for use with left-hand doors.

The aperture 23 in the latch lever is spaced from the pintle aperture 14 through which the pintle screw 15 projects and the head member 22, which projects in one direction a considerable distance to one side of the cylindrical member, is provided with an aperture 24 adapted to align with the pintle aperture 14 when the latch bolt is assembled with the latch lever. In assembling the latch lever with the base member, the aperture 24 in the head member 22 is aligned with the aperture 14 and the pintle screw projected through the two aligned apertures with a portion of the head member 22 positioned or projecting between the latch lever and the projection 11 or 12, depending upon whether the latch bolt is projected toward the left or right.

The keeper for the latch bolt comprises a base member 25 from which projects a Y-shaped keeper head 26 provided with a notch 27 which cooperates with the latch bolt 21 carried by the latch lever. The keeper head 26 may be formed integral with or may be attached to the base 25, as desired. In closing, the latch bolt 21 rides over a cam surface 28 on the upper side of the lower prong 29 of the keeper head which permits the door to be easily closed, and a cam surface 30 on the under side of the upper prong 31 of the keeper head assures the catching of the bolt in the notch 27 irrespective of the speed with which the door is closed. While the keeper illustrated

comprises a Y-shaped keeper head it will be apparent that any well known type of keeper may be employed.

Fig. 1 shows the latch applied to a right-hand door 35, that is, a door which is hinged at the right-hand side. The base members 13 and 25 are secured to the door 35 and a jamb 36 respectively by screws 37 in a conventional manner. The latch bolt projects to the left and the head member 22 is positioned or projects between the latch lever and the upstanding projection 12 on the base member 13. When the latch is applied to left-hand doors, as shown in Fig. 2, where the reference characters 38 designates a door hinged at its left-hand side and the reference character 39 the jamb, the latch bolt 21 is projected through the aperture 23 in the latch lever in the opposite direction, that is, toward the right, in which event the head member 22 is confined between the latch lever and the upstanding projection 11 on the base member 13. The latch lever illustrated is so shaped that a portion 40 thereof strikes a base member 13 and limits the rotation of the handle portion of the lever towards the member or door to which it is attached.

In the preferred embodiment illustrated, the latch lever is slightly narrower than the distance between the upstanding projections 11 and 12 and the head member 22 is visible in the plan view. But, if desired, it will be apparent that an overlying ridge may be formed on the latch lever to conceal the underlying head member 22 or a recess in the nature of a counterbore can be formed in the sides of the latch lever to receive the head member. This latter construction is shown in Fig. 10 wherein the corresponding parts of the latch are designated by the same reference characters with a prime mark affixed thereto. The width of the member 10' as shown in this figure is equal to the distance between the upstanding projections 11' and 12' on the base member 13' and the head member 22' on the latch bolt is located in one of two similar counterbores 41 on opposite sides of the latch lever 10' so that it is flush with the side of the latch lever.

While the preferred embodiment of the invention has been illustrated and described I do not wish to be limited to the particular construction shown, which may be varied within the scope of this invention. This application is intended to cover all adaptations and modifications of the present invention that come within the practice of those skilled in the art to which it pertains and I particularly point out and claim as my invention the following:

1. A latch comprising: a plurality of spaced members; a latch lever having a portion thereof projecting between said spaced members, said latch lever having a pintle aperture; a latch bolt removably supported by said latch lever and having a portion thereof projecting between said latch lever and one of said spaced members; and a pintle pin carried by said spaced members projecting through the pintle aperture in said latch lever pivotally connecting said latch lever with said spaced members.

2. A latch comprising: a plurality of spaced members; a latch lever having a portion thereof projecting between said spaced members, said latch lever having a pintle aperture and a second aperture spaced from said pintle aperture; a headed latch bolt projecting through said second aperture in said latch lever and having a portion of the head thereof projecting between said latch lever and one of said spaced members; and a pintle pin carried by said spaced members projecting through the pintle aperture in said latch lever pivotally connecting said latch lever with said spaced members.

3. A latch comprising: a base member; a latch lever having a pintle aperture and a second aperture spaced from said pintle aperture; a latch bolt projecting through said second aperture in said latch lever and having a portion thereof extending in the direction of said pintle aperture in said latch lever and having an aperture therein aligned with the pintle aperture; a pintle pin projecting through the pintle aperture in the latch lever and the aperture in the latch bolt pivotally connecting said latch lever with said base member.

4. A latch comprising: a base member; a latch lever having a pintle aperture and a second aperture spaced from said pintle aperture; a headed latch bolt projecting through said second aperture in said latch lever having an aperture in the head thereof aligned with the pintle aperture; and a pintle pin projecting through the pintle aperture in the latch lever and the aperture in the head of the latch bolt pivotally connecting said latch lever with said base member.

5. A latch comprising: a base member; a plurality of spaced members on said base member; a latch lever having a portion thereof projecting between said spaced members, said latch lever having a pintle aperture in the portion thereof which extends between said spaced members; a latch bolt removably supported by said latch lever; a member fixed to said latch bolt having a portion thereof projecting between said latch lever and one of said spaced members; and a pintle pin carried by said spaced members projecting through the pintle aperture in said latch lever pivotally connecting said latch lever with said base member.

6. A latch comprising: a base member; a plurality of spaced members on said base member; a latch lever having a portion thereof projecting between said spaced members, said latch lever having a pintle aperture in the portion thereof which extends between said spaced members and a second aperture spaced from said pintle aperture; a latch bolt projecting through said second aperture in said latch lever; a member fixed to said latch bolt having a portion thereof projecting between said latch lever and one of said spaced members provided with an aperture aligned with the pintle aperture in said latch lever; and a removable pintle pin carried by said spaced members projecting through the pintle aperture in said latch lever and the aperture in said member fixed to the latch bolt pivotally connecting said latch lever with said base member.

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