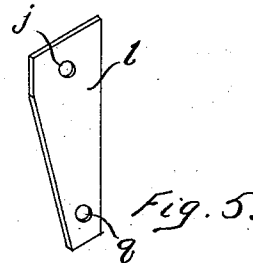
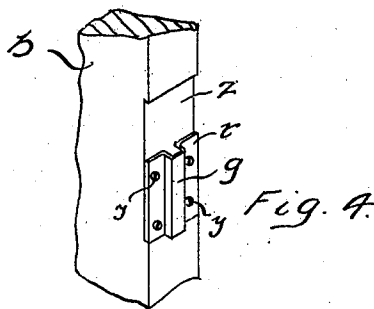
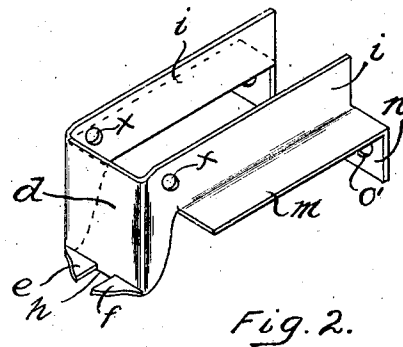
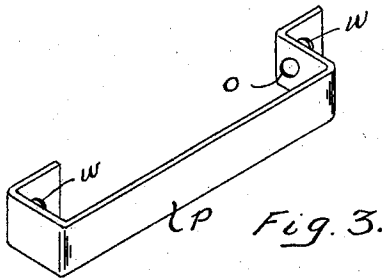
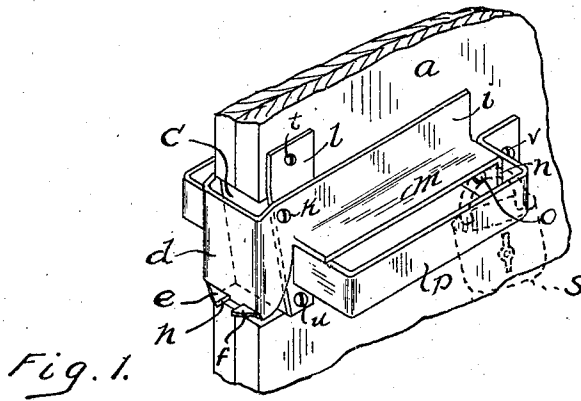


W. MORGAN.
DOOR LATCH.
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980,663.

Patented Jan. 3, 1911.



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DOOR-LATCH.

980,663.

Specification of Letters Patent.

Patented Jan. 3, 1911.

Application filed April 18, 1910. Serial No. 556,068.

To all whom it may concern:

Be it known that I, WILLIAM MORGAN, a citizen of the United States of America, and a resident of Cedar Falls, Blackhawk county, Iowa, have invented certain new and useful Improvements in Door-Latches, of which the following is a specification.

My invention relates to improvements in door latches, and the object of my improvement is to provide a reversible combination latch and handles adapted to be operated from either side of a door, and to be easily disengaged from the casing-catch, and to be locked securely, with a minimum of parts, and requiring a minimum of effort in use. This object I have accomplished by the means which are hereinafter described and claimed, and which are illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view of my improved device as applied to a door, the door being shown in only a broken detail. Fig. 2 is a perspective detail view of the reversible latch. Fig. 3 is a perspective detail view of one of the door handles. Fig. 4 is a perspective detail view of a part of a door-casing, with an adjustable catch attached thereto. Fig. 5 is a perspective detail view of one of the bearing-plates for a latch-member. Similar characters of reference designate corresponding parts throughout the several views.

The characters *a* and *b* represent respectively a door and its casing. A wedge-shaped groove *c* is located in the vertical edge of the door *a* opposite to a shallow groove *z* in the casing-edge *b*. The groove *z* forms a flush-seat for the catch *r*, the latter being shorter than the groove in order to permit of adjustment of the catch along the groove to shift the position of worn parts, the adjustment being effected by removing and relocating the screws *y*.

The latch *d* is reversible, being in the form of a U-shaped body, with parallel members *i* extended along both sides of the door *a*, the medial connecting or transverse part *d* being seated in the groove *c*. Each member *i* of said latch has a horizontally-projecting flanged portion *m* which terminates in a depending part or projection *n*, the latter having an orifice *o'* for a purpose to be hereinafter mentioned. Alined perforations *x* are located in the members *i* near their junctions with the transverse part *d* and to that side of their center of gravity. A pivot-bolt *k*

is used through said perforations to pivot the members to said door. The transverse part *d* has horizontally-projecting detents *e* and *f* spaced apart sufficiently to permit them to closely engage the medial raised ridge *g* of the catch-plate *r*. The outer walls or sides of these detents are sloped obliquely back for a purpose to be hereinafter described. When desired, a friction- or bearing-plate *l* is located on each side of said door opposite to each other, and they have perforations *j* and *q* to receive fastening bolts *t* and *u*. When so placed the latch-members *i* move over them, the plates *l* taking the wear.

Handles *p* of the form shown in Fig. 3, are secured on each side of the door oppositely, by means of bolts *v* passed through their bolt-holes *w*. These handles are so located with reference to the members *i*, that when the latter are in their normal down position, such members overlie the handles with their finger-pieces partially covering the finger-opening of the handles, while the projections *n* drop down within the handles in contact with the inner surface of each of their sides most remote from the catch *g*. Each handle has a perforation *o* which registers with the adjacent orifice *o'* in the abutting projection *n*, and the bolt of a padlock *s* may be removably inserted in said orifices to secure the handle and latch together. Since the center of gravity of the latch *d* is on the side opposite its detents *e* and *f* from its pivot *k*, the flanged finger-pieces normally lie upon the top of the handles *p*, and the said detents are then in engagement with the catch *g*.

In use, it is only necessary to thrust the hand into the interspace of one of the handles *p*, when the fingers will contact with and lift the member *i* of the latch *d*, thus retracting the detents *e—f* into the wedge-shaped space *c* of the door and releasing them from the catch *g*, when the door may be swung open at once without further manipulation. Since the parts of the device on opposite sides of the door are the same, the same procedure is resorted to to open the door from either side. It is of course to be understood, that when a casing is mentioned herein, any other equivalent supporting body for the catch-plate *r* is included in the idea of means, such as the edge of another door or otherwise, and it is also to be understood that minor changes in this device which come within the scope of its principle of

operation are claimed to be included herein. It is also pointed out, that this device, being bisymmetrical, is adapted to be reversed for use on doors opening either to the right or left. Since the tendency of the detents *e* and *f* is to remain engaged with the catch *g*, because of the unbalanced condition of the latch, when the door is to be closed and latched, it is only necessary to swing it toward the casing, when the obliquely inclined sides of the detents engage such catch *g* and being pushed back far enough to pass then under the influence of gravity, swing outwardly again to engage the catch, without further need of manipulation. The device is, therefore, adapted for engagement with or disengagement from the catch, with necessity for but the simplest manipulation of the operator, requiring the use merely of one hand for either action.

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

1. The combination with a door and an abutting body, of a catch on said body, a latch having connected members pivoted to said door and extending along opposite sides thereof, said latch having means for detachably engaging said catch, and handles on said door, one under each of said members and abutting thereon.

2. The combination with a door and an abutting body, of a catch on said body, a latch having connected members pivoted to and extending along opposite sides of said door, the intermediate connecting part of the latch having means for detachably engaging said catch, and handles on said door, one under each of said members and abut-

ting thereon, each of said members having an outwardly-projecting lateral flange adapted to partially cover the abutting handle.

3. The combination with a door and an abutting body, of a catch on said body, a latch having members pivoted to and extending along opposite sides of said door, said latch having means for detachably engaging said catch, and handles on opposite sides of said door one under each of said latch-members and abutting thereon, and each of said members having detachable connecting-means for its adjacent handle.

4. The combination with a door and an abutting body, of a catch on said door, a latch pivoted to said door, said latch having members lying extended along opposite sides of the door and connected by a transverse portion overlying the edge of the door near said catch, said transverse portion having means for detachably engaging said catch, a friction-plate secured to each side of said door under and forming a bearing for the members of said latch, a handle on each side of said door abutting upon each of said members, a projection from each member adapted to contact with the abutting handle, and each of the abutting members and handles being provided with registering orifices; with means adapted to traverse said orifices and detachably secure said parts together.

Signed at Cedar Falls, Iowa, this 31st day of March, 1910.

WILLIAM MORGAN.

Witnesses:

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W. T. M. AITKEN.