No. 838,701. PATENTED DEC. 18, 1906.

J. B. ENGSTROM.

DOOR LATCH.

APPLICATION FILED JAN. 22, 1906.

2 SHEETS—SHEET 1.

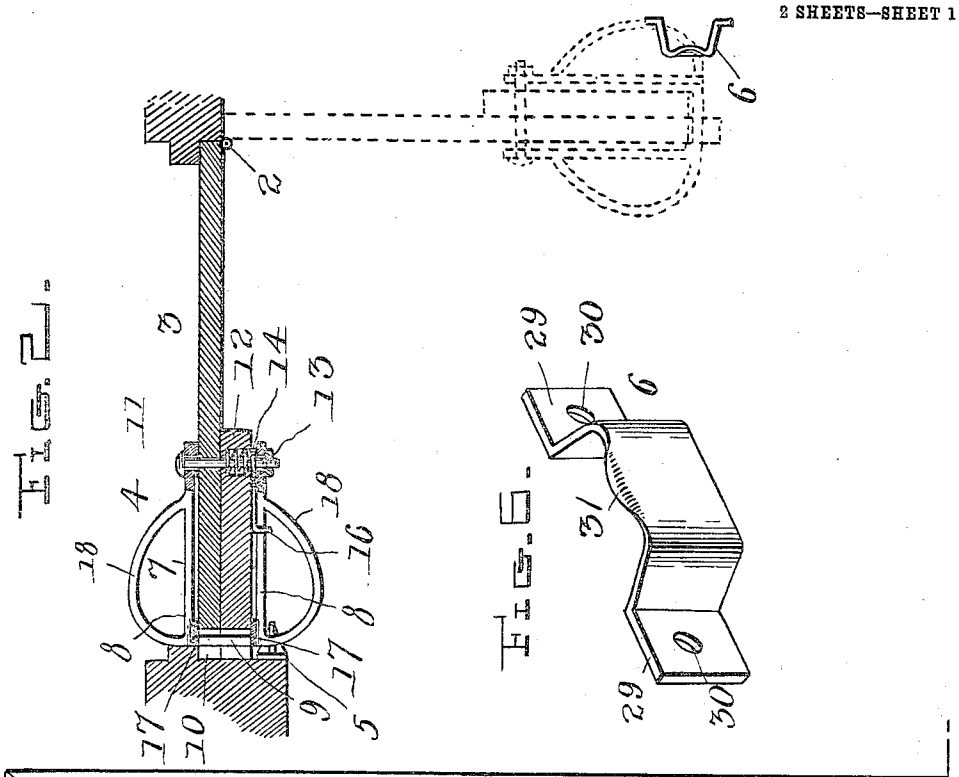


FIG. 2.

FIG. 5.

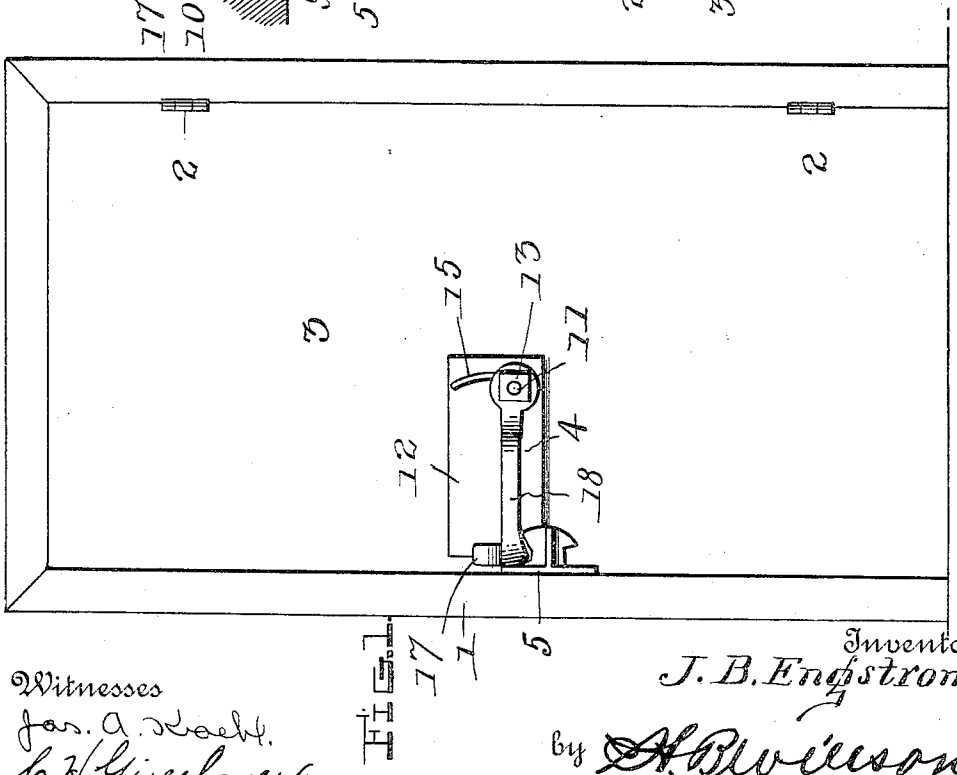


FIG. 1.

Witnesses

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2 SHEETS—SHEET 2.

FIG. 3.

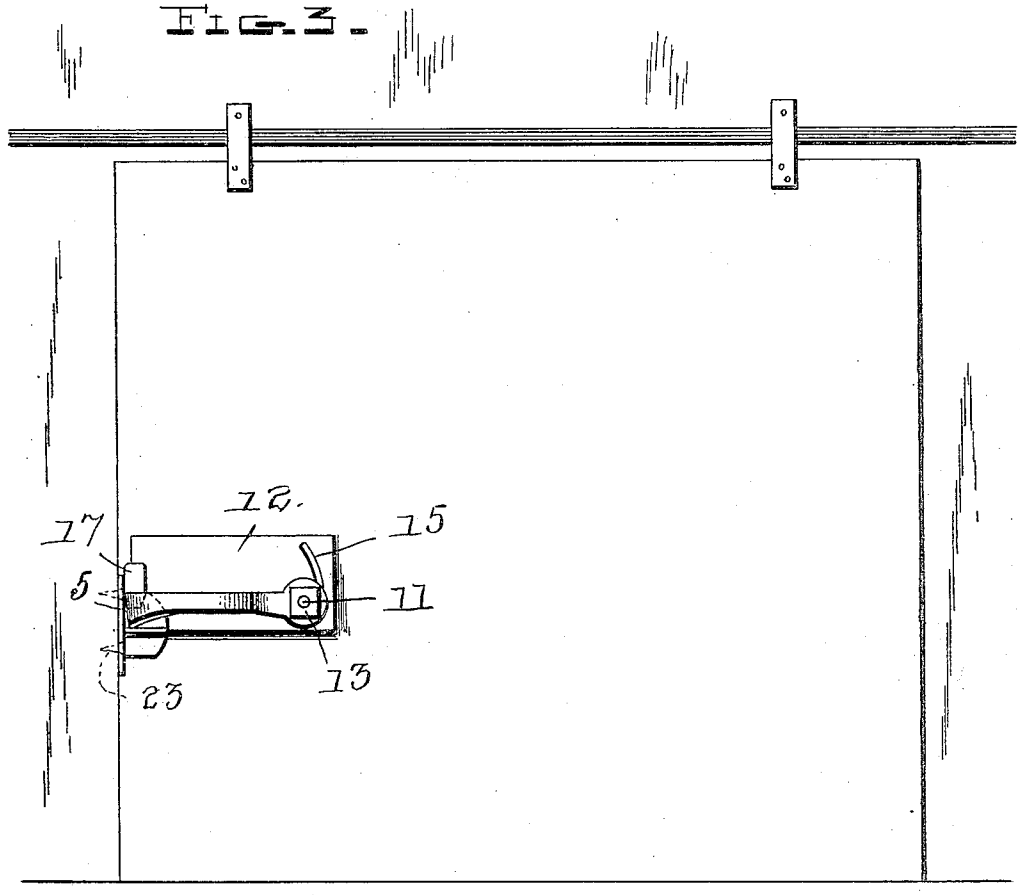


FIG. 4.

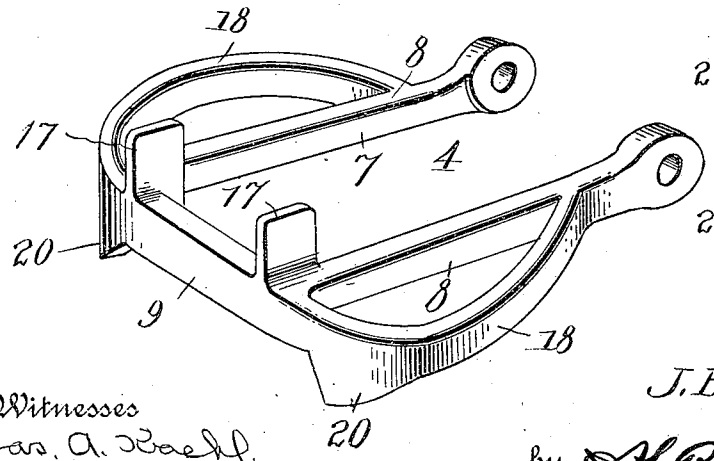
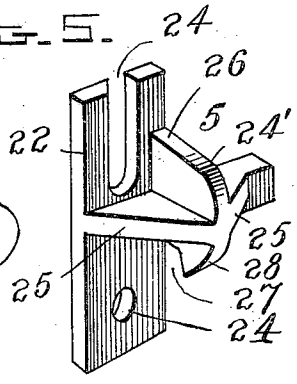


FIG. 5.



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DOOR-LATCH.

No. 838,701. Specification of Letters Patent. Patented Dec. 18, 1906.

Application filed January 22, 1906. Serial No. 297,294.

To all whom it may concern:

Be it known that I, JACOB B. ENGSTROM, a citizen of the United States, residing at Manchester, in the county of Delaware and State of Iowa, have invented certain new and useful Improvements in Door-Latches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in latches for doors and gates of all kinds, and more particularly for either swinging or sliding barn-doors.

The object of the invention is to provide a simple, durable, and comparatively inexpensive latch of this character which may be used upon either sliding or swinging doors and which will effectively retain the door in either its closed or open position.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a portion of a swinging door and its frame, showing my improved latch mounted thereon. Fig. 2 is a horizontal sectional view through the same. Fig. 3 is a view similar to Fig. 1, showing the latch applied to a sliding door. Fig. 4 is a perspective view of the latch. Fig. 5 is a perspective view of the latch-keeper for holding the door in its closed position; and Fig. 6 is a similar view of the keeper for holding the door in its open position, as shown in dotted lines in Fig. 2.

Referring to the drawings by numeral, 1 denotes a portion of a door-frame in which is hingedly mounted, as at 2, a swinging door 3. My improved latch 4 is mounted upon the free edge of the door and coacts with two keepers 5 6, the former of which retains the door in its closed position and is secured to the jamb of the door-frame 1, and the latter is secured to the frame or any other suitable support and is adapted to hold the door in its open position, as shown in dotted lines in Fig. 2.

The latch 4, which is adapted for use upon either swinging doors, as seen in Figs. 1 and 2, or upon sliding doors, as seen in Fig. 3, comprises a substantially U-shaped body portion 7, consisting of two substantially parallel arms 8, which project from a connecting end or cross-bar 9. The latter is disposed and swings in a notch or recess 10, formed in the free edge of the door 3, and the arms 8 are disposed upon the opposite sides of the said door, to which they are pivotally connected by a pivot-bolt 11, which projects through an opening in the door and in a reinforcing block or plate 12, which is secured upon the door between its inner face and one of the arms 8, as clearly shown in Figs. 1 and 2. The pivot-bolt 11 passes through openings in the slightly-enlarged inner ends of the arms 8 and has upon its screw-threaded end a nut 13. Coiled upon said bolt and seated in a concentric recess formed in the block 12 is a coil-spring 14, which has one of its ends secured in a notch in said block, as shown at 15, and its other end bent to form a hook 16, which is engaged with the inner arm 8, so that the spring forces the latch downwardly until it engages one of its keepers or the bottom of the recess 10 in the door. The latch is guided in its sliding movement by lips or projections 17, arranged at the outer ends of the arms 8 upon their upper sides, so as to engage the outer faces of the door and the block 12, as seen in Fig. 2. Upon each of the arms 8 is preferably formed an outwardly-projecting hand-loop 18, the outer end of which forms a continuation of the end or cross-bar 9 and has a depending projection or enlargement 20, which is adapted to engage one of said keepers 5 6. These projections 20 are substantially V-shaped, their inner faces being abrupt and their outer faces having a gradual inclination, so that the latch will be guided into said keepers as the door is swung to either its closed or open position, as will be readily seen upon reference to Fig. 2.

The keeper 5 for holding the door in its closed position is double, so that it may be used either, as shown in Fig. 1, for a swinging door or, as shown in Fig. 4, for a sliding door. This keeper comprises a base-plate 22, which is adapted to be adjustably secured upon the jamb of the door-frame 1 by screws or the like 23, which pass through slots or openings 24, formed in it, as clearly shown in the drawings. Upon the outer face of said plate 22 is formed a vertically-extending keeper rib 24', which is reinforced at its center by angularly-disposed webs 25, arranged upon its opposite sides and formed integrally with it and said base-plate. One edge 26 of the rib or

projection 24 is substantially straight or horizontal, so as to permit of the use of the keeper when the latch is applied to a swinging door, as shown in Figs. 1 and 2, and the opposite edge of said rib or projection is notched, as shown at 27, and beveled outwardly, as at 28, so that it may be used when the latch is applied to a swinging door, as in Fig. 3. In the latter case it will be noted that the keeper 5 is inverted to bring its beveled edge 28 and notch 27 uppermost, so that the extended portion of the end or cross-bar 9 may readily slide up the incline 27 and drop into the notch 28 as the sliding door is moved to its closed position.

The keeper 6 is only used in connection with the latch when the latter is used upon the swinging door, and it is adapted to be secured upon the side of the barn or other building or structure in which the door is provided for holding said door in open position. This keeper is of substantially U form and has the ends of its arms 29 bent outwardly into the same plane and apertured at 30 to receive screws or the like, which secure said keeper in a horizontal position in the plane of the latch. The connecting portion of this U-shaped keeper has its upper edge beveled or bent inwardly, as at 31, to permit the beveled outer edge of one of the keeper projections 20 of the latch to readily ride upon the same and drop in rear thereof.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined by the appended claims.

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

1. The herein-described latch comprising arms for operation on opposite sides of a door, a cross-bar connecting the free ends of said arms and for operation in a recess in the free edge of the door, hand-loops forming extensions of the cross-bar and united with the arms, keeper-engaging projections extending downwardly from the ends of the cross-bar, and guide-lips for operation on opposite sides of the door, and projecting upwardly from the free ends of the arms, substantially as described.

2. In combination with a latch having means whereby it may be pivotally mounted on a door and provided at its free end with a cross-bar and keeper-engaging projections extending downwardly from the ends of the cross-bar, a reversible keeper having a rib provided with oppositely-extending projections on opposite sides, one of said projections having its outer edge beveled, and the other having its outer edge notched, for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JACOB B. ENGSTROM.

Witnesses:
M. E. BLAIR,
F. C. HALL.