June 30, 1931. J. E. GLOEKLER 1,812,334

LATCH CONSTRUCTION

Filed July 10, 1930

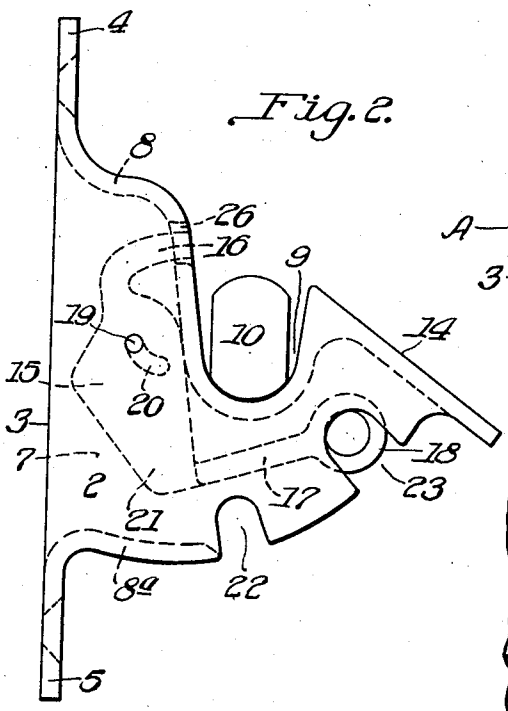


Fig. 2.

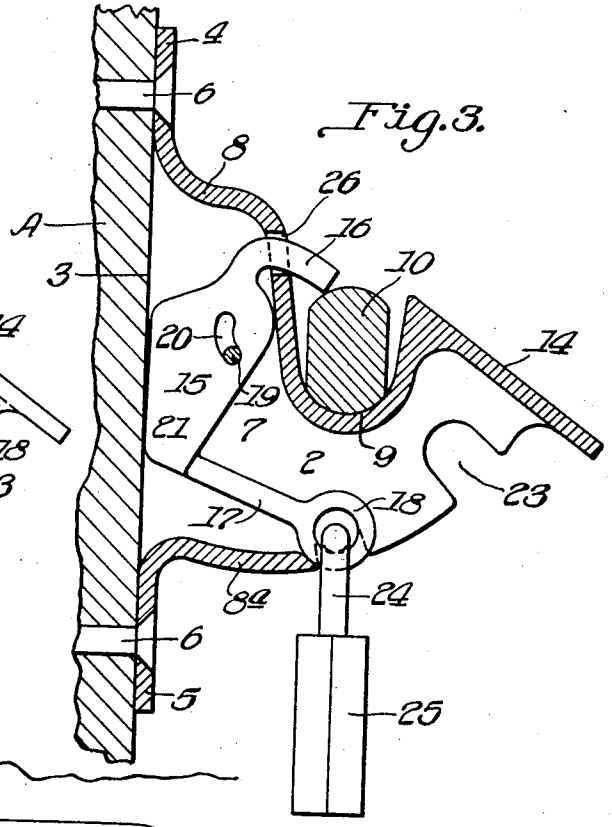


Fig. 3.

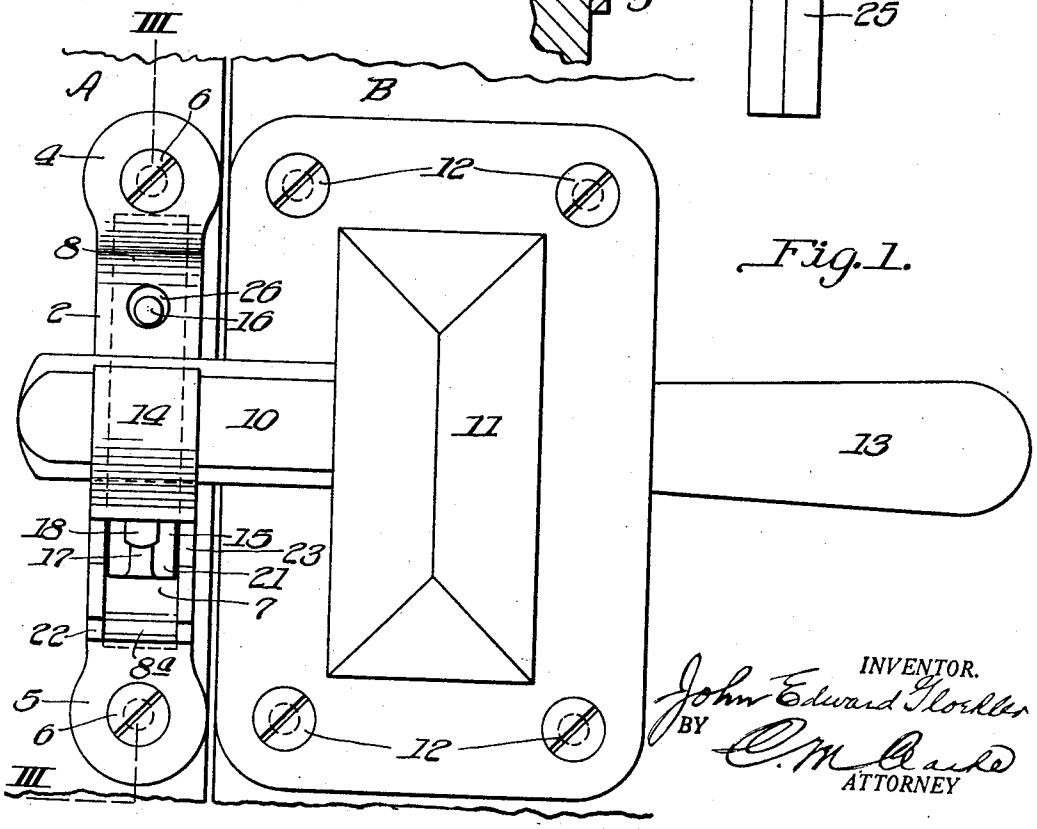


Fig. 1.

INVENTOR.
John Edward Gloekler
BY
C. M. Clarke
ATTORNEY

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UNITED STATES PATENT OFFICE

JOHN EDWARD GLOEKLER, OF PITTSBURGH, PENNSYLVANIA

LATCH CONSTRUCTION

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My invention refers to improvements in hasp or bolt retaining keepers or receiving sockets, for use in connection with swinging doors. The device is particularly applicable to the fastening mechanism for the doors of refrigerators, freight cars, closets and the like, capable of automatic engagement upon closing the door, with means for retaining the hasp or bolt against accidental or unauthorized release.

One preferred embodiment of the invention is shown in the accompanying drawings, in which:

Fig. 1 is a face view showing the frame and door members in interlocking engagement;

Fig. 2 is a view of the hasp member in side elevation;

Fig. 3 is a vertical sectional view on the line III—III of Fig. 1.

In the drawings, A represents the surrounding frame portion of a member B mounted on suitable hinges or swinging supports at its opposite side edge and capable of opening and closing toward and from the hasp holding or keeper member 2.

Said member preferably consists of a single casting having a flat inner face 3 and terminal lugs 4 and 5 through which extend securing bolts or screws 6 for secure attachment, to the face of frame A adjacent its inner edge.

The middle portion of hasp holding or keeper member 2 is hollow, as at 7, within the surrounding continuous walls 8 and 8*a*, one of which walls extends in various formation over the entire upper portion of the member 2. Wall 8*a* extends forwardly for a limited distance, the further lower portion of the casting between the side walls being preferably open vertically, as in Fig. 3.

Upper wall 8 extends outwardly and downwardly and then upwardly at back and front of a bolt-receiving socket or U-shaped groove 9, adapted to receive the interengaging locking bolt 10 of the lever housing 11. The latter is of well known construction and of any suitable form or shape, secured upon the face of the door by screws or bolts 12. Bolt 10 is in operative connection with the extended lever or handle 13, and is preferably provided with a retracting spring within the housing, so that it will positively seat in socket 9 upon closing the door.

Keeper member 2 is provided, beyond the socket 9, with a downwardly and outwardly inclined face 14, upwardly over which the bolt 10 rides upon closing the door, the bolt 10 thereupon positively seating in the socket when the door is thrust to closed position.

For the purpose of positively retaining the bolt against upward movement, I provide the locking dog 15, having the upper finger terminal 16 and a lower outwardly extending arm 17 having the terminal eye 18. Dog 15 is pivotally mounted on a cross pin 19 extending through the opposite sides of the casting upon which the dog is freely mounted, as by slot 20, for clearance and relative adjusting movement in open or closed positions, as in Figs. 2 and 3.

The dog is also preferably counterweighted, as by the lateral extension 21, beyond the pivotal mounting, so that it will automatically assume the open position of Fig. 2, when the lower arm 17 is free to swing outwardly. The lower edges of the side wall member 2 are cut out at opposite sides, as at 22 and 23, providing for clearance of the shackle 24 of a pad-lock 25.

The wall 8 is provided with a clearance opening 26 for outward and inward movement of the locking finger 16.

When not locked by such means, the locking finger 16 will be retracted, as in Fig. 2, leaving the socket opening 9 free and unobstructed for reception of the bolt 10. When desired, the terminal eye 18 may be thrust downwardly by the fingers, through the open bottom of the casting and the pad-lock inserted as in Fig. 3, finger 16 in such position projecting partially over the upper edge portion of the bolt and positively preventing its opening movement.

Otherwise, due to the rounded upper side of the bolt, and the partial projection of the finger, the bolt may be lifted by ordinary unlatching movement, thrusting the finger backwardly for opening the door, and it will be similarly thrust backwardly, upon closing, by pressure of the inner side of the bolt in coming into register with the socket.

The construction and operation of the invention will be readily understood and appreciated by the foregoing description. It is comparatively simple and inexpensive in construction not liable to get out of order, and is extremely efficient and continuously operative in connection with any door mechanism to which it may be suitably applied.

Changes or variations may be made in the particular design, shape, size, proportions or other features by the builder or designer, but all such changes are to be understood as within the scope of the following claims.

What I claim is:

1. A bolt receiving keeper having a rear attaching base, a hollow interior, and a front concaved wall forming a socket and a swinging locking arm in the hollow interior having a bolt engaging finger operable through the front wall and a locking arm provided with a lock engaging terminal.

2. A bolt receiving keeper having a rear attaching base, a hollow interior, and a front concaved wall forming a U shaped socket and an inclined face leading thereto, a pivotally mounted dog in the hollow interior having a bolt engaging finger operable across the socket, and means for fixedly holding the dog in position.

3. A bolt receiving keeper having a rear attaching base, a hollow interior, and a front concaved wall forming a U shaped socket and an inclined face leading thereto, a pivotally mounted dog in the hollow interior having a bolt engaging finger operable through the front wall across the socket, and an arm extending from the dog adapted to be held in fixed position.

4. A bolt receiving keeper having a rear attaching base, a hollow interior, and a front concaved wall forming a U shaped socket and an inclined face leading thereto, a pivotally mounted counterweighted dog in the hollow interior having a bolt engaging finger operable across the socket, and a supplemental extension of the dog having a terminal adapted to be connected with the hasp for prevention of movement of the dog.

5. In combination with a locking bolt and means for lifting it mounted on a door, a bolt engaging keeper having a hollow interior, a rear attaching base, a front open top bolt socket and a bolt engaging guiding face, and a bolt locking dog pivotally mounted within the hollow interior of the hasp provided with a bolt locking finger, a counterweight and a swinging terminal padlock shackle engaging eye.

6. A bolt receiving keeper for a vertically movable locking bolt consisting of a hollow casting having rear attaching base flanges, forwardly extending side walls, and a front wall providing a sloping face and a U-shaped socket, a locking dog pivoted between the side walls for lost motion tilting having a bolt engaging finger operable through the front wall across the socket and a lower swinging eye terminal, the side walls having clearance openings for registering with the eye terminal.

In testimony whereof I hereunto affix my signature.

JOHN EDWARD GLOEKLER.