April 27, 1948. G. HAGSTROM 2,440,510

KEEPER OR STRIKER FOR LATCHES AND THE LIKE

Filed June 14, 1946

Fig. 1.

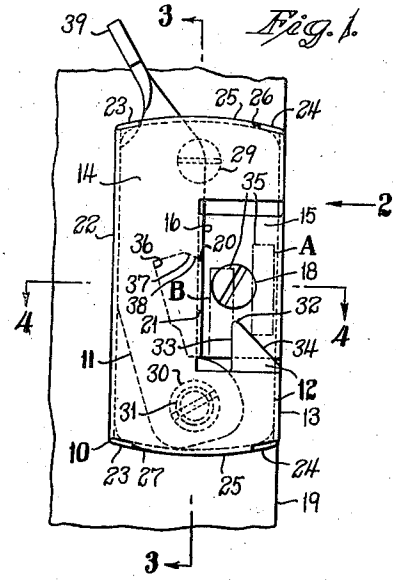


Fig. 8.

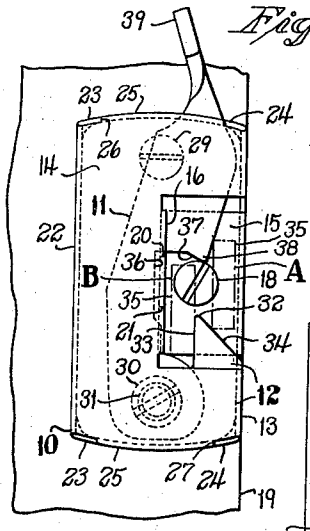


Fig. 5.

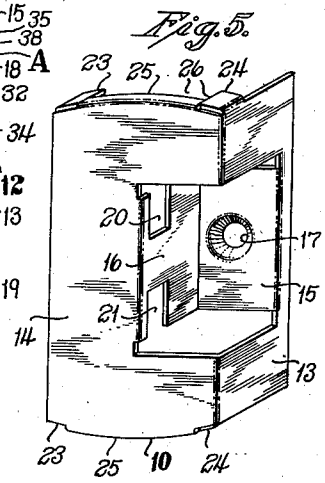


Fig. 3.

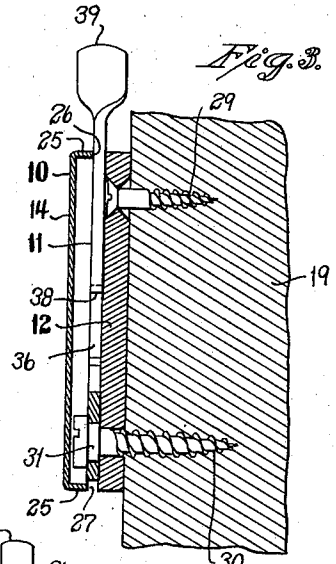


Fig. 4.

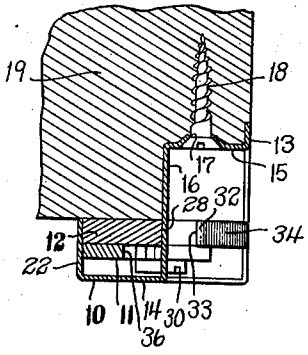
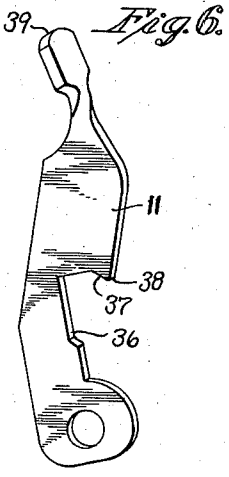


Fig. 6.



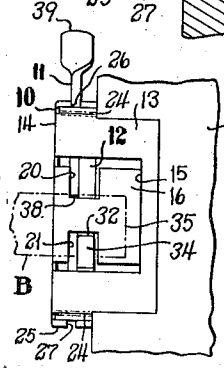


Fig. 2.

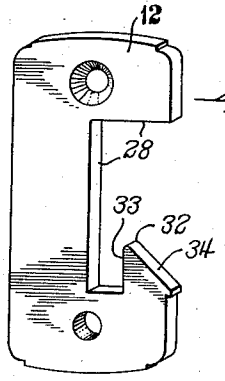


Fig. 7.

Inventor
Gotthard Hagstrom
By Seymour, Earle & Nichols
Attorneys

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KEEPER OR STRIKER FOR LATCHES AND THE LIKE

Gotthard Hagstrom, New Haven, Conn., assignor, by mesne assignments, to The Pioneer Hardware Corporation, Bridgeport, Conn., a corporation of Connecticut

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5 Claims. (Cl. 292—340)

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The present invention relates to improvements in keepers or strikers for use in conjunction with latches or locks of the type designed and adapted for use on doors and other closures.

One of the main objects of the present invention is to provide a simple and reliable keeper or striker which combines low cost for manufacture with attractive appearance and durability.

Another object of the present invention is to provide a superior keeper or striker assembly which itself may be utilized to lock in place a latch-member forming a feature of a latch.

A further object of the present invention is to provide a superior keeper or striker having provision for locking or retaining a cooperating latch-member but having its parts so constructed and arranged that the locking or retaining feature of the keeper is automatically retired into a non-locking position when a latch-member engages with the keeper or striker, to thus guard against the unintentional locking or retention of the latch-member of a cooperating latch or lock.

Still another object of the present invention is to provide a simple, reliable and effective keeper or striker which may be readily installed by relatively unskilled persons.

A still further object of the present invention is to provide a superior keeper or striker embodying a locking or retaining feature and which is readily available for use either at the right or left edge of a door or other closure.

With the above and other objects in view, as will appear to those skilled in the art from the present disclosure, this invention includes all features in the said disclosure which are novel over the prior art.

In the accompanying drawings, in which certain modes of carrying out the present invention are shown for illustrative purposes:

Fig. 1 is a view in side elevation of a keeper or striker constructed in accordance with the present invention and shown as mounted at the right edge of a door jamb or other closure-frame, the pivotal locking-lever being shown in its retired position;

Fig. 2 is a front elevation view on a smaller scale of the showing of Fig. 1 and looking in the direction of the arrow 2;

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

Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 1;

Fig. 5 is a perspective view of the cover-member, detached;

Fig. 6 is a similar view of the locking-lever;

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Fig. 7 is a similar view of the latch-retaining plate or strike-plate; and

Fig. 8 is an elevational view similar to Fig. 1 but showing the locking-lever in its advanced or locking position.

The particular keeper or striker assembly selected for illustration in order to make clear a preferred form of the present invention, includes in the main a cover-member 10, the pivotal locking-lever 11 and a latch-retaining or striker-member 12.

The cover-member 10 above referred to may be conveniently formed of sheet metal and includes a front face-portion 13 and an integral side face-portion 14 extending at substantially a right angle to the said front face-portion 13.

Intermediate its upper and lower ends, the material of the cover-member 10 is deflected—the material from the central portion of the front face-portion 13 being deflected into substantial parallelism with the side face-portion 14 to form a side panel 15, while the material from the central portion of the side face-portion 14 adjacent its juncture with the front face-portion 13, is deflected into substantial parallelism with the front face-portion 13 to provide a front panel 16 which remains integrally joined with the adjacent edge of the side panel 15, as is especially well shown in Figs. 4 and 5.

The side panel 15 of the cover-member 10 is formed substantially centrally with a clearance-opening 17 having the material surrounding it deflected toward the free edge of the front face-portion 13 to form, in effect, a conical counter-sunk portion in which may be seated the head of a cover-attaching screw 18. The said screw 18 may be extended into any suitable supporting structures such, for instance, as the face of a so-called "stop" 19 forming a usual feature of a door-casing or jamb.

The front panel 16 of the cover-member 10 is formed respectively in its upper and lower edges (as viewed in the drawings) with clearance-notches 20 and 21, for purposes as will hereinafter appear.

The cover-member 10 is also formed with an integral flange-like rear portion 22 which extends in substantial parallelism with both the front face-portion 13 and with the front panel 16 but is narrower than both thereof, as will be apparent by reference to Fig. 4. Both the upper and lower edges of the rear-portion 22 just referred to, are bent forwardly to provide flanges 23—23, while portions of the upper and lower edges of the front face-portion 13 are bent rear-

wardly to form similar flanges 24—24. The respective upper and lower edges of the side face-portion 14 are bent toward the offset side panel 15 to provide narrow flanges 25—25. The flanges 25—25 just referred to extend between their adjacent flanges 23 and 24 but only for a fraction of the width thereof, to thus respectively provide at the upper and lower edges of the side face-portion 14, clearance-notches 26 and 27, for purposes as will hereinafter appear.

Returning now to the latch-retaining member 12, it will be noted that it is of plate-like form (Fig. 7) and is formed in its forward edge with a relatively-deep-and-long clearance-notch 28 which is designed and adapted not only to clear a latch-member but also to accommodate the front panel 16 of the cover-member 10. The said striker-member is pierced adjacent its respective upper and lower ends to respectively receive screws 29 and 30, both of which may extend into the side face of the stop 19 or similar structure. The upper perforation in the latch-retaining member 12 is countersunk on both of its opposite sides so that the head of the upper screw 29 will be substantially flush with the outer face of the said member, regardless of its mounting—either right or left.

The lower screw 30 is formed directly beneath its head with an integral collar 31 having a length in the direction of the axis of the screw 30 substantially corresponding to the thickness of the locking-lever 11, through the lower portion of which it extends and upon which the said locking-lever is adapted to swing.

The respective upper and lower ends of the latch-retaining member 12 are shaped to respectively fit within the clearance-notches 26 and 27 in the respective upper and lower edges of the cover-member 10, in such manner as to complement the adjacent surfaces of the latter.

Integral with the latch-retaining member 12 and projecting upwardly into the outer lower portion of its clearance-notch 28, is a nose 32 having a substantially-vertical inner face which provides a latch-retaining abutment 33. The forward portion of the nose 32 is sloped upwardly and rearwardly to form an inclined striker-surface 34 adapted to be engaged by a latch-member, in a manner as will hereinafter appear.

The striker-surface 34, as well as the latch-retaining abutment 33 of the latch-retaining member 12, is adapted to be engaged by any suitable latch-member such as the pivotal latch-member indicated in the accompanying drawings by broken lines 35.

For purposes of clearing the said latch-member 35 and permitting the same to move into engagement with the latch-retaining abutment 33, the locking-lever 11 before referred to is formed in the lower portion of its forward edge with a clearance-notch 36, as is especially well shown in Fig. 6. The upper edge of the said clearance-notch 36 is formed with a downwardly-and-forwardly inclined locking-abutment 37 which forms the under face of what may be aptly termed a "locking-nose" 38. The clearance-notch 20 in the upper edge of the front panel 16 provides for the clearance of the locking-nose 38.

The upper portion of the locking-lever 11 projects upwardly through the clearance-notch 26 in the cover-member 10 to a point considerably above the upper surface of the said cover-member, where the said locking-lever is twisted at a right angle—or in any other suitable manner provided with a finger-piece 39 available for manipulation from the exterior of the assembly.

Should it be desired to mount the keeper-assembly at the right side of a door opening, the cover-member 10 will be reversed top for bottom so that the clearance-notch 27 therein will be located at the top, and the companion clearance-notch 26 thereof will be located at the bottom. The locking-lever 11 would then project upwardly through the clearance-notch 27 and the clearance-notch 21 in the front panel 16 will provide clearance for the portion of said locking-lever upon which the locking-abutment 37 is formed.

Operation

For purposes of description, let it be assumed that the locking-lever 11 is retired into its inoperative position, as is shown in Fig. 1. Under these conditions, the locking-abutment 37 and the locking-nose 38 of the said locking-lever, will be retired to the rear of the front surface of the front panel 16.

Now, when a pivotal latch-member such as 35 attached to a door in the usual manner, is swung inwardly, its lower inner corner will strike the inclined striker-surface 34 of the plate-like latch-retaining member 12 and will "ride up" the same in the manner indicated at the position A in Figs. 1 and 8.

The latch-member 35 will not continue to ride up the inclined striker-surface 34 and will ultimately drop in behind the latch-retaining abutment 33 of the nose 32, as indicated at B in Figs. 1, 2 and 8. When located as last described, the latch-member 35 will be releasably retained and thus the door of which it forms a feature, will also be releasably retained in a closed position.

Now let it be assumed that it is desired to lock the latch-member 35 against being lifted and thus disengaged from the latch-retaining abutment 33. Under these circumstances, the locking-lever 11 may be swung from the position in which it is shown in Fig. 1 into the position in which it is shown in Fig. 8, to thereby interpose its locking-abutment 37 in the path of upward movement of the latch-member 35. Thus, the latch-member 35 will be prevented from being lifted to a degree sufficient to clear its lower edge from the nose 32 of the latch-retaining member 12.

Preferably and as shown, the screw 30 or its equivalent is so located as to cause the locking-lever 11 to be retained by gravity in either its retired or its advance positions, as are respectively shown in Figs. 1 and 8.

Now let it be assumed that when the door is open, the locking-lever 11 has been inadvertently moved into its locking position, in which position it is shown in Fig. 8. Under these conditions, when the door is closed and the latch-member 35 is caused to ride up the inclined striker-surface 34 of the latch-retaining member 12, the said latch-member will be automatically caused to engage with the front edge of the locking-level 11 before the latch-member can drop back of the latch-retaining abutment 33. Engagement of the latch-member 35 with the front edge of the locking-lever 11 will force the said locking-lever from the position in which it is shown in Fig. 8 back into the position shown in Fig. 1, and thereby avoid having the said locking-lever effect the locking of the latch-member until such time as the locking-lever is pur-

posely swung from the position indicated in Fig. 1 into the position shown in Fig. 8.

The invention may be carried out in other specific ways than those herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive, and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

I claim:

1. A keeper for latches and the like, including in combination: a cover-member having a front face-portion and a side face-portion projecting from the said front face-portion at substantially a right angle, a part of the said front face-portion and a part of the said side face-portion intermediate the respective opposite ends of the cover-member being respectively deflected to provide the said front face-portion with a side panel extending in substantial parallelism with the said side face-portion, and to provide the said side face-portion with a front panel extending in substantial parallelism with the said front face-portion; a latch-retaining member extending to the rear of the said front panel and having a portion extending forwardly thereof toward the said front face-portion and there provided with a latch-retaining abutment and an inclined striker-surface; and a locking-member movably mounted intermediate the side-face portion of the said cover-member and the said latch-retaining member and having a locking-abutment located adjacent the said latch-retaining abutment.

2. A keeper for latches and the like, including in combination: a cover-member having a front face-portion and a side face-portion projecting at an angle from the said front face-portion, a part of the said front face-portion and a part of the said side face-portion intermediate the respective opposite ends of the cover-member being respectively deflected to provide the said front face-portion with a side panel extending in substantial parallelism with the said side face-portion, and to provide the said side face-portion with a front panel extending in substantial parallelism with the said front face-portion; a latch-retaining member extending to the rear of the said front panel and having a portion extending forwardly thereof toward the said front face-portion and there provided with a latch-retaining abutment and an inclined striker-surface; and a pivotal locking-member swingable in a plane substantially parallel with the said side face-portion and side panel and having a locking-abutment swingable in front of the said front panel to be engaged by and to lock a latch-member.

3. A keeper for latches and the like, including in combination: a cover-member having a front face-portion and a side face-portion projecting at an angle from the said front face-portion, a part of the said front face-portion and a part of the said side face-portion intermediate the respective opposite ends of the cover-member being respectively deflected to provide the said front face-portion with a side panel extending in substantial parallelism with the said side face-portion, and to provide the said side face-portion with a front panel extending in substantial parallelism with the said front face-portion: a latch-retaining member extending to the rear of the said front

panel and having a portion extending forwardly thereof toward the said front face-portion and there provided with a latch-retaining abutment and an inclined striker-surface; and a pivotal locking-member pivoted at a point below the lower edge of said front panel about an axis extending substantially parallel therewith, the said locking-member having a locking-abutment extendable over an upper edge of the said front panel into position for engagement with a latch-member.

4. A keeper for latches and the like, including in combination: a cover-member having a front face-portion and a side face-portion projecting at an angle from the said front face-portion, a part of the said front face-portion and a part of the said side face-portion intermediate the respective opposite ends of the cover-member being respectively deflected to provide the said front face-portion with a side panel extending in substantial parallelism with the said side face-portion, and to provide the said side face-portion with a front panel extending in substantial parallelism with the said front face-portion, the said side panel being formed with a screw-receiving aperture for the reception of an attaching-screw; a latch-retaining member extending to the rear of the said front panel and having a portion extending forwardly thereof toward the said front face-portion and there provided with a latch-retaining abutment and an inclined striker-surface; and a locking-member movably mounted intermediate the side-face portion of the said cover-member and the said latch-retaining member and having a locking-abutment located adjacent the said latch-retaining abutment.

5. A keeper for latches and the like, including in combination: a cover-member having a front face-portion and a side face-portion projecting at an angle from the said front face-portion, a part of the said front face-portion and a part of the said side face-portion intermediate the respective opposite ends of the cover-member being respectively deflected to provide the said front face-portion with a side panel extending in substantial parallelism with the said side face-portion, and to provide the said side face-portion with a front panel extending in substantial parallelism with the said front face-portion; a latch-retaining plate extending to the rear of the said front panel and having a portion extending forwardly thereof toward the said front face-portion and there provided with a latch-retaining abutment and an inclined striker-surface; a pivotal locking-member swingable in a plane substantially parallel with the said latch-retaining plate and interposed between the latter and the side face-portion of the said cover-member; and a retaining-member extending through both the said pivotal locking-member and the said latch-retaining plate and providing the pivot about which the said pivotal locking-member may turn.

GOTTHARD HAGSTROM.

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