Aug. 9, 1966 J. L. WILLIAMS 3,265,427

METAL DOOR JAMB STRIKE PLATE ASSEMBLIES

Filed May 20, 1964

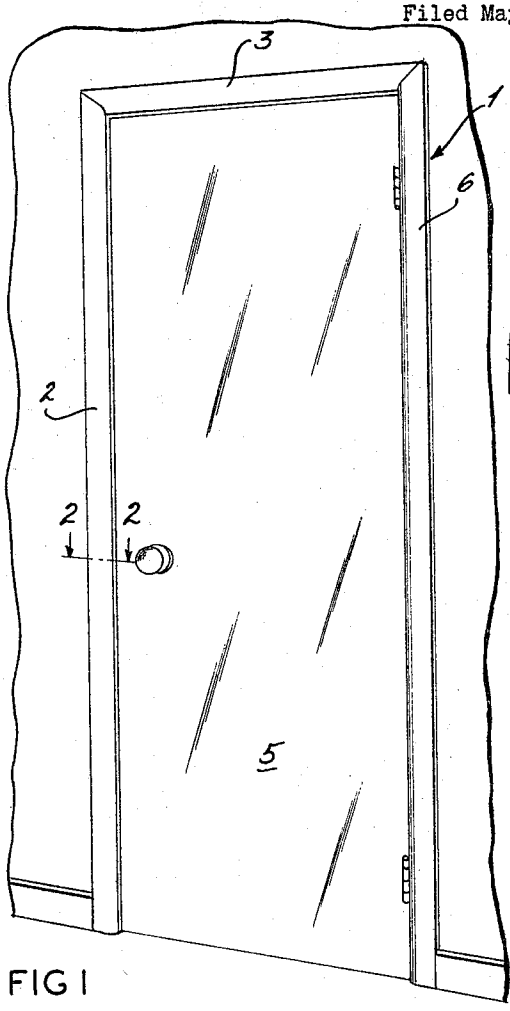


FIG 1

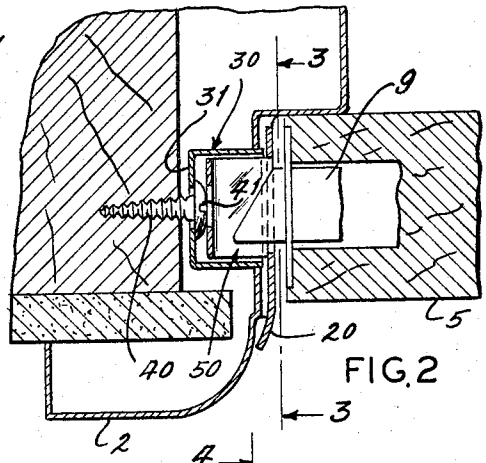


FIG. 2

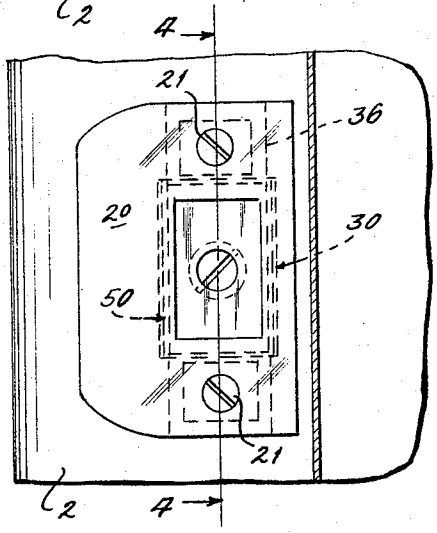


FIG. 3

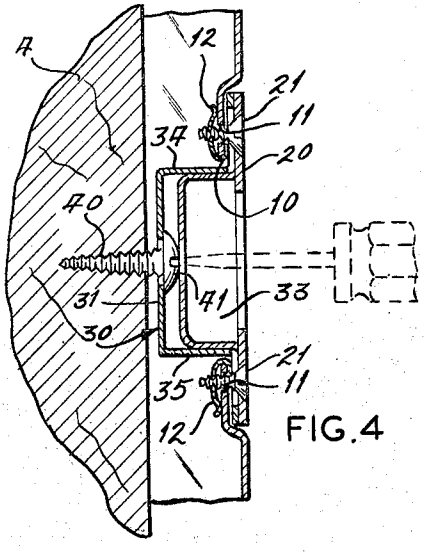


FIG. 4

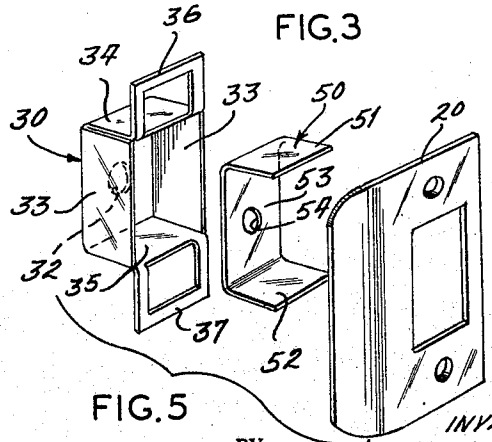


FIG. 5

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METAL DOOR JAMB STRIKE PLATE ASSEMBLIES

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This invention relates to strike plate assemblies for light metal door frames.

The modern light weight metal door frame was pioneered by Joseph J. Steffan (see Patents Nos. 2,538,925 and 2,661,084). Since those door frames have come into common use, the tendency has been toward providing arrangements whereby the strike plate jamb section is secured to the rough buck behind it only at the top and bottom of the jamb section.

This has led to several difficulties. The center of the span cannot be adjusted with respect to the door, to maintain the proper clearance between the free edge of the door and the facing surface of the jamb section, particularly in the area of the strike plate. Furthermore, the door is rather easily jimmied open, by springing the jamb section away from the door until the strike plate clears the bolt of the door latch.

One of the objects of this invention is to provide a strike plate assembly by which the clearance of the strike plate jamb section with respect to the door can be adjusted.

Another object is to provide such a strike plate assembly which makes difficult the springing of the door frame with respect to the door.

Still another object is to provide such a strike plate assembly which is adjustable transversely of the frame, with respect to the bolt of the door latch.

Still another object is to provide such a strike plate assembly in which the various adjustments can be made with a screwdriver, and without disassembling any part of the strike plate assembly.

Other objects will become apparent to those skilled in the art in the light of the following description and accompanying drawing.

In accordance with this invention, generally stated, a strike plate assembly or keeper mechanism of the general type of that shown in Steffan Patent No. 2,678,843 is provided with a dust box deep enough to accommodate a clamping device, between which and the dust box, the head of a screw, the shank of which projects through a hole in the bottom of the dust box, is accommodated. The clamping device is provided with an access port, so that the screw can be turned with the clamp in place. The screw is driven into the wood buck, and the head of the screw, being confined between the inside surface of the bottom of the dust box and the underside of the bottom of the clamping means, holds the dust box in any desired position with respect to the rough buck within the limits of the length of the screw. The dust box is secured to the jamb section by sheet metal screws, so that the positioning of the dust box positions the central span of the jamb section.

The transverse adjustment feature of the keeper mechanism of Patent No. 2,678,843 is retained, so that in spite of the anchoring of the dust box with respect to the jamb, transverse adjustment of the strike plate or keeper plate with respect to the door bolt (by virtue of oversize screw holes **21** in the jamb section and oversize clip openings in flanges **36, 37**) is permitted.

In the drawing:

FIGURE 1 is a view in perspective of a door frame equipped with a strike plate assembly of this invention;

FIGURE 2 is a sectional view taken along the line 2—2 of FIGURE 1;

FIGURE 3 is a sectional view taken along the line 3—3 of FIGURE 2;

FIGURE 4 is a sectional view taken along the line 4—4 of FIGURE 3; and

FIGURE 5 is an exploded view of parts of the strike plate assembly of this invention.

Referring now to the drawing for one illustrative embodiment of strike plate assembly of this invention, reference numeral **1** indicates a door frame of the dry wall type, one example of which is shown in Evans Patent No. 2,835,933, in which a strike plate jamb section **2** is mounted at its upper end on a rail section **3**, and at its lower end, by a nailing strap, not shown in FIGURE 1, but illustrated in the Evans patent, to a rough wooden buck **4**.

A door **5** is hinged along a hinge side jamb section **6**, and is provided with the usual spring latch, with a spring biased bolt **9**.

At the level of the bolt **9**, near the center of the span of the strike plate jamb section **2**, the jamb section has a keeper opening **10**, above and below which are enlarged strike plate screw holes **11**. Tinnerman type clips **12** are mounted on the edges defining the upper and lower boundaries of the opening **10**. In this embodiment, the jamb section is embossed around the opening **10**, to accommodate a strike plate **20**.

A dust box **30** is mounted on the jamb section **2**, with a part extending through and within the opening **10**. The dust box **30** has a bottom **31** with a hole **32** through it, side walls **33**, top and bottom end walls **34** and **35**, and frame-like flanges **36** and **37** integral with and projecting at right angles from the top edge of the end walls **34** and **35** respectively. The flanges **36** and **37** embrace the clips **12** when the dust box **30** is mounted on the jamb section **2**, and the bottom **31** extends between the jamb section face and the rough buck, but is spaced from the rough buck **4**, as shown particularly in FIGURES 2 and 4.

A wood screw **40** projects through the hole **32** in the bottom of the dust box, and into the rough buck **4**. Screw **40** has a head **41**, the underside of which engages the upper-side of the bottom **31** of the dust box.

A clamping member, which, in this embodiment, takes the form of a U-shaped yoke **50**, is slidably mounted in the dust box **30**, above the head **41** of the screw **40**. The yoke **50** has upper and lower arms **51** and **52** and a bottom web **53**, in which there is a port **54**. The port **54** is so positioned as to be aligned with the hole **32** in the bottom of the dust box **30**, when the yoke **50** is mounted in the dust box. The port **54** is of a size to admit a screwdriver blade, but is smaller in diameter than the diameter of the screw head **40**. Thus, as shown particularly in FIGURES 2 and 4, when the yoke **50** is mounted in the dust box, the screw head **41** is caged between the underside of the yoke bottom web **53** and the upperside of the dust box bottom **33**.

The strike plate **20** is mounted over the dust box flanges **36** and **37** and the yoke legs **51** and **52**, all of which abut the underside of the strike plate **20**, by means of sheet metal screws **21**, which screw into the Tinnerman clips **12**.

The installation of the strike plate assembly of this invention is self-evident. The clips **12** are mounted on the upper and lower edges defining the opening **10** for the dust box. The dust box **30** is slipped into the opening. A pilot hole may be drilled in the rough buck through the hole **32** in the bottom of the dust box, or the screw **40** may be driven directly into the rough buck **4** until the screw head **41** barely reaches the bottom of the dust box. The yoke **50** is then slipped into the dust box and the strike plate **20** is positioned so that the sheet

metal screws **21** can be inserted in the holes in the strike plate, and threaded into the clips **12**. The sheet metal screws **21** are drawn down tight, and the assembly is complete.

The central reach of the jamb section **2** can now be adjusted with respect to the door, merely by screwing the screw **40** in or out with respect to the rough buck **4**. It can be seen that when the door **5** is closed, the jamb section **2** can no longer be sprung easily, to jimmy the lock. The screws **21** are inaccessible, and even if the jamb itself were torn loose from the screws **21**, the strike plate **20** will still be positioned to retain the bolt **9**. Thus, the strike plate assembly of this invention provides as much protection against unauthorized entry, as if the assembly had been set into a solid frame. As a practical matter, it provides even more protection, since a solid frame frequently develops, with shrinkage, a considerable gap between the frame and the edge of the door, whereas the frame of this invention can easily be adjusted to maintain a close fit.

It can be seen that in spite of the fixing of the dust box with respect to the door, the transverse adjustability of the strike plate **20**, which is a feature of the Steffan keeper mechanism patent, is retained.

Numerous variations in the details of construction of the strike plate assembly of this invention, within the scope of the appended claims will become apparent to those skilled in the art in the light of the foregoing disclosure. For example, the shape of the holes **32** and **54** may be varied; the clamp member **50** may be provided with side walls, to form a complete dust box in its own right; and in the latter case, in which the clamp member also serves as a dust box, the present dust box can be made in the form of a yoke, without the side walls **33**. Sheet metal or other types of screws can be used instead of the wood screw **40**, particularly if the rough buck is constituted by metal framing members. The material and construction of the rough buck are, of course, of no moment, as long as provision can be made for the engagement of the screw **40**. These variations are merely illustrative.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. In a metal door frame of the character in which a strike plate jamb section is supported by a rough buck

and is normally unsecured to said rough buck through its center span and the strike plate jamb section has a hole to receive the latch of a door in said frame, the improvement comprising a dust box proportioned to fit in the hole in the strike plate jamb section and having a pair of oppositely disposed flanges adapted to bear on the face of the jamb section along the margin of said hole, said dust box having a bottom with a screw receiving hole in it; a screw extending through said hole, said screw being of a length to screw into the rough buck and having a head of a size to engage the wall of said bottom around the margin of said hole, said screw head having a screwdriver receiving recess in it; clamping means mounted within said dust box, said clamping means having a bottom web with an opening in it proportioned to admit a screwdriver but not to admit the head of said screw, said head being positioned between the bottom of the dust box and the bottom web of said clamping means, with the screwdriver receiving recess of said head framed within the said opening, and means for retaining said clamping means within said dust box.

2. The improvement of claim **1** wherein the clamping means is a U-shaped yoke, with arms projecting toward the door and a bottom web integral with said arms and extending between them, said arms being spaced sufficiently to receive a door latch bolt between them.

3. The improvement of claim **2** wherein the means for retaining the yoke within the dust box is a strike plate mounted on said strike plate jamb section with the yoke arms abutting the underside of said strike plate.

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