March 24, 1942. G. S. JERVIS 2,277,549

DOOR HINGE

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Fig. 1.

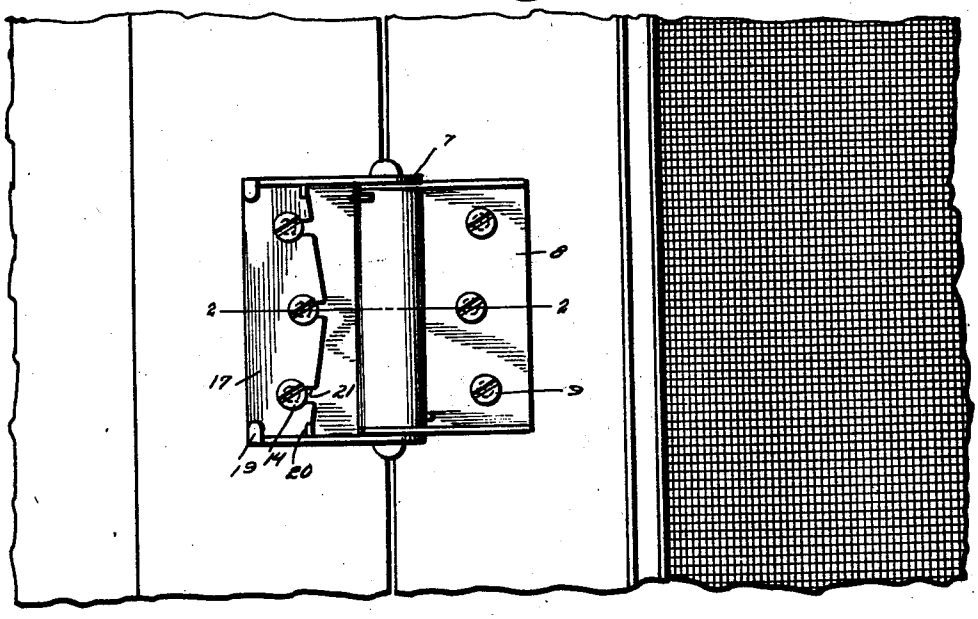


Fig. 4.

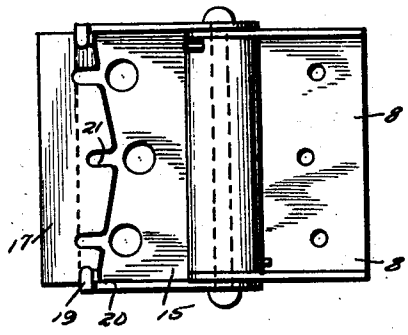


Fig. 7.

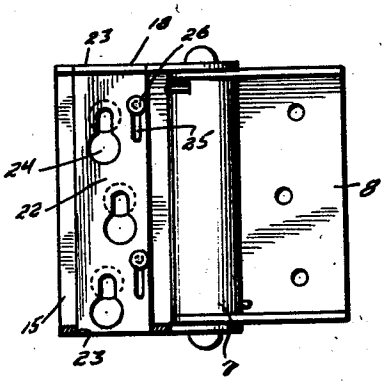
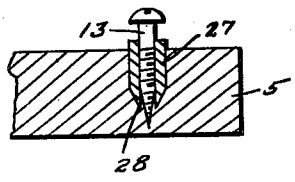


Fig. 9



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Fig. 2.

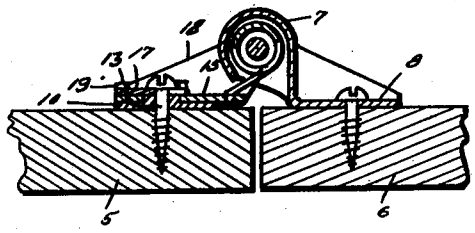


Fig. 5.

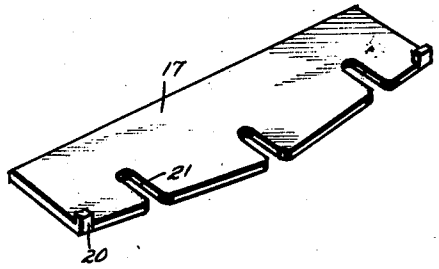


Fig. 3.

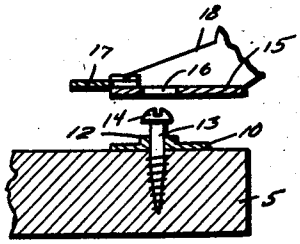


Fig. 8.

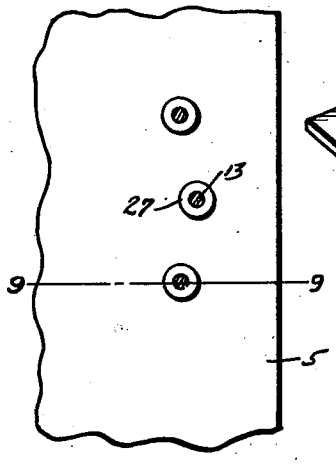
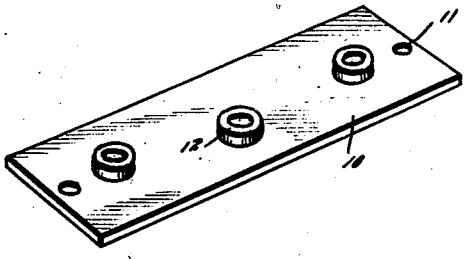


Fig. 6.



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UNITED STATES PATENT OFFICE

2,277,549

DOOR HINGE

George S. Jervis, Amityville, N. Y.

Application March 17, 1941, Serial No. 383,833

2 Claims. (Cl. 16—149)

The present invention relates to new and useful improvements in hinge construction for easily and quickly mounting a screen door, movable partition, or the like, in position on a frame, or jamb, and the invention has for its primary object to provide fastening means for securing the hinge to the door frame without necessitating the removal and replacement of screws or other fastening devices each time the screen door is hung.

A further object is to provide a device of this character of simple and practical construction, which is neat and attractive in appearance, strong and durable, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which—

Figure 1 is a fragmentary elevational view of a screen door showing the hinge in position for attaching the same to the door frame,

Figure 2 is a sectional view taken substantially on a line 2—2 of Figure 1,

Figure 3 is a fragmentary group sectional view showing the hinge plate in position for placing over the permanently attached fastening screws,

Figure 4 is a plan view showing the locking plate in its released position,

Figure 5 is a perspective view of the locking plate,

Figure 6 is a similar view of the permanent anchoring plate,

Figure 7 is a plan view showing a modified form of locking plate,

Figure 8 is a fragmentary side elevational view of a door jamb showing a modified form of hinge fastener, and

Figure 9 is a sectional view taken on a line 9—9 of Figure 8.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates the door frame while the numeral 6 designates the frame of a screen door. The hinge is designated generally at 7 and includes the hinge plate 8 which is secured to the screen frame 6 by means of screws or the like 9.

A permanent fastening plate 10 is secured to the frame 5 adjacent its edge, the plate 10 having openings 11 formed adjacent each end for receiving screws or the like (not shown) for permanently securing the plate 10 to the frame 5.

Rising from the plate 10 is a plurality of apertured bosses 12 through which fastening screws 13 are inserted, the heads 14 of said screws being spaced outwardly from the bosses as shown in Figure 3 of the drawings.

The other hinge plate of the hinge is designated at 15 and is provided with openings 16 of sufficient diameter to receive the heads 14 and the bosses 12 so that the plate 15 will rest flatwise against the plate 10, and the bosses 12 snugly engage in the openings 16. The bosses 12 are constructed of a depth corresponding to the thickness of the plate 15 so that the edges of the bosses are flush with the surface of the plate 15, and the heads 14 of these screws 13 will thus project above the surface of the plate 15.

A locking plate 17 is slidably mounted on the plate 15, the locking plate 17 being positioned between the upstanding flanges 18 formed at the opposite ends of the hinge plate 15 and said flanges adjacent the outer edges of the plate 15 are formed with inwardly projecting stops 19 adapted for engagement by lugs 20 formed on the inner edges of the locking plate 17. In the form of the invention illustrated in Figures 1 to 6 inclusive, the locking plate 17 is adapted for horizontal sliding movement, the lugs 20 preventing complete removal of the locking plate from the hinge.

The inner edge of the locking plate 17 is formed with slots 21 adapted for receiving the shanks of the screws 13 so that the locking plate may slide under the heads 14 of said screws whereby to anchor the plate 15 against movement on the fixed plate 10.

In the form of the invention illustrated in Figure 7 of the drawings, the locking plate is designated at 22 and is adapted for sliding vertically on the hinge plate 15 through openings 23 formed in the flanges 18 of the hinge. The locking plate 22 is formed with keyhole openings 24 for receiving the screws 13 and sliding under the heads 14 of said screws to secure the hinge in position. The plate 22 is also provided with vertically extending slots 25 through which headed screws 26 are inserted and attached to the plate 15 to prevent separation of the locking plate 22 from said last named plate.

From the foregoing it will be apparent that the plate 10 is permanently attached to the door frame 5 and the screws 13 accordingly need not be removed each time the screen door is hung, the locking plate merely being released to permit removal.

In Figures 8 and 9 I have illustrated a modified

form of fastening means for the hinge plate **15**, the permanent plate **10** being dispensed with and a plurality of tubular members **27** are sharpened at one end as shown at **28** and driven into the jamb **5**. The outer end of the tubular members project beyond the surface of the jamb a distance equal to the thickness of the plate **15** through the openings of which the tubular members are inserted so that the ends of the members will be flush with the surface of the plate.

The screws **13** are threaded into the members **27**, or the screws may be of sufficient length to be freely inserted in the members and threaded into the jamb, the heads of the screws projecting beyond the plate **15** to receive the locking plate as heretofore explained.

It is believed the details of construction and manner of use of the device will be readily understood from the foregoing without further detailed explanation.

What I claim is:

1. A hinge comprising a pair of hingedly connected plates adapted for attaching respectively to a door jamb and to a door for swingably mounting the door on the jamb, a plate permanently secured to the jamb under the adjacent hinge plate and having outwardly projecting apertured bosses projecting through the said adjacent hinge plate, screws positioned in said bosses and having heads outwardly of the said hinge plate and a locking plate slidably mounted on the hinge plate and having slots receiving the screws to engage under the heads of the screws for releasably securing the hinge plate to said permanent plate.

2. A hinge comprising a pair of hingedly connected plates adapted for attaching respectively to a door jamb and to a door for swingably mounting the door on the jamb, a plate permanently secured to the jamb under the adjacent hinge plate and having outwardly projecting apertured bosses projecting through the said adjacent hinge plate, screws positioned in said bosses and having heads outwardly of the said hinge plate and a locking plate slidably mounted on the hinge plate and having slots receiving the screws to engage under the heads of the screws for releasably securing the hinge plate to said permanent plate, and stops on the hinge plate and on the locking plate engageable upon a predetermined sliding movement to prevent separation of the locking plate from the hinge plate.

GEORGE S. JERVIS.