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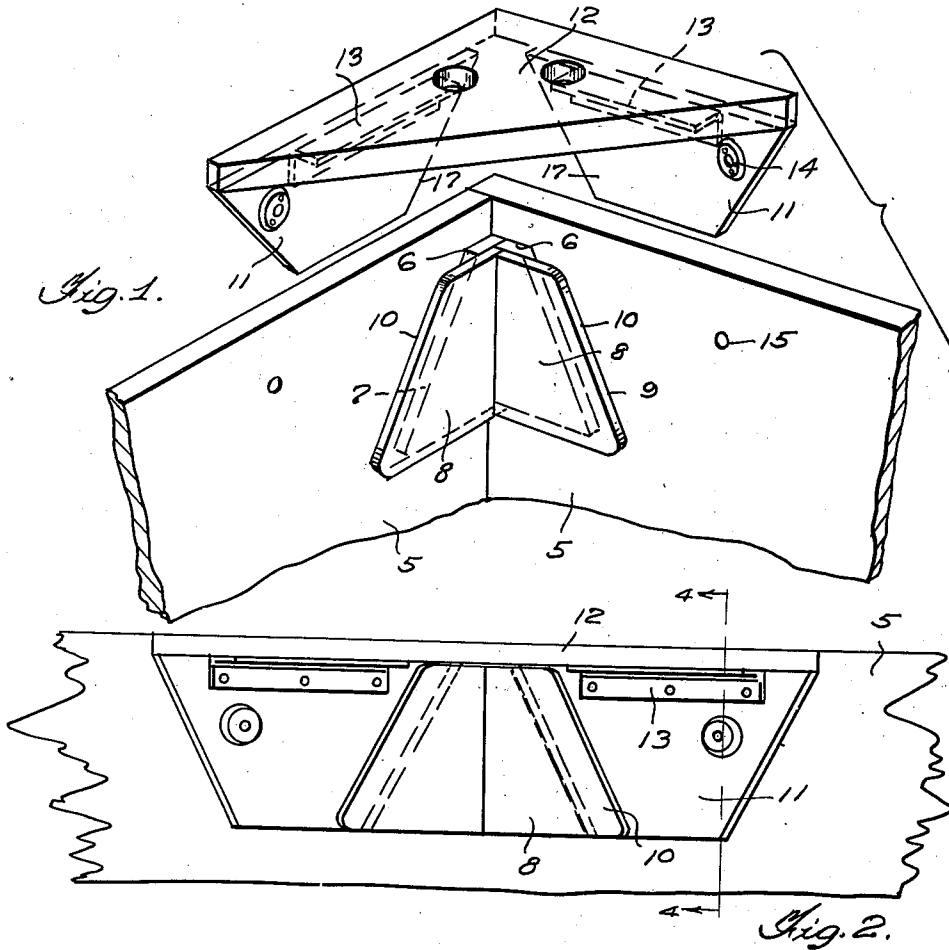
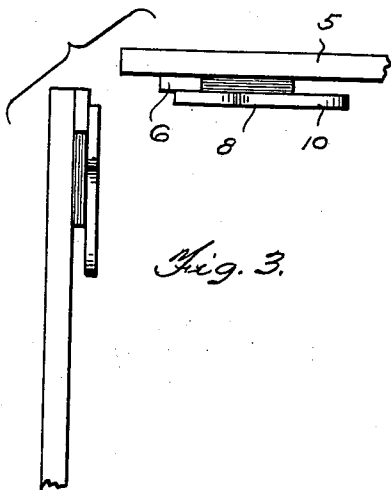
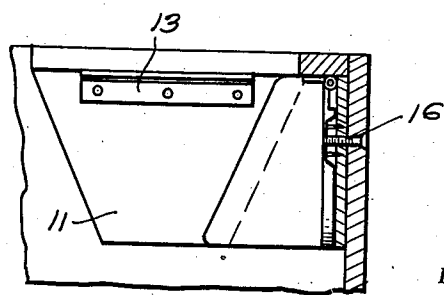
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2,340,545

PANEL AND CORNER FASTENER

Filed Oct. 22, 1942

2 Sheets-Sheet 1



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Fig. 4. Fred Dana Marsh

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2 Sheets-Sheet 2

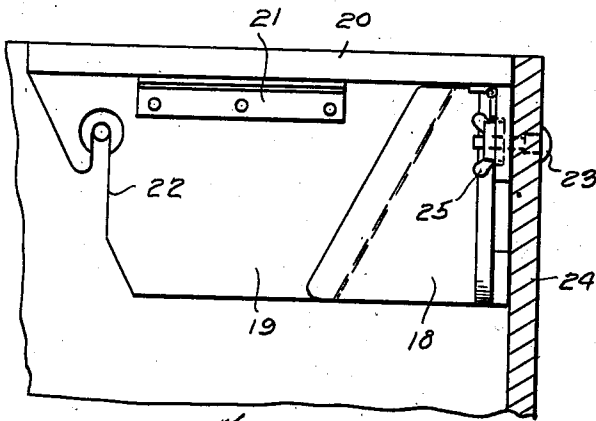


Fig. 5

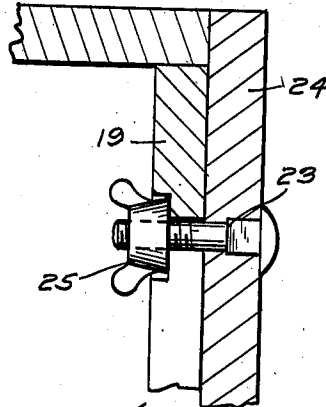


Fig. 6

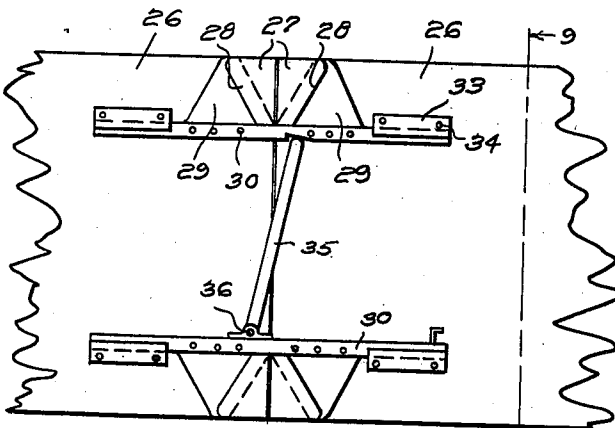


Fig. 7



Fig. 8

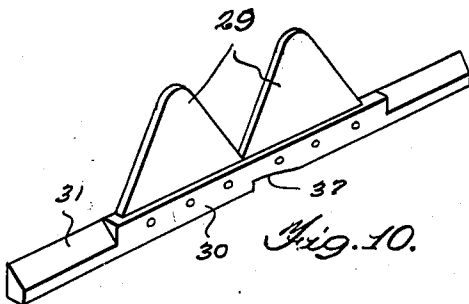


Fig. 10

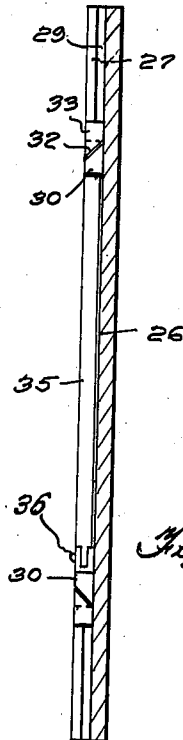


Fig. 9

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UNITED STATES PATENT OFFICE

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PANEL AND CORNER FASTENER

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Application October 22, 1942, Serial No. 462,977

2 Claims. (Cl. 20-92)

The present invention relates to new and useful improvements in means for fastening the corners of various structural elements, such as crates, boxes and various types of furniture having side members adapted for attaching in a position at right angles to each other, as well as embodying a construction adapted for securing panels in edge to edge relation.

An important object of the present invention is to provide a fastening attachment of this character of simple and practical construction, which is 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 in the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which—

Figure 1 is a fragmentary group perspective view of a corner fastener embodying my invention.

Figure 2 is a fragmentary side elevational view showing the fastener in assembled position.

Figure 3 is a group plan view of the meeting edges of two side members of a structure to be fastened together and showing the holding plate secured thereto.

Figure 4 is a sectional view taken substantially on a line 4—4 of Figure 2.

Figure 5 is a sectional view showing a modified fastening attachment for the holding plate.

Figure 6 is a fragmentary sectional view of the modified fastener device shown in Figure 5.

Figure 7 is a fragmentary bottom plan view of a panel fastening device embodying my invention.

Figure 8 is an edge elevational view thereof.

Figure 9 is a sectional view taken substantially on a line 9—9 of Figure 7.

Figure 10 is a perspective view of one of the double locking plate members for the panel fastener.

Referring now to the drawings in detail and with particular reference to the form of the invention illustrated in Figures 1 to 4, inclusive, the numerals 5—5 represent a pair of side members of a box, crate or the like adapted for connection in a position at right angles to each other, the inner surface of the members having cleats 6—6 cemented or otherwise fixedly secured thereto and provided with downwardly inclined edges 7.

Secured to the outer surface of the cleats 6 are the holding plates 8—8, the side edges of

the holding plates also being inclined as shown at 9 and projecting outwardly beyond the inclined edge 7 of the cleats 6 so as to form flanges 10—10 which are spaced from the adjacent surface of the members 5—5. A pair of locking plates 11—11 of substantially triangular form have one edge secured to the underside of a triangular-shaped push plate 12 by means of hinges 13—13, the locking plates 11 being adapted for engagement behind the flanges 10—10 of the holding plates for securing the members 5—5 in assembled position.

A threaded metal plate 14 is secured to each of the locking plates 11 in alignment with an opening 15 in the associated member 5 for receiving a fastening screw 16 to secure the locking plates 11 against accidental displacement.

The locking plates 11 have inclined edges 17—17 cooperating with the inclined edges 7 of the cleats 6 to provide a wedging fit for the locking plates to draw the adjacent ends of the members 5 closely against each other in a manner as will be apparent.

In the form of the invention illustrated in Figures 5 and 6 of the drawings the holding plates are designated at 18 and the locking plates 19 connected to the push plate 20 by the hinges 21. In this form of the invention the edge of the locking plate 19 is formed with a vertically extending slot 22 adapted to receive a bolt 23 carried by the side member 24, the bolt being provided with a wing nut 25 for securing the locking plates in position.

Figures 7 to 10, inclusive, illustrate the invention adapted for use in connecting a pair of panels 26—26 in edge to edge relation, the panels, at their meeting edges being formed with holding plates 27—27 including the flanges 28—28 behind which the triangular-shaped locking plates 29—29 are positioned. The locking plates 29—29 are formed on one edge of a bar 30 which is positioned in bridging relation with respect to the meeting edges of the panels as will be apparent from an inspection of Figure 7 of the drawings.

One edge of the bar 30, adjacent each end thereof, is beveled as shown at 31 adapted for conformably engaging the bevel edges 32 of cleats 33 secured to the opposite side of the panel in any suitable manner, such as by screws or bolts 34.

A pair of the bars 30 with the locking plates 29 are positioned adjacent each side edge of the panels 26 and one of the bars 30 is provided with a locking bar 35 pivoted to the bar 30 as at 36 with the free end of the locking bar adapted to enter a notch 37 formed in the other of said bars

30 to secure the locking plates 29 in locking position behind the flanges 28.

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

Having described the invention, what is claimed as new is:

1. A fastener for a pair of structural elements and comprising a holding plate secured to each element and including a flange on each plate spaced from its associated element and cooperating with its associated element to form a channel on the surface of the element, and a pair of locking plates adapted for positioning flatly against the respective elements with one edge slidably inserted in said channels, a connector plate, and means swingably connecting the lock-

ing plates at right angles to each other to the connector plate for insertion of the locking plates as a unit behind the respective flanges.

2. A corner fastener for a pair of right angularly disposed members, said fastener comprising a holding plate secured to each member adjacent the corner and including a flange spaced from the member, a pair of locking plates adapted for insertion behind the respective flanges, a connector plate, and hinges connecting one edge of each of the locking plates to one side of the connector plate with the locking plates positioned at right angles to each other for moving the latter as a unit into and out of locking position, said locking plates being foldable against the connector plate when not in use.

FRED DANA MARSH.