June 11, 1940. E. GALANTE 2,203,987

CORNER PIECE FOR FRAMES

Filed Dec. 7, 1938

Fig. 1

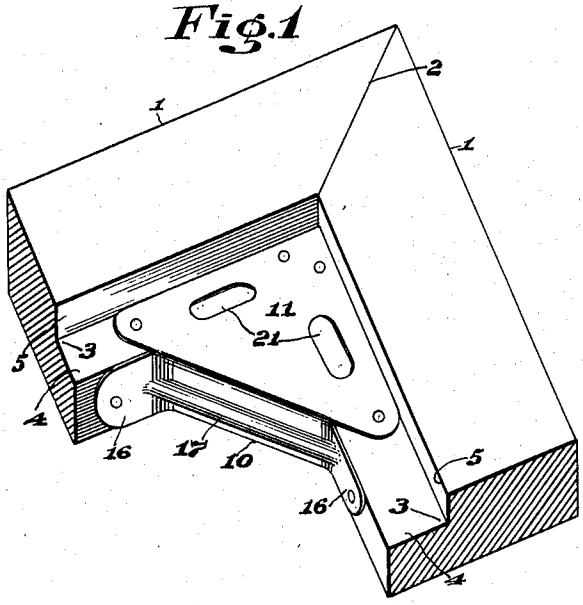


Fig. 3

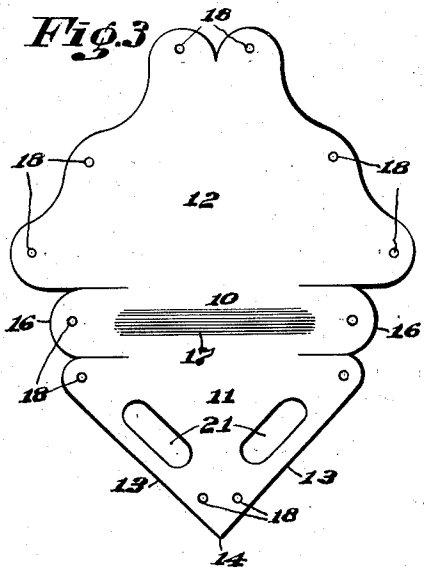


Fig. 2

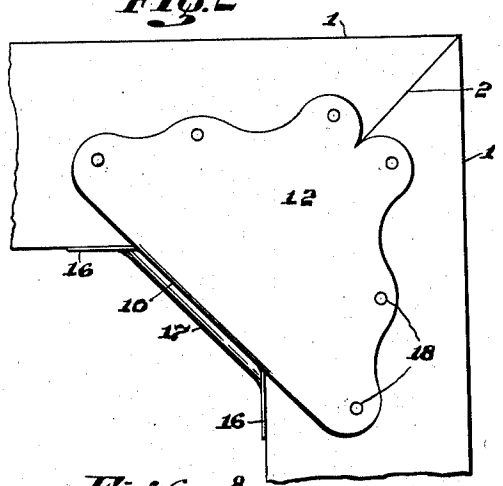


Fig. 4

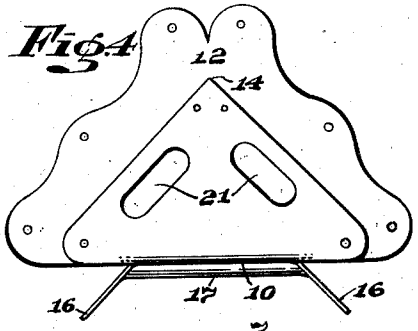


Fig. 5

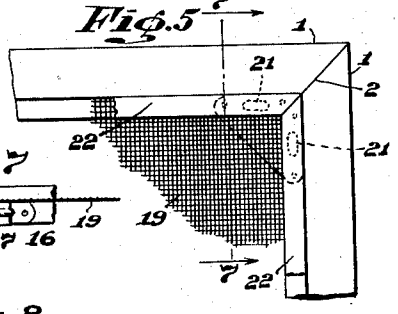


Fig. 6

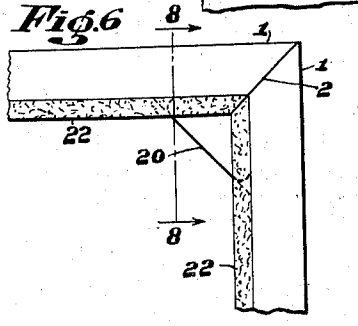


Fig. 7

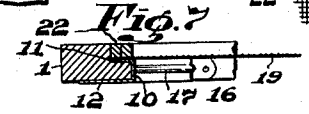
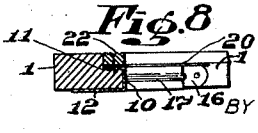


Fig. 8



INVENTOR
Ermanno Galante
BY
John E. R. Hayes
ATTORNEY

Patented June 11, 1940

2,203,987

UNITED STATES PATENT OFFICE

2,203,987

CORNER PIECE FOR FRAMES

Ermanno Galante, Woburn, Mass.

Application December 7, 1938, Serial No. 244,407

2 Claims. (Cl. 20—92)

The invention relates to an improvement in corner pieces for frames, and especially mitered frames, by which the end abutting bars of the frame are connected and securely fastened to one another. The invention is one in which the corner piece is made adaptable not only for frames to which screening is applied, as window screens and screen doors, but is also adaptable for picture framing and the like.

Among the objects of the invention are:

To provide a corner piece for a frame sold in a disjointed or knocked-down condition, and which may easily and accurately be assembled by the unskilled;

To provide a corner piece in which the mitered joint between the frame bars is at the front open to sight at all times during the application of the corner piece, in order that it may be seen that the joint is made a properly closed joint;

To provide a corner piece which will leave uncovered the entire front face of the frame, and which will permit of this face being finished even by planing after the application of the corner piece; and

To provide especially a corner piece which when attached will strongly hold together the assembled frame bars without need of further fastening, and enable them to withstand rough usage.

In addition to attaining these objects the corner piece possesses other advantages all of which can best be seen and understood by reference to the drawing in which an embodiment of the invention is shown, and in which—

Fig. 1 shows in perspective a fragmentary part of a frame fitted with the corner piece embodying the invention as looked at from the front, but without the beading or finishing that is applied for completing the work.

Fig. 2 is the same as Fig. 1 looked at from the back of the frame.

Fig. 3 is a plan of the template, or blank, from which the corner piece is made.

Fig. 4 is a plan of the corner piece.

Fig. 5 is a plan of a fragmentary part of a frame for a screen fitted with the corner piece embodying the invention and provided with a finishing bead or strip.

Fig. 6 is like Fig. 5 except that the frame is shown applied to the holding of a picture and provided with finishing bead or strip.

Fig. 7 is a section on the line 7—7 of Fig. 5; and Fig. 8 is a section on the line 8—8 of Fig. 6.

Referring to the drawing, 1—1 represents frame bars the abutting ends of which are mitered to form a joint 2. This joint lies at an angle of 45° to the respective bars. Along the inside edge to the front face of the frame bars each is provided with a rabbet or longitudinal groove 3. 4 represents the bottom of this groove and 5 its side. The rabbet or groove 3 is adapted to receive a finishing strip or bead, as will later be explained. The depth of the rabbet or channel may vary. It must be of sufficient depth that the front plate section of the corner piece, later to be referred to, may lie within it and there be concealed by a finishing strip. The depth of the channel will also depend on the relation of the face of the finishing strip to the adjacent face of the frame. If it is desired that the face of the finishing strip lie flush with the face of the frame, or below it, then the rabbet or groove must be of sufficient depth to permit of this.

The corner piece for connecting the frame bars is made from a one piece blank or template, as shown in Fig. 3. The corner piece comprises a flange carrying plate section 10. From the opposite side edges of this plate section there are turned up at right angles thereto flange forming plate sections 11 and 12, respectively. These plate sections lie parallelly disposed. The plate section 11 is made generally triangular in shape, presenting edges 13, 13 lying at right angles to each other and meeting in an apex 14. The plate section 12 is one appreciably longer and wider than the plate section 11 and need have no particular form excepting that it should have appreciable length and width. Extending from the ends of the plate section 10 are flange forming plate sections 16, 16, respectively. These plate sections 16 are turned to lie in planes parallel, respectively, with the respective edges 13, 13 of the plate section 11, or, in other words, the plate sections 16, 16 lie in planes normal to one another, or so that if their planes were extended into an apex these planes would lie at right angles to each other. The plate section 10 is preferably reinforced by a rib 17 which is lengthened to extend into the plate sections 16, 16 through the joints between the respective sections.

In the application of the corner piece to the frame for connecting its abutting frame bars the corner piece is so applied that its section 10 will lie interposed between the inner sides of the respective bars adjacent the inside angle between them, and will extend at precisely right angles to the mitered joint 2 between the abutting ends of the bars.

The section 11 will extend to lie within the rabbeted or grooved edge 3 of the respective bars on the front of the frame with bearing against

the bottom 4 of the groove, while the edges 13, 13 thereof will have bearing against the side 5 of the groove, with the apex 14 lying precisely within the plane of the joint 2. The sections 16, 16 will then lie to have bearing against the inside edges of the respective bars. On the back the section 12 will extend upwardly over the back of the frame and well cover the joint 2 although the extension of this section will be inside the outer edges of the frame bars so as to permit of their being planed.

In order that the various sections of the corner piece may thus have bearing against the frame bars, the bars themselves must be so made that proper co-ordination will be obtained. Assuming the bars being so made as to properly receive the corner piece, then the application of the corner piece to the bars will, by the bearing of its various parts, bring the abutting ends of the bars into proper co-ordination to form the joint 2. In this connection the edges 13, 13 of the section 11 of the corner piece, extending as they do into the joint, materially assist in properly positioning the bars for obtaining accurate jointure between them and for holding them in place when positioned. At such time that portion of the joint 2 lying between the exposed front faces of the bars will be open to sight at all times in order that it may be seen that the joint 2 is made a properly closed joint, or one having a snug fit.

After the assembling of the bars and corner piece with the bars being held securely in place by hand, then the corner piece is secured to the bars, it being provided with various openings 18 through which fastenings may be inserted to enter the bars. These openings, or at least some of them, are so arranged for both flanged sections 11 and 12, that an initial fastening of the corner piece may be made at points on opposite sides of the joint 2 and as near the joint as possible. After these fastenings have been obtained the other fastenings may readily be applied.

With the corner piece thus provided the frame bars are so left that they may be finished by planing, or otherwise, either along the edges of the bars, or over their front faces inasmuch as the flange section 10 of the corner piece lies below these faces.

After the application of the corner piece the object framed, be it screen 19, as shown in Fig. 5, or picture 20, as shown in Fig. 6, is then applied fitting within the rabbeted or grooved edge 3 of the bars with bearing against the bottom and side of the groove, and with extension over the flange section 11 of the corner piece fitting therein. The object is then secured by tacking, or otherwise, the flange section 11 of the corner piece being provided with elongated openings 21 in it through which fastenings may be inserted for holding the object. After the application of the object then the rabbet or groove in the bars is closed and the fastened edge of the object covered and concealed by a finishing bead or strip 22, which is nailed in place. This bead or strip may lie either flush with the front face of the bars or extend below or above it, depending upon the thickness of the strip or relative depth of the groove in the bars.

I claim:

1. The combination with the abutting ends of frame bars having a mitered joint and a rabbeting along the front inside corner edges thereof, of a corner piece for positioning and holding together said bars comprising a flange carrying section arranged to lie interposed between the inner sides of said bars adjacent the angle between them and extending at right angles to said joint, flanges projecting at right angles from the opposite sides of said flange carrying section of different lengths, the shorter one of said flanges extending to lie within said rabbeting with fitting against the bottom thereof an covering only that portion of said joint extending through said rabbeting, the other longer one of said flanges extending to fit against the back of said frame bars inside the outer edges thereof with appreciable extension over said joint and widening on either side thereof, and means for fastening said corner piece to said bars.

2. The combination with the abutting ends of frame bars having a mitered joint and a rabbeting along the front inside corner edges thereof, of a corner piece for positioning and holding together said bars comprising a flange carrying section arranged to lie interposed between the inner sides of said bars adjacent the angle between them and extending at right angles to said joint, flanges projecting at right angles from the opposite sides of said flange carrying section of different lengths, the shorter one of said flanges having edges extending at right angles to each other and meeting in a common apex, said shorter one of said flanges extending to lie within said rabbeting with its body fitting against the bottom edges of said rabbeting, with its fitting against the side of said rabbeting and with its apex lying within the plane of said joint, said shorter one of the flanges covering only that portion of said joint extending through said rabbeting, the other longer one of said flanges extending to fit against the back of said frame bars inside the outer edges thereof with appreciable extension over said joint and widening on either side thereof, and means for fastening said corner piece to said bars.

ERMANNO GALANTE.