G. E. FERRY.

CORNER PIECE FOR SCREEN FRAMES.

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973,643. Patented Oct. 25, 1910.

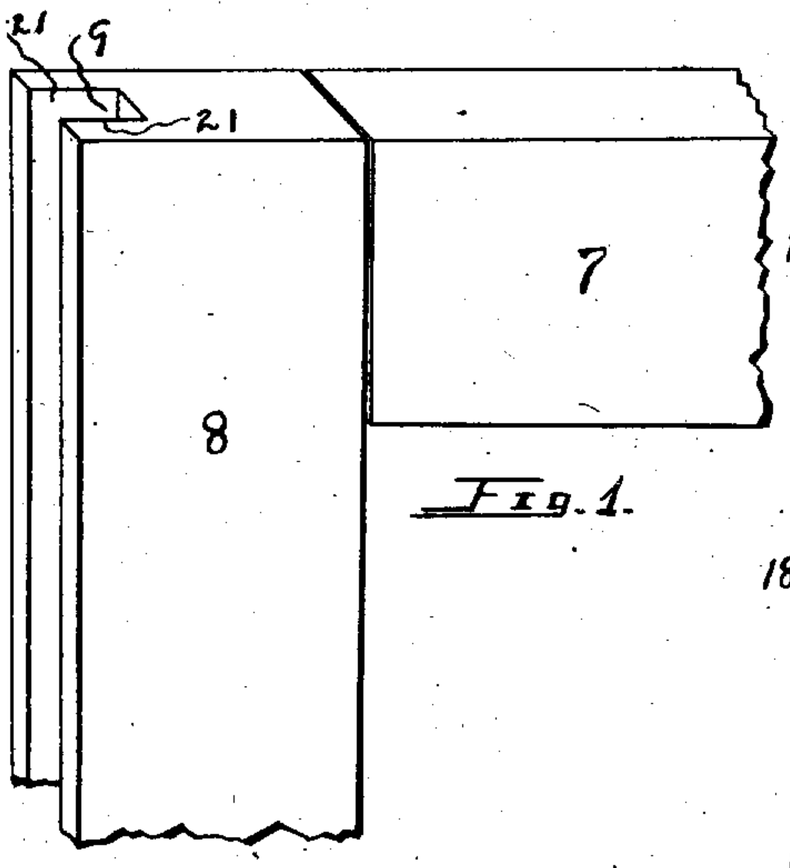


Fig. 1.

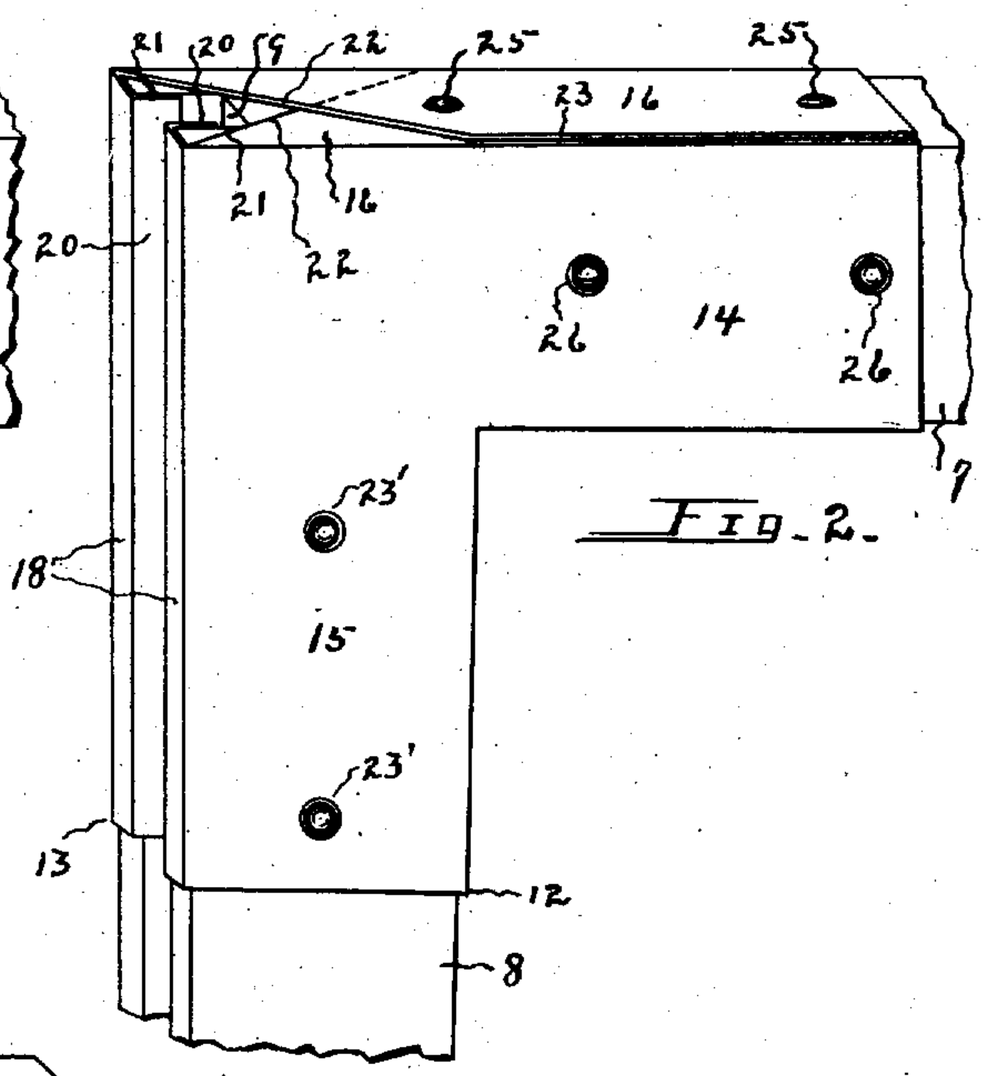
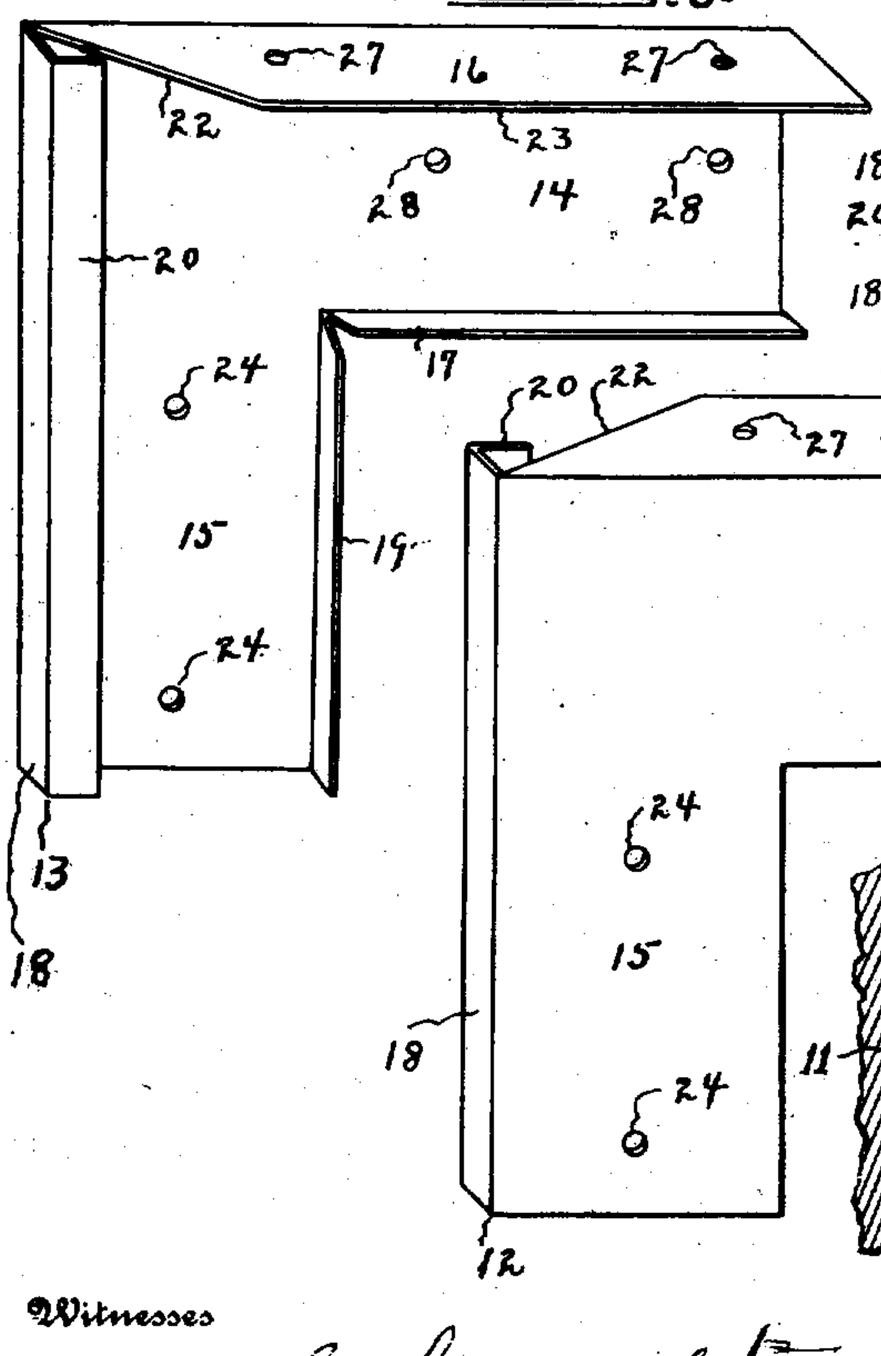


Fig. 2.

Fig. 3.



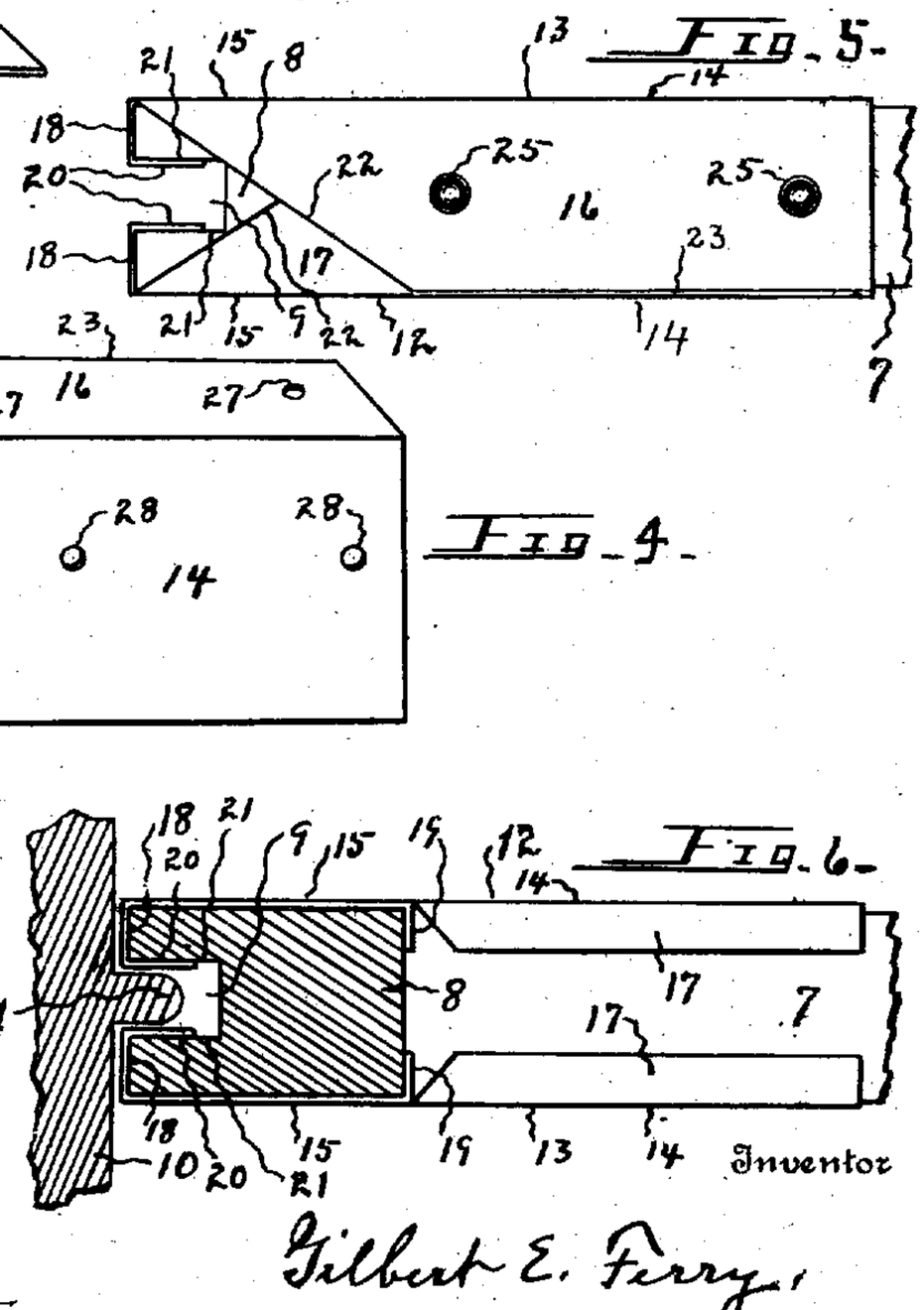


Fig. 5.

Fig. 4.

Fig. 6.

Witnesses

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CORNER-PIECE FOR SCREEN-FRAMES.

973,643. Specification of Letters Patent. Patented Oct. 25, 1910.

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To all whom it may concern:

Be it known that I, GILBERT E. FERRY, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Corner-Pieces for Screen-Frames, of which the following is a specification.

This invention relates to improvements in corner pieces for screens or similar frames, and has for its object to provide corner pieces of this class having features of construction whereby the cost of manufacture may be reduced, but wherein a strong and convenient structure may be produced for use in effectually securing together the terminals of the vertical and horizontal strips of the frame.

Metallic sheets are generally employed in the manufacture of corner pieces of this class; they are formed so that they envelop more or less of the end portions of the strips. In their manufacture, the required forms are generally cut from integral sheets, and a loss of material has resulted on account of the comparatively extensive and angular forms required, when cutting the sheets. The herein described corner pieces, by reason of their construction are very convenient for mounting upon the ends of the strips, and may be manufactured from small portions of waste sheets or cuttings of no particular value for other purposes, whereby the cost of production is lessened, and an article is provided, convenient and effective for the purposes required.

With these objects in view the invention discloses a novel combination and arrangement of parts, as described herein, pointed out by the appended claims, and as illustrated in the accompanying drawing, it being understood that changes in form, size, proportion and minor details may be made within the scope of the claims without departing from the spirit of the invention or sacrificing any of its advantages.

In the drawing, Figure 1 is a perspective view showing the terminals of a horizontal and vertical strip of an ordinary screen frame, before being secured together. Fig. 2 is a view of the same parts shown in Fig. 1, with corner pieces mounted thereon embodying my invention. Figs. 3 and 4 are perspective views illustrating the construction, separately, of the corner pieces shown in Fig. 2. Fig. 5 is a plan view of the upper side of a horizontal strip and the upper end of a vertical strip, the corner pieces being mounted thereon. Fig. 6 is a plan view of the lower side of a horizontal strip, the vertical strip being in section, and illustrating the employment of flanges, a part of a window frame, and a tongue usually employed in connection with slidable screen frames being added and in section.

Referring now to the drawing for a more particular description, numerals 7 and 8 indicate, respectively, horizontal and vertical strips of a screen frame or other like device, and as is well known, grooves 9 are generally formed in the outer sides or faces of the vertical strips, extending their entire length.

At 10 is indicated a support or part of a window frame, a longitudinal projection, ridge or tongue thereon being indicated at 11, and in practice, when the parts of a screen frame have been assembled and operatively mounted, said screen frame is slidable, the tongues engaging within the grooves.

In order that the terminals of the horizontal and vertical strips may be effectively secured together, I provide the corner pieces indicated at 12 and 13. They are each L-shaped, and may be constructed to advantage of sheet metal. Each has a flat body portion 14 adapted to have a seating upon the side of a horizontal strip; also each has a flat body portion 15 integral with and disposed in the plane of body-portion 14, adapted to have a seating upon a side of a vertical strip. Body portions 14 of the L-shaped corner pieces are provided with transverse upper and lower flanges, indicated respectively at 16 and 17. They are disposed substantially at right angles to these body portions, and are adapted to have seatings, respectively upon the upper and lower sides or faces of the horizontal strips. Body portions 15 of the corner pieces are provided with flanges 18 and 19 disposed substantially at right angles to said body portions. Flanges 19 are adapted to have seatings upon the inner sides of the vertical strips. Flanges 18 are disposed substantially at right angles to body portions 15 and may have seatings upon the outer sides of the vertical strips adjacent to grooves 9, and they may have inwardly extending wings 20

disposed substantially parallel with said body portions 15, and are adapted to have seatings upon the oppositely-disposed walls 21 of said grooves 9.

In practice, the terminals of the horizontal and vertical strips of a screen frame may be effectively held together by use, singly, of either of the L-shaped members 12 or 13, and it is not necessary that both be used. Where they are used in this manner, the members are secured upon the same side of the screen frame, the opposite side remaining blank. Where thin material is employed, however, it is an advantage to use both members 12 and 13 conjointly. The preferred construction is to provide a width for flanges 16 equal to the space between the sides of the strips, as best shown in Figs. 2 and 5, these flanges having reduced or cut away portions to provide the inclined edges 22 intermediate flanges 18 and their free longitudinal edges 23, in which instance, flanges 16 may overlap, as plainly shown in said Fig. 2. This construction however, while adding materially to rigidity and strength as compared with flanges of less width which could not overlap, is not important. But where thin material is employed they may be constructed and disposed in a manner to overlap to advantage. It will be noted that flanges 16, as shown do not obtrude upon groove 9. It will be understood that corner pieces of this class must be so constructed that tongue 11 may have an unobstructed seating within and throughout the entire length of said groove.

In operation, body portions 15 of the L-shaped corner pieces are first seated upon the terminal of a vertical strip 8, and it will be held by means of flanges 18 and 19, also it will be seen that longitudinal wings 20 provide an additional holding means. I employ holding members to connect the L-shaped members to the strips, as brads or nails 23′ driven into the sides of strip 8 through openings 24 of body-portions 15. Horizontal strip 7 is then inserted between body portions 14 and is pushed forwardly until its front end makes contact with the vertical strip, and at this time it is held between flanges 16 and 17, and pins or nails 25 and 26 may be driven into the horizontal strip through the respective openings 27 and 28, whereby the terminals of the horizontal and vertical strips will be securely fastened together.

It will be seen that the herein described corner pieces may be constructed from metallic strips of small size, as compared with integral structures which envelop both sides of the horizontal and vertical strips. Also the parts as shown and described may be readily assembled, and may be conveniently secured.

Longitudinal wings 20 provide metallic portions which may make contact with longitudinal tongue 11, so that the screen may slide with less friction, and they provide an increased degree of rigidity for said flanges. I do not claim any novelty in the screen frame shown in the drawing. The herein described means are simply for securing the terminals of frame strips where they meet at right angles to form a corner of the frame.

Having fully described my invention, what I claim and desire to secure by Letters Patent is,—

1. In combination with the horizontal and vertical strips of a frame, said vertical strip having a longitudinal groove, a fastening means therefor, comprising a metallic, apertured, L-shaped plate adapted to have a seating upon one of the sides of said horizontal and vertical strips and provided with flanges upon its longitudinal edges adapted to have seatings upon the upper and lower faces of said horizontal strip and upon the outer and inner faces of the vertical strip, the flange upon the outer face of said vertical strip being provided with a longitudinal wing embracing one of the walls of said groove; and holding-members connecting between the L-shaped plate and said strips and traversing the apertures of said plate.

2. In combination with the horizontal and vertical strips of a frame, said vertical strip being provided with a longitudinal groove, a fastening means therefor, comprising a pair of metallic, apertured, L-shaped plates adapted to have seatings upon the sides of said horizontal and vertical strips and provided with flanges upon their longitudinal edges adapted to have seatings upon the upper and lower faces of said horizontal strip and upon the outer and inner faces of the vertical strip, the flanges upon the outer faces of said vertical strip being provided with longitudinal wings adapted to embrace the walls of said groove; and a plurality of holding-members connecting between the L-shaped plates and said strips and traversing the apertures of said plates.

3. In combination with the horizontal and vertical strips of a frame, the vertical strip being provided with a longitudinal groove, a fastening means therefor, comprising a pair of L-shaped plates adapted to have seatings upon the sides of the strips and having longitudinal flanges adapted to have seatings upon the outer and inner faces of said strips and to engage within said groove; and a plurality of keepers connecting between said strips and said plates.

4. In devices for the purpose described, the combination with the horizontal and vertical strips of a frame, the vertical strip having a longitudinal groove opening upon its upper terminal, comprising

a pair of plates formed L-shaped and adapted to have seatings upon the sides of said strips; said plates being provided with transversely-formed edges for seatings upon the outer and inner faces of the vertical strip, and with longitudinal flanges adapted to have seatings upon the upper face of the horizontal strip and upon the upper terminal of the vertical strip outwardly of said groove, and a plurality of impaling members transversely traversing said plates and said strips.

5. In combination with the horizontal and vertical strips of a frame, said vertical strip having a longitudinal groove, a fastening means therefor, comprising a metallic, apertured, L-shaped plate adapted to have a seating upon one of the sides of said horizontal and vertical strips and provided with flanges upon its longitudinal edges adapted to have seatings upon the upper and lower faces of said horizontal strip and upon the outer and inner faces of the vertical strip; and holding-members connecting between the L-shaped plate and said strips, and traversing the apertures of said plate.

6. In combination with the horizontal and vertical strips of a frame, said vertical strip being provided with a longitudinal groove, a fastening means therefor, comprising a pair of metallic, apertured, L-shaped plates adapted to have seatings upon the sides of said horizontal and vertical strips and provided with flanges upon their longitudinal edges adapted to have seatings upon the upper and lower faces of said horizontal strip and upon the outer and inner faces of the vertical strip; and a plurality of holding-members connecting between the L-shaped plates and said strips and traversing the apertures of said plates.

In testimony whereof I have affixed my signature in presence of two witnesses.

GILBERT E. FERRY.

Witnesses:
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