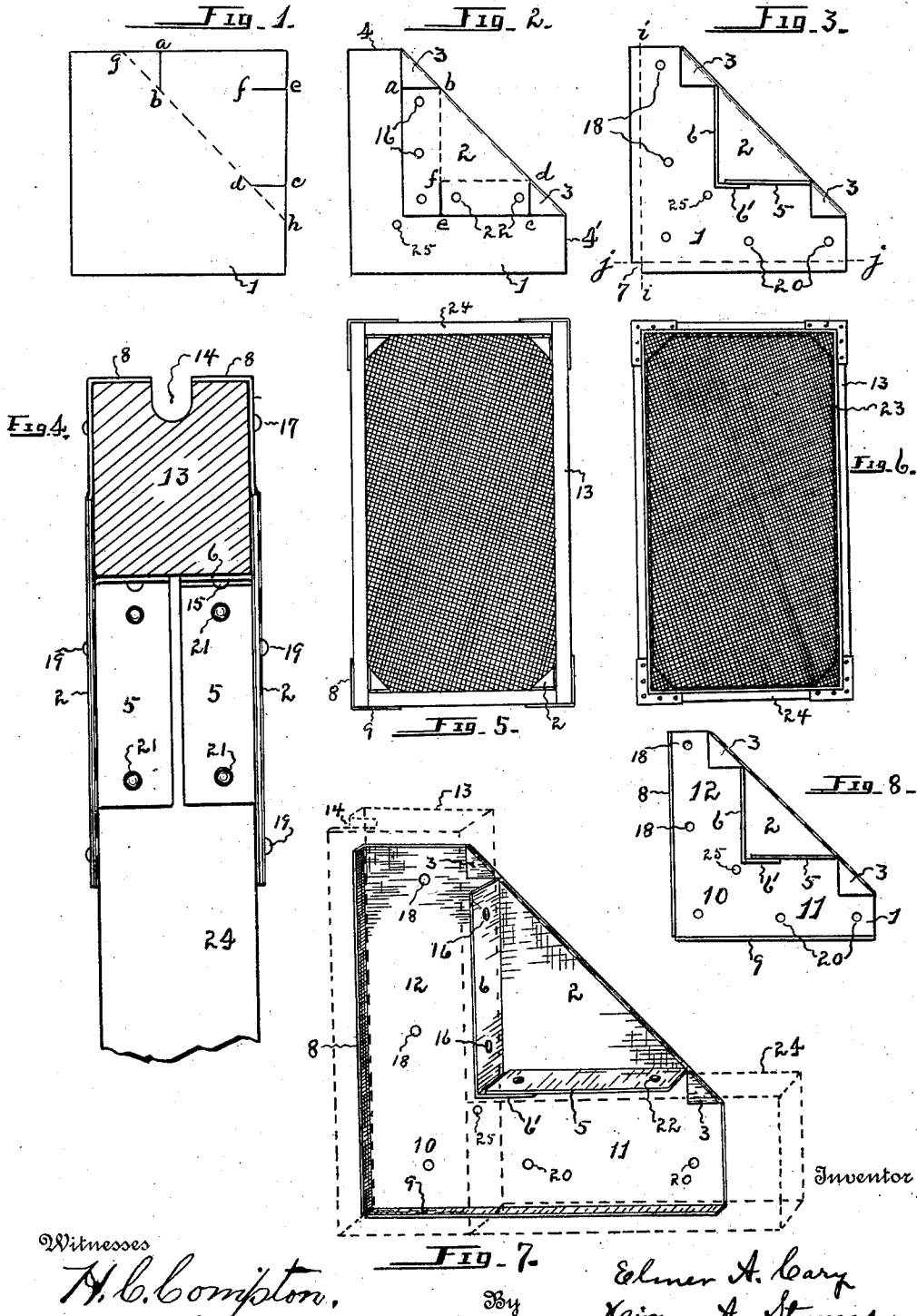


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CORNER PIECE FOR SCREEN FRAMES.
APPLICATION FILED JULY 2, 1910.

987,046.

Patented Mar. 14, 1911.



Witnesses

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Fig. 7.
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CORNER-PIECE FOR SCREEN-FRAMES.

987,046.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ELMER A. CARY, 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 an improved corner piece for frames, the same being particularly useful in connection with screen frames.

The principal object of the invention is to provide corner pieces which may be formed from metallic sheets without loss of material, which will be reliable for connecting the vertical and horizontal strips of a frame, and will be durable in use.

Another object is the provision of a holding means which will be convenient in use as a corner piece for connecting frame strips generally, whether the joints are mitered or otherwise.

With these and other objects in view the invention presents a novel construction, combination and arrangement of parts as described herein and claimed, and as illustrated in the accompanying drawing, wherein,—

Figures 1, 2 and 3 are plan views of a rectangular, metallic plate or sheet used in forming one of the corner pieces, and illustrating different stages of construction. Fig. 1 shows the plate before it is bent. Fig. 2 shows the same when incised and bent to form the triangular reinforcing wing and secondary reinforcing side wings. Fig. 3 illustrates the formation of holding-flanges. Fig. 4 is a view showing two corner pieces mounted upon the sides of a horizontal and a vertical frame-strip, being a plan view of the inner face of the horizontal frame-strip with flanges thereon, the vertical strip being in section. Fig. 5 is a side view of a screen frame with my newly invented corner pieces mounted thereon. Fig. 6 is a view of the opposite side of parts shown in Fig. 5. Fig. 7 is a perspective view of the corner piece, the horizontal and vertical strips being indicated by broken lines to show the relative position of parts when the device

is mounted upon the strips as a corner piece. Fig. 8 is a plan view of the corner piece.

Referring now to the drawing for a more particular description, numeral 1 indicates a rectangular, metallic sheet or plate. It may be incised on lines *a b*, *c d*, and *e f*, and when bent and folded on line *g h*, as shown in Figs. 1 and 2, a triangular, reinforcing plate or wing 2 and secondary, triangular reinforcing plates 3 will be provided, as shown in Fig. 2, plates 3 being formed between plate 2 and the right-angled edges 4 and 4' of sheet 1. Wing 2, as shown in Figs. 2 and 3 may then be bent upwardly on line *f d*, between incisions *e f* and *c d* and disposed at a right angle to wing 2 to form a holding-flange 5; and a holding-flange 6 may be formed by bending to a right-angle on line *b f* the outlying part of wing 2 between incision *a b* and the inner terminal of incision *e f*; and the free end portion of flange 6 may be bent at a right angle to provide an upright flap or flange 6' to reinforce and to be disposed parallel with flange 5. Sheet 1 may then be bent or upset on lines *i i* and *j j*, that part of said sheet at the intersection of these lines being incised and providing the notch 7, the upset portions of said sheet providing longitudinal flanges 8 and 9. As thus described, wings 2 and 3 are disposed substantially parallel with sheet 1, flanges 5, 6, 6', 8 and 9 being at right angles thereto, and an L-shaped bearing-plate or contact surface 10 is provided consisting of wings 11 and 12, for seatings upon the sides of the strips forming the corner portion of a rectangular frame. It will be seen that the corner piece thus described consists of an integral, metallic sheet so incised and bent that practically all of the material is utilized, and manufacture, on account of the simplicity of the structure, may be economically accomplished. The corner pieces provide a reliable holding means for connecting the wooden strips at the corners of frames generally; wings 2 and 3 reinforce the body-portion or sheet 1 of the corner-piece, and this is of importance since thin metal is generally used, and since the several flanges are disposed transversely with reference to

these parts, a very strong construction is provided.

The vertical strip of a rectangular frame is indicated at 13, and it may be provided with the usual groove or slot 14, opening upon its outer side. The horizontal strip of the frame is indicated at 24. In practice, wing 12 of the L-shaped bearing-plate 10 may be seated upon one of the sides of strip 13, flange 6 embracing the inner face of this strip, said flange to be secured by means of nails or keepers 15 which may pass through suitable openings 16 formed in this flange; and flange 8 is adapted to embrace the outer face of said vertical strip, its edge being disposed flush with the wall of the groove, as shown in Fig. 4. Wing 12 of the L-shaped plate 10 is also secured to said vertical strip by suitable keepers 17 which may pass through openings 18 formed therein.

The end-portion of the horizontal strip may be disposed with its side in contact with wing 11 of the L-shaped bearing plate, and may be secured by keepers 19 (Fig. 4) which pass within apertures 20, flange 9 embracing a part of the end of the vertical strip and the outer face of the horizontal strip. The inner face of the horizontal strip may have the short wing or flap 6' seated thereon, and a part of flange 5 may be disposed upon said wing 6', the remaining part of this flange being seated upon the inner face of said horizontal strip and secured thereto by means of suitable keepers or nails 21, which may pass through apertures 22, provided for this purpose.

In instances where it is desired to secure the corners of frames of heavy structure, two corner pieces may be employed if desired, and mounted opposite to each other and bearing upon the sides of the horizontal and vertical strips, as illustrated in Fig. 4, and they provide a reliable holding means for connecting the adjacent ends of the strips.

The device may be conveniently used for repairing weakened frames to strengthen their corners, and is particularly useful in connection with the manufacture of screen frames. As shown in Fig. 6, the wire gauze or screen cloth may be secured upon the frame by use of the conventional molding strips 23, secured to the frame in any suitable manner, aperture 25 being provided for the corner-piece near the inner edge of the L-shaped plate at the junction of wings 11 and 12, for use when commencing to nail the wire cloth upon the screen frame.

While I have shown and described apertures formed in the bearing-plate and flanges, these apertures may be omitted at the time when the corner piece is manufactured, and may be supplied by an operator while securing the device to the frame-strips. Also in some instances I may and prefer-

ably shall manufacture the corner pieces without employing flanges 8 and 9 for the reason that the device will be operative, in a measure, without the use of said flanges.

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

1. In devices for the purpose described, a rectangular, metallic sheet incised and bent to form a two-membered bearing-plate substantially of L-shape with longitudinal flanges upon the outer and inner edges and forming a central, triangular bracing-plate between said members, and providing a pair of secondary, triangular bracing-plates seated upon and at the ends of the members of the L-shaped bearing-plate in alinement with said central, triangular bracing-plate.

2. A corner piece for the purpose described, comprising a metallic sheet bent to form a right-angled bearing-plate with flanges upon its outer and inner right-angled edges, and providing between the adjacent portions of said right-angled bearing-plate a central, double, triangular bracing-plate and forming a pair of secondary, double, triangular bracing-plates at the terminal portions of the right-angled bearing-plate in alinement with said central, double, triangular bracing-plate.

3. A corner piece for the purpose described, comprising a metallic sheet bent to form an L-shaped bearing-plate with longitudinal flanges upon its inner L-shaped edge and forming a central, triangular bracing-plate between the right-angled members of said L-shaped bearing-plate and providing a pair of secondary, triangular bracing-plates seated upon and at the ends of the members of the L-shaped bearing-plate in alinement with said central, triangular bracing-plate.

4. A corner piece for the purpose described, comprising a metallic sheet bent to form a right-angled bearing-plate with upset flanges upon its inner right-angled edge and provided between the adjacent portions of said right-angled bearing-plate with a central, double, triangular bracing-plate and forming a pair of secondary, double, triangular bracing-plates disposed upon the terminal portions of said right-angled bearing-plate in alinement with said central, double, triangular bracing-plate.

5. In combination with the horizontal and vertical strips of a frame said vertical strip being provided with a longitudinal groove opening upon its outer face, a corner piece consisting of a metallic sheet bent to provide an L-shaped bearing-plate and a triangular bracing-plate disposed between the adjacent members of the L-shaped plate; said L-shaped bearing-plate adapted to engage one of the sides of the horizontal and vertical strips, and provided with transverse

flanges upon its outer and inner edges adapted to engage, respectively, the outer and inner faces of said strips, the outer flange upon the outer face of the vertical strip being disposed flush with the wall of said longitudinal groove; the bases of said triangular bracing-plate being disposed adjacent to the inner faces, respectively, of said horizontal and vertical strips, and fastening devices for connecting the bearing-plate and its inner flanges with said horizontal and vertical strips. 10

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

ELMER A. CARY.

Witnesses:

HIRAM A. STURGES,
WM. E. JOHNSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
