A. WOLF.

CORNER POST FASTENING.

APPLICATION FILED NOV. 9, 1914.

1,161,432.

Patented Nov. 23, 1915.

2 SHEETS—SHEET 1.

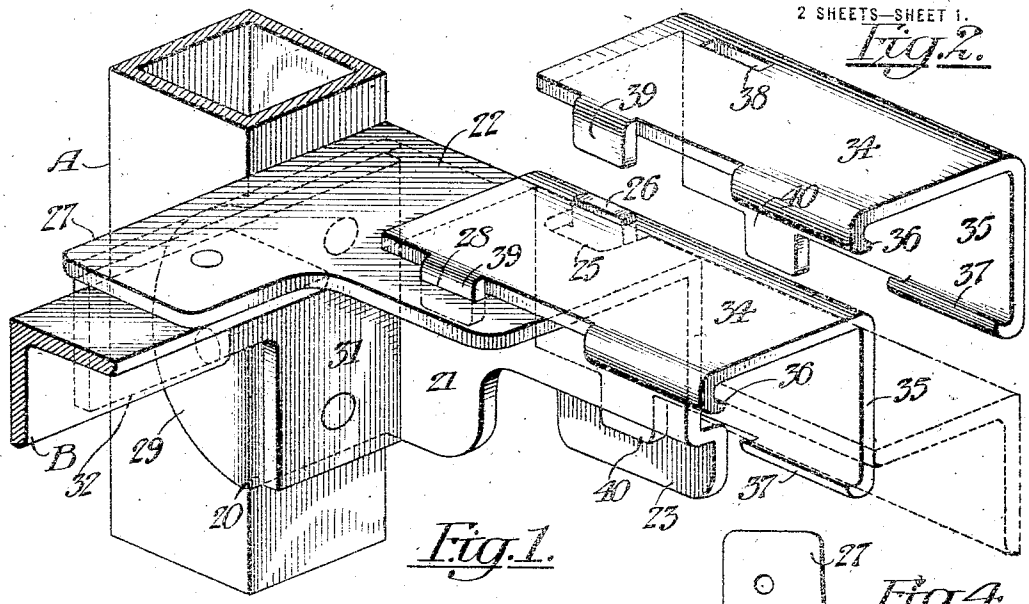


Fig. 1.

Fig. 2.

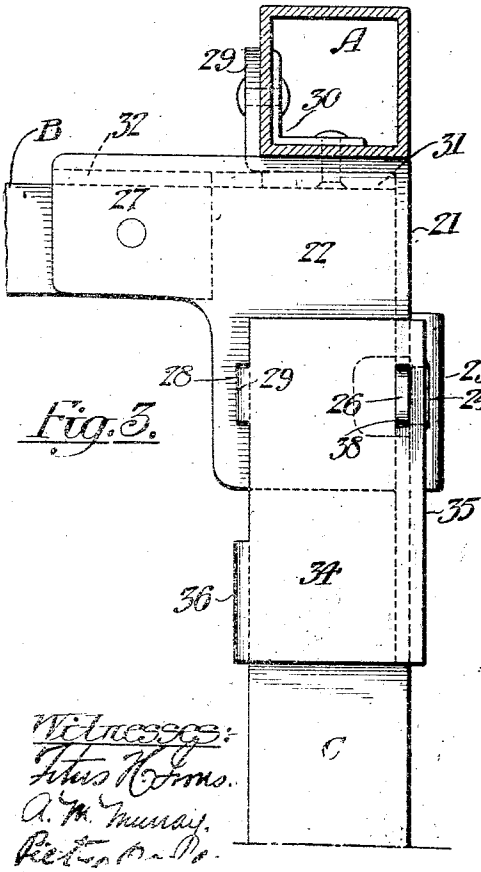


Fig. 3.

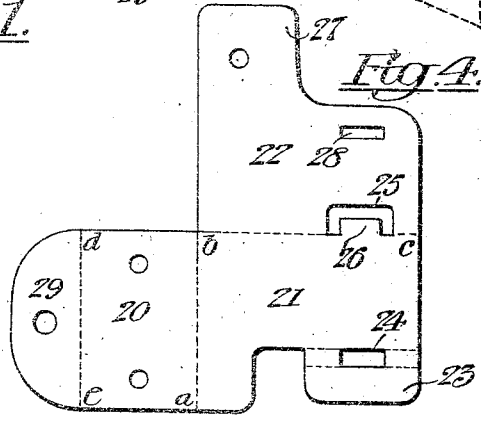


Fig. 4.

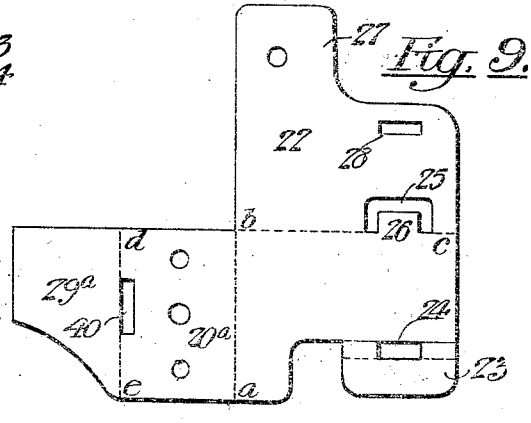


Fig. 9.

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2 SHEETS—SHEET 2.

Fig. 6.

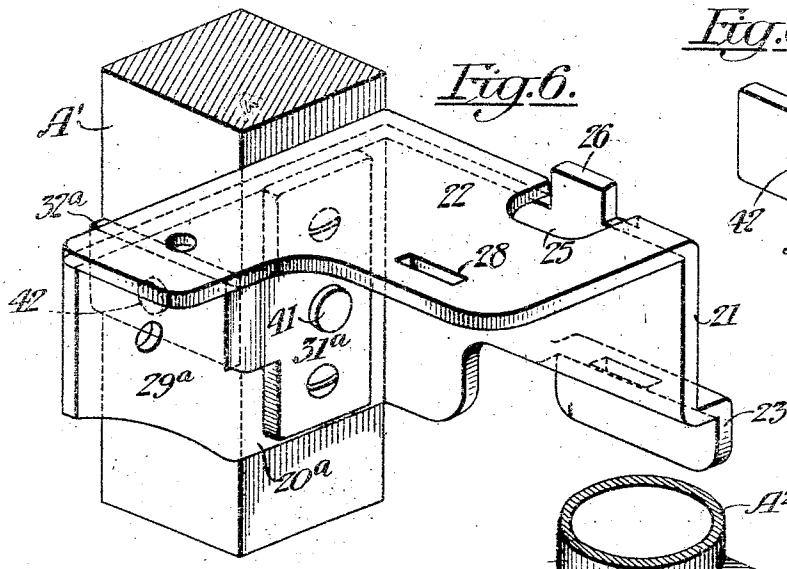


Fig. 8.

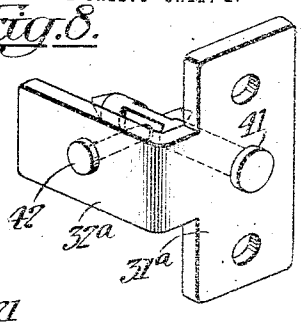


Fig. 10.

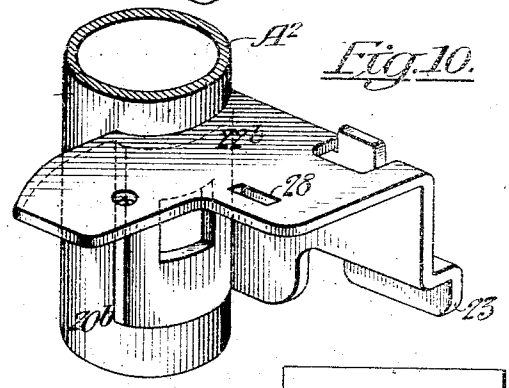


Fig. 7.

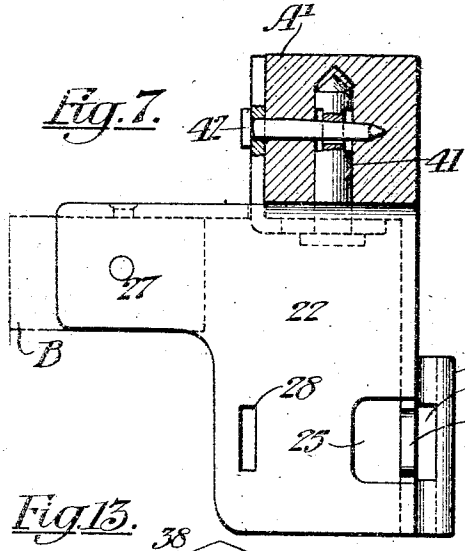


Fig. 5.

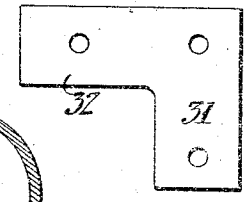


Fig. 13.

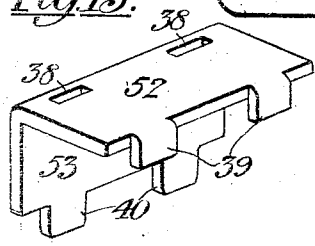


Fig. 12.

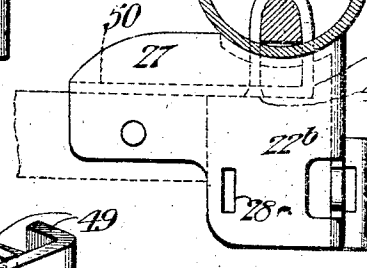
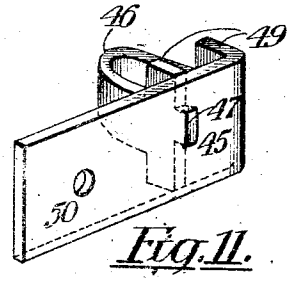


Fig. 11.



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AARON WOLF, OF NEW YORK, N. Y.

CORNER-POST FASTENING.

1,161,432. Specification of Letters Patent. Patented Nov. 23, 1915.

Application filed November 9, 1914. Serial No. 871,015.

To all whom it may concern:

Be it known that I, AARON WOLF, a citizen of the United States, and resident of New York, borough of Manhattan, in the county of New York and State of New York, have invented certain new and useful Improvements in Corner-Post Fastenings, of which the following is a specification.

This invention relates to certain improvements in corner post fastenings and more particularly to that type in which the side rail is secured to a post by a pair of interlocking members formed from stamped blanks of sheet metal and secured to the post and side rail respectively.

In my improved construction the member carried by the corner post preferably includes three plate portions disposed in planes at right angles to each other. A vertically disposed plate portion is adapted to be secured to the post, and a vertically disposed plate portion projects outwardly therefrom and is adapted to engage with and be secured to the side rail or a member carried by said side rail.

A plurality of vertically projecting extensions or flanges at different elevations and in different planes enter co-acting apertures of the other member to lock the members in the proper relative positions when said members are properly superposed. The entire corner post fastening may be formed of only two pieces which may be rigidly and firmly secured to each other and to the post, cross rail and side rail.

Various changes may be made in the details of construction and within the scope of the appended claims without departing from the spirit of my invention. The form may be varied to facilitate the attachment of one of the members to corner posts of different shapes and sizes although one blank might be so formed as to be adaptable to any and all forms of posts. Therefore, I desire the specific forms illustrated in the accompanying drawings to be considered in an illustrative rather than in a limiting sense.

In these drawings, Figure 1 is a perspective view of a square, tubular, metal post having one embodiment of my invention attached thereto; Fig. 2 is a separate perspective view of the member shown in Fig. 1 and which is adapted to be attached to the side rail; Fig. 3 is a top plan view of the parts shown in Fig. 1, Fig. 4 is a plan view of the blank from which the post-carrying member shown in Figs. 1 and 3 is formed; Fig. 5 is a plan view of the auxiliary member used in connection with the post carrying member of Figs. 1 and 3; Fig. 6 is a perspective view of a square wooden post with a member designed for use therewith; Fig. 7 is a top plan view of the parts shown in Fig. 6; Fig. 8 is a perspective view of the auxiliary member employed for facilitating the rigid attachment of the main member to the post; Fig. 9 is a plan view of the blank from which the main member shown in Fig. 6 is formed; Fig. 10 is a perspective view of a cylindrical tubular post with a member particularly designed for use therewith; Fig. 11 is a perspective view of the auxiliary member used in the form shown in Fig. 10, Fig. 12 is a plan view of the assembled parts shown in Figs. 10 and 11, and Fig. 13 is a perspective view of a device for connecting together two post carrying members and without a side rail.

In the specific construction illustrated in Figs. 1 to 5, inclusive, the post carrying member is formed of a blank cut substantially as shown in Fig. 4. This blank includes three main plate portions 20, 21 and 22. The portion 20 is adapted to engage with the surface of the post A and to lie in a substantially vertical plane. The portion 21 is bent at right angles to the portion 20 along the line *a*—*b* and is adapted to stand out from the post in substantially a vertical plane and in the general direction of the length of the side rail. The portion 22 is bent along the line *b*—*c* to lie substantially at right angles to the planes of both the portions 20 and 21 and constitutes a top lying in a substantially horizontal plane.

The portion 21 has an apertured flange 23 at its lower edge which is offset to bring the aperture 24 in a substantially horizontally extending portion and permit the movement of a part through the aperture in a substantially vertical direction. In the portion 22 there is formed a substantially U-shaped slot 25, the ends of which lie substantially in the line *b*—*c*. Thus, when the portions 21 and 22 are brought into planes at right angles to each other, the part 26 de-

fined by this slot will project upwardly in the plane of the portion 21 and above the horizontal plane of the top 22 to constitute a locking lug. The top 22 has an aperture 28 along its opposite edge. The purpose of this lug and aperture is set forth more fully hereinafter. The top 22 is of a width materially greater than the width of the post so as to form a flange 27 which extends in a horizontal plane toward the other post of the same head or foot and constitute a lug to which a cross rail B may be secured.

In shaping the member from the blank shown in Fig. 4, the portion 20 may be bent in accordance with the specific character of the post to which the member is to be attached. If the member is to be attached to a square, metal, tubular post A, as shown in Figs. 1 and 3, the portion 20 may have a flange or extension 29 which may be bent along a line *d*—*e* so as to lie in a plane substantially at right angles to the portion 20. The portion 20 and its flange 29 may engage with two adjoining sides of the post and may have apertures to receive screws, bolts or rivets extending through the wall of the post. If the metal of the post be comparatively thin, an angle iron or other reinforcing member 30 may be placed inside of the post and receive the fastening members and permit the wall of the post to be clamped between the member 30 and the parts 20 and 29.

As previously stated, the flange 27 serves as a horizontal attaching lug for the cross rail B. In order to provide an additional support for this cross rail, I may employ an auxiliary member of the form shown in Fig. 5. This member includes a plate portion or base 31 adapted to engage with the outer surface of the portion 20 and to be held in place by the same bolts, rivets or screws. A flange 32 lies in the plane of the base 31 and extends along beneath one edge of the flange 27 and in a vertical plane at right angles to the plane of the flange 27. The cross rail B, which is preferably in the form of an angle iron, may be secured to both of the flanges 27 and 32 and thus rigidly held in place.

The side rail is preferably in the form of an angle iron and the member which is connected to the side rail for detachably securing the latter to the post is so designed that the top and side flanges of the said rail come substantially in the planes of the portions 21 and 22 of the post supported member and in fact the angle iron may directly abut the ends of these portions. The side rail supporting member preferably includes a top plate portion 34 and a side plate portion 35 bent to lie at right angles to each other and to lie in engagement with the upper and outer surface of the flanges of the side rail. For securing the member to the side rail, the portions 34 and 35 may have flanges 36 and 37 bent over to grip the edges of the side rail or suitable rivets or bolts may be employed or if desired, both kinds of fastening means may be utilized. The particular way of fastening the part to the side rail forms no portion of my present invention.

The portion 34 is adapted to lie in engagement with the upper surface of the portion 22 and the portion 35 is adapted to engage with the outer surface of the portion 21. Along the line of intersection of the two parts is a slot or aperture 38 adapted to receive the lug 26 and at the free edges of the two portions 34 and 35 are depending lugs or flanges 39 and 40 adapted to enter the slots 28 and 24 respectively. This interengagement of slots and lugs can be brought about only when the side rail carrying member is moved vertically down into the proper position on the post supported member. As the lugs 26 and 40 are at different elevations in substantially the same plane and the lugs 29 and 39 are in different vertical planes, spaced some distance apart, it will be evident that the side rail is positively prevented from tilting in any direction. By slightly tapering the various lugs, a wedging action is secured which insures a tight and firm engagement of the parts.

It is evident that some changes may be made in the manner of forming the lugs and apertures and in the positioning thereof. For instance, the aperture 28 might be in the top plate 34 and the lug 39 might be struck up from the part 22 to enter the same; the apertures 28 and lug 39 might be omitted and the cross rail might be secured merely to the flange 27. To give the article a more finished appearance, the side rail supporting member might be of greater length than that shown and extend all the way to the post, or a separate piece might be laid on the top portion 22 between the post and the end of the top portion 34 and with its surface flush with the upper surface of said top 34.

The same identical construction shown in Figs. 1 to 5, inclusive, may be employed in connection with a solid square post as well as with a hollow square post, but if the post be of wood, I might slightly modify the attaching parts so as to better insure the structure against any loosening of the parts.

In Figs. 6, 7, 8 and 9, I have shown a construction which may be employed in connection with hollow square posts A′ but which is particularly designed for use with solid square wooden posts. The blank of the post carrying member is shown in Fig. 5 and is substantially the same in form as the blank shown in Fig. 4 except that between the parts 20^a and 29^a, corresponding to the parts 20 and 29 of Fig. 4, there is provided a slot 40 along the line *d*—*e*. Also the part 20^a

differs slightly in form from the part 29, but this is comparatively unimportant. Instead of folding the part 29^a to lie at right angles to the part 20^a, I leave it in the same plane and utilize it as the vertical flange to which the side of the cross rail is secured and as a substitute for the flange 32 shown in Fig. 1. The auxiliary member shown in Fig. 8 has its plate portion 31^a and its flange 32^a but these are bent to lie at right angles to each other and the flange 32^a is of such width that it may pass through the slot 40 and be secured to the side of the post.

If the post, in connection with which this construction is employed, be hollow, the same arrangement of rivets or bolts and inner reinforcing member 30 may be employed, but if the post be of wood, I preferably provide a locking pin 41 adapted to extend through apertures in the parts 31^a and 20^a and into a socket in the post, and a key or locking pin 42 adapted to extend through the flange 32^a into the post and through an aperture in the pin 41. By making the aperture in the pin 41 slightly elongated and by properly positioning it in respect to the aperture in the flange 32^a, and by properly tapering the locking pin 42, the driving of the latter into position will draw the pin 42 inwardly so as to effectively clamp the parts 31^a and 20^a in position. In addition to these locking pins, a pair of wood screws may be inserted through the parts 31^a and 20^a into the post as shown in Fig. 6.

It will be noted that in both Fig. 1 and Fig. 6, the cross rail is secured to both a horizontal flange and a vertical flange and that a flange at right angles to the plane of the portion 20 or 20^a engages with the side of the post. Thus substantially the same effect is secured although in one case, the vertical flange for the cross rail is a part of the main member and the other flange is a part of the auxiliary member, while in the other construction, the reverse is true.

Substantially the same form of member may be employed if the post be a cylindrical tubular one. In Figs. 10, 11 and 12, I have shown a construction especially designed for posts in the form of tubes. The connection between the post supporting member and the member carried by the side rail is substantially the same as that hereinbefore described. The top part 22^b of the member is cut away on a curved line so as to properly fit the curvature of the post A^2 and the part 20^b is similarly curved. The remaining parts are substantially the same as those shown in Fig. 4 although the flange 29 may, if desired, be omitted. In connection with this member, I preferably employ the auxiliary member shown in Fig. 11. This is formed of a strip of metal including a plate portion 45, one end of which is bent to form a loop 46 extending in a direction substantially at right angles to the plane of the plate portion 45. The free end 47 may terminate in a lug adapted to be extended through a slot in the plate portion and riveted or swaged over as is clearly shown. The part 20^b and the wall of the post A^2 are provided with registering apertures adapted to receive the loop 46. A wedge 48 may be driven lengthwise of the post through the loop so as to bring shoulders 49 into engagement with the outer surface of the part 20^b and bind the latter firmly to the wall of the post. With the parts thus clamped, an extension of the plate portion 45 will serve as a flange 50 and will lie in a vertical plane beneath and preferably in engagement with the underside of the flange 27 and coöperate with the latter in forming surfaces at right angles to each other and to which the cross rail may be secured.

In each of the three forms illustrated, an auxiliary member is employed which has one portion adapted to engage with the outer surface of a portion of the main member and clamp the latter directly to the surface of a portion of the main member and clamp the latter directly to the surface of the post and provided with another portion serving as a flange, which in two cases is adapted for attachment to the cross rail. Various other forms of auxiliary members may be employed dependent upon the character of the post, and as previously stated, the auxiliary member may be entirely omitted if desired and if it is only necessary to employ a single lug in a horizontal plane for the attachment of the cross rail.

If desired the side rail which is shown in the form of an angle iron may be designed to connect directly to the post carrying member and thus entirely omit the member shown in Fig. 2. To do this, it is merely necessary to cut from one flange of the angle iron a projection corresponding to the projection 40 and to form on the other flange an opening and a projection corresponding to the opening 38 and projection 39.

In using the blank shown in Fig. 4 in connection with a tubular post instead of with a square post, the edge of the portion 22 which in Fig. 4 is shown as being straight, may be curved to follow the contour of the post and the portion 20 would be bent to a corresponding curve.

For securing the head and foot of the post together, for shipment or exhibition purposes, I preferably employ a member of substantially the form shown in Fig. 13. It will be noted that this member includes a top plate portion 52 and a side plate portion 53 corresponding in a general way with the top and side portions 22 and 21 of the member shown in Fig. 2. This member shown in Fig. 13 has a double set of projections and apertures and is designed to engage with the post supported members of both the head

and foot. These post supported members may have their ends directly abut or they may be spaced a slight distance apart.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In combination, a corner post, a member secured thereto and including a plate portion for engagement with the post and outwardly extending, substantially horizontal and vertical plate portions, said horizontal portion having an aperture adjacent its edge farthest from said vertical portion and said vertical portion having an aperture adjacent to its lower edge, and a side rail member having projections adapted to enter said apertures.

2. A corner post fastening including a member adapted to be secured to a corner post and having a substantially horizontal plate portion and a substantially vertical plate portion extending downwardly from one edge of the latter, said horizontal portion having an aperture therein spaced from said edge, and an upwardly extending projection adjacent to said edge, and a side rail member having an aperture adapted to receive said projection and a projection adapted to enter said first mentioned aperture.

3. In combination, a corner post, a member secured thereto and including intersecting horizontal and vertical plate portions at an angle to each other and presenting an upwardly extending projection adjacent the line of intersection of said portions, said vertical portion having an offset flange adjacent to its lower edge and provided with an aperture therethrough and a side rail member having horizontal and vertical plate portions for engagement with the horizontal and vertical plate portions of said member and having an aperture to receive said projection and a projection to enter said aperture, and one of said horizontal plate portions having a projection at its edge opposite to the vertical portion and interlocking with a coacting part of the other horizontal plate portion.

4. A corner post fastening including a member having two plate portions, one extending substantially in a horizontal plane and the other depending therefrom along one edge and disposed substantially in a vertical plane and having an offset flange at its lower edge, said flange and the edge of said horizontal portion farthest from the line of intersection being provided with apertures and said member having an upwardly extending projection along the line of intersection of said plate portions and a side rail member having projections adapted to enter said apertures and an aperture adapted to receive said projection.

5. In combination, a member including a post engaging portion and outwardly extending, substantially horizontal and vertical plate portions, a side rail member secured to said outwardly extending portions, an auxiliary member for clamping said post engaging portion to said post, said auxiliary member including two flanges, one extending outward vertically in a plane substantially at right angles to the first mentioned outwardly extending vertical portion, and the other secured to the side of said post and a cross rail secured to said first mentioned flange and to said horizontally extending portion.

6. In combination, a pair of corner posts each having a member secured thereto and each member having intersecting horizontally and vertically disposed plate portions provided with apertures adjacent to their edges farthest from the line of intersection and a projection adjacent to their line of intersection, and a connecting member including horizontally and vertically disposed plate portions having projections adapted to enter the apertures of both of said members and apertures along the line of intersection of its plate portions for receiving the projections of both members.

7. A corner post fastening including a stamped sheet metal corner post member and a side rail member, said corner post member having a substantially vertical plate portion and a second plate portion disposed in a plane at right angles thereto and integral therewith along one edge, said first mentioned plate portion having an upwardly extending integral projection at its upper edge and in its own plane and an apertured offset portion at its lower edge, and said side rail member having a vertical plate portion adapted to lie at the outer surface of the first mentioned plate portion of the corner post member and having an aperture at its upper edge and a projection at its lower edge for engagement with the first mentioned projection and aperture, and a second plate portion disposed in a horizontal plane and extending over the second mentioned plate portion of the corner post member, one of said last mentioned superposed plate portions having an aperture and the other having a vertically extending integral flange adapted to enter said aperture at a point spaced laterally from the planes of said vertical plate portions.

8. A corner post fastening, including a stamped sheet metal corner post member, having two integral plate portions in planes at right angles to each other and a side rail member also having two integral plate portions in planes at right angles to each other, one plate portion of each member being disposed in a vertical plane and each of said vertical plate portions having a vertically

extending projection at one edge for interlocking engagement with the other, and the other plate portion of said side rail member being disposed in a horizontal plane and extending over the other plate portion of the corner post member, one of said last mentioned plate portions having a vertically extending projection integral therewith for interlocking said members at a point spaced from the planes of said vertical plate portions.

Signed at New York in the county of New York, and State of New York this 7th day of November A. D. 1914.

AARON WOLF.

Witnesses:

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PETRO ORILIA.