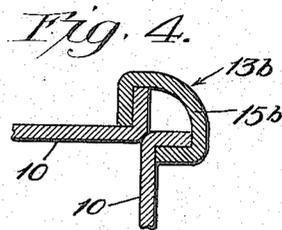
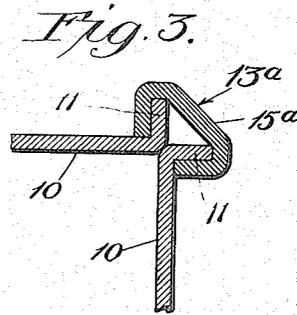
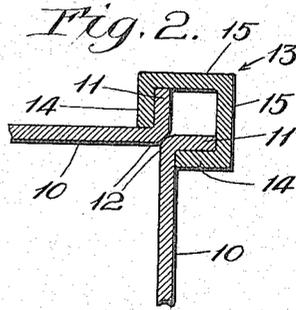
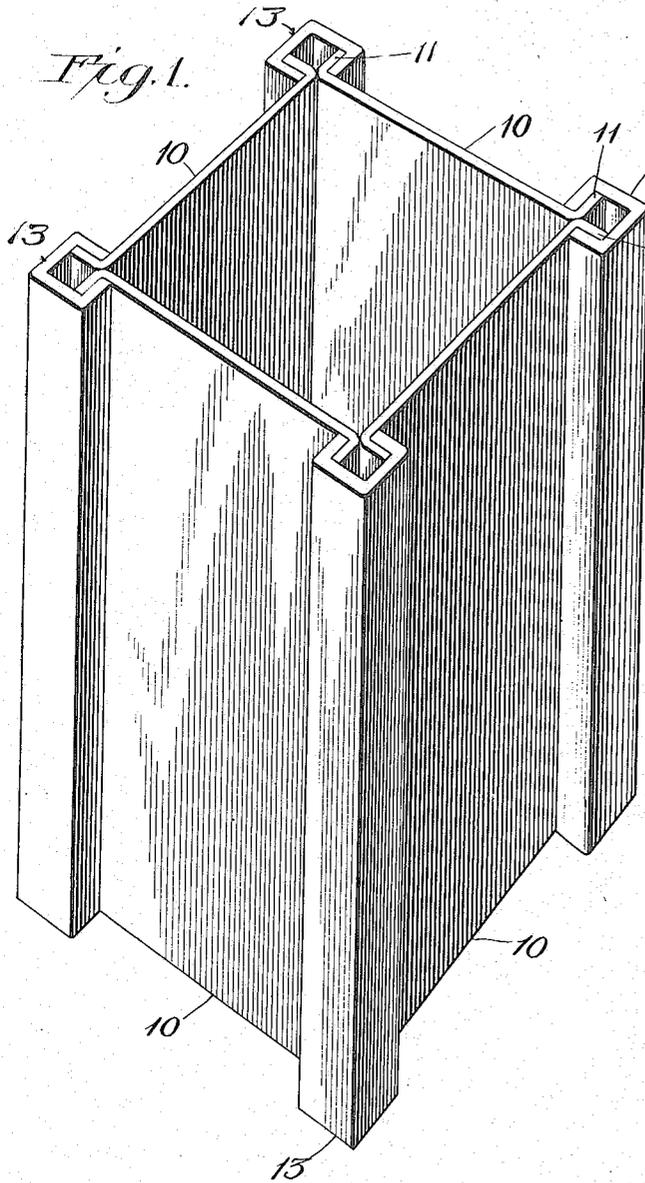


E. McCLURE.
JOINT FOR STRUCTURAL METAL WORK.
APPLICATION FILED JAN. 27, 1914.

1,129,040.

Patented Feb. 16, 1915.

2 SHEETS—SHEET 1.



Witnesses:
Harry S. Gaither
A. Anderson

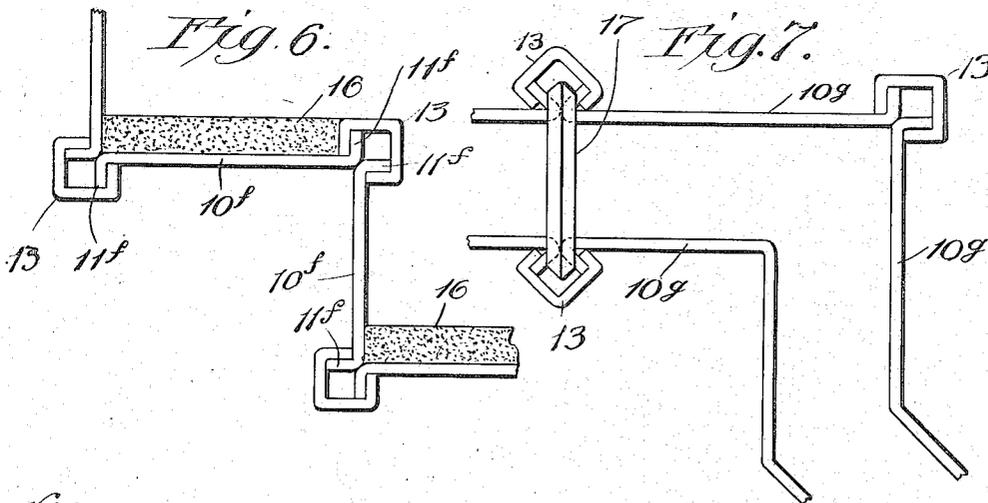
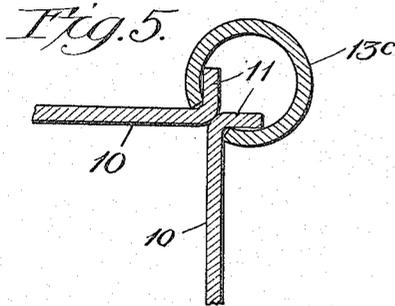
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UNITED STATES PATENT OFFICE.

EDWARD McCCLURE, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO FRANKLIN P. SMITH, OF CHICAGO, ILLINOIS.

JOINT FOR STRUCTURAL METAL-WORK.

1,129,040.

Specification of Letters Patent.

Patented Feb. 16, 1915.

Application filed January 27, 1914. Serial No. 814,667.

To all whom it may concern:

Be it known that I, EDWARD McCCLURE, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Joints for Structural Metal-Work, of which the following is declared to be a full, clear, and exact description.

This invention relates to joints for structural metal work and designs to provide a joint whereby the meeting edges of metal plates or other objects may be temporarily or permanently secured together at any desired angle with respect to each other.

Another object is to provide a joint for structural metal work whereby metal plates may be secured together along their meeting edges in such manner as to form columns, treads and risers for stairs, fence posts, elevator inclosure pilasters, concrete forms or molds, flag poles, forms for concrete sewers, pipes, etc., or in fact, almost any structure in which it is desired to join two or more plates of metal together.

The invention consists in the several novel features hereinafter fully set forth and particularly defined in the claim.

The invention is clearly illustrated in the drawings furnished herewith in which:

Figure 1, is a perspective view of a fragment of a column or post embodying the preferred form of the invention; Fig. 2 is a detail horizontal section taken through one of the corners of said column or post and showing the joint thereof; Figs. 3, 4 and 5, are detail sections, showing modified forms of the invention; Fig. 6 is a side view of the joint applied to treads and risers of stairs, and Fig. 7, is a plan of a fragment of a mold or form for use in forming concrete walls, and showing the application of the joint thereto.

Referring to said drawings and first to Figs. 1 and 2, the reference numeral 10 designates four sheets or plates of metal arranged in the form of a square column or post, with their edge portions meeting or abutting against each other as clearly shown in Fig. 2. The edge portions of each sheet or plate 10, are bent outward at an angle to the plane of the sheet, so as to provide a lip or flange 11, at each edge portion. These lips or flanges may extend through the en-

tire length of the sheets or plates 10, or only part way along their edge portions, as is found desirable or necessary, and in building up a structure like the one seen in Fig. 1, the corners 12, (formed between the sheets and their lips,) abut against each other to prevent movement of the sheets toward the interior of the column or post.

At each corner the lips or flanges 11, are connected by a connecting member or corner piece 13, which straddles the lips and extends longitudinally of the structure; said member has four sides, 14-14, 15-15, the sides 14, being adapted to embrace the lips 11, and having a longitudinally extending slot or gap between their free edges, between which are held the corner portions 12, of the sheets or plates. Preferably, the free edges of the lips 11, engage with the inner faces of the sides 15, of the corner piece 13, and the free edges of the sides 14, engage with the outer faces of the sheets or plates 10. The corner piece 13, may be secured in place by first bringing the corners 12 of the sheets together, after which the corner pieces 13, may be slipped endwise over the lips 11.

In the modified form shown in Fig. 3, the side 15^a, of the corner piece 13^a, extends obliquely across the edges of the lips 11, but in other respects the joint is practically the same as that seen in Fig. 2.

In Fig. 4, the side 15^b, of the corner piece 13^b, is in the form of a quarter-round; this form may be found desirable in some situations on account of its curved lines.

In the modified form shown in Fig. 5, the corner piece 13^c, takes the form of a cylindrical tube, having a longitudinally extending slot for receiving the corners of the sheets, and as in other forms, this corner piece operates to secure together the meeting edge portion of the plates.

In Fig. 6, the joint is shown as applied to the treads and risers of stairs, and in this case the two lips 11^d, on each plate 10^d, are reversed with respect to each other, but otherwise the construction is the same as that seen in Fig. 2; a body of concrete 16, may be placed upon each tread between the riser and the nosing, which in this case is formed by the joint between the tread and the riser at the front thereof.

In Fig. 7, is shown a mold or form for use in erecting concrete walls, and the plates 10^e,

are shown as connected by joints similar to the ones illustrated and described heretofore. If desired, tie-rods 17, may be employed between the two parallel walls, for holding them in spaced relation, and the tie-rods may be in the form of a U, the ends of which extend down into the hollow of the joints.

From the above it will be seen that the joint may be used in a great variety of situations and that its exact form of construction is not material to this invention broadly considered; that it may be used for connecting together metal sheets to form ornamental structure work, or it may be used for building up forms or molds to be used in connection with concrete walls, columns, posts, floors, stairs, and other analogous structures.

I claim as new and desire to secure by Letters Patent:—

A column construction comprising a plurality of channel-shaped members, grouped around a common center, with their channels facing outward, and their corner portions in contact, and a plurality of corner pieces therefor straddling the adjacent flanges of the channel members, each corner piece having two angularly disposed sides formed with a gap between their marginal edges, and said sides bearing against the adjacent flanges of the channel members to hold the corners of the adjacent channel members in firm contact.

EDWARD McCLURE.

Witnesses:

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