

March 5, 1935.

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1,993,499

SECTIONAL CORNICE CONSTRUCTION FOR METAL PARTITIONS AND THE LIKE

Filed July 9, 1929

2 Sheets-Sheet 1

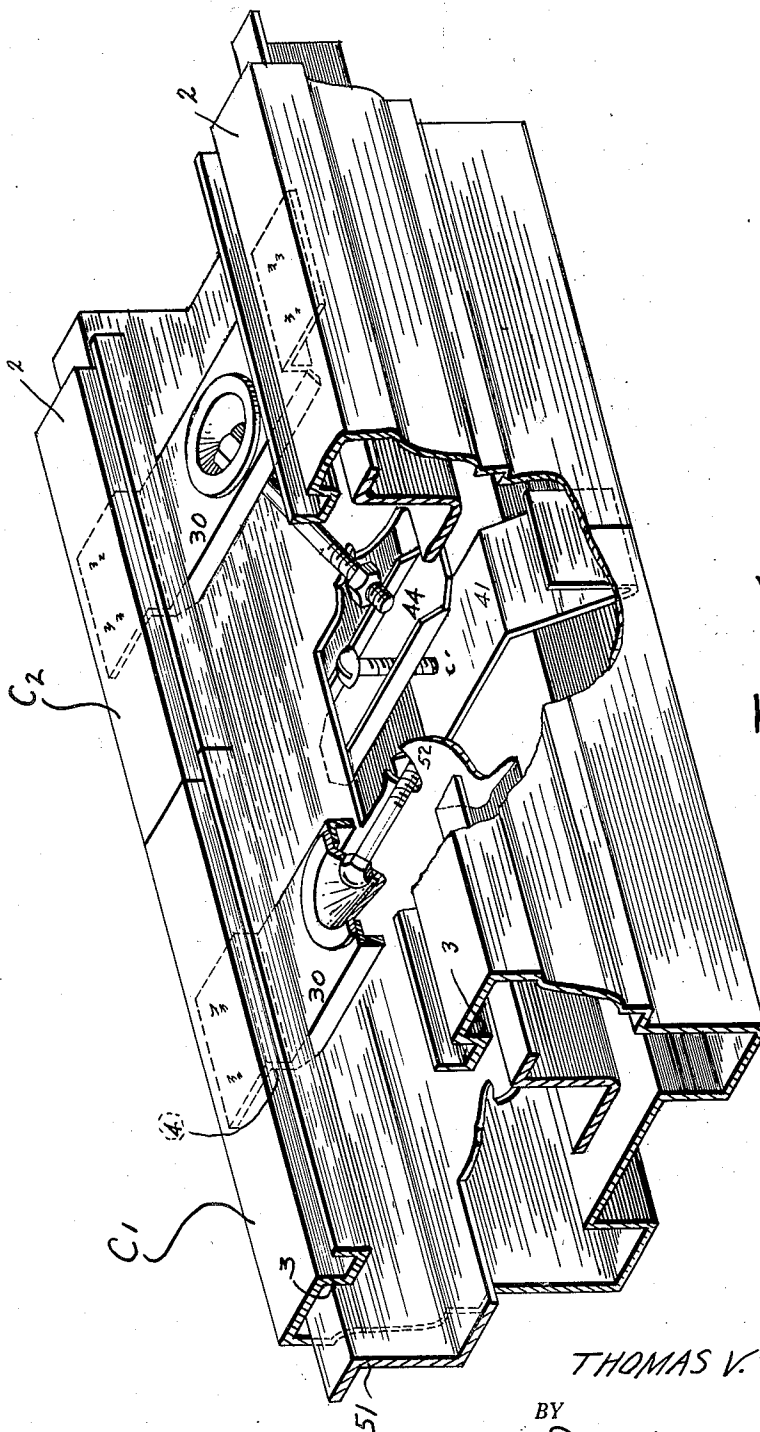


Fig. 1

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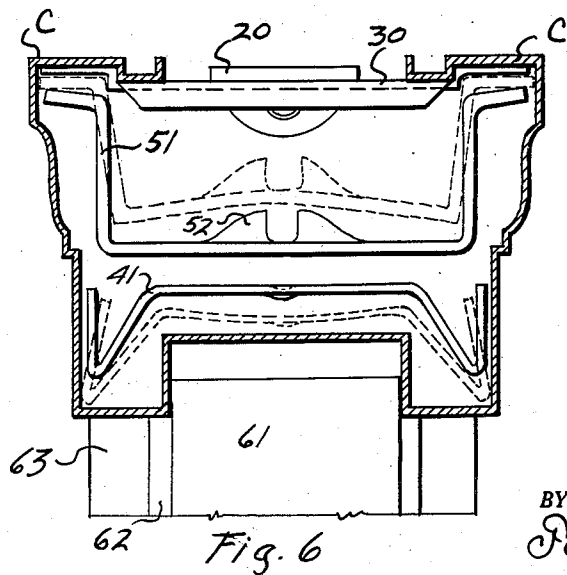
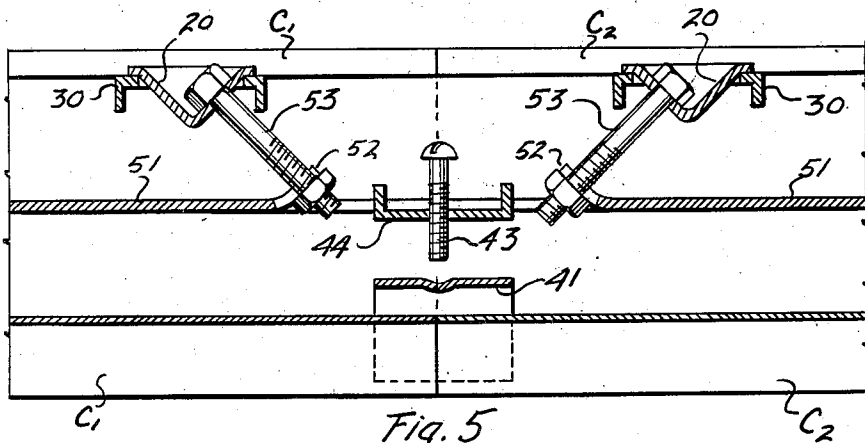
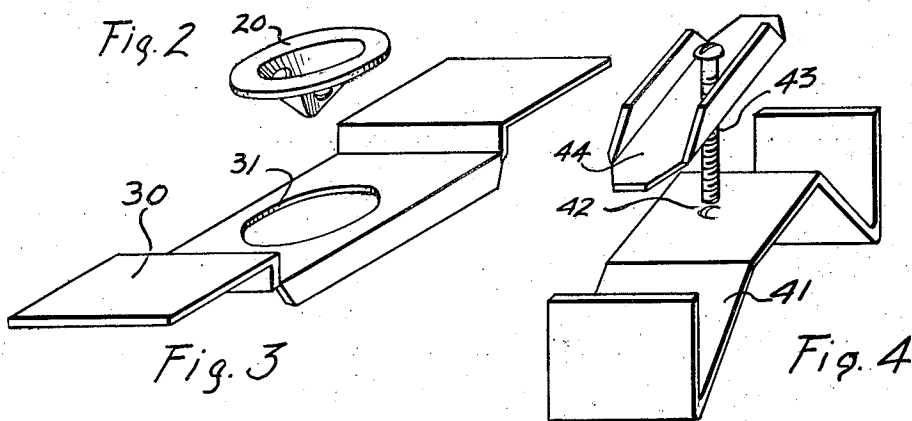
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SECTIONAL CORNICE CONSTRUCTION FOR
METAL PARTITIONS AND THE LIKE

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Application July 9, 1929, Serial No. 377,051

12 Claims. (Cl. 189—34)

This invention relating, as indicated, to metal partitions, has more particular reference to construction where it is desirable to join or splice two abutting sheet metal members such as to attain accurate alignment and close contact, while at the same time maintaining effective structural strength, and yet permitting a ready assembly or disassembly. The utility of such a joint is particularly evident in metal partitions where a continuous cornice must have a finished appearance together with structural strength to support the wall, and at the same time be made up of standard sections or lengths readily assembled or disassembled in any combination. Other objects and advantages will appear as the description proceeds.

To the accomplishment of the foregoing and related ends, the invention, then, consists of the means hereinafter fully described, and particularly pointed out in the claims, the following description and the annexed drawings setting forth in detail certain structure embodying the invention, such being illustrative however of but one of the various ways in which the principle of the invention may be employed.

In said annexed drawings:—

Fig. 1 is an isometric view, partly broken away, showing the abutting ends of two sections of cornice; Figs. 2, 3 and 4 are isometric views of details; Fig. 5 is a longitudinal sectional view; and Fig. 6 is a transverse sectional view.

In its general features, the structure is made up of sections C₁, C₂, mated together in end alignment, the sections being in the form of molding or trim members, or more usually cornice sections of channel form, and having take-up and fastening means adapted to form a close strong joint. Extending across from flange to flange of the sections C₁, C₂, are bridging members or ties 30, these being secured in any suitable way, as by welding, molding or riveting, and preferably the sections have their flanges further rebent, as at 2, whereby to form a horizontal ledge. If the rebent portions 2 be further rebent downwardly or shouldered as at 3, and the ties be correspondingly upturned or shouldered as at 4, engagement of the shoulders 4 of the ties against the downturned portions 3 still further increases the hold against lateral spreading. The tie bars 30 are provided with seats for the engagement of screw-threaded members, and advantageously this may be arranged by a washer 20 seatable in an opening in the tie bar. If the washers be concaved or cupped, a more effective seating may be had, particularly for

angularly directed screw-threaded fastenings. Thus, the washers may be of generally hemispherical form having outturned equators, and with holes between the equatorial portion and the pole. At the joint there is provided a junction member or floating splice plate 51. This may vary somewhat in form, but advantageously may be of channel section and with the flanges further rebent outwardly. It is convenient to provide holes or cutouts in the web through which a bridge nut 44 may be inserted. Ears 52 may be pressed up, providing slots to receive screw-threaded members or bolts 53 extending from the tie bars 30.

Directly at the joint is a backing member 41 which provides abutting surfaces laterally, and which may preferably be of channel or bowed form with flanges spread out diagonally and thence folded sharply back on themselves. A depression 42 may be provided in the web of such member to receive the end of a screw-threaded member 43 extending from the bridge nut 44. The latter may advantageously be of channel form, and have its corners removed in order to be more easily insertable in position. With the bridge nut inserted so as to bear against the under face of the member 51, the screw 43 being set down, will exert a thrust against the expansible bowed abutting member 41.

Although the member 51 may be readily initially inserted, it will be seen that when the screw-threaded members 53 are placed in position from the tie bars 30 thereto, tightening of the bolts serves to spread the outer edges of the splice plate 51 against the members C₁, C₂, tightening therein against the fixed tension of the ties 30. By reason also of the angular placement of the screw-threaded members 53, a draw up in both longitudinal and vertical planes is had, and a thrust-like action, which not only tightens the abutting ends in the joint both above and below, but affords a truss-support union. At the same time, with the screw 43 pressing down against the bowed expansible abutment member 41, the extremities thereof are sprung outwardly to occasion an even thrust against the abutting portions of the joint, thereby insuring accuracy of fit as viewed externally.

Due to the fact that the splice plate 51 and the abutment member 41 are flexed and in compression, the joint will not be permanently distorted by a temporary overload, but even if the overload be such as to slightly spring the joint, it will promptly spring back into position, with

accurate alignment, closing the opening tightly. The abutment member 41 serves a further purpose in preventing possible passage of light through any crevice in the completed joint.

5 It will be seen that the cornice may be provided with a panel receiving recess on its lower face and will serve as a crown and structural support for a partition made up of panel members 61, support members 62 and trim members 63. All
10 parts of the splice are coacting, and the upper bridging members may be arranged as desired, as many tie bars 30 being provided as desirable. With these moreover, it will be seen that even if secured by spot welding, the welds are not in
15 tension, but only in shear stress in a longitudinal direction.

Holes may be provided at intervals in the splice plate 51 to correspond with holes in the lower part of the cornice and permit access to
20 the vertical members or posts as desired.

Other modes of applying the principle of the invention may be employed, change being made as regards the details disclosed, provided the means stated in any of the following claims, or
25 the equivalent of such, be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. A hollow sheet metal cornice section of generally channel form with upper outer flanges, means bridging said flanges, a second similar
30 cornice section in alignment with the first-mentioned section, and a splice-plate joining such sections and secured to said bridging means.

2. A hollow sheet metal cornice section of generally channel form with outer flange portions
35 rebent inwardly, spaced ties bridging such rebent flanges and secured thereto, a second similar cornice section abutted against said first-mentioned section in alignment therewith, and a
40 splice-plate joining such abutting sections and secured to said spaced ties.

3. A hollow sheet metal cornice section of generally channel form with flange portions rebent inwardly, a similar cornice section abutted to
45 said first-mentioned section in alignment, and means for maintaining said sections in alignment, said means comprising a generally channel shaped member overlapping the joint, and a screw-threaded member acting against the web
50 portion of said last-named member to expand its flange portions in contact with both said cornice sections.

4. A sheet metal molding section abutted to a similar section, and means for aligning such sections and holding them in juxtaposition, said
55 means comprising a splice plate overlapping the joint and diagonally positioned screw-threaded members extending from each of said molding members to said splice plate.

5. A cornice member of generally channel form having upstanding flange portions which are rebent inwardly and further rebent downwardly, spaced ties having upturned portions to

mate such downturned portions and prevent spreading of the upstanding flanges of the cornice member, and means for securing said ties to said cornice member.

6. A cornice member of generally channel form with upstanding flanges rebent inwardly, a similar member abutted thereto in alignment, a splice plate of channel form overlapping such joint, means to expand the edges of the flanges
10 of said splice plate, and means to secure said cornice members to said splice plate and pull them together, said means comprising diagonally positioned screw-threaded members between said splice plate and each of said cornice members.

7. A cornice member of generally channel form, a similar member abutting said first member in alignment, a backing member overlapping the joint and comprising a channel with out
20 spread flanges, each flange resting against the inside of the aligned cornice member, and means for expanding the outturned flanges of said backing member, said means including a means for exerting pressure against the web portion of said backing member.

8. A cornice member abutting a similar member in alignment, and means to preserve the alignment and draw the cornice members together, said means including generally hemispherical washers having outturned equators,
30 holes midway between the equator and the pole of each washer, and screw-threaded members positioned angularly to the plane of the equator and passing through such holes and bearing against such washers.

9. Two similar cornice members, each of generally channel form with flange portions rebent inwardly, abutted in alignment; spaced ties bridging the flanges of each of said cornice members; a splice plate aligned with said cornice
40 members and overlapping the joint; and angularly positioned screw-threaded members extending from said ties to said splice plate.

10. In sheet metal partition construction, a cornice member of generally channel form with
45 upper outer flanges, a floating splice member therefor, and a tie member for connecting the flanges of said cornice member, said tie member having an opening in its span for access to a screw threaded member.

11. In sheet metal partition construction, two hollow cornice sections having end edges to abut
50 in alignment; and two diagonally acting screw threaded means angularly oriented with respect to each other for drawing the end edges of said sections together.

12. In sheet metal partition construction, two hollow cornice sections having end edges to abut
55 in alignment; an expansible bowed member bridging the inside of the joint so formed and means pressing thereon for spreading said member and truing all the end edges forming such joint.

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