April 2, 1929. O. K. SCHNEIDER 1,707,282

RADIATOR SHIELD

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Fig. 1.

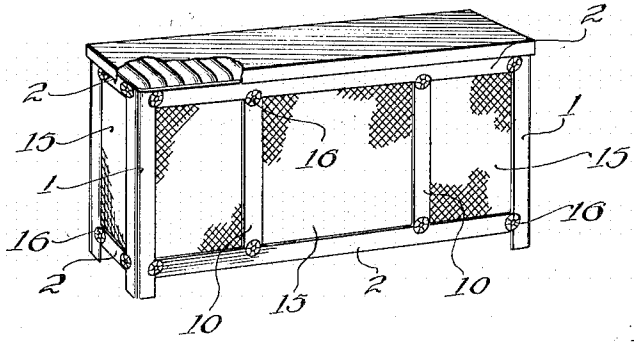
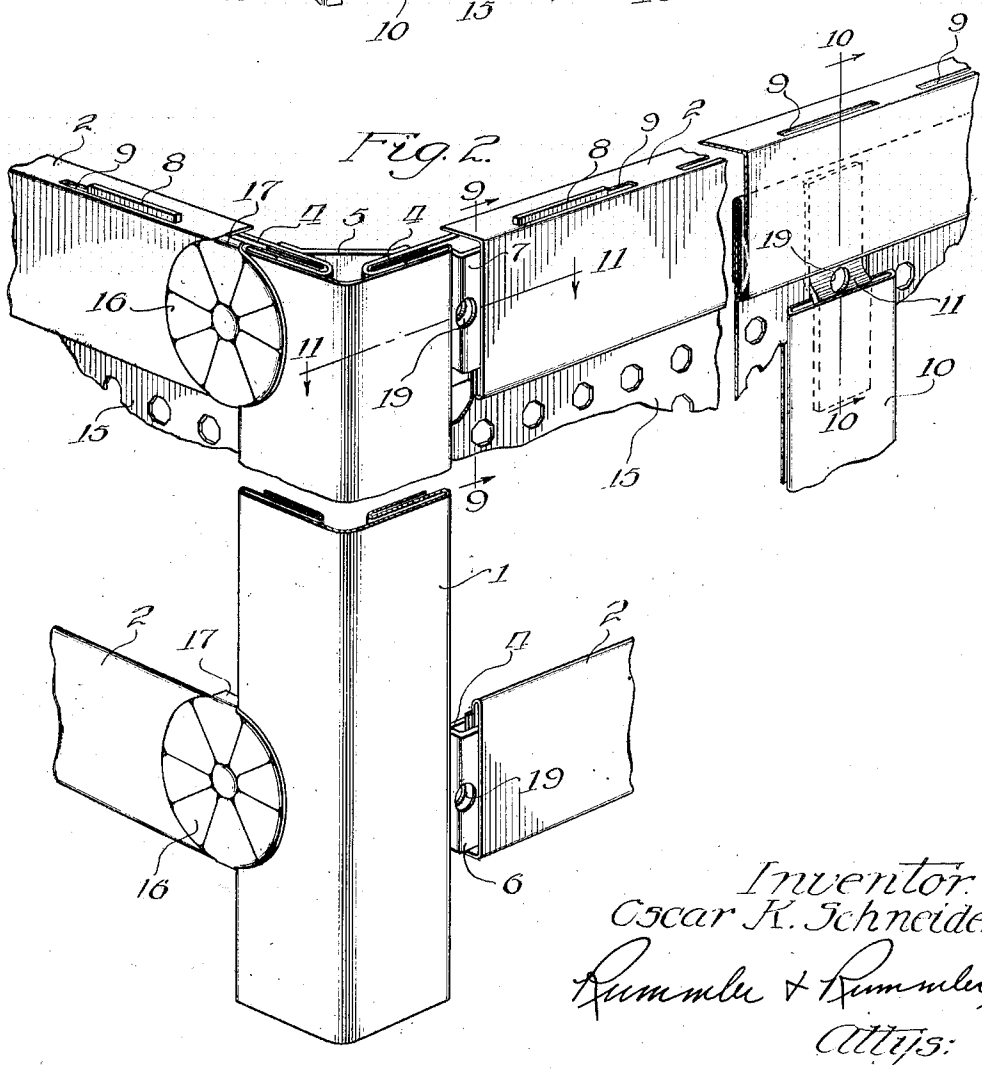


Fig. 2.



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Fig. 3.

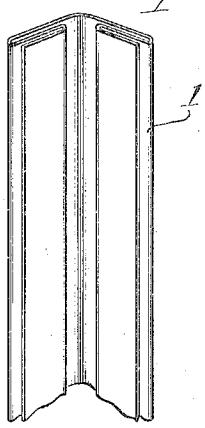


Fig. 4.

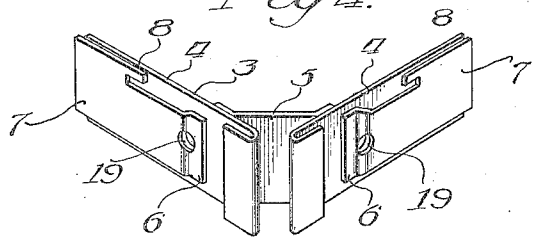


Fig. 5.

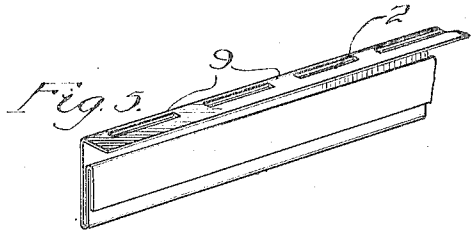


Fig. 6

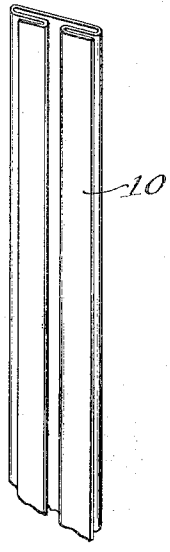


Fig. 7.

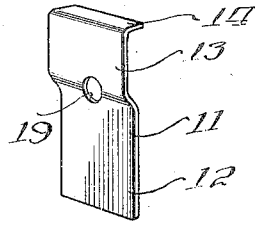


Fig. 8.

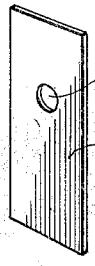


Fig. 9.

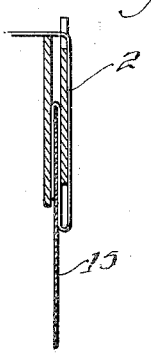


Fig. 10

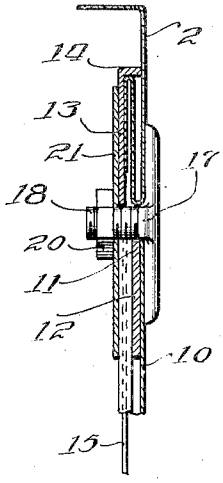
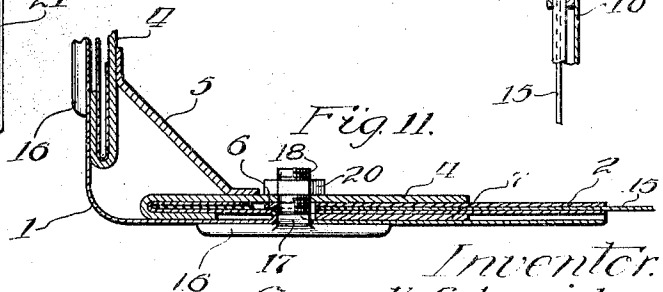


Fig. 11.



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UNITED STATES PATENT OFFICE.

OSCAR K. SCHNEIDER, OF CHICAGO, ILLINOIS, ASSIGNOR TO FRANK S. BETZ COMPANY, OF HAMMOND, INDIANA, A CORPORATION OF INDIANA.

RADIATOR SHIELD.

Application filed December 4, 1926. Serial No. 152,673.

This invention relates to improvements in metal cabinet construction, and particularly to means for connecting frame and panel elements to permit of assembling cabinets of various proportions from a minimum number of standardized stock parts.

The main objects of the invention are to provide improved forms of structural elements for building up metal cabinets of different sizes from stock parts and requiring no shaping other than cutting certain parts to length to suit the desired cabinet dimensions; to provide certain improved types of frame member sections adapted for ready interconnection; and to provide improved means for detachably securing said sections together.

A specific embodiment of this invention is illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view of the cabinet designed to enclose a steam radiator, a portion of the top thereof being broken away.

Fig. 2 is an enlarged perspective view of the several frame member sections shown in detachably secured relation.

Fig. 3 is an enlarged perspective view of a corner member section.

Fig. 4 is a perspective view of a corner bracket used for detachably securing the corner member sections and frame member sections in rigid relation.

Fig. 5 is a perspective view of a side rail frame member section.

Fig. 6 is a perspective view of an intermediate frame member section.

Fig. 7 is a perspective view of a connector part adapted to telescope with the frame member section illustrated in Fig. 6.

Fig. 8 is a perspective view of a locking plate used to detachably secure the frame member sections shown in Figs. 6 and 7 with the side rail frame member section shown in Fig. 5.

Fig. 9 is a sectional view taken on line 9—9 of Fig. 2.

Fig. 10 is a sectional view taken on line 10—10 of Fig. 2.

Fig. 11 is a sectional view taken on the line 11—11 of Fig. 2 but includes a bolt omitted from Fig. 2.

In the form shown in the drawings, the built-up metal cabinet comprises angle corner members 1 whose longitudinal edges are bent back upon the body portion and re-bent upon themselves in flattened S-shape. Upper and lower side rail frame member sections 2 have their lower longitudinal edges similarly bent while their upper longitudinal edges are bent to form flanges disposed in a horizontal plane. Brackets 3 comprising angularly disposed arms 4 rigidly secured together as by the gusset 5, and secured to said arms 4 are wings 6 having offset portions 7 with longitudinally projecting lugs 8. The adjacent ends of the arms 4 are bent upon themselves in U-shape for detachably engaging the S-shaped marginal flanges of the corner members. The outer portions of each arm 4 and its wing 7 are telescoped with the longitudinal folds of the rail member 2 and the longitudinal slots 9 in the flanges of the side rail members 2 receive the hook lugs 8 of the wings 5.

Intermediate frame members 10 have both their longitudinal edges bent upon themselves and rebent upon themselves to form marginal flanges of S-shaped cross section and are secured between the upper and lower side rail members through the connecting pieces 11 whose lower portions 12 telescope within the ends of the members 10 and whose upper portions 13 are offset and flanged at 14 to overhang the S-shaped marginal flange of the rail members 2 as shown in Fig. 10.

Panels 15 are secured in place by seating their marginal portions in grooves formed by the S-shaped flanges of the frame members, and the assembled cabinet is held in rigid relation by the ornamental bolts or clamping members 16, whose heads have overturned lips 17 which embrace the edges of the connector fittings 7 or 11, as the case may be, and whose threaded stems 18 passing through the apertures 19 coact with nuts 20. Plates 21 are interposed between the nuts 20 and the connecting pieces 11 and serve as washers to afford a good bearing between the nuts and the adjacent frame members.

It will thus be seen that the peculiar conformation of the assembled interlocking frame members and connectors prevents the former from being injured by buckling or distortion when the ornamental clamping members tightly secure them together.

It will be noted that the several forms of frame members are each of uniform cross-

sectional form throughout and therefore may be made and sold in long lengths and that cabinets of different sizes and for many purposes may be made up on the job by merely cutting the frame members and panels to correct lengths. The frame members that require perforations, namely the rails 2, have a series of spaced perforations along their entire length so that they are ready for use when cut in two at any medial point between adjacent perforations.

While but one specific embodiment of this invention has been herein shown and described, it will be understood that numerous details may be altered or omitted without departing from the spirit of the invention, as defined in the following claims.

I claim:

1. In a metal cabinet construction, angled corner members having their longitudinal edges bent back upon themselves and rebent upon themselves to form a marginal flange of S-shape, side rails, and means for detachably securing said corner members and side rails together comprising brackets detachably secured to said side rails and having their adjacent ends bent back upon themselves in U-shape for transverse interlocking engagement with one of the bent portions of said corner members.

2. In a metal cabinet construction, angled corner members having their longitudinal edges bent back upon themselves and rebent upon themselves to form a marginal flange of S-shape, a panel interposed between one of the bent portions of said corner members, side rails, and means for detachably securing said corner members and side rails together comprising brackets detachably secured to said side rails and having their adjacent ends bent back upon themselves in U-shape for transverse interlocking engagement with one of the bent portions of said corner members.

3. In a metal cabinet construction, corner members of angle section having their longitudinal edges bent back upon themselves and rebent upon themselves to form a marginal flange of S-shape, side rails having one of their longitudinal edges bent back upon themselves and rebent upon themselves in S-shape, means for detachably securing said corner members and said side rails together comprising brackets having one of their ends adapted to telescope with one of the bent portions of said side rails and having the other of their ends bent back upon themselves in U-shape for transverse interlocking engagement with one of the bent portions of said corner members.

4. In a metal cabinet construction, corner members of angle section having their longitudinal edges bent back upon themselves and rebent upon themselves to form a marginal flange of S-shape, side rails having one of their longitudinal edges bent back upon themselves and rebent upon themselves to form a marginal flange of S-shape, means for detachably securing said corner members and said side rails together comprising brackets having one of their ends adapted to telescope with one of the bent portions of said side rails and having the other of their ends bent back upon themselves in U-shape for transverse interlocking engagement with one of the bent portions of said corner members and a panel interposed between the other of said bent portions of said corner members and said side rails.

5. In a corner bracket for metal cabinet frames, angularly disposed arms rigidly secured together, the adjacent inner ends of said arms being bent upon themselves in U-shape and wings secured to said arms having off-set portions, said wings having projecting lugs thereon.

6. In a metal cabinet construction, a frame member having one of its longitudinal edges bent back upon its body portion and having its other longitudinal edge bent to form a flange, said flange being slotted, and means for detachably securing a pair of said frame members together comprising a bracket having angularly disposed sections rigidly secured together, wings secured to said sections having off-set portions, said wings having projecting lugs whereby the outer ends of each bracket section may be telescoped within one of the bent portions of each frame member and the slot of each frame member may be engaged by each lug.

7. In a metal cabinet construction, angled corner members having their longitudinal edges bent back upon themselves and rebent upon themselves to form a marginal flange of S-shape, side rails having one of their longitudinal edges bent back upon themselves and rebent upon themselves to form a marginal flange of S-shape, and the other of their longitudinal edges bent to form flanges, said flanges having slots therein, means for detachably securing said corner members and said rails together comprising brackets having angularly disposed sections rigidly secured together, the adjacent ends being bent upon themselves in U-shape, wings secured to said sections having off-set portions, said wings having projecting lugs whereby the outer ends of each bracket section may be telescoped within one of the bent portions of the rails and the slot of each rail may be engaged by each lug, and the adjacent ends of said sections may be transversely interlocked with one bent portion of each corner member.

8. In a metal cabinet construction, angled corner members having their longitudinal edges bent back upon themselves and rebent upon themselves to form a marginal flange of S-shape, side rails having one of their

longitudinal edges bent back upon themselves and rebent upon themselves to form a marginal flange of S-shape and the other of their longitudinal edges bent to form flanges, said flanges having slots therein, means for detachably securing said corner members and said rails together comprising brackets having angularly disposed sections rigidly secured together, the adjacent ends being bent upon themselves in U-shape, wings secured to said sections having off-set portions, said wings having projecting lugs whereby the outer ends of each bracket section may be telescoped within one of the bent portions of the rails and the slot of each rail may be engaged by each lug, and the adjacent ends of said sections may be transversely interlocked with one bent portion of each corner member, and panels interposed between the other bent portions of said corner members and said rails.

9. In a metal cabinet construction, upper and lower side rail frame member sections having their adjacent longitudinal edges bent back upon themselves and rebent to form a marginal flange of S-shape, transverse frame member sections having each of their longitudinal edges bent back upon themselves and rebent to form a marginal flange of S-shape, means for securing the transverse sections with the side rail sections comprising connector fittings having one end adapted to be telescoped within one of the bent portions of the transverse member and the other end adapted for connection with side rail sections.

10. In a metal cabinet construction, upper and lower side rail frame member sections having their adjacent longitudinal edges bent back upon themselves and rebent to form a marginal flange of S-shape, transverse frame member sections having each of their longitudinal edges bent back upon themselves and rebent to form a marginal flange of S-shape, means for securing the transverse sections with the side rail sections comprising connector fittings having one end adapted to be telescoped within one of the bent portions of the transverse member and the other end off-set and flanged for connection with the side rail sections on their inner sides.

11. In a metal cabinet construction, upper and lower side rail frame member sections having their adjacent longitudinal edges bent back upon themselves and rebent to form a marginal flange of S-shape, transverse frame member sections having each of their longitudinal edges bent back upon themselves and rebent to form a marginal flange of S-shape, means for securing the transverse sections with the side rail sections comprising connector fittings having one end adapted to be telescoped within one of the bent portions of the transverse member and the other end off-set and flanged for connection with the side rail sections on their inner sides, and clamping members for rigidly securing the connector fittings and side rail members together.

12. In a metal cabinet construction, upper and lower side rail frame member sections having their adjacent longitudinal edges bent back upon themselves and rebent to form a marginal flange of S-shape, transverse frame member sections having each of their longitudinal edges bent back upon themselves and rebent to form a marginal flange of S-shape, means for securing the transverse sections with the side rail sections comprising connector fittings having one end adapted to be telescoped within one of the bent portions of the transverse member and the other end off-set and flanged for connection with the side rail sections on their inner sides, and clamping members for rigidly securing the connector fittings and side rail members together, comprising headed bolts passing through the side rail members and having lips adapted to embrace the edges of the connector fittings.

13. In a metal cabinet construction, angled corner members having their longitudinal edges bent back upon themselves and rebent upon themselves to form a marginal flange of S-shape, side rails having one of their longitudinal edges bent back upon themselves and rebent upon themselves to form a marginal flange of S-shape and the other of their longitudinal edges bent to form flanges, said flanges having slots therein, frame member sections intermediate the angled corner members having their longitudinal edges bent back upon themselves and rebent upon themselves to form marginal flanges of S-shape, means for securing the intermediate sections with the side rail sections comprising connector fittings having one end adapted to be telescoped within one of the bent portions of the intermediate sections and the other end off-set and flanged for connection with the side rail sections on their inner sides, clamping members for rigidly securing the connector fittings and side rail members together, comprising headed bolts passing through the side rail members and having lips adapted to embrace the edges of the connector fittings, means for detachably securing said corner members and said rails together comprising brackets having angularly disposed sections rigidly secured together, the adjacent ends being bent upon themselves in U-shape, wings secured to said sections having off-set portions, said wings having projecting lugs whereby the outer ends of each bracket section may be telescoped within one of the bent portions of the rails and the slot of each rail may be engaged by each lug, and the adjacent ends of said sections may be

transversely interlocked with one bent portion of each corner member, and panels interposed between the other bent portions of said corner members and said rails.

14. In metal cabinet construction, a frame member having one of its longitudinal edges bent back upon itself and rebent upon itself to form a marginal flange of S-shape, a second frame member having one end bent back upon itself in U-shape for transverse interlocking engagement with one fold of said marginal flange, and a panel seated in the other fold of said marginal flange.

15. In metal cabinet construction, a frame member having one of its longitudinal edges bent back upon itself and rebent upon itself to form a marginal flange of S-shape, a second frame member having one end bent back upon itself in U-shape for transverse interlocking engagement with one fold of said marginal flange, a panel seated in the other fold of said marginal flange, and means for rigidly securing said members together.

Signed at Chicago this 2nd day of December, 1926.

OSCAR K. SCHNEIDER.