

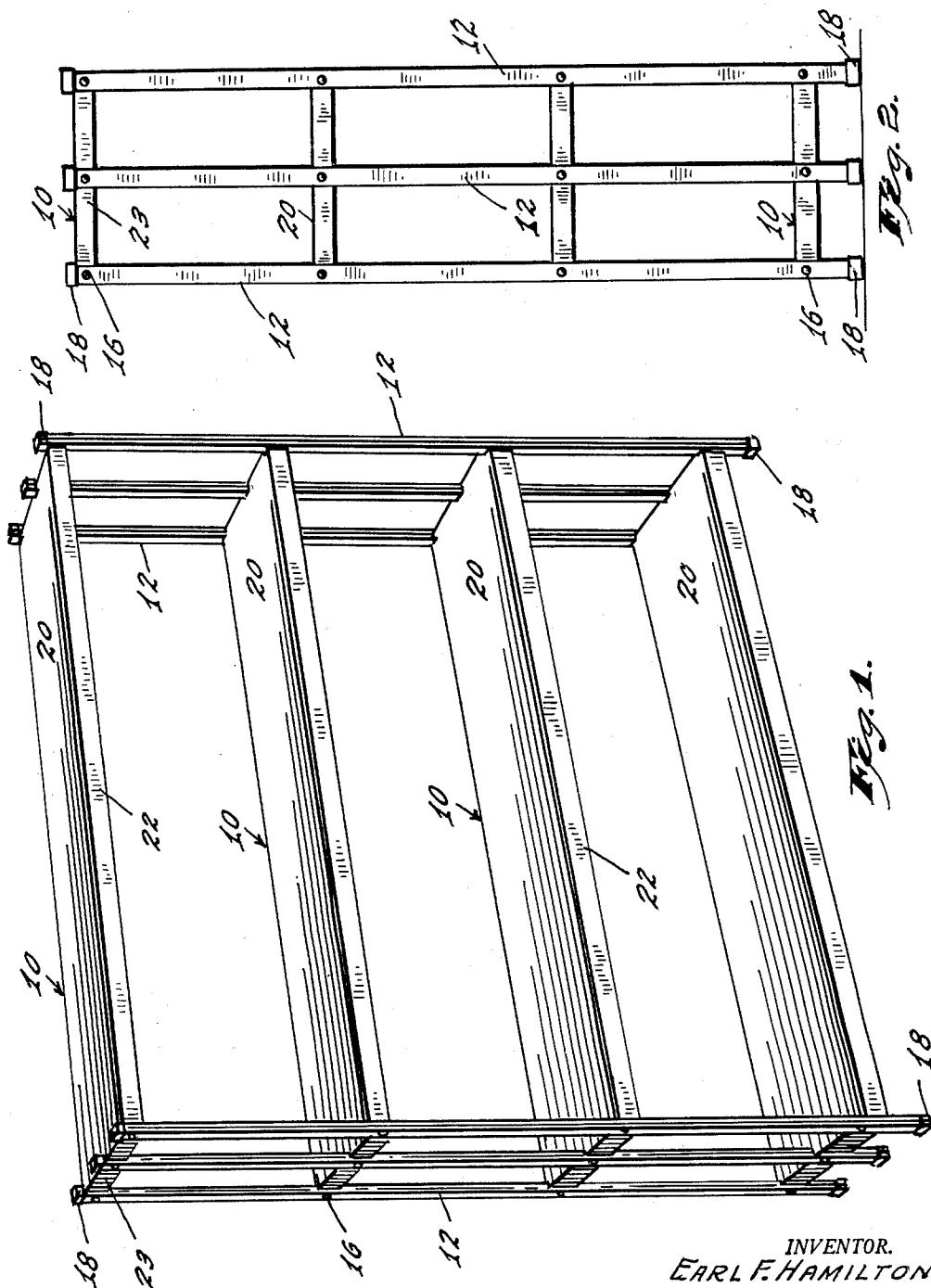
May 16, 1961

E. F. HAMILTON
SHELF CONSTRUCTION

2,984,362

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3 Sheets-Sheet 1



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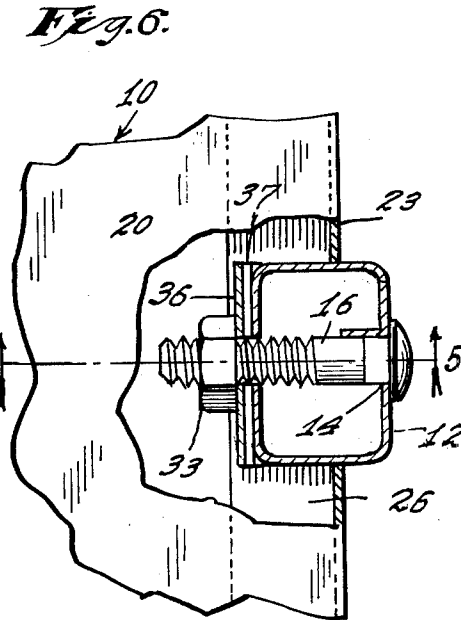
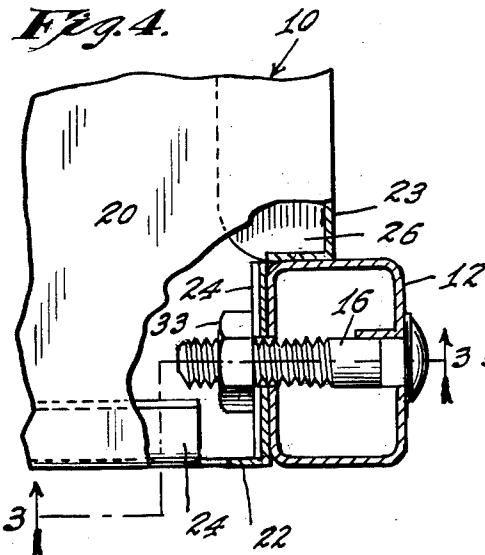
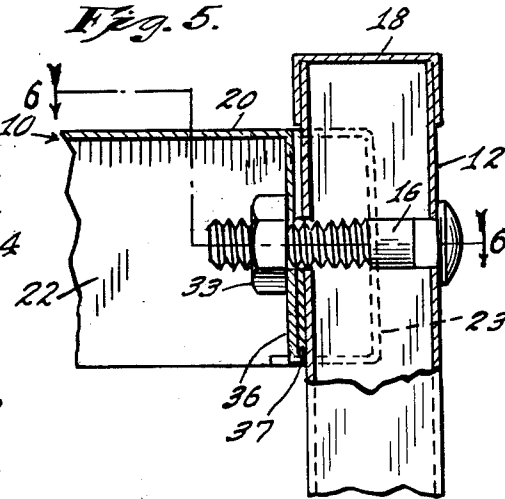
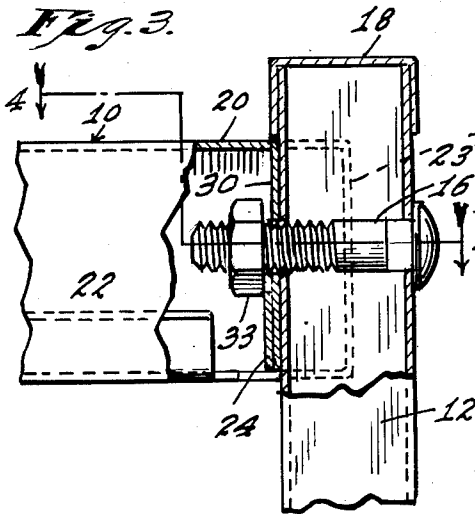
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3 Sheets-Sheet 2



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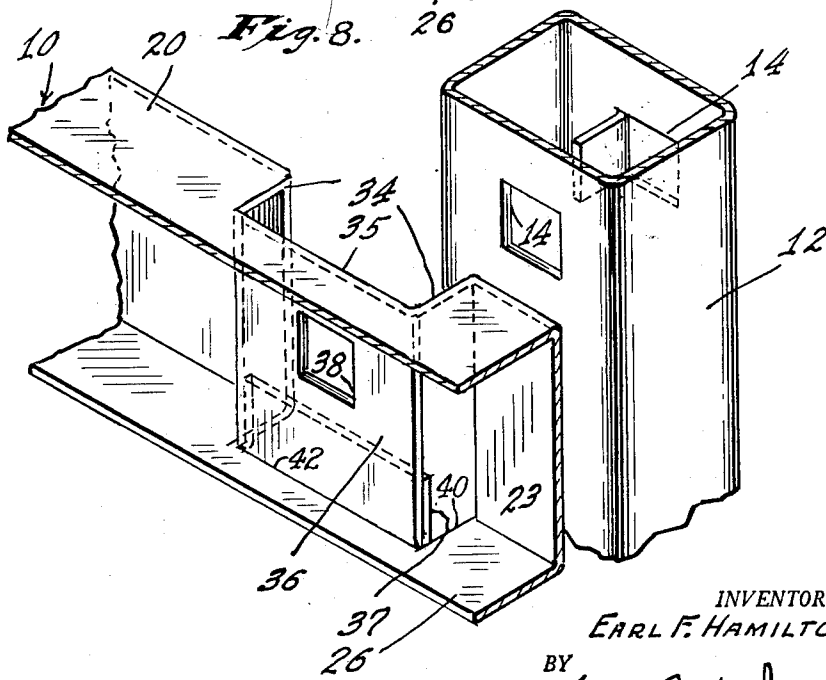
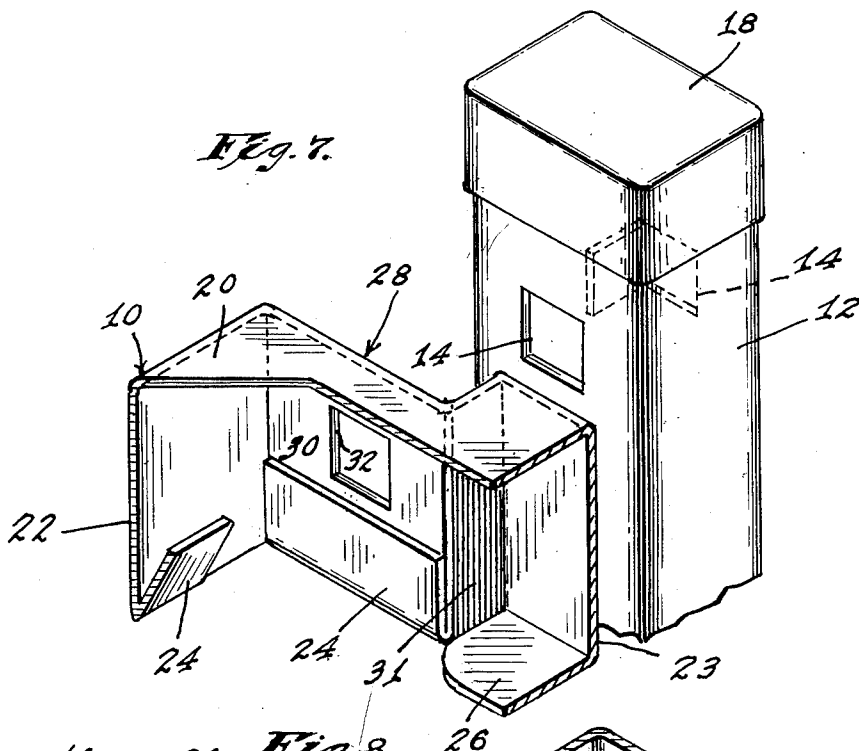
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3 Sheets-Sheet 3



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2,984,362

SHELF CONSTRUCTION

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7 Claims. (Cl. 211—135)

This invention relates to a shelf construction, and has for one of its objects the provision of an easily assembled construction adapted for shipment in a knock-down condition. It is another object of my invention to provide a shelf construction which can be constructed from inexpensive sheet-metal and metal-tubing, which will have an attractive appearance, and which will prove sturdy and durable in use.

According to the preferred form of my invention, there is provided a plurality of vertically extending floor-engaging legs rigidly connected to the opposite ends of a plurality of vertically spaced shelves. Each of said shelves is formed from a length of sheet-metal having its marginal edges bent downwardly to provide a stiffening border skirt. A plurality of spaced offsets are formed in the ends of the shelves and constitute recessed mounting seats adapted to receive the legs supporting said shelves. The border skirts in said offset areas are bent out of their normal planes to define vertically extending walls of substantial extent abutting the legs.

Other features and embodiments of my invention will become more apparent from the detailed description which follows and from the accompanying drawings in which:

Fig. 1 is a perspective view of a shelf construction embodying my invention;

Fig. 2 is an end elevation of the shelf construction shown in Fig. 1;

Fig. 3 is an enlarged fragmentary vertical section taken on the line 3—3 of Fig. 4 and showing one of the corner leg-shelf connections;

Fig. 4 is a horizontal section taken on the line 4—4 of Fig. 3;

Fig. 5 is a vertical section similar to Fig. 3 taken on the line 5—5 of Fig. 6, but showing an intermediate leg-shelf connection;

Fig. 6 is a horizontal section taken on the line 6—6 of Fig. 5;

Fig. 7 is a fragmentary exploded isometric view of a corner leg-shelf connection; and

Fig. 8 is a fragmentary exploded isometric view of an intermediate leg-shelf connection.

As illustrated in the drawings, my shelf construction comprises a plurality of vertically spaced shelves 10 supported at their ends on a plurality of vertically extending floor-engaging legs 12. While I have illustrated a shelf construction employing for such shelves supported on three legs at each of their ends, my invention contemplates the use of any desired number of shelves supported on a plurality of legs connected to the edges of the shelves at any desired positions.

The legs 12, which are desirably formed from lengths of metal-tubing having a rectangular cross-section, are identical in construction. Each of the legs is provided with a plurality of vertically spaced openings 14 adapted for the reception of bolts 16 for mounting the shelves 10 on said legs. Caps 18, formed from any desired material such as nylon, rubber, or the like, are placed over each of the ends of the legs 12 to enhance the appearance of

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the shelf construction and to prevent the legs from scratching or marring the floor or any other surface with which they may come in contact.

The sheet-metal shelves 10 are also identical in construction and are mounted on the legs 12 in a spaced vertical relation. As illustrated in the drawings, each of the shelves comprises a flat upper supporting surface 20 having its margins bent downwardly to form depending border skirts 22 and 23 extending substantially continuously around the periphery of the shelf. The skirt 22 extending along the longitudinal edges of the shelf is bent obliquely inwardly to form a stiffening flange 24, and the skirt 23 extending along the transverse edges of the shelf is bent inwardly parallel to the upper shelf surface 20 to form a similar stiffening flange 26.

As illustrated in the drawings, each of the shelves is offset inwardly at its corners to provide recessed mounting seats for connection to the leg members 12. To this end, a section of the corner of the upper supporting surface 20 is removed, as indicated at 28. The flange 24 is slit and bent upwardly against its border skirt 22, thus permitting said skirt to be bent into a plane parallel to a plane to the skirt 23. The end of the flange 26 is removed, and the end of the skirt 23 is bent inwardly into a plane parallel to the skirt 22. In this manner the ends of the skirts 22 and 23 form a pair of vertically extending walls 30 and 31 normal to each other and adapted to abut the inwardly presented faces of the corner legs 12 to form an extended vertical support for the shelf-leg connection. An opening 32 is formed in the wall 30 for the reception of one of the bolts 16 receiving a nut 33. Conveniently, the opening 32 is formed in the wall 30 immediately above the upturned flange 24 so that said flange will stiffen the wall 30 and prevent it from bending upon tightening of the bolt and nut.

Additional leg-receiving offsets are formed in the ends of the shelves between the corner offsets. Each of these intermediate offsets is formed by cutting the upper supporting shelf surface 20 along the lines 34, and then bending skirt 23 and the strip of metal formed by the cutting operation downwardly along the line 35 to form a vertically extending wall 36 parallel to the skirt 23 but offset inwardly therefrom. The lower end of the wall 36 is bent upwardly, as at 37, to stiffen said wall. Thus, the wall 36, the edges of the flange 26, and the edges 34 of the supporting surface 20 form extended supporting surfaces adapted to abut the inwardly presented faces of the legs disposed inwardly from the corners of the ends of the shelves. As in the case of the walls 30, openings 38 are formed in the walls 36 immediately above the stiffening member 37 to permit the bolts 16 to extend through said walls to receive the nuts 33 for connecting the shelves to the legs.

As will be clear from Fig. 8, in forming each of the recesses between the corner recesses, the skirt 26 is cut inwardly along the lines 40 and 42 normal to the wall 36 to accommodate the lower end of said wall. The edges 40 thus formed in the flange 26 are parallel to the edges 34 in the shelf surface 20 whereby said edges 34 and 40 will engage and support the lateral faces of the leg 12. And the edge 42 on the flange 26 abuts the lower end of the wall 36 to thus support and brace the lower end of said wall.

I claim as my invention:

1. In a shelf construction, a plurality of spaced vertically extending legs, a plurality of vertically spaced shelves connected to said legs and supported in spaced relation thereby, each of said shelves comprising a metal sheet having a substantially continuous border skirt, the metal sheet and skirt being offset inwardly at the corners of each of said shelves to provide recessed mounting seats for the legs, the skirts along each pair of adjacent shelf edges being bent normal to their respective

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shelf edges to form a pair of vertically extending walls normal to each other at each offset and abutting the faces of the legs connected to the shelves, at least one of said bent skirt portions at each of said mounting seats having its lower end bent back on itself to form a stiffening lip therefor, and means connecting the legs to the shelf skirt portions forming said recessed mounting seats.

2. In a shelf construction, a plurality of spaced vertically extending legs, a plurality of vertically spaced shelves connected to said legs and supported in spaced relation thereby, each of said shelves comprising a metal sheet having a substantially continuous border skirt, an inwardly directed flange on the lower edge of said skirt stiffening the shelf and skirt, said metal sheet and skirt being offset inwardly at the corners of each of said shelves to provide recessed mounting seats for the legs, the skirt portions at said offsets being bent normal to their respective shelf edges to form a pair of vertically extending walls normal to each other and abutting the faces of the legs connected to the shelves, the flange on at least one of the skirt portions in each of said offsets being bent back against said skirt portion to strengthen the same, and means connecting the legs to the shelves.

3. In a shelf construction, a plurality of spaced vertically extending legs, a plurality of vertically spaced shelves connected to said legs and supported in spaced relation thereby, each of said shelves comprising a metal sheet having a substantially continuous border skirt, an inwardly directed flange on the lower edge of said skirt stiffening the shelf and skirt, said metal sheet and skirt being offset inwardly at the corners of each of said shelves to provide recessed mounting seats for the legs, the skirt portions at said offsets being bent normal to their respective shelf edges to form a pair of vertically extending walls normal to each other and abutting the faces of the legs connected to the shelves, one of the skirt portions in each of said offsets being provided with an aperture for reception of fastening means for connecting the legs to the shelf in said recessed offsets, and the flange on the apertured skirt portion being bent back against said skirt portion to strengthen the same.

4. In a shelf construction, a plurality of spaced vertically extending legs connected to the shelves at the ends thereof, each of said shelves comprising a metal sheet having a substantially continuous border skirt, the metal sheet and skirt being offset inwardly at the corners of each shelf and along the medial stretches of the shelf ends to form recessed mounting seats for the legs, the skirt portion in each of said recesses forming at least one vertically extending wall parallel to the skirt portions at the ends of the shelf and abutting the inner face of one of the legs, and means connecting the legs to the shelves.

5. A shelf construction as set forth in claim 4 with

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the addition that the skirt portions in the corner recesses are bent to form a pair of leg-abutting walls normal to each other, and the skirt portions in the remaining recesses are bent to form single leg-abutting walls parallel to the skirt portions at the ends of the shelves.

6. In a shelf for an article of furniture, a metal sheet having a flat upper supporting surface, a depending border skirt integral with said supporting surface and extending substantially continuously around the periphery of said supporting surface, and a plurality of recesses along the margins and at the corners of said supporting surface adapted to receive a plurality of floor-engaging supporting legs, the skirt portion in each of the recesses being bent out of its general plane to form one or more vertically extending walls adapted to abut one or more of the inwardly presented faces of the floor-engaging legs to form an extended support therefor, and the supporting surface being cut back at each of said recesses to provide one or more edges in said supporting surface at each recess engageable with one of said floor-engaging legs.

7. In a shelf construction, a plurality of vertically spaced shelves, a plurality of spaced vertically extending legs connected to the shelves along the edges thereof, each of said shelves comprising a metal sheet forming a flat upper supporting surface and a substantially continuous border skirt, an inwardly extending flange on said border skirt, said supporting surface and skirt being offset inwardly at spaced intervals along the shelf edges to form recessed mounting seats for the legs, the skirt portions in each of said recesses being bent out of the plane of the border skirt adjacent said mounting seat to form a single leg-abutting wall parallel to the border skirt adjacent said mounting seat, the supporting surface and skirt flange at each of said recesses having an opening cut therein, with the metal forming the edges of the recess cut in said supporting surface forming a pair of opposed leg-supporting edges normal to said leg-abutting wall and the metal forming the edges of the recess cut in the skirt flange forming a pair of opposed leg-supporting edges normal to said leg-abutting wall and a third supporting edge engaging the lower end of said leg-abutting wall, and means connecting the legs to the shelves at each of said leg-abutting walls.

References Cited in the file of this patent

UNITED STATES PATENTS

47,302	Jewett	May 4, 1915
1,435,321	Meyer	Nov. 24, 1922
1,681,218	Carlson	Aug. 21, 1928
1,984,080	Onions	Dec. 11, 1934
2,604,213	Bales	July 22, 1952
2,621,800	Neubauer	Dec. 16, 1952
2,760,650	Franks	Aug. 28, 1956
2,808,944	Jones	Oct. 8, 1957