

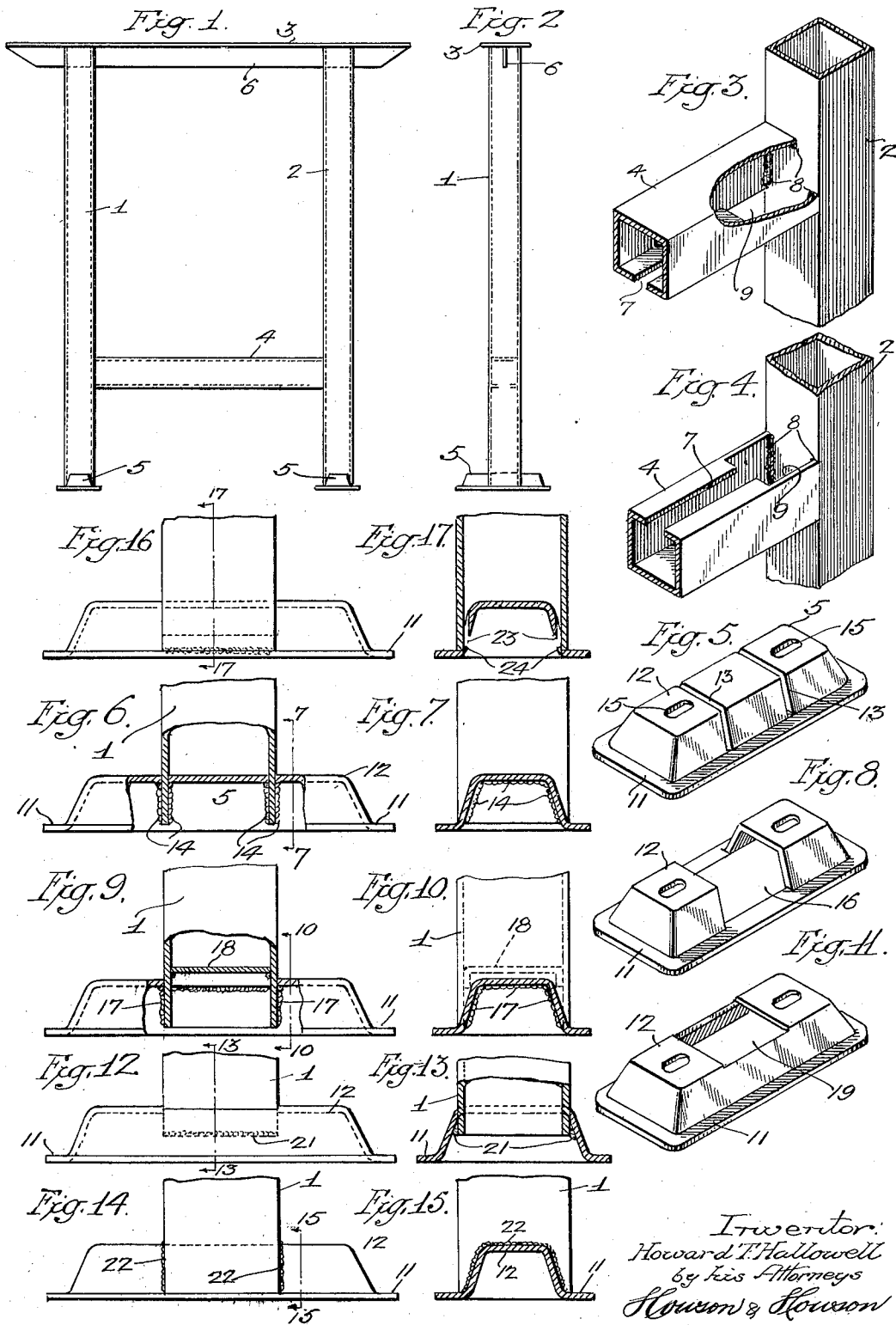
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METAL LEG STRUCTURE

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METAL LEG STRUCTURE

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This invention relates to improvements in metal table or bench legs, and a principal object of the invention is to provide a tubular leg construction of generally improved characteristics.

More specifically, an object of the invention is to provide a leg construction of the stated type of relatively great strength and durability and of low cost of production.

The invention further resides in certain structural details hereinafter set forth and illustrated in the attached drawing, in which:

Figure 1 is a fabricated leg made in accordance with my invention;

Fig. 2 is an end elevation of the leg structure;

Figs. 3 and 4 are fragmentary views in perspective illustrating a detail of the construction;

Fig. 5 is a view in perspective of a preferred form of foot for the tubular uprights;

Fig. 6 is a fragmentary elevational and partial sectional view illustrating the foot shown in Fig. 5 assembled with the leg;

Fig. 7 is a section on the line 7—7, Fig. 6;

Fig. 8 is a view in perspective of another form of foot element within the scope of my invention;

Fig. 9 is a view similar to that of Fig. 6 showing the foot illustrated in Fig. 8 assembled with the leg;

Fig. 10 is a section on the line 10—10, Fig. 9;

Fig. 11 is a view in perspective of still another form of foot element;

Fig. 12 is a fragmentary elevational view of the foot shown in Fig. 11 assembled with the leg;

Fig. 13 is a section on the line 13—13, Fig. 12;

Fig. 14 is a fragmentary elevational view showing still another type of foot and leg assembly;

Fig. 15 is a section on the line 15—15, Fig. 14, and

Figs. 16 and 17 are views corresponding with the views of Figs. 14 and 15 respectively, showing a still further modification within the scope of my invention.

With reference to the drawing, a fabricated metal table or bench leg structure made in accordance with my invention may comprise two rectangular tubular uprights 1 and 2 united at their tops by a cross bar 3 and adjacent their lower ends by a stringer 4. Each of the uprights 1 and 2 is provided at the bottom with a foot support 5 adapted to provide a suitable extended bearing surface for contact with the supporting surface. In the present instance, the top cross bar 3 takes the form of a metallic T-section which is mounted in the upright position to afford an extended flat surface at the top of the leg structure. The depending flange 6 of this cross bar occupies longitudinal slots in the upper ends of the uprights 1 and 2, as shown in Fig. 2, these slots preferably being of sufficient depth to

permit the upper edges of the uprights 1 and 2 to contact with the under surface of the transverse flange of the T-bar. The cross bar 3 may be united with the tubular uprights 1 and 2 by welding at the joints.

The stringer 4 preferably is of substantially rectangular tubular form of dimensions corresponding with the cross sectional dimensions of the uprights 1 and 2. In the present instance, as shown in Figs. 3 and 4, this stringer is of the desired rectangular form but divided longitudinally in the lower wall as indicated at 7 in Fig. 3. The ends of the stringer 4 in the present instance abut the opposed faces of the uprights 1 and 2 and are secured to the uprights by welding. The weld, as indicated at 8 in Figs. 3 and 4, is made on the inside of the stringer 4, and in order to provide for this interior welding, I form the under sides of the stringer 4 at each end with an opening 9 giving access to the inner joints for the welding operation. The surfaces at the external joints are thus left unmarred by the welding and an extremely neat and desirable appearance afforded.

The preferred form of the foot 5 is illustrated in Fig. 5 and the manner of its connection with the uprights 1 and 2 illustrated in Figs. 6 and 7. As shown in the drawing, the elevated mid section 12 is divided intermediate its ends by parallel slots 13 which are so relatively positioned as to receive the opposite side walls of the upright to which the foot is to be attached. The width of the mid section 12 is such that the other pair of opposite walls of the upright may rest upon the upper surface of the flange 11, so that that portion of the mid section 12 between the slots 13 is entirely embraced within the lower end of the upright. With the upright so inserted in the slots 13, the foot 5 may be united to the upright by welding at the joints at the under side of the foot, as indicated at 14 in Figs. 6 and 7. The opposite end portions of the mid section 12 which lie at opposite sides of the upright are provided with openings 15 for reception of bolts whereby the foot may be attached to the floor surface if desired.

It will be apparent that the aforescribed device is characterized by an extreme simplicity of form and assembly, and at the same time affords a structure of considerable strength and durability. That portion of the mid section 12 of the foot 5 which lies within the upright constitutes in effect a strut preventing deformation of the sides of the tubular form, and the parts reinforce each other to produce a substantially rigid structure. At the same time, the construction has a highly ornamental appearance which is materially aided by the fact that the welded joints both for the stringer 4 and the feet 5 are all located at the inner unexposed surfaces.

It will be apparent that there may be consid-

erable modification without departure from the invention. In the embodiment, for example, shown in Fig. 8, that portion of the elevated mid section 12 of the foot which in the embodiment illustrated in Fig. 5 occupies in assembly a position within the tubular upright, has been entirely eliminated. In this instance, as shown in Fig. 9, the upright fits neatly within the space designated by the reference numeral 16 in Fig. 8, and the foot and the leg are joined together by welding, as indicated at 17 in Figs. 9 and 10. The lower edge of the upright in this instance rests upon the top of the flange 11 as in the preceding embodiment, but it will be apparent that the inner portions of this flange may be cut away so that the lower edge of the upright may lie flush with the lower surface of the flange 11. In order to reinforce those walls of the upright which are engaged by the elevated portions of the foot, I may provide in the interior of the leg and secure thereto by welding a strut 18 extending between these walls.

In Fig. 11, I have illustrated a still further embodiment in which the elevated mid section 12 of the foot is made of sufficient width to permit of an opening 19 of sufficient size to admit the upright 1. Following insertion of the lower end of the upright in this opening 19, the parts may be joined together by welding at the points indicated at 21 in Fig. 13.

In the modification disclosed in Figs. 14 and 15, the elevated mid section 12 of the foot is solid throughout, and two opposite walls of the upright are cut away to conform to the shape of this elevated mid section. The foot in this case in effect fits within a recess in the lower end of the upright formed by these cut-out portions, and the upright and the foot may then be united by welding 22 extending around the outer edges of the joints. In order to avoid this welding on the outer surfaces of the assembly, I may, as illustrated in Figs. 16 and 17, form openings 23 in the lower portions of the elevated mid section 12 which abut the opposite side walls of the upright. These openings give access for welding to the inner sides of the joints between the lower edges of the upright and the flange 11, as indicated at 24. The external welded joints are thus avoided.

There may be still further modifications without departure from the invention.

I claim:

1. In a fabricated metal leg structure, an upright of substantially rectangular tubular form, a foot section comprising a flat marginal flange and an elevated mid section, and slots in said mid section adapted to receive opposite walls of said upright, said foot being united to the upright by means of welding applied at the edges of said slots.

2. A fabricated metal leg structure comprising an upright of substantially rectangular tubular section, and a foot element for said upright comprising a marginal flange and an elevated mid section, slots intersecting said mid section and adapted for reception of opposite walls of said upright, said flange constituting a support for the lower edges of the other walls of said upright, and means for uniting the foot with said upright.

3. In a fabricated metal leg structure, the combination with an upright of rectangular tubular section, and a foot for the lower end of said section comprising a marginal flange and an intermediate elevated portion, said elevated portion

having slots adapted for reception of opposite walls of said upright, said foot being attached to said upright by welding at the edges of said slots and on the under side of said foot.

4. A fabricated metal leg structure comprising an upright of substantially rectangular tubular form, and a foot element for the lower end of said upright, said element comprising a continuous transverse marginal flange and elevated intermediate portions spaced for reception therebetween of said upright, said elevated portions lying at opposite sides of said leg with their edges in substantial abutment with the latter, and said foot being secured to the leg by means of welding applied at said edges of said elevated portions and on the under side thereof.

5. A fabricated metal leg structure comprising an upright of substantially rectangular tubular form, a foot element for the lower end of said upright, said element comprising a transverse marginal flange and elevated intermediate portions spaced for reception therebetween of said upright, said elevated portions lying at opposite sides of said leg and having inturned edges in substantial abutment with the latter, and said foot being secured to the leg by means of welding applied at said edges of said elevated portions and on the under side thereof, and a reinforcing element secured in the interior of said upright at the lower end thereof and internally reinforcing the walls of said upright.

6. A fabricated metal leg structure comprising an upright of substantially rectangular tubular form, and a foot for the lower end of said upright comprising a substantially flat marginal flange and an elevated mid section, said upright having in opposite walls and at the lower edge recesses conforming to the transverse outline of said mid section said foot being attached to said upright by welding at the edges of said recesses.

7. A fabricated metal leg structure comprising an upright of substantially rectangular tubular form, and a foot for the lower end of said upright comprising a substantially flat marginal flange and an elevated mid section, said upright having in opposite walls and at the lower edge recesses conforming to the transverse outline of said mid section, and said mid section having openings therein giving access to the inner edges of the joints between the upright and the foot for welding said joints.

8. In a fabricated metal leg structure, a foot member comprising a flat marginal flange and an elevated mid section, and having in said elevated mid section spaced slots, and an upright having portions adapted to fit into said slots and united to the foot member by means of welding applied at the edges of said slots.

9. In a fabricated metal leg structure, the combination with a foot member comprising a marginal flange and an elevated mid section, and slots intersecting said mid section, and an upright having at its lower end projecting portions adapted to fit into said slots and united with said foot by welding at the edges of said slots and on the under side of said foot.

10. In a fabricated metal leg structure, a foot member comprising a continuous flat marginal flange and an elevated mid section, and having a slot in said elevated mid section, and an upright having a portion adapted to fit into said slot and united to the foot member by means of welding applied at the edges of said slot.

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