July 15, 1930. P. M. WEGE 1,770,500

METAL TABLE CONSTRUCTION

Filed Dec. 27, 1926 2 Sheets-Sheet 1

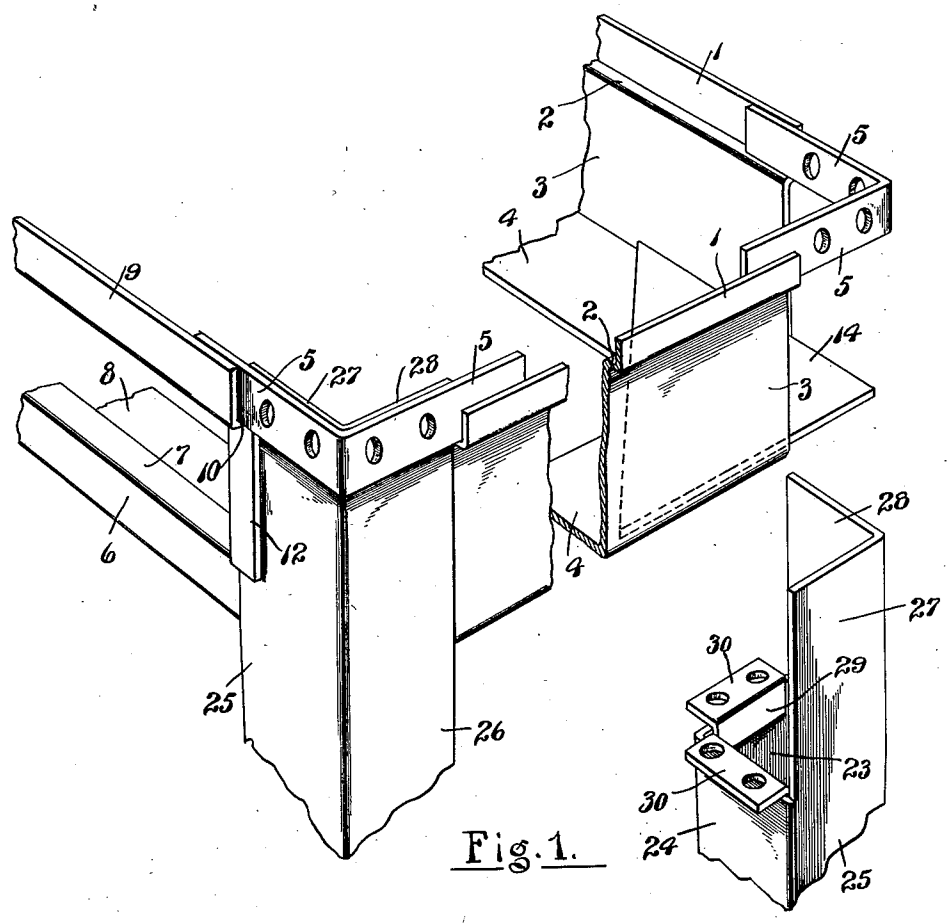


Fig. 1.

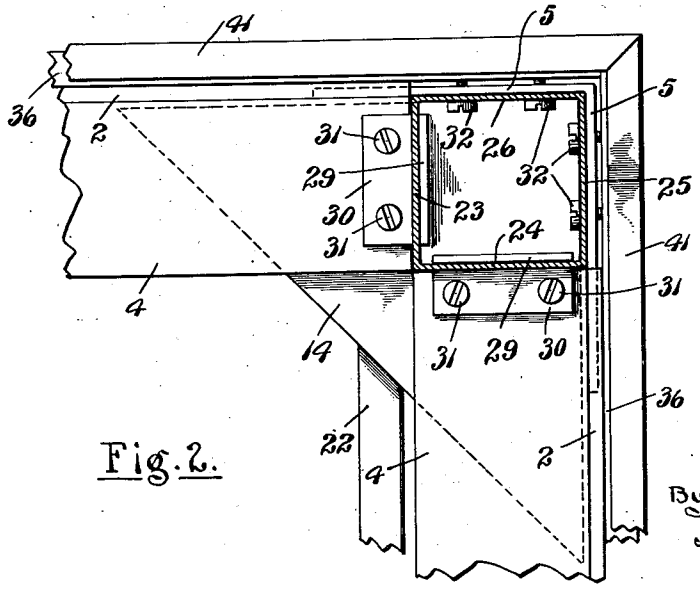


Fig. 2.

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METAL TABLE CONSTRUCTION

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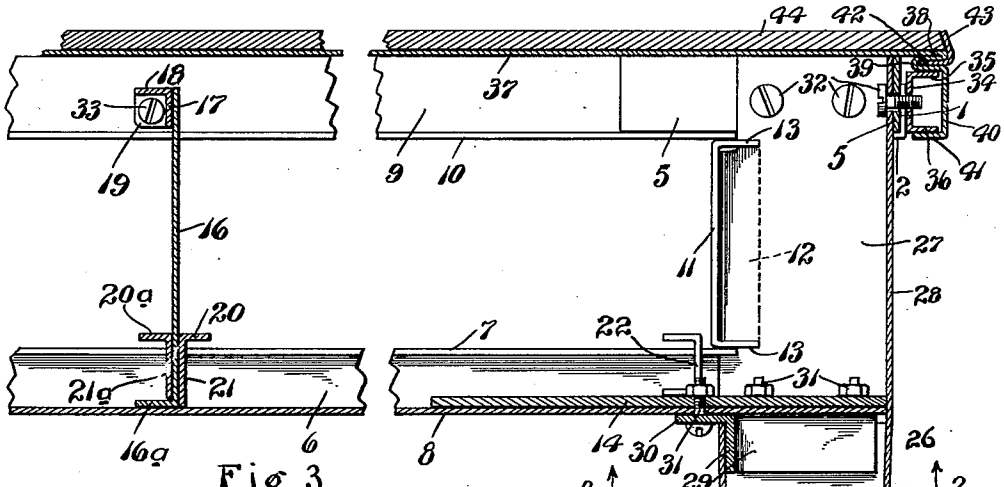


Fig. 3.

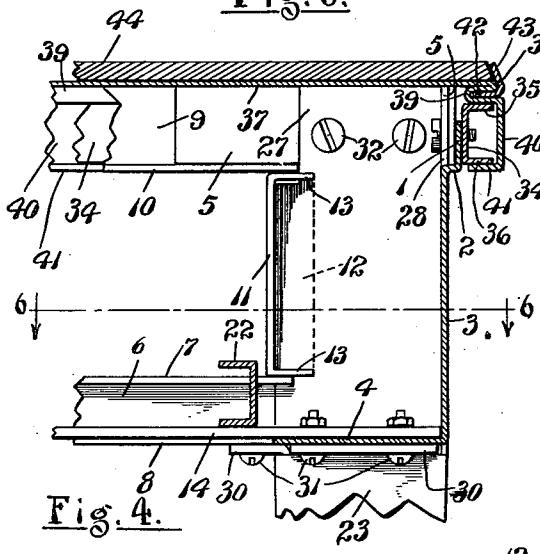


Fig. 4.

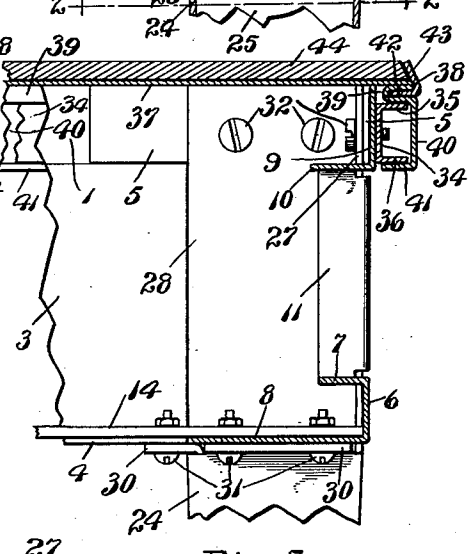


Fig. 5.

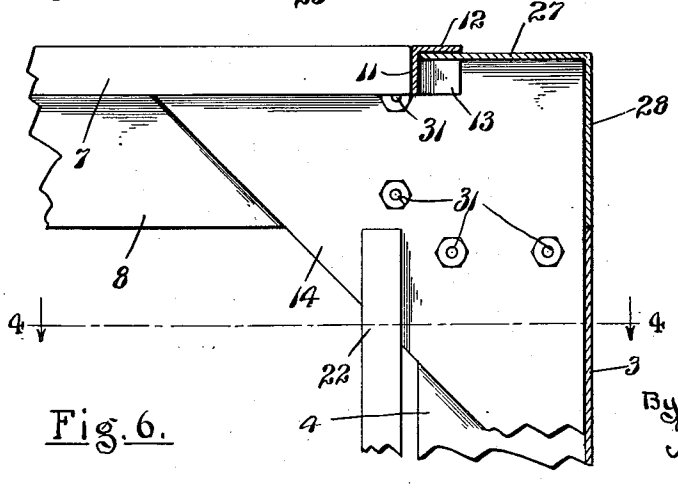


Fig. 6.

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UNITED STATES PATENT OFFICE

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METAL-TABLE CONSTRUCTION

Application filed December 27, 1926. Serial No. 157,075.

This invention relates to a table made of sheet metal and equipped with a linoleum upper surface or top. It is an object and purpose of the present invention to construct a table which is made wholly of sheet metal, except for the linoleum upper wearing surface, and in which the linoleum is attached to a sheet metal support by means of sheet metal border bands serving to retain it in place. A further object and purpose of the invention and one which is of primary significance is to construct the table of parts which may be very quickly and easily assembled or disassembled, this making it possible to ship the construction in its knock-down form wherein it occupies relatively little space, and which may be assembled when its destination is reached in a very simple manner, the only tools required being a screw driver, and there being no particular skill required of the one making the assembly. Many other objects and purposes than those stated will be apparent as understanding of the invention is had from the following description taken in connection with the accompanying drawings, in which,

Fig. 1 is a fragmentary perspective view illustrative of the table frame structure, one supporting leg of which is shown located in place and the other shown disconnected.

Fig. 2 is a fragmentary horizontal section at one corner of the table on the plane of line 2—2 of Fig. 3, and looking upward in the direction indicated by the arrows.

Fig. 3 is a fragmentary longitudinal vertical section through the table near the front side thereof and looking in a forward direction.

Fig. 4 is a fragmentary horizontal section substantially on the plane of line 4—4 of Fig. 6 and looking in the direction indicated.

Fig. 5 is a fragmentary transverse vertical section through the upper part of the table construction near one end and looking toward said end of the table, and

Fig. 6 is a fragmentary horizontal section on the plane of line 6—6 of Fig. 4 looking downwardly as indicated by the arrows.

Like reference characters refer to like parts in the different figures of the drawings.

In the construction of the table a rectangular supporting frame over which the top is placed, is provided, including a rear side member and end members which are of the same formation, each being made from a single plate of sheet metal, formed with a vertical lip 1 at its upper edge which is then bent inwardly for a short distance to make a horizontal ledge 2, thence again extended downwardly, as indicated at 3, in a plane parallel with the lip 1. From the lower edge of the section 3 a flange 4 is turned horizontally. If the table is not to have drawers the front side of the frame will be a duplicate of the rear side. It is many times desirable however, to construct the table so that drawers may be mounted under the top and drawn outwardly at the front side. In such case, instead of using a front side similar to the rear side including the sections 1, 2, 3 and 4, as described, a front is provided including a lower channel having a vertical web 6 and upper and lower flanges 7 which lie horizontally and extend rearwardly, the flange 8 being considerably wider than the flange 7 and lying in the same horizontal plane with the flanges 4 of the rear side and end members, previously described. Above the channel an angle is located having a vertical leg 9 in the same plane with the vertical web 6 of the channel and a horizontal leg 10 turned rearwardly from the lower edge of the leg 9. At the ends of the angle and channel, spacing members of sheet metal are provided in the form of short angles having two legs 11 and 12 at right angles to each other, from one of which the leg 11 as shown in the drawing, horizontal ends 13 are bent. The upper end 13 lies underneath the leg 10 while the lower end 13 lies above the upper flange 7. A permanent structure is made by spot welding or otherwise suitably securing the ends 13 to said leg and flange. These sides and ends of the table frame are connected at their corners by metal brackets, each comprising two arms 5 located at a right angle to each other. The arms lie against the inner sides of the lips 1 and over the ledges 2 and against the vertical leg 9 of the upper angle at the front of the table frame, as best shown in Fig. 1. A permanent connection is made

in any suitable manner preferably by spot welding. In addition when the table is assembled the corners are strengthened and reinforced by gusset plates 14 which are disposed to lie over the horizontal flanges 4 and 8 and are permanently secured in place when the legs of the table, as will appear later, are connected in place.

It is evident that drawers may be slidably placed in this frame entering between the horizontal leg 10 and the upper horizontal flange 7 of the two members at the front of the table frame. One long drawer could be used but in practice the space in the length of the frame is divided into any desired number of compartments by means of vertical partitions 16 (see Fig. 3). A partition 16 at its upper edge is welded to the vertical leg 17 of a horizontal angle member which is completed by an upper horizontal leg 18 and ends 19 bent from one of the legs so as to lie against the inner side of the leg 9, previously described, and also at its rear and against the inner side of the lip 1 of the rear side of the frame. The manner of attaching this horizontal angle member will be later described. At its lower edge the partition 16 is bent at right angles, as indicated at 16^a, to rest upon the flange 8 and at either side two angles are permanently attached, having upper horizontal legs 20 and 20^a while the vertical legs 21 and 21^a lie against the partition 16 and are permanently secured thereto by spot welding. Near the ends of the table horizontal channels 22 secured to the plates 14, are disposed and on the upper flanges thereof and on the flanges 20 and 20^a drawers may be slidably mounted.

The legs are formed of sheet metal preferably in one piece, bent into rectangular form and having four sides 23, 24, 25 and 26. Two of the sides, 25 and 26 as shown, extend above the adjacent sides 23 and 24 of the leg as indicated at 27 and 28. Angle connections, each comprising a vertical leg 29 and a horizontal leg 30, are disposed, one at the upper edge of each of the sides 23 and 24. The vertical legs 29 are permanently attached to their respective sides 23 and 24 and the horizontal legs extend laterally beyond said sides 23 and 24.

When the table legs are attached to the frame the legs 30 of the angle connections come underneath the flanges 4 and 8, previously described, and suitable connecting bolts 31 are used, the same passing through the legs 30, said flanges 4 and 8 and through the gusset plates 14, this being fully shown in Figs. 3, 4, 5 and 6. In addition the extensions 27 and 28 to the sides 25 and 26 of the table supporting legs, at their upper ends come inside of the arms 5 of the corner connecting brackets of the table frame. Screws 32 are used which pass through said extensions 27 and 28 and through openings in the arms of said brackets. In the same way screws 33 pass through the ends 19 provided on the horizontal angle bar having legs 17 and 18 through the part 9 and the lip 1 on the rear side of the table frame.

The screws 32 and 33 thread through suitable openings made in the webs of horizontal channels which lie at each side and end of the table frame near the upper edges thereof, as shown in Figs. 3, 4 and 5. These channels include a vertical web 34 and upper and lower outwardly extending spaced apart flanges 35 and 36. Said channels extend entirely around the frame of the table and are connected at the time said legs are bolted and otherwise attached in place by means of the bolts 31 and screws 32 and 33.

Over the frame thus connected together and supported by vertical legs at each corner, the top is placed. In practice the channels having the webs 34 and flanges 35 and 36 are laid in the sides and ends of the top structure before application is made to the frame of the table so that the attachment of the channels at the same time secures the top in place.

The top structure includes a flat upper plate 37 of sheet metal which at its side and end edges is turned back on itself making the bend indicated at 38. After being turned inward a short distance a reverse bend or U-shaped loop, indicated at 39, is made in an outward direction and the metal is then extended downwardly making a vertical section 40, terminating in an inturned flange 41. The distance between the flange 41 and the under side of the second bend or loop 39 is sufficient that the flanges 35 and 36 of the side and end channels previously described may pass freely therein yet make a fairly snug fit. The loop at 39 which is of U-shape receives a horizontal section 42 of a metal border strip which is completed by an upwardly and inwardly inclined integral section 43, making securing flanges which bear against the edges of a sheet of linoleum 44 placed upon the metal plate 37. This particudar structure of top for a desk or table is not new in this application, being fully shown, described and claimed in my prior application, Serial Number 121,769, filed July 12, 1926.

The construction described is very practical and is easily formed and assembled so far as the parts need assembly at a factory, by means of suitable tools and dies. The shipment of the table may be made in knock-down form with the table supporting legs, the gusset plates 14 and the top structure detached. When the destination is reached and assembly is to be made, it is necessary merely to fit the parts together and use the securing bolts 31 and screws 32 and 33, it being evident that the assembly of the table is with it turned upside down on a floor so that the bolts and screws may be readily put in place and tightened. The invention is defined in the appended claims and is to be considered

comprehensive of all forms of structure coming within their scope.

I claim:

1. In a device of the class described a rectangular frame of sheet metal, detachable legs of sheet metal located at the corners of the frame, top securing bars located around the frame at the sides and ends of the frame and near the upper edges thereof, means for connecting said frame, legs and top securing bars together, and a top covering the frame having means forming an interlocking connection with said securing bars.

2. The table construction comprising a rectangular frame of sheet metal having sides and ends, legs located at the corners of the frame and extending downwardly therefrom, a top located over the frame, bars having interlocking connection with the sides and ends of the top, said bars being located horizontally against the sides and ends of said frame and screws passing through the legs and frame into said bars to detachably connect the legs and said bars to the frame and at the same time secure the top to said frame.

3. A table construction comprising sides and ends each formed from a plate of sheet metal, and each comprising a vertical section, a flange extending inwardly horizontally from the lower edge of said vertical section, a short horizontal ledge extending outwardly from the upper edge of the vertical section and a vertical lip extending upwardly from the outer edge of said ledge, gusset plates of right angle triangular form located at the corners of the frame over adjacent ends of the horizontal flanges on said sides and ends of the frame, corner brackets each having two arms located at right angles to each other located at the corners of the frame above said gusset plates, the ends of the arms having attachment to the vertical lips on adjacent sides and ends of said frame, sheet metal legs located at the corners of the frame each of said legs having spaced apart sides and two of the adjacent sides of the legs extending above the other two sides thereof, said extensions at their upper ends passing inside of said corner brackets, and the gusset plates passing over the upper edges of the shorter sides of said legs, brackets attached to the upper portions of said shorter sides, means for detachably connecting said brackets horizontal flanges and gusset plates together, horizontal channel bars located one at the outer side of the flanges and screws passing through the extensions at the upper ends of said legs and through said brackets and threading through the webs of the channel bars.

4. A construction containing the elements in combination defined in claim 3, combined with a top located over the frame and having depending inwardly turned channels at its sides and ends in which the first mentioned channels are received, whereby the top is secured to the frame.

5. In a construction of the class described, a frame having rear side and ends of sheet metal and a front side comprising spaced apart upper and lower metal bars, said lower bars at their front side and said rear side and ends of the frame each having a horizontal inwardly extending flange, all the flanges lying in the same horizontal plane, corner brackets connecting the rear side and ends of the frame and said ends of the frame and the upper bar of the front side of the frame, gusset plates lying over said horizontal flanges at the corners of the frame, legs detachably secured at the corners of the frame to said flanges and gusset plates and to said corner brackets, top securing bars located alongside each side and end of the frame in substantially the same horizontal plane with the corner brackets, said bars being secured to the frame by the same means which connects the legs and corner brackets together and a top located over the frame and provided at its sides and ends with depending channels having inwardly extending flanges, said horizontal bars being seated in said channels between the flanges thereof.

6. A table comprising, a frame having spaced apart vertical sides and ends of sheet metal, each of said sides and ends having an inwardly extending horizontal flange at its lower edge, said vertical sides and ends being cut away at the respective corners of the frame, legs of sheet metal for each corner of the frame, each leg being substantially square in cross section and having two short adjacent sides and two long adjacent sides extended above the said short sides, the top edges of said short sides lying under said frame flanges and the upper extensions of said long sides closing the corners of the frame at said cut away portions thereof and means for attaching the legs to the frame.

7. A table comprising, a sheet metal frame having spaced apart vertical sides and ends, each being cut away at the respective corners of the frame, an inturned flange at the lower edge of each side and end of the frame, a right angle bracket near the upper edge of each corner of the frame, sheet metal legs for each corner of the frame, said legs being substantially square in cross section and having two short adjacent sides and two long adjacent sides extending above the short sides, the upper edges of said short sides lying against the under sides of said flanges and the upper extensions of the long sides closing the corners of the frame at the cut away portions thereof and means for connecting the upper edges of the long sides to said brackets and the edges of the short sides to said flanges.

8. A table comprising, a rectangular frame, a top therefor having depending members

outside of said frame, said depending members being formed with inwardly opening channels, top securing bars detachably located in said channels and screws to attach said top securing bars to said frame.

9. A table comprising, a rectangular frame, detachable legs at each corner thereof, a table top having depending members outside of said frame, top securing bars having detachable interlocking engagement with said depending top members and screws to attach said legs, frame and top securing bars together.

In testimony whereof I affix my signature.

PETER M. WEGE.