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MEANS FOR PREVENTING WEAVING IN METAL TABLES AND THE LIKE

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2 Sheets-Sheet 1

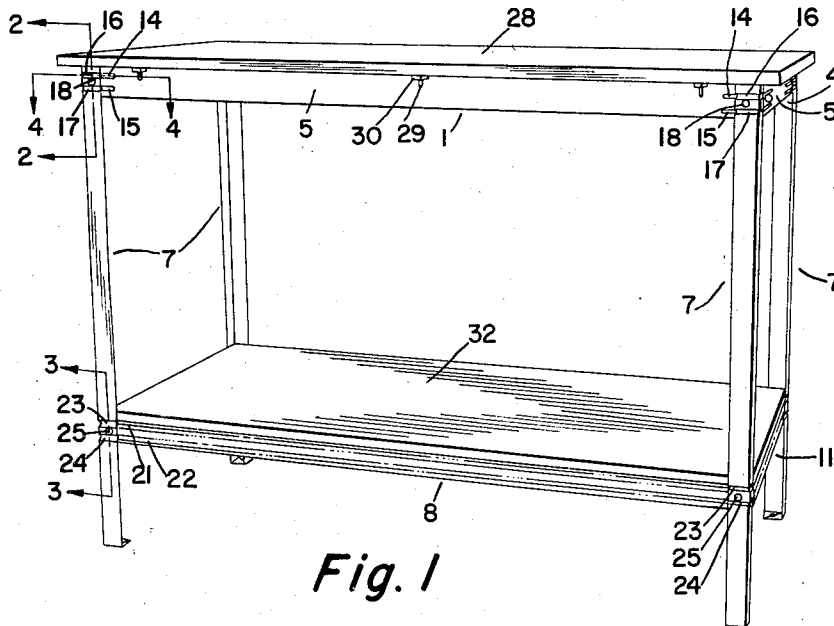


Fig. 1

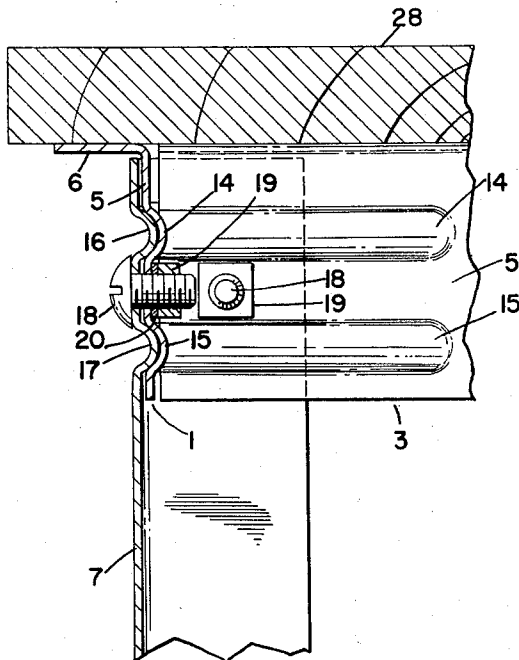


Fig. 2

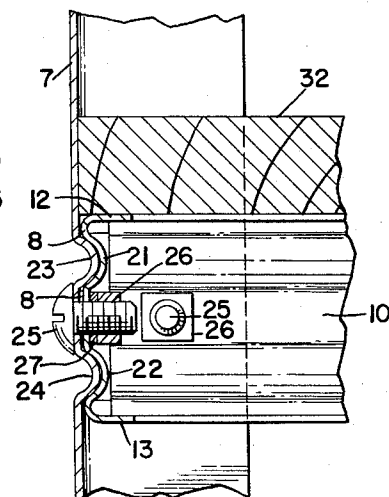


Fig. 3

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2 Sheets-Sheet 2

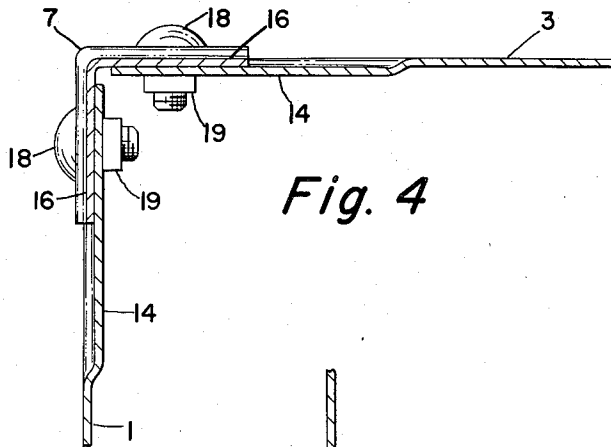


Fig. 4

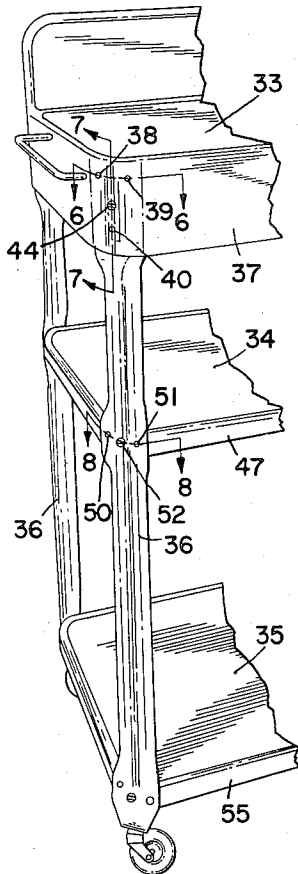


Fig. 5

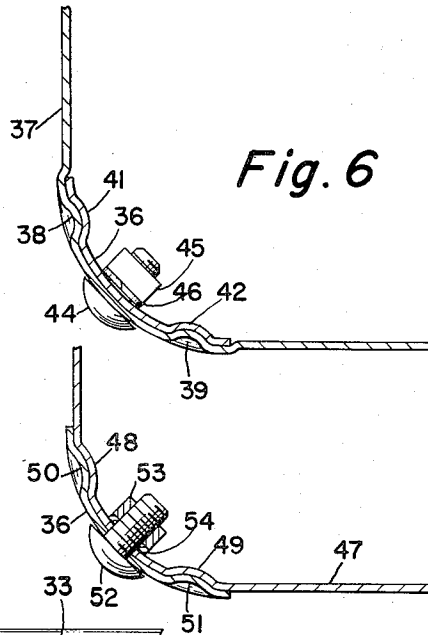


Fig. 6

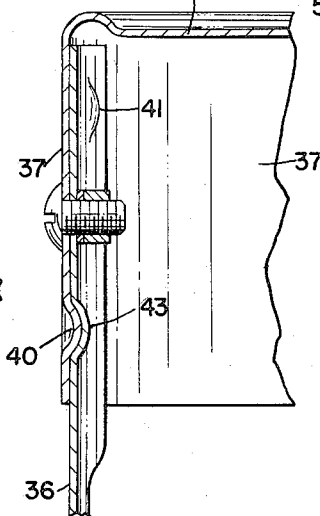


Fig. 7

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MEANS FOR PREVENTING WEAVING IN METAL TABLES AND THE LIKE

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6 Claims. (Cl. 211-148)

This invention relates generally to means for preventing weaving in metal tables and the like.

A primary object of the invention is to provide a metal table or like article, made of light gauge metal or the like, and which is of extremely rigid construction.

Another object of the invention is to provide an article of the character described, in which means have been incorporated for preventing or minimizing any tendency of the article to "weave" at the joints, after assembly of the parts which form the article.

A further object of the invention is to provide an article of the character described, which consists of parts of simple construction, which can be quickly and easily assembled, with only a screw driver, and with a minimum number of fastening elements.

In the accompanying drawings forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same,

Fig. 1 is a perspective view of a work bench embodying the principal features of the invention;

Fig. 2 is a fragmentary cross-sectional view, taken on the line 2-2 of Fig. 1;

Fig. 3 is a fragmentary cross-sectional view, taken on the line 3-3 of Fig. 1;

Fig. 4 is a fragmentary cross-sectional view, taken on the line 4-4 of Fig. 1;

Fig. 5 is a fragmentary perspective view of an appliance table or cart, embodying a modification of the invention;

Fig. 6 is a fragmentary cross-sectional view, taken on the line 6-6 of Fig. 5;

Fig. 7 is a fragmentary cross-sectional view, taken on the line 7-7 of Fig. 5, and

Fig. 8 is a fragmentary cross-sectional view, taken on the line 8-8 of Fig. 5.

Referring to Figs. 1 to 4 inclusive of the drawings, there is disclosed a work bench comprising a top embodying front and rear members 1 and 2 and side members 3 and 4, each of these members formed from sheet or strip metal and having a vertical body portion 5 and a horizontally and outwardly extending flange 6 at its upper edge.

The work bench further comprises four legs 7 of angle cross-section for supporting the top, each of these legs being also formed from sheet or strip metal.

The work bench may, if desired, include a lower frame which consists of front and rear members 8 and 9 and side members 10 and 11, each of which is of channel-shaped cross-section, formed from sheet or strip metal, with the flanges 12 and 13 thereof extending horizontally inwardly.

The structure, as thus described, consists of twelve separate pieces, made of light gauge material, and if assembled, in a conventional manner, would lack rigidity, due to weaving or relative movement of the parts at the joints or connections between the parts.

In order to rigidify the entire structure and eliminate weaving, the front, rear and side members 1, 2, 3 and 4,

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are provided at their ends with parallel vertically-spaced ribs 14 and 15, which are made by embossing the metal, so that the ribs extend inwardly from the body portions 5 of the members. These ribs may extend the full length of the body portions 5, thereby reinforcing the members in their entirety, but need not extend for a distance greater than shown in the drawings.

The legs 7 are similarly provided at their upper ends with parallel vertically-spaced ribs 16 and 17, which are also made by embossing the metal, so that the ribs extend inwardly from the legs.

In assembling the legs 7 with the members 1, 2, 3 and 4, the legs are positioned so that the ribs 16 and 17 nest in the ribs 14 and 15 of the members 1, 2, 3 and 4, after which the parts are removably secured together by means of bolts 18, and nuts 19, lock washers 20 being interposed between the members 1, 2, 3 and the nuts 19.

The provision of the nested or interlocked ribs, as described, enables the parts to be assembled with a minimum number of bolts and nuts, and, at the same time, the entire structure is rigidified and freed from any possibility of weaving.

The lower frame members 8, 9, 10 and 11 are similarly provided with parallel vertically-spaced ribs 21 and 22 embossed in the webs of these members, and which are nested or interlocked with parallel vertically-spaced ribs 23 and 24 in the legs 7, these parts being removably secured together by means of bolts 25 and nuts 26, lock washers 27 being interposed between the members 8, 9, 10 and 11 and the nuts 26. The ribs 21 and 22, in this case, extend the full length of the frame members.

The provision of the interlocking ribs is also effective to facilitate assembly of the parts, since they act to properly locate the parts in relation to each other, and enable the fastening elements to be quickly and easily inserted in proper position.

It will be understood that the ribs may extend outwardly instead of inwardly, without change of function.

In order to complete the work bench, a wooden panel 28 may be secured to the flanges 6 of the top members, as by means of bolts 29, nuts 30 and lock washers.

A wooden shelf 32 may be supported on the flanges 12.

The ribs, which have been described, are of arcuate cross-section, but it will be understood that they may be of other cross-section, such as triangular, rectangular, etc.

It will also be understood that the construction, as described, is also adaptable for the erection of shelving. For this purpose, additional shelves, frame members and additional ribs in the legs, all embodying the principles described, may be utilized.

In Figs. 5, 6, 7 and 8, a wheeled appliance table or cart is shown, in which a modification of the invention is utilized.

The appliance table, in this case, comprises a top 33, shelves 34 and 35, and legs 36.

The top 33 is provided with an apron or skirt 37 having indentations 38, 39 and 40 at the corners thereof, which indentations nest with similar indentations 41, 42 and 43 respectively in the upper end of the legs 36. Each of the legs 36 is then connected to the apron 37 by means of a single bolt 44, and nut 45, a lock washer 46 being interposed between the leg 36 and nut 45.

The shelf 34 is provided with a flange 47, having indentations 48 and 49 at the corners thereof, which indentations nest with similar indentations 50 and 51 respectively, in the legs 36. Each of the legs is then connected to the flange 47 by means of a single bolt 52 and nut 53, a lock washer 54 being interposed between the flange 47 and the nut 53.

The shelf 35 is also provided with a flange 55, which

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is connected to the legs 36 in exactly the same manner that the flange 47 is connected to the legs, so that further description of the indentations and connections is believed to be unnecessary.

The provision of the nested or interlocked indentations, as described, enables the parts of the appliance table to be assembled with a minimum number of bolts and nuts, and, at the same time, the entire structure is rigidified and freed from any possibility of weaving, in a manner similar to that described in connection with the work bench of Figs. 1 to 4.

Moreover, the indentations, as in the case of the ribs in Figs. 1 to 4, are also effective to facilitate assembly of the parts, since they act to properly locate the parts in relation to each other, and enable the fastening elements to be quickly and easily inserted in proper position.

The arrangement and shape of the indentations may be varied.

It is thus seen that I have provided metal structures of the character described, made of light gauge sheet metal or the like, which are of extremely rigid construction, which are free from "weave" at the joints, and which consist of parts of simple construction, which can be quickly and easily assembled, with only a screw driver, and with a minimum number of fastening elements.

It is to be understood that the forms of my invention, herewith shown and described, are to be taken as preferred examples of the same, and that various changes may be made in the shape, size and arrangement of parts of the invention without departing from the spirit of the invention, or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. In a structure of the character described, a top having front, rear, and side members, said top having vertically-spaced indentations adjacent the corners thereof, and leg members supporting said top, said leg members having vertically-spaced indentations nested with said first-named indentations, and means interconnecting the leg members with said top and coacting with the nested indentations to prevent weaving of the parts in the area of said connection.

2. A structure, as defined in claim 1, in which said

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top members are sheet metal members having vertically-spaced ribs at the ends thereof, and said leg members have vertically-spaced ribs nested with the ribs of said top members.

3. A structure, as defined in claim 2, in which each leg member is connected to each top member by means of bolts extending through the leg members and top members at points intermediate the spaced ribs.

4. A structure, as defined in claim 3, in which each of the leg members is an angle member, and each leg of the angle member is connected to an end of the top member by means of a single bolt and nut.

5. A work bench comprising a panel, sheet metal top members arranged in the form of a rectangle, means for securing said top members to said panel, each top member having a pair of vertically-spaced ribs adjacent its ends, legs for supporting said top members, each leg comprising an angle member having vertically-spaced ribs adjacent its upper end and adapted for nesting with the ribs of the top members, and means for securing each leg of the angle member to an end of a top member.

6. A work bench, as defined in claim 5, including a sheet metal shelf member, having a pair of vertically-spaced ribs adjacent its ends, each leg having additional vertically-spaced ribs adapted for nesting with the ribs of the shelf member, and means for securing each leg of the angle member to an end of the shelf member.

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