Aug. 24, 1943. P. ROSENBERG 2,327,743

SECTIONAL TABLE

Filed March 5, 1942 2 Sheets-Sheet 1

Fig. 1.

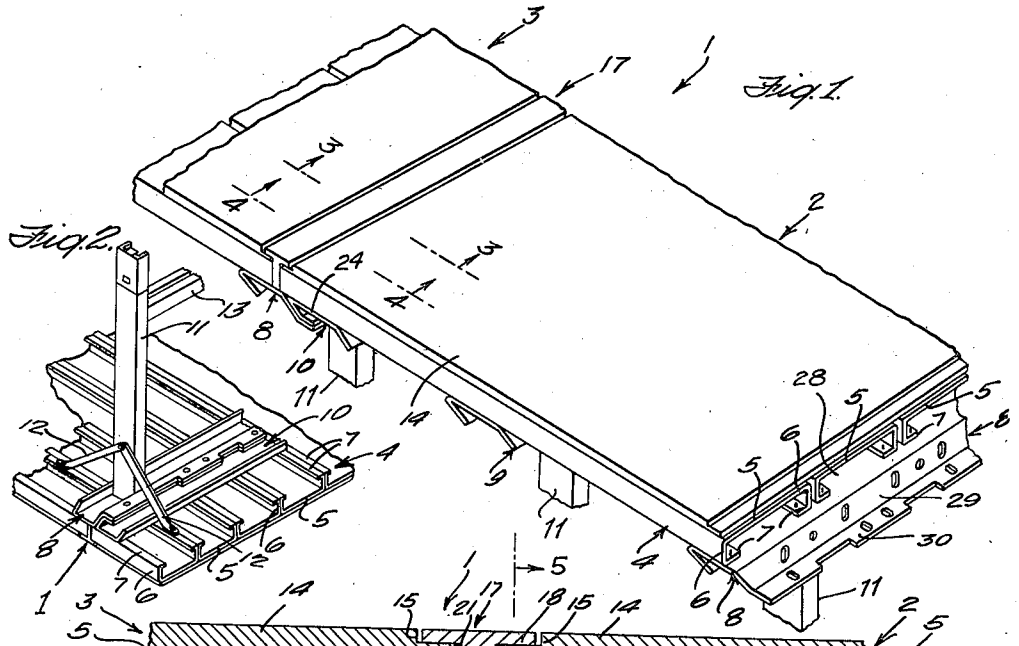
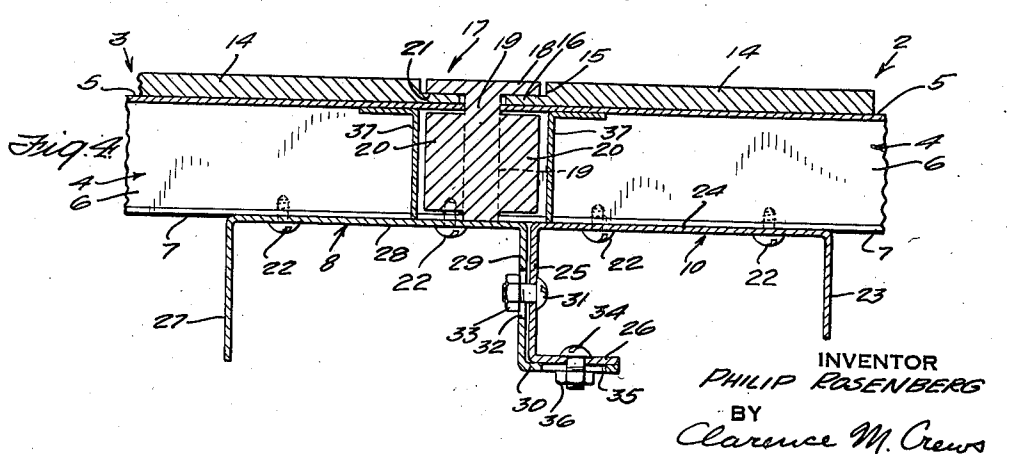


Fig. 2.

Fig. 3.

Fig. 4.



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Fig. 5.

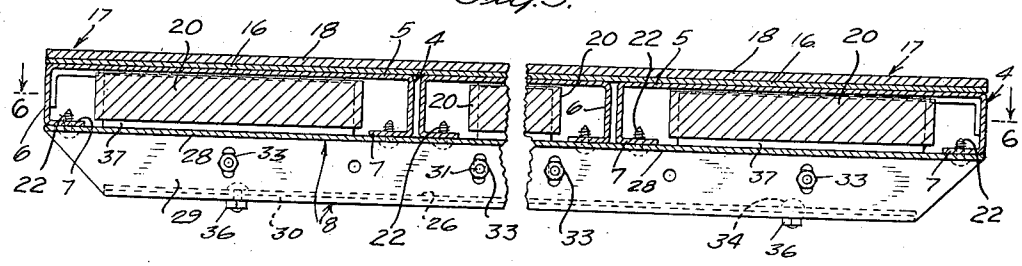
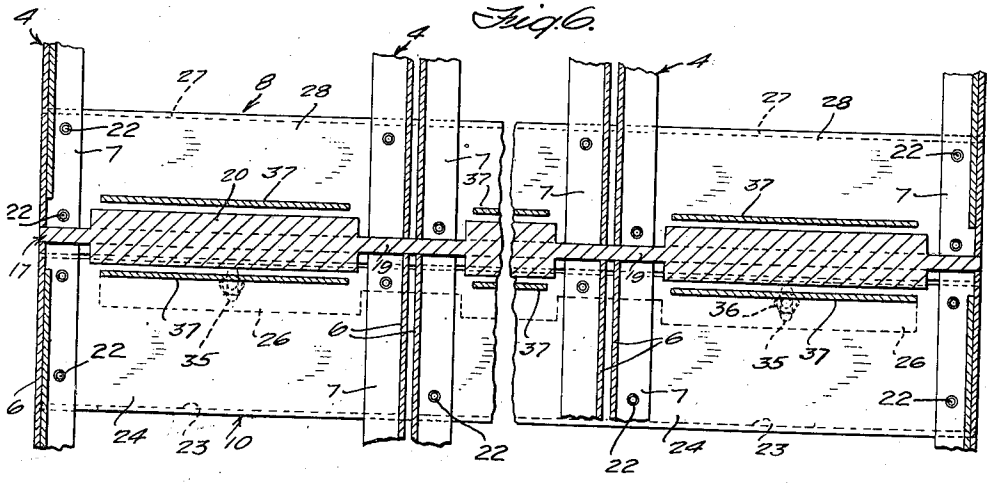


Fig. 6.



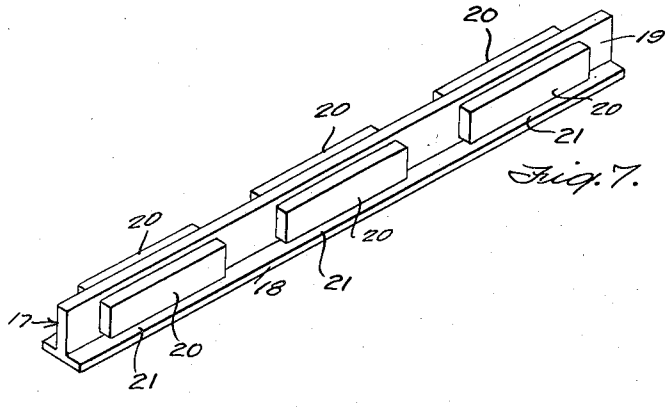


Fig. 7.

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Patented Aug. 24, 1943 2,327,743

UNITED STATES PATENT OFFICE

2,327,743

SECTIONAL TABLE

Philip Rosenberg, New York, N. Y.

Application March 5, 1942, Serial No. 433,453

3 Claims. (Cl. 311—4)

This invention relates to joint structures for sectional work tables, more particularly to means for holding the surfacing material of adjacent table sections smoothly in place, and for bridging the space between the working surfaces of the adjacent sections.

The invention is disclosed herein as embodied in a table structure of the kind disclosed in United States Patents #2,166,195 granted to Emanuel Mically and myself, and #2,166,196 granted to me, and is in the nature of an improvement upon the invention disclosed and claimed in the latter patent.

Tables of the kind referred to commonly include two or more sections, each comprising a metallic frame having a plane metallic top portion and a non-metallic sheet of surfacing material adhered or otherwise suitably secured to the table top.

Because of the difference in coefficients of expansion of the metallic and non-metallic portions of the table, and also because the material of the surface sheet may be more or less hygroscopic in character while the metallic parts are not, there is a tendency for the surface sheet to creep and pull loose from the metallic portion of the table top, particularly at the ends of the table sections, and hence to produce objectionable bulging or warping of the surface material at the joint between sections. It is a primary object of the present invention to provide an improved joint construction for obviating these drawbacks.

In Patent #2,166,196 disclosure is made of a T-shaped clamping bar, having side portions of its head set respectively in recesses or rabbets formed in the adjacent upper margins of the surface sheets of two joined table sections. Hold-down screws set in the lower body portion of the clamping bar are adapted to be passed downward through openings formed in a metallic element or elements of the metallic frame of one of the sections. Nuts threaded onto the downwardly projecting ends of the screws serve to draw the entire clamping bar downward and thereby to press the sides of the clamping bar head firmly down against the reduced end portions of the surface sheets. This construction has been found practical and highly useful, but it is subject to certain disadvantages which are eliminated by the improvements of the present invention.

In the prior construction it was necessary to set the hold-down screws into the relatively slender body portion of the clamping bar. This resulted in a weakening of the bar and in a limited amount of spoilage through splitting of the bar. The more serious disadvantage, however, lay in the fact that the bar was frequently required to be applied by persons not conscious of its limitations. If the nuts were overtightened, the head of the bar might be overstrained and caused to split or warp at one side or the other. Again, the overtightening might overstrain the body of the bar and cause it to split and release one or more of the screws. More commonly, however, the bar would seemingly be satisfactorily secured in place with proper adjustment, only to have it develop an overstrain under changing conditions of temperature and humidity. Then too, the bar itself was subject to expansion and contraction with changes of humidity, and since the clamping force of the nuts was transmitted through the entire height of the bar, the clamping action of the bar was apt to vary materially from time to time.

It is a primary object of the present invention to provide an improved form of joint bar having channels in its opposite sides at a short distance below the upper surface, each channel of just sufficient width to receive and hold together the reduced end portion of the surface sheet and the immediately adjacent sheet metal portion of the table top. This construction obviates the need for hold-down screws, provides opposed holding members which are under no substantial initial strain, and locates the opposed holding surfaces so near to one another that changes of humidity and temperature have no material tendency to impose strain upon the bar.

Other objects and advantages will hereinafter appear.

In the drawings forming part of this specification

Fig. 1 is a fragmentary perspective view showing all of one section top and part of a second section top of a multiple section table embodying the invention;

Fig. 2 is an inverted fragmentary perspective view of a portion of the table;

Fig. 3 is a fragmentary sectional view taken upon the line 3—3 of Fig. 1 looking in the direction of the arrows;

Fig. 4 is a view similar to Fig. 3 taken upon the line 4—4 of Fig. 1 looking in the direction of the arrows;

Fig. 5 is a vertical, transverse, sectional view broken away intermediate its ends, the section being taken upon the line 5—5 of Fig. 3 looking in the direction of the arrows;

Fig. 6 is a fragmentary, horizontal, sectional

view taken upon the line 6—6 of Figs. 3 and 5, looking in the direction of the arrows; and

Fig. 7 is an inverted, perspective view of an improved joint bar which is utilized in the invention and which in itself constitutes a salient feature of novelty of the invention.

The illustrative table 1 comprises two or more sections of which two sections, designated 2 and 3, respectively, are illustrated. The several sections are essentially duplicates of one another, and a description of the parts of one section is, therefore, equally applicable to the parts of another. Each table section top is desirably made up of a series of longitudinal sheet metal channel bars 4, each comprising a plain central body portion 5, downturned vertical side flanges 6, and inturned horizontal bottom flanges 7. The members 4 are connected to one another by transverse tie members 8, 9 and 10 in the form of sheet metal channel members. The tie members 9 are located intermediate the ends of a section and may be plain channel members, while the tie members 8 and 10 are located at opposite ends of a section, are of special construction, and will be described more fully hereinafter.

The table legs 11 may also be in the form of sheet metal channel bars, each having the upper end thereof secured in one of the channel bars 8, 9, 10 and being held in place by inclined bracing bars 12 which are bolted or otherwise suitably secured to the leg and to horizontal bottom flanges 7 of associated channel bars 5. The legs 11, connected in common to a single one of the channel bars 8, 9, 10, may be cross-connected through tie bars 13.

A surface sheet 14 of non-metallic material, desirably of the composition known commercially as "Masonite" is adhered or otherwise suitably secured to the top plane surface of the table top formed by the body members 5 of the channel bars 4. Each sheet 14 at the end of its table section which is to be joined to another table section is formed with a shouldered upper recess 15 to provide a reduced lower end portion 16. The end portion 16 terminates a little short of the channel bars 4, so that if the surface sheet becomes loosened from the table top, the ends of the surface sheet can creep toward the end of the table section without bulging.

A joint bar 17 is interposed between the abutting ends of the table sections 2 and 3, the bar being desirably made of wood or some non-metallic composition which will provide a satisfactory working surface. The bar 17 includes a continuous smooth head portion 18 and a continuous central body portion 19. The head portion 18 projects to either side of the central body portion 19 to lie in the recesses 15 of the surface sheets 14. The head portion 18 is of substantially the same depth as the recesses 15, and the smooth upper surface of the head 18 stands substantially flush with the upper surfaces of the surface sheets 14.

The side faces of the head are spaced slightly from the adjacent vertical walls of the recesses 15, so as to admit of relative creeping of the surface sheets without buckling.

Beneath the plain body members 5 of the channel bars 4 which form the main body of the table top, the central body portion 19 of the joint bar 17 has projecting from each of its sides a series of spaced side body parts 20. The side body parts 20 are spaced from one another to provide clearance for the side vertical flanges 6 and the bottom horizontal flanges 7 of the channel members 4, so that these flanges, as well as the body parts 5 of the channel members 4 may abut against the central body part 19 of the joint bar 17.

Each side body part 20 is separated from the opposed side portion of the head 18 by a slot or channel 21 of just sufficient width to receive and substantially fit the body part 5 of a channel member 4, together with the reduced end portion 16 of the associated surface sheet 14. The head part 18 and the side body parts 20 do not exert any substantial clamping or frictional force upon the members 5 and 16, but they do hold these members against separation from one another, while permitting relative creep to occur with substantial freedom.

As illustrated, each table section has at the right-hand end thereof one of the channel members 8 and at the left-hand end one of the channel members 10. These channel members are secured to horizontal flange members 7 in any suitable manner as by screws 22.

The channel member 10 comprises a vertical flange 23, a horizontal body portion 24, a vertical flange 25, and an inturned horizontal flange 26 at the lower extremity of the flange 25. The channel 13 comprises a left-hand vertical flange 27, a central horizontal body portion 28, a right-hand vertical flange 29, and an out-turned horizontal flange 30. The channel member 8 extends across the space intervening between the two table sections which is bridged by the central body portion 19 of the joint bar 17.

The joint bar 17 rests upon the portion 28 of the channel member 8, and serves as a spacer to support and reinforce the table top members 5 together with the surface sheets 14 at the extremities thereof.

When the joint bar and the table sections have been fitted together substantially as illustrated in Figs. 1, 3 and 4, bolts 31 are passed through openings of the flange 25 and through slots 32 of the flange 29, and the flanges 25 and 29 are drawn and clamped together by threading nuts 33 onto the bolts 31. Bolts 34 are also passed downwardly through openings of the flange 26 and through slots 35 of the flange 30. Nuts 36 threaded on the bolts 34 clamp the flanges 26 and 30 together against relative shifting.

Reinforcing angle brackets 37 are desirably secured, as by welding, to the lower sides of the central body portions 5 of the channel members 4, these brackets being formed with downwardly extending legs which engage the upper faces of the channel members 8 and 10 and serve as spacers and supports alongside the joint block 17.

With the construction described, table sections may be conveniently and efficiently united and separated as conditions may require. The joint block is clamped between the adjacent ends of the table sections, and it serves to hold the ends of the section tops and of the surface sheets in smooth contact with one another at all times. The joint bar is not subjected to any substantial strain either during manufacture, assembly or use. It performs its intended function in a very efficient and dependable manner at all times.

I have described what I believe to be the best embodiment of my invention. I do not wish, however, to be confined to the embodiment shown, but what I desire to cover by Letters Patent is set forth in the appended claims.

I claim:

1. A joint bar, adapted for use between the sections of a sectional table of which each sec-

tion has a sheet metal top and a surface sheet of non-metallic material shouldered to provide a portion of reduced thickness at the end, said joint bar including head portions adapted to overlie the reduced end portions of the surface sheets, and body portions adapted to project beneath the sheet metal tops of the table sections, said head and body portions being separated by slots of fixed width, each of appropriate width to embrace and fit the sheet metal top together with the reduced end of the surface sheet of a table section.

2. A joint bar, adapted for use between the sections of a sectional table of which each section has a plane top made up of sheet metal members formed with downwardly extending reinforcing flanges or webs, and a surface sheet of non-metallic material shouldered to provide a portion of reduced thickness at the end, said joint bar including continuous head portions adapted to overlie the reduced end portions of the surface sheets, a continuous central body portion, and intermittent series of side body portions adapted to project beneath the plane sheet metal tops of the table sections, said head and body portions being separated by slots of fixed width, each of appropriate width to receive and substantially fit the plane portion of the sheet metal top together with the reduced end of the surface sheet of a table section, and said side body portions being spaced from one another lengthwise of the bar to provide clearance for the table top flanges.

3. A joint bar of non-metallic material for table joints comprising a continuous central body portion, a continuous head portion projecting outward at both sides from the central body portion, and a series of side body portions at spaced intervals along opposite sides of the central body portion, said side body portions being separated from the continuous head portion by channels of substantially uniform width.

PHILIP ROSENBERG.