

May 3, 1938.

H. T. HALLOWELL

2,116,433

POWER SEWING MACHINE TABLE

Filed Feb. 2, 1934

5 Sheets-Sheet 1

Fig. 1.

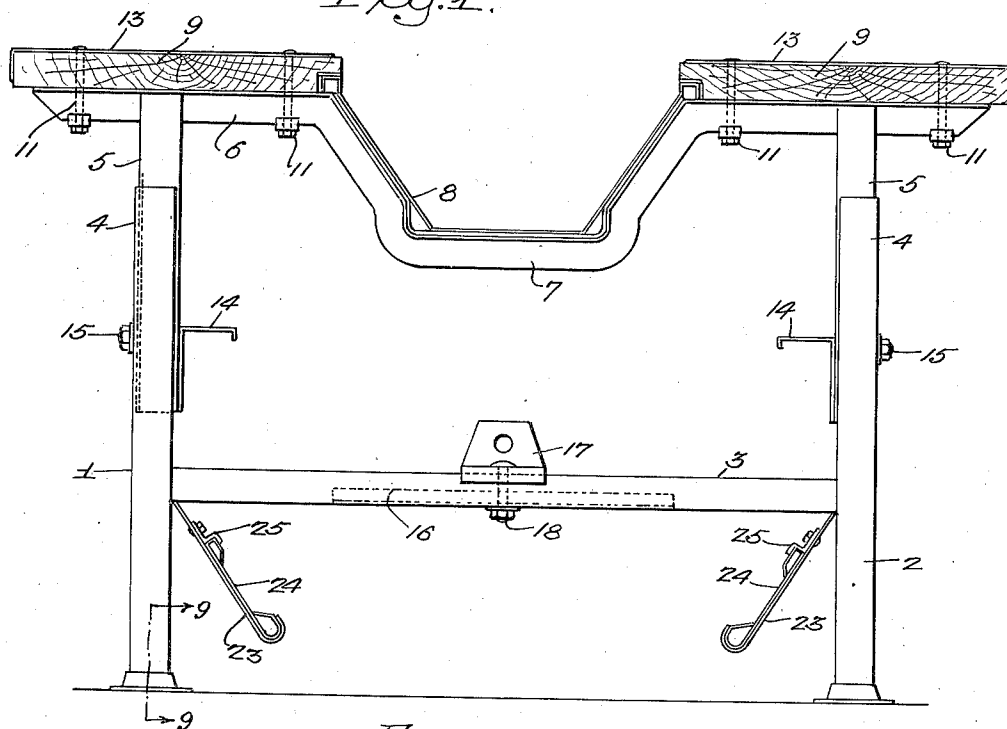


Fig. 10.

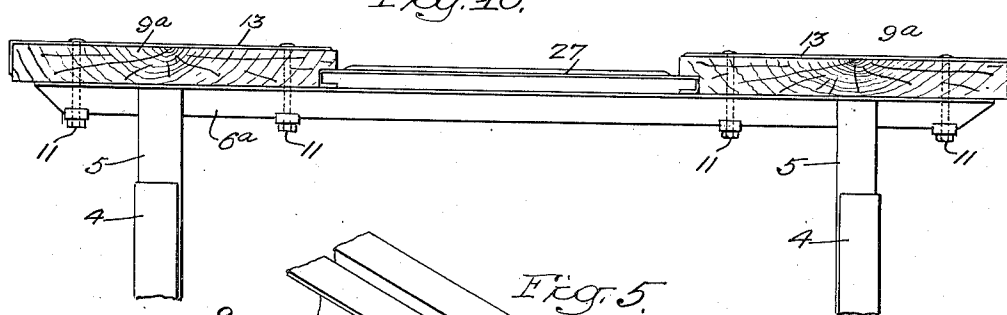


Fig. 5.

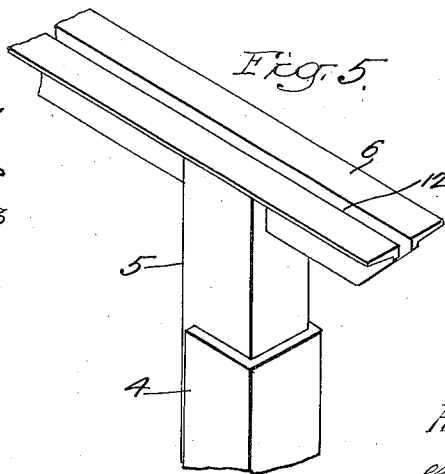
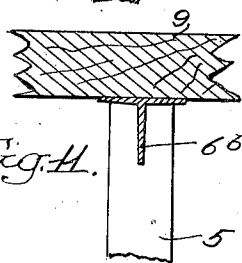


Fig. 4.



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Fig. 2.

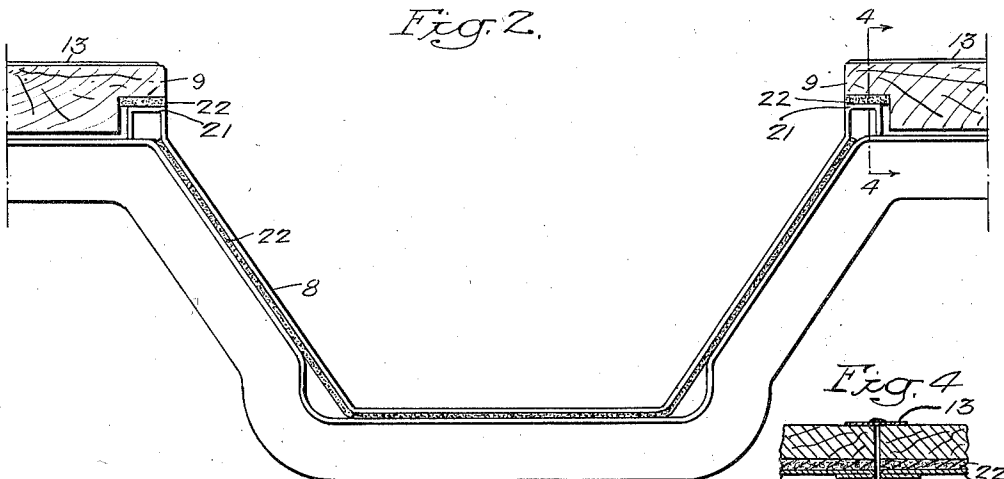


Fig. 4.

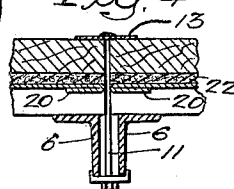


Fig. 3.

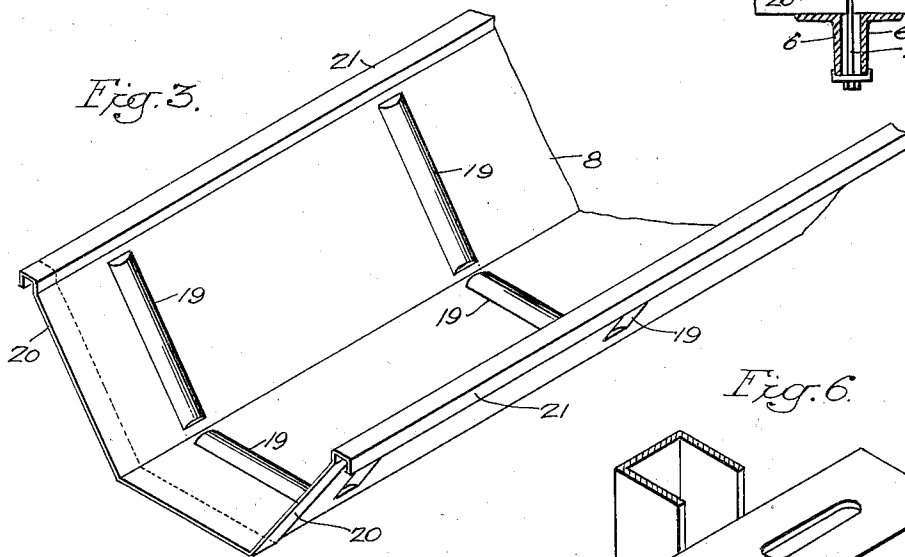


Fig. 6.

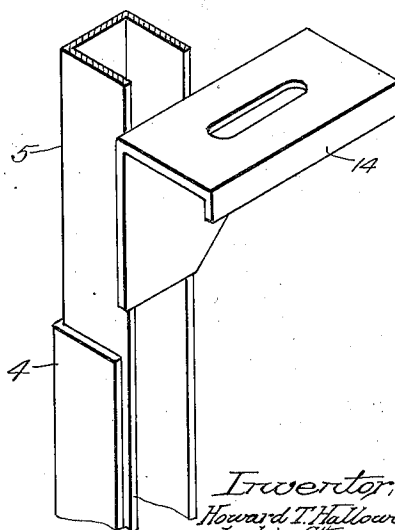
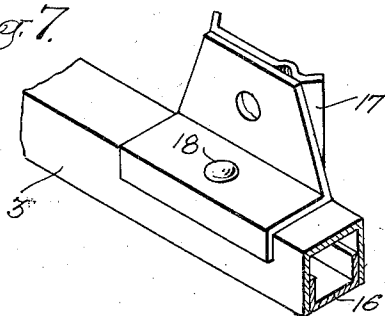


Fig. 7.



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Fig. 9.

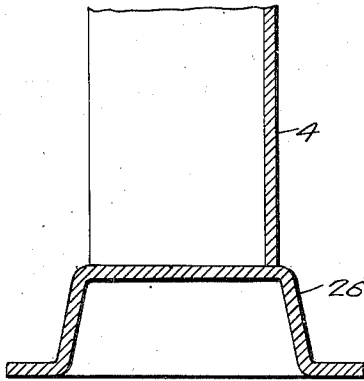


Fig. 8.

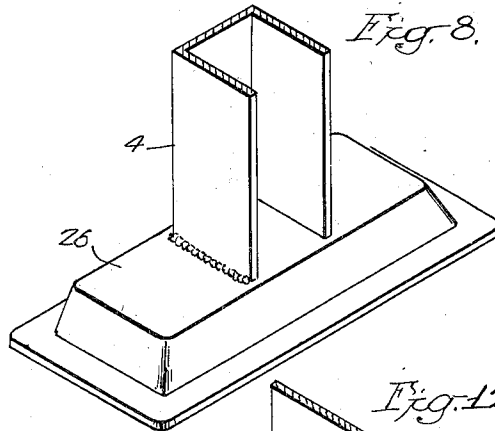


Fig. 13.

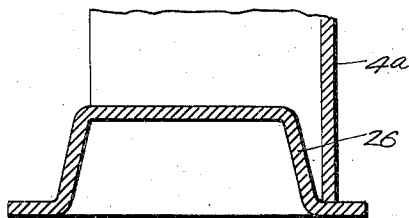


Fig. 12.

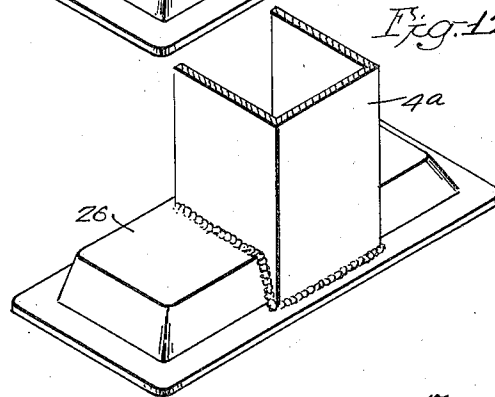


Fig. 14.

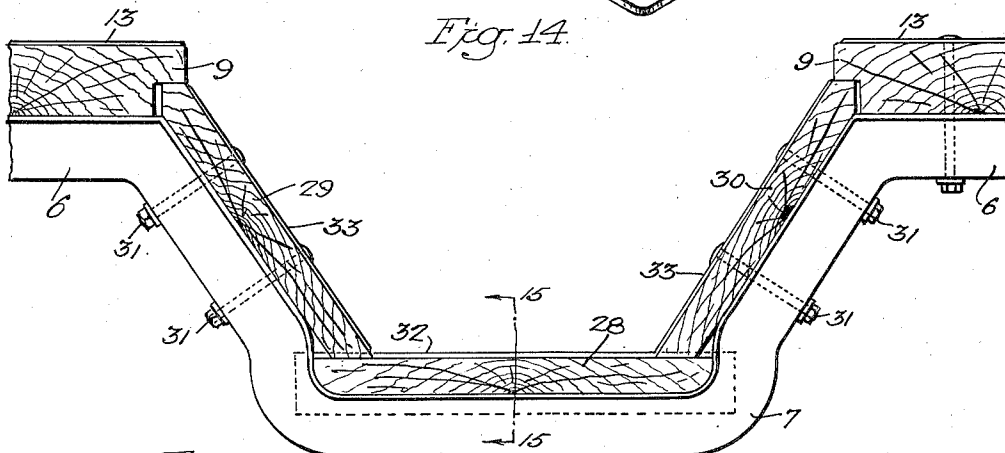
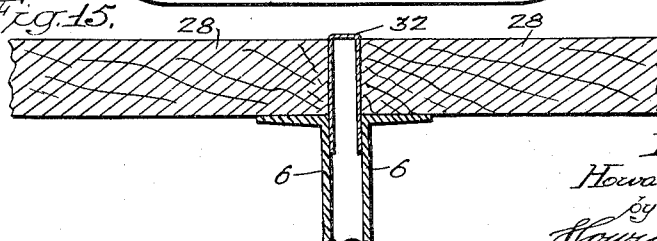


Fig. 15.



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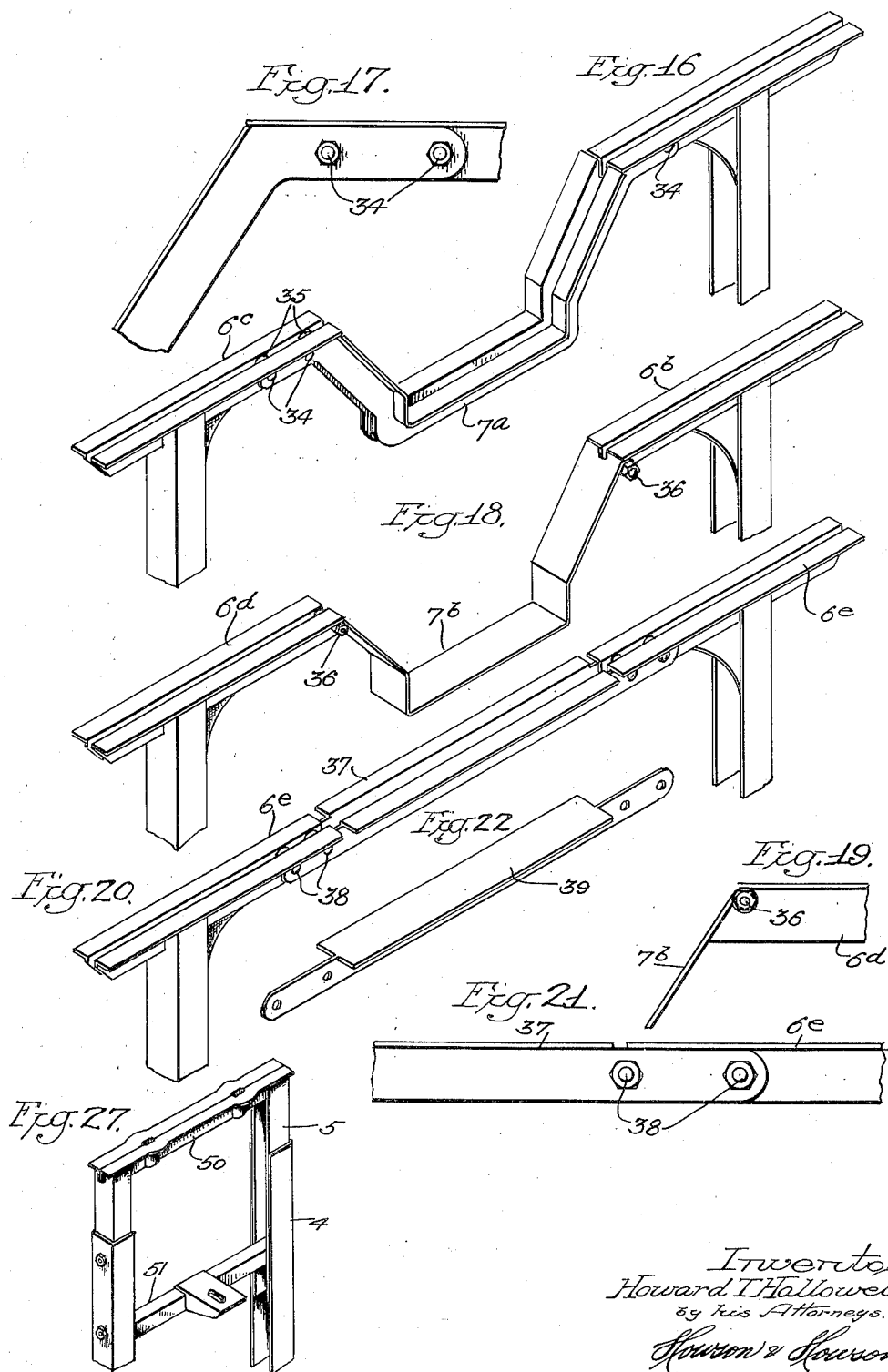
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POWER SEWING MACHINE TABLE

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UNITED STATES PATENT OFFICE

2,116,433

POWER SEWING MACHINE TABLE

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Application February 2, 1934, Serial No. 709,504

5 Claims. (Cl. 311—15)

This invention relates to improvements in power sewing machine tables. These tables, which are used in various lengths, comprise essentially a series of aligned relatively spaced leg structures which support the table top, and the principal object of the present invention is to provide a simplified and improved leg structure for tables of this character.

In the attached drawings:

Figure 1 is an end elevation of a table made in accordance with my invention;

Fig. 2 is an enlarged fragmentary elevation of the central trough structure of the table;

Fig. 3 is a fragmentary view in perspective of a preferred form of metallic trough element;

Fig. 4 is a section on the line 4—4, Fig. 2, showing the juncture of adjacent trough sections;

Fig. 5 is a fragmentary view in perspective of the upper end of one of the uprights of a leg structure;

Figs. 6 and 7 are views in perspective showing other portions of one of the leg structures;

Fig. 8 is a view in perspective of one of the foot elements of the leg structure;

Fig. 9 is a fragmentary sectional view on the line 9—9, Fig. 1;

Fig. 10 is a fragmentary end elevational view illustrating a modification within the scope of the invention;

Fig. 11 is a fragmentary sectional view illustrating a further modification;

Figs. 12 and 13 are views corresponding to those of Figs. 8 and 9 illustrating a modified form of footing;

Fig. 14 is an enlarged sectional view illustrating a still further modification within the scope of the invention;

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

Fig. 16 is a view in perspective of the upper end of a leg structure illustrating a further modification;

Fig. 17 is a fragmentary side view illustrating a detail of the structure shown in Fig. 16;

Fig. 18 is a view in perspective of the upper end of a leg structure constituting a still further embodiment of my invention;

Fig. 19 is a fragmentary side view illustrating a detail of the structure shown in Fig. 18;

Fig. 20 is a view in perspective of the upper end of a leg structure showing a still further modification;

Fig. 21 is a fragmentary side view illustrating a detail of the leg structure shown in Fig. 20;

Fig. 22 is a view in perspective illustrating a

further modification in the type of leg structure illustrated in Fig. 20;

Fig. 23 is a view in perspective of a leg structure constituting still another embodiment of my invention;

Fig. 24 is a view in perspective of the upper end of a leg structure constituting a modification within the scope of the invention of the structure illustrated in Fig. 23;

Fig. 25 is a fragmentary section on the line 25—25, Fig. 24;

Fig. 26 is a view in perspective of one of the elements of the leg structure illustrated in Fig. 24, and

Fig. 27 is a fragmentary view in perspective illustrating a still further embodiment of my invention.

With reference to Fig. 1 of the drawings, a leg structure made in accordance with my invention comprises uprights 1 and 2 which are connected at their lower ends by a transverse bar 3. Each of the uprights 1 and 2 comprises telescoping sections, 4 and 5 respectively, the sections 5 at the top being embraced and sliding in the base sections 4. Supported in the tops of the upper sections 5 of the uprights 1 and 2 is a transverse member 6 having a central depressed portion 7 in which is mounted a trough element 8, the trough termination at the top and at each side in a flat surface formed in the present instance by panels 9, 9, which are secured by means of bolts 11 to the transverse member 6. It will be understood that the leg structure described above constitutes one of a number arranged in spaced aligned relation to afford a table of the desired length. In practice, the sewing machines are supported upon the flat surfaces afforded by the panels 9, and the fabrics, passed through the machines, accumulate in the trough 8.

As illustrated in Figs. 4, 5 and 6, the telescoping members 4 and 5 of the uprights 1 and 2 are formed of channels, while the transverse member 6 comprises two angle elements arranged back to back and in spaced relation with their depending flanges secured by welding in slots formed in the upper ends of the elements 5. The bolts 11 which secure the panels 9 in place extend upwardly through the slot 12 between the angle elements of the transverse member 6, and either pass through the panels 9, or at the intermediate leg structures between the ends of adjoining panel elements, the heads of the bolts in the latter case being held by clamping plates 13 overlying the juncture between the adjoining panels.

With reference to Figs. 1 and 6, it will be noted that the free edges of the channel constituting the elements 5 project slightly beyond the corresponding edges of the elements 4, and to these projecting edges of the elements 5 are secured brackets 14 which in assembly support elements of the sewing machine operating mechanism. The elements 5 as previously set forth are slidably adjusted in the base elements 4, permitting regulation of the height of the top of the table, and the elements 4 and 5 are clamped in the adjusted positions by bolts 15 extending through registering apertures in the two elements. The transverse bar 3 is preferably of inverted channel form and is provided intermediate its ends with a reinforcing channel 16 which is welded in position between the depending flanges of the channel 3. This reinforcing channel also provides a means for readily clamping in position upon the cross bar 3 a bracket element 17 to which in assembly is secured support bearings for a central longitudinal shaft through which driving connection is established between a suitable source of power and the sewing machines mounted on the table as previously described. In the present instance, I have shown a bolt 18 extending through the bracket 17 and downwardly through the reinforcing channel 16.

The trough element 8, as illustrated in Fig. 3, is preferably made of pressed metal, being provided at intervals longitudinally with pressed-out ribs 19 to afford greater rigidity. At the ends of the trough, the metal is turned back as indicated at 20, see also Fig. 4, for the purpose of providing rounded and relatively smooth end edges, and at the upper longitudinal edges of the trough the metal is formed to provide in effect inverted channels 21 which in assembly and as best illustrated in Fig. 2 are clamped between the upper flanges of the transverse member 6 and the inner undercut edges of the panels 9. By this means, the trough elements may be held in place upon the leg structures by the clamping action of the members 9 through the bolts 11. Preferably and as also illustrated in Fig. 2, felt or other pads 22 are inserted between the metallic trough and the transverse member 6 and between the upper surfaces of the channels 21 and the overlying portions of the panels 9. In order to protect the operators from possible contact with the moving parts of the sewing machine operating mechanism, I preferably provide the leg structures at opposite sides with depending brackets 23 which support sheet metal guard plates 24 extending the full length of the table. In the present instance, the brackets 23 are formed at their lower ends with sockets for reception of the correspondingly shaped lower ends of the plates 24, and the plates 24 are held at their upper ends by clamps 25 secured to the brackets 23 and engage the upper edges of the plates.

In Figs. 8 and 9, I have illustrated a preferred form of footing for the uprights 1 and 2 of the leg structures. These footings comprise flanged members 26 having elevated central portions having flat top surfaces which are abutted by the lower ends of the channels 4, and said channels are secured by welding to the elements 26 as illustrated.

In Figs. 10 to 13, inclusive, I have illustrated certain modifications of the aforescribed structure. Fig. 10 shows a table leg construction for use where the central deep trough is not desired. In this instance, the transverse members 6a of

the leg structure are made straight and lack the depressed central portion 7 of the form shown in Fig. 1. To replace the trough 8, a flat pressed metal sheet 27 is inserted between the boards 9a, 9a, these sheets resting upon the transverse member 6a as illustrated and being clamped in position through the medium of the boards 9a as previously set forth. In Fig. 11, I have illustrated a simple bar 6b of T-section replacing the fabricated transverse members 6 and 6a of the embodiments shown in Figs. 1 and 10. In Figs. 12 and 13, the leg elements 4a corresponding to the elements 4 of the previously described embodiments are formed with the central web extending below the edges which engage the upper surfaces of the foot elements 26 so that the leg element embraces one side of the elevated portion of the foot element as illustrated, the lower edge of the extended portion of the leg being welded to the transverse flange at the bottom of the foot element.

In Figs. 14 and 15, I have illustrated the leg structure described above in its adaptation to the use of wood in the formation of the central trough. As illustrated, a wooden panel 28 rests in the bottom of the depressed portion 7 of the transverse member 6, this panel forming the bottom of the trough. The sides of the trough are formed by panels 29 and 30 which are secured by bolts 31 against the inclined sides of the depressed portion 7, the lower ends of these side panels bearing against the upper face of the floor panel 28 and clamping this panel in position. The upper ends of the panels underlie the undercut portions of the panels 9 which correspond to the elements designated by the same reference numeral in the previously described embodiment. In this case, I prefer to employ in the intermediate leg structures a spacing element 32 in the form of an inverted channel which is welded in position between the angle elements of the transverse member 6, this spacer element being abutted on opposite sides by the ends of adjoining panels 28. Clamping plates 33 corresponding to the plates 13 of the embodiment shown in Fig. 1 are employed to cover the junctures between the adjoining side panels 29 and 30, the heads of the bolts 31 being secured in these clamping plates.

It will be noted that in the aforescribed embodiments the transverse members 6 are made of integral angle members which are bent at their mid sections to form the depressed portion 7 which receives the trough sections 8. In Fig. 16, I have shown a structure in which these transverse members 6c are fabricated, the central depressed section 7a in this instance being separate from the upper side portions and being secured thereto by means of bolts 34. Where these bolts pass through the angle elements of the transverse member, I preferably employ spacer elements or sleeves 35.

In the embodiment shown in Fig. 18, the central depressed portion 7b of the transverse member is made of simple strap material and is secured to the upper end elements 6d of the transverse member by means of bolts 36 which pass through the elements 6d and through eyelets formed at the upper edges of the strap member 7b.

In Figs. 20 and 21, the depressed central portion of the previously described embodiment is replaced by a straight section 37 formed of two angle sections arranged back-to-back and secured to the end section 6e of the transverse member by means of bolts 38. This member 37

may be replaced, if found desirable, by a member 39 of T-section, the depending web of which is extended at each side as shown in Fig. 22 for insertion between the spaced angles of the end members 6e to which it may be secured in obvious manner by means of bolts corresponding to the bolts 38 of the previously described embodiment.

In the embodiment of my invention illustrated in Figs. 23 to 26, inclusive, the transverse bars 3a corresponding to the member 3 of the embodiment shown in Fig. 1, is secured to the lower ends of the upper leg elements 5 instead of to the lower members 4, and the upper transverse member 40 is composed of two sections, the inner ends of which are turned down and have their lower ends united by welding or in other suitable manner to the transverse bar 3a, the said bar thereby being utilized as the base member of the depressed intermediate section of the upper transverse member 40 which receives the trough element designated by the reference numeral 41. This trough element in the present instance is shown formed in two longitudinal sections 42 and 43 having depending flanges 44 at their meeting edges which are united by bolts 45. In this type of structure, the depending inner ends of the upper transverse members 40 may be eliminated if desired, as shown in Fig. 24, the sides of the trough element 41 being secured by bolts 46 to angle elements 47 secured to the inner ends of the transverse elements 40. In this instance also the bottom of the trough 41 is secured directly by means of bolts 48 to the transverse bar 3a. This type of construction is desirable by reason of the fact that the operating mechanism for the sewing machines may be mounted entirely upon the upper movable portion of the leg structure so that adjustment of the leg structures to obtain a desired height of table does not affect the relation between the various elements of the operating mechanism, as would be the case for example in the embodiment shown in Fig. 1, where the main operating shaft is suspended from the cross bars 3, which in that instance are secured to the base elements 4 of the telescoping leg structures. This form of leg is also desirable by reason of the relative rigidity of the upper structure of the table including the trough formation. It will be noted that in this instance the upper transverse elements 40 are also of modified form, being formed by two angle pieces arranged back-to-back and in contiguous relation. Openings 49 for passage of the panel-retaining bolts 11 in this instance are provided by pressing out the angles laterally as illustrated.

In Fig. 27 I have illustrated a leg construction for flat top tables which corresponds substantially to that disclosed in Figs. 23 and 24, the upper transverse member 50 in this instance being straight and the lower cross bar 51 being secured after the manner of the cross bar 3a to the upper movable elements 5 of the uprights.

There may be further modifications without departure from the invention.

I claim:

1. In a table of the character set forth, a leg structure comprising a pair of uprights, an upper transverse member supported on said uprights and having a depressed mid section, table-top elements supported on said member at each side of said mid section and having undercut inner edges, a metallic trough element mounted in said depressed mid section and having its upper turned-over edges confined in the undercut recesses of said table-top elements, and means for securing the latter elements to said transverse member.

2. In a table of the character set forth, a leg structure comprising a pair of uprights each comprising upper and lower telescoping channel elements, means for maintaining said elements in adjusted position, upper and lower transverse members uniting said uprights, said lower transverse member consisting of an inverted channel, an upright channel of lesser length than the lower transverse member and secured between the depending flanges of the latter, a bracket element supported on said lower transverse member, and a bolt extending through said bracket and said member and secured in said upright channel element.

3. In a table of the character set forth, a leg structure comprising a pair of uprights having aligned slots at their upper ends, an upper transverse member comprising a pair of angle elements having their depending legs seated in the slots of said uprights and welded to the latter, said angle elements being secured to said uprights with said legs in spaced relation, table-top elements supported on said transverse member, and bolts extending through the space between the depending legs of said angle elements and securing said table-top elements to the transverse member.

4. In a table of the character set forth, a leg structure comprising a pair of uprights each comprising upper and lower telescoping channel sections, the flanges of said upper channel sections extending beyond the free edges of the corresponding flanges of the related lower sections, brackets secured to the free edges of the flanges of said upper leg sections and adjustable therewith with respect to said lower leg sections, an upper transverse member connecting the tops of said upper leg sections, and table-top elements secured to said transverse member.

5. In a table of the character set forth, a leg structure comprising a pair of uprights, an upper transverse member supported on said uprights and having a depressed section, a table-top element supported on said member at one side of said depressed section, an integral trough element mounted in said depressed section with an upper edge thereof underlying the inner edge portion of said table-top element, and bolts securing said table-top element to the transverse member and through the latter clamping said trough element in position.

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