

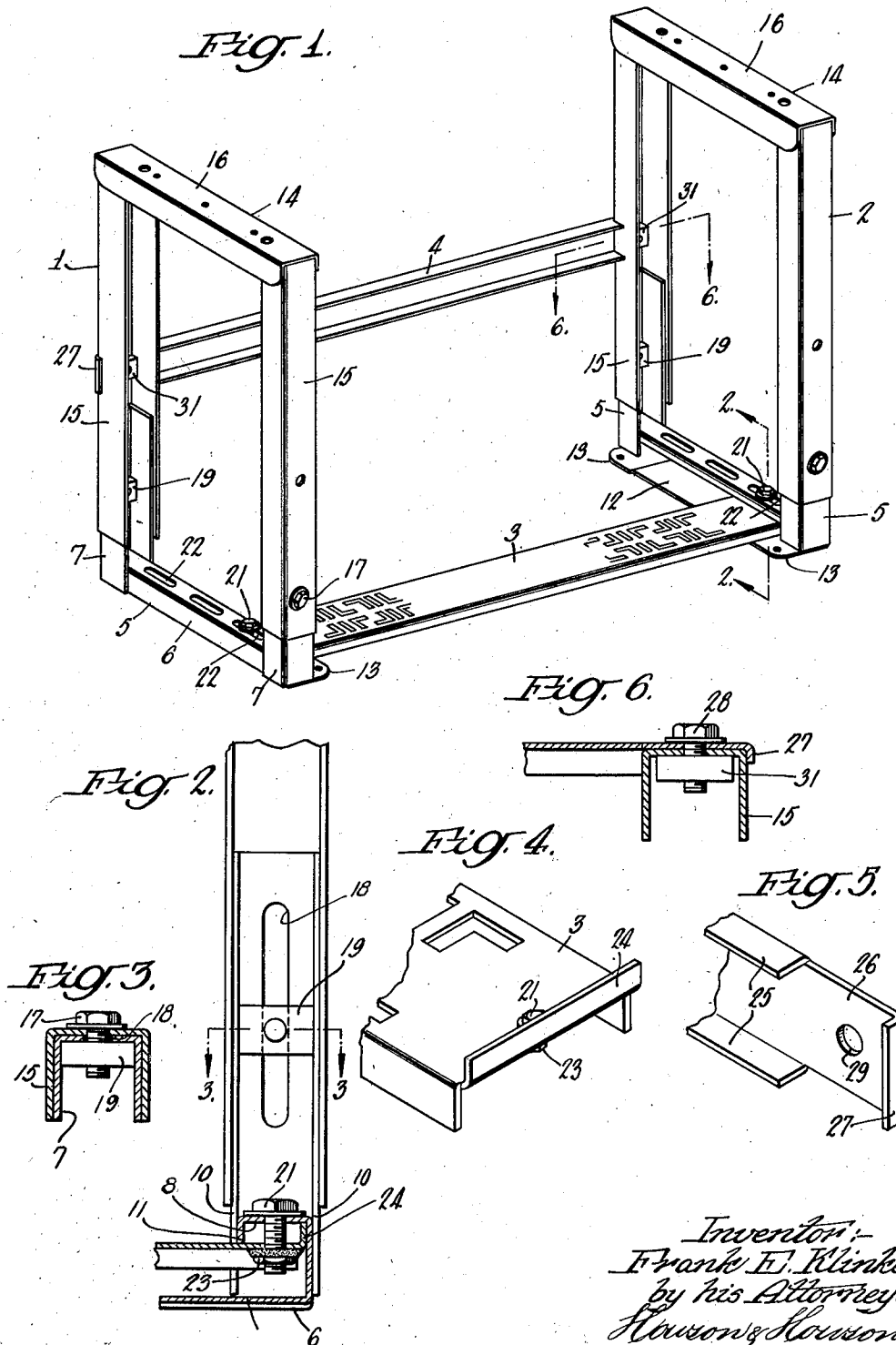
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STAND FOR WORK TABLES

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STAND FOR WORK TABLES

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This invention relates to leg structures or stands for work tables, and more particularly for sewing machine tables.

An object of the invention is to provide a leg structure or stand of simple, rugged and economical construction which shall incorporate a novel and improved device for adjusting the effective height of the table.

Another object is to provide a stand of the stated character composed essentially of pressed metal and comprising a novel and improved base structure as hereinafter more fully described.

The invention further resides in certain novel and advantageous structural details hereinafter described and illustrated in the attached drawing, in which:

Figure 1 is a view in perspective of a leg structure or stand made in accordance with my invention;

Fig. 2 is a fragmentary section on the line 2-2, Fig. 1;

Fig. 3 is a section on the line 3-3, Fig. 2;

Figs. 4 and 5 are fragmentary views in perspective showing details of construction, and

Fig. 6 is a section on the line 6-6, Fig. 1.

With reference to the drawing, the leg structure or stand therein illustrated comprises two upright sections 1 and 2 which are rigidly connected in the present instance by a treadle bar 3 and a cross brace 4, the latter being located at the back of the stand. Each of the upright sections 1 and 2 comprises a base member 5 consisting of a transverse element 6, which as hereinafter set forth combines the function both of a brace and a footrest, and two upright channels 7 attached respectively to the opposite ends of the element 6 and constituting leg elements. The element 6, as best shown in Figs. 1 and 2, comprises a base flange 7a forming a bottom wall, a relatively spaced parallel upper flange 8 constituting a top wall, and a connecting web 9 which extends between the proximate longitudinal side edges of the flanges 7a and 8. The opposite edge of the top flange 8 terminates in a depending flange 11 which parallels but is of lesser depth than the web 9. The flange 7a is of greater width than the flange 8, and the mid section of the flange 7a is offset upwardly, as indicated at 12 in Fig. 1, so as to limit the contact of the flange with the floor to the two relatively restricted end areas 13, 13. The lower ends of the upright channels 7 embrace the extremities of the upper reinforcing portion of the element 6 comprising the top flange 8, the web 9, and the depending flange 11, said extremities fitting

neatly into the channels with the web 9 and flange 11 bearing against the side flanges 10, 10 of the latter, and being secured to the said uprights preferably by welding.

Each of the upright sections 1 and 2 comprises also an upper relatively adjustable member 14 which consists of two upright channels 15, 15 and a cross brace 16 in the form of an inverted channel, the upper extremities of the uprights 15, 15 fitting neatly within the channel recess of the cross brace 16 and being rigidly united with the latter preferably by welding. The channeled leg elements 15 telescopically embrace the elements 7, and the sliding fit thus established permits adjustment of the upper member 14 with respect to the base member 5 to vary the effective height of the upright section as a whole. The two members are held in adjusted position by means of bolts 17 which extend through apertures in the transverse webs of the channels 15 and through longitudinal slots 18 formed in the channels 7, clamping nuts 19 being applied to the inner ends of the said bolts. As shown in Figs. 2 and 3, the nuts 19 are rectangular in form and are dimensioned so as to fit more or less neatly between the side flanges of the channels 7 which thereby prevent the nut from turning. These nuts provide a relatively wide area of clamping contact and permit the respective pairs of channels 15 and 7 to be clamped solidly together solely by manipulation of the head ends of the bolts.

The treadle bar 3 is of inverted channel form and is secured at its ends to the transverse elements 6 of the two upright sections by means of bolts 21. These bolts extend downwardly through longitudinal slots 22 in the upper flange 8 of the respective elements 6, through apertures in the top web of the inverted channel 3, and are threaded into nuts 23 which, in the present instance, are welded to the underside of the treadle bar, see Fig. 2. The treadle bar 3 has at each end an upturned flange 24 which corresponds in height to the depth of the depending flange 11 of the element 6. In assembly, the outer end face of the flange 24 seats against the inner surface of the web 9 of the element 6, and the upper edge of the said flange bears solidly against the under side of the flange 8 of said element. Similarly the lower edge of the depending flange 11 seats against the upper surface of the treadle bar, so that when the bolts 21 are tightened, the end of the treadle bar is secured solidly and rigidly to the element 6.

The cross brace 4 is also of channel form, and

as shown in Figs. 4 and 5, the side flanges 25 of the channel are cut away at each end so that the transverse web 26 at the extremities may bear flatly against the outer faces of the upright elements 15 of the respective sections 1 and 2. The extremities of the web 26 are turned inwardly to form a terminal inset flange 27, and this flange with the adjoining ends of the severed flanges 25 form a socket to receive the said uprights 15 and to mechanically interlock the cross brace with the latter. The cross brace is secured to the said elements 15 by bolts 28, see Fig. 6, which extend through apertures 29 in the webs 26 of the cross brace and through corresponding apertures in the webs of the uprights 15. The inner ends of the bolts 28 are secured by rectangular nuts 31, of the same character as the nuts 19 previously described, which fit within the channels of the uprights 15. The cross brace is thus solidly clamped to the uprights and the connection is rendered rigid by the mechanical interlock provided by the offset flange 27 and the ends of the flanges 25.

In the aforedescribed construction it will be noted that the upright sections 1 and 2 constitute identical units which may be connected in pairs, as set forth, to produce a rigid stand structure. Each of said units consists of two principal members, 5 and 14, which are relatively adjustable to vary the effective height of the unit as required. Each of these relatively adjustable members is composed of three principal elements of pressed metal rigidly secured together, and one of the elements of the base member, namely, the element 6, is formed so as to combine the function of a rigid brace and a foot or pedestal support for the unit. It is to be noted particularly that the leg elements 7 of the base members 5 of the units are relatively short, and that on the other hand the telescoping leg elements 15 of the upper members are relatively long and extend substantially to the bottoms of the units. With this arrangement, the exposed joints between the relatively adjustable base and upper members of the units are located close to the bottom and in relatively close proximity to the floor level, and the adjusting or clamping bolts 17 are similarly located in positions adjacent the bottoms of the units. By forming the elements 7 and 15 so that the latter embrace the former, a substantially smooth and uninterrupted surface is provided for the leg elements from a point adjacent the floor level to the top of the stand structure, and the said units are thus substantially free from projections and sharp edges which might cause damage to the clothes of an operator. It will be noted further that the treadle bar 3 and cross brace 4 are formed so as to solidly abut and interlock with the elements which they respectively connect, and are well adapted to maintain the upright units rigidly in their respective relative positions.

I claim:

1. In a stand for work tables, an upright unit comprising spaced pressed metal channels arranged with their open sides facing each other and constituting leg elements, a pressed metal

cross brace rigidly connecting the lower ends of said leg elements, said brace being formed with an upper longitudinal reinforcing portion and a lower transversely extended flange, the ends of said upper portion fitting snugly within the channel of the respective leg elements, and said flange forming a footrest for the unit.

2. In a stand for work tables, an upright unit comprising spaced pressed metal channels arranged with their open sides facing each other and constituting leg elements, a pressed metal cross brace rigidly connecting the lower ends of said leg elements, said brace being formed with a bottom transversely extended flange, a top flange spaced from said bottom flange, and an upright web connecting proximate longitudinal edges of said flanges, said top flange terminating at the other longitudinal edge in a depending flange paralleling said web, the upper portion of said brace including said web, upper flange, and depending terminal flange being dimensioned so as to fit at the ends within the channels of said leg elements with the web and depending flange bearing against the side flanges of the channel, with said bottom flange forming a footrest for the unit.

3. In a stand for work tables, a pair of upright units each comprising spaced upright leg elements and a cross brace rigidly connecting the lower ends of said elements, said cross brace being composed of pressed metal and having longitudinally extending vertically spaced top and bottom walls, said upper wall being joined to the lower wall along one longitudinal edge and having at the other longitudinal edge a depending relatively shallow terminal flange, a channel bar extending between the respective cross braces and rigidly connecting said units, said bar having at its extremities upturned transverse terminal flanges of substantially the same effective height as the depending terminal flange of the upper wall of said cross brace, and a bolt extending downwardly through the upper wall of said cross brace and securing the ends of said bar at the under side of said wall, the extreme edges of said terminal flanges abutting solidly against the under side of the top wall of said cross brace and the upper surface of said channel bar respectively and forming a solid abutment for the interconnected parts.

4. In a stand for work tables, an upright unit comprising a base member consisting of spaced upright leg elements and a cross brace rigidly connecting the lower ends of said elements and forming a footrest for said member, an upper member consisting of spaced upright leg elements and a cross brace rigidly connecting the upper ends of said elements, the leg elements of said upper member extending substantially the full normal height of the table and slidably and externally telescoping the leg elements of the base member for adjustment of said unit as to height, and means at the lower ends of the leg elements of said upper member for releasably clamping the said telescoped leg elements in adjusted position.

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