

June 16, 1953

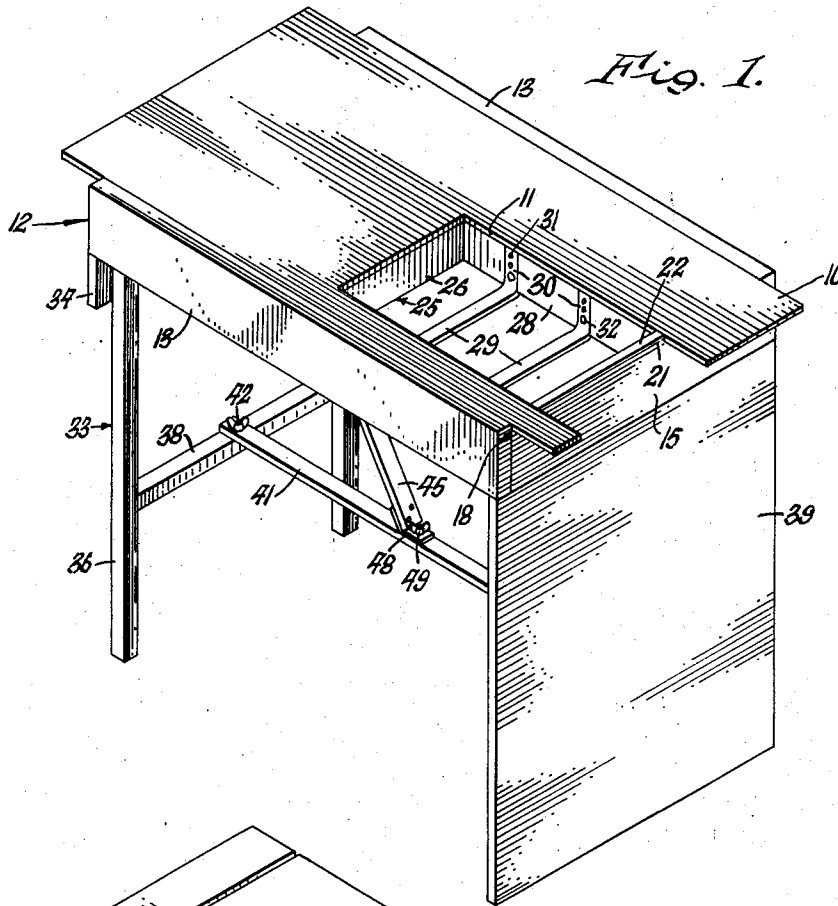
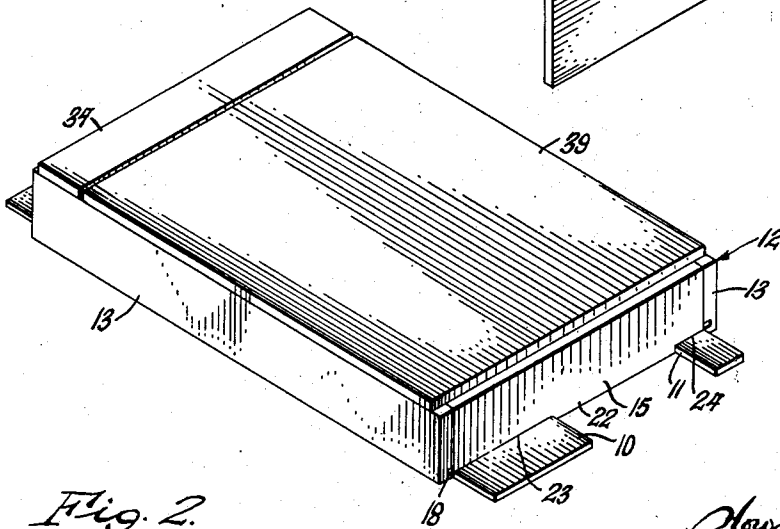
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2,642,325

FOLDING LEG STRUCTURE FOR TABLES

Filed Dec. 26, 1951

2 Sheets-Sheet 1



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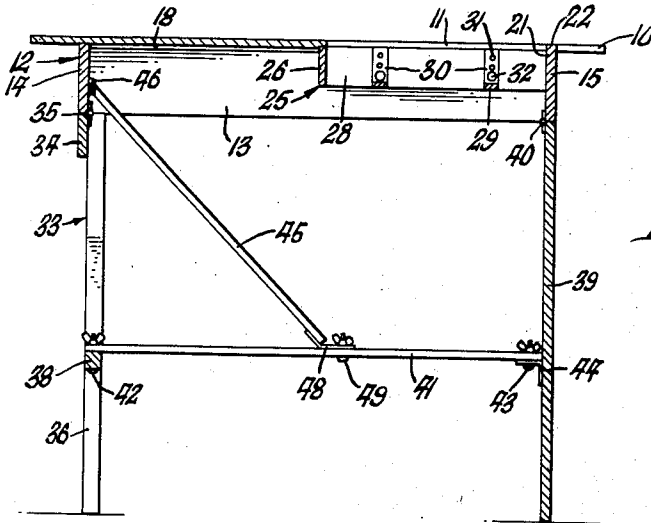


Fig. 3

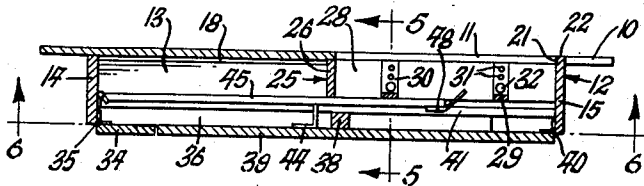


Fig. 4

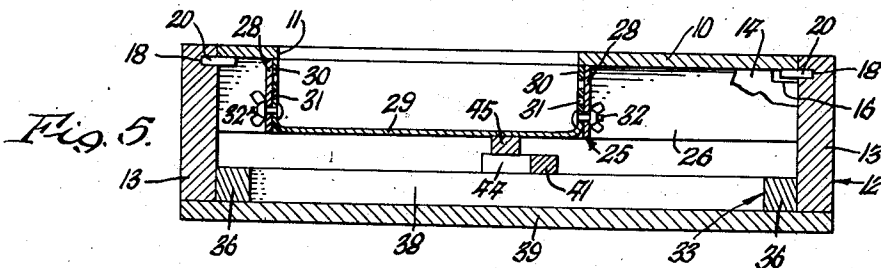


Fig. 5

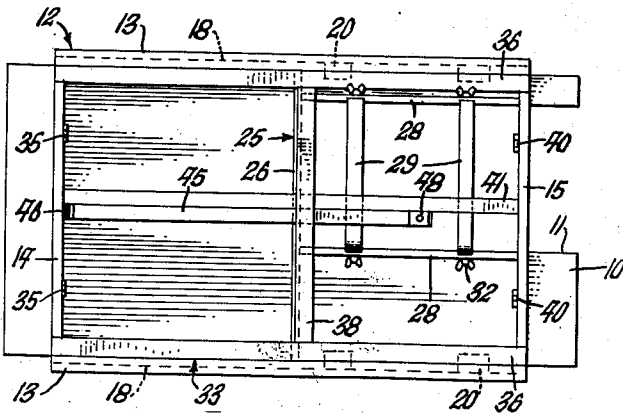


Fig. 6

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UNITED STATES PATENT OFFICE

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FOLDING LEG STRUCTURE FOR TABLES

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3 Claims. (Cl. 311-84)

1

This invention relates to a folding leg structure for the rectangular in plan top frame of a table the parts of which table are capable of being folded together into the form of a box for convenient carrying or storage as a compact structure and is more particularly illustrated for use in conjunction with supporting a sewing machine and hence in providing a sewing machine table.

One of the principal objects of the present invention is to provide such a folding leg structure for a table which table and leg structure are very attractive in appearance both when unfolded for use as a table and also when folded into the form of a compact carrying case or when placed to one side when not in use.

Another object of the invention is to provide such a folding leg structure for a table which table and leg structure are of large size when unfolded but which folds into the form of a very compact structure.

Another object of the invention is to provide such a folding leg structure for a table which table and leg structure are stable and rigid when unfolded so as to serve adequately to function as a sewing table.

Another object of the invention is to provide such a folding leg structure for a table which table and leg structure are light in weight and low in cost and is adapted to low cost assembly line fabrication.

Other objects and advantages of the invention will be apparent from the following description and drawings in which:

Fig. 1 is a perspective view of the table having a folding leg structure embodying the present invention and showing the same set up or unfolded and in position to receive a sewing machine.

Fig. 2 is a perspective view of the table having a folding leg structure embodying the present invention showing the same collapsed into the form of a compact carrying case or for storage or setting to one side, the table being shown with its top panel underneath.

Fig. 3 is a vertical longitudinal section through the table set up as shown in Fig. 1.

Fig. 4 is a similar vertical longitudinal section of the table folded into the form of a compact carrying case as illustrated in Fig. 2 but with the top panel on top.

Fig. 5 is a vertical transverse enlarged sectional view taken generally on line 5-5, Fig. 4.

Fig. 6 is a horizontal sectional view taken generally on line 6-6, Fig. 4.

The table having a folding leg structure embodying the present invention is shown as comprising a horizontal sliding top panel 10 of rec-

2

tangular form in plan and being longer in one direction than the other. This top panel 10 is shown as provided along one transverse edge with a large rectangular cut out or recess 11, this being for the purpose of mounting a sewing machine (not shown) with its base disposed below the level of the top panel 10. The top panel 10 of the table is slidably supported in a rectangular frame indicated generally at 12. This frame is shown as comprising a pair of wooden longitudinal side bars 13 arranged with their upper edges coplanar with the top surface of the top panel 10 of the table and with their opposed sides in sliding engagement with the longitudinal edges of the top panel 10.

These longitudinal bars of the frame 12 are connected at their ends by wooden cross bars 14, 15. The cross bar 14 is at the unindented end of the table top 10 and its upper edge is disposed in contact with or in closely spaced relation to the under face of the top panel 10, as best shown in Fig. 3. At its opposite ends this cross bar is notched, as indicated at 16, Fig. 5, at its two upper corners. These notches 16 generally align with horizontal grooves 18 provided in the longitudinal side bars 13 immediately below and with their upper edges in line with the lower face of the top panel 10. A pair of lugs or slides 20 ride in the groove 18 at each side of the table. These lugs are shown as each being in the form of rectangular straps of metal each secured to the underside of the top panel 10 to project outwardly from the longitudinal edge of the table into the corresponding groove 18. These lugs are also preferably located on opposite sides of the cutout 11 in the top panel of the table.

The opposite cross bar 15 of the frame 12 connects the corresponding ends of the longitudinal side bars 13 and is provided along its upper edge with an elevated portion 21 which fits into the cut away portion 11 of the table and has its upper edge 22 coplanar with the upper surface of this top panel. The ends 23 and 24 of the cross bar 15 are at a lower elevation than the elevated part 22 and slidably support the tongues or two extensions to the top panel 10 provided by its cutout 11.

The top frame or structure for the table is completed by a holder for the sewing machine and which is indicated generally at 25. This holder comprises a cross bar 26 connecting the centers of the side bars 13 and arranged immediately below and preferably in sliding contact with the top panel 10 of the table and also arranged to align with the inner end of the cutout 11 of this top panel, as best shown in Figs. 1, 3 and 4. Two

longitudinal bars 28 are arranged on opposite sides of the cutout 11 of the top panel 10 and each is connected at one end with the cross bar 26 and at its opposite end with the cross bar 15 of the top of the table frame. These longitudinal bars 28 preferably have their upper edges arranged flush with the other bars 13, 14, 15 and 26 so as to provide sliding support for the top panel 10. The bottom of the rectangular depression formed below the cutout 11 by the four top frame bars 15, 26 and 28 is enclosed by cross straps 29. These cross straps are preferably made of metal and have upturned ends 30, each provided with a vertical series of holes 31. A wing bolt 32 extends through any one of these holes 31 of each cross strap 29 and through a hole in the corresponding frame bar 28. It will be seen that by the selection of the proper holes 31 of the cross straps 29, these cross straps can be secured at different elevations with reference to the top panel 10 to suit different sizes of sewing machines.

One end of the top frame of the table is supported by a leg structure indicated generally at 33. This leg structure comprises a vertical panel 34 of the same length as the cross bar 14 of the top frame and arranged with its upper edge in alignment with the lower edge of this cross bar 14 as best shown in Fig. 3. A pair of hinges 35 connect the panel 34 with the cross bar 14, the leaves of these hinges being secured to the inner faces of the panel 34 and cross bar 14, respectively, so that the panel 34 swings inwardly and into mating relation with the adjacent ends of the longitudinal frame bars 13. A leg 36 is secured to each end of the swinging panel 34, these legs being spaced inwardly from the ends of this panel so as to nest within the longitudinal top frame bars 13 when the panel 34 is so swung upwardly into mating relation with these longitudinal side frame bars 13. The lower ends of the legs 36 are connected by a cross bar 38.

The opposite end of the top frame of the table is supported by a large rectangular vertical panel 39. This panel is arranged below and in vertical alignment with the cross bar 15 of the table top and is connected to this cross bar 15 by a pair of hinges 40. These hinges are arranged with their leaves secured to the inner faces of the panel 39 and cross bar 15, respectively, so that the panel 39 is capable of being swung upwardly into mating relation with the longitudinal top frame bars 13. The width of the panel 39 is preferably equal to the length of the panel 34 and these dimensions are preferably both equal to the over-all width of the top frame 12 of the table when these panels are so swung into mating relation with the longitudinal side bars 13. The joint height of the panels 34 and 39 is preferably equal to the spacing of the pintles of the hinges 35 and 40 so that when these two panels are raised into mating relation with the side bars 13 their lower ends come into mating relation with each other and form a substantially unbroken face along the bottom of the top frame.

The table also includes a bracing structure for maintaining it rigid when erected. For this purpose a foot bar 41 is removably secured, as by a wing bolt 42, to the upper face of the cross bar 38 between the legs 36 of the table and preferably centrally thereof. The opposite end of this foot bar 41 is removably secured, as by a wing bolt 43 to the horizontal arm of an angle bracket 44 the vertical arm of which is attached to the inner face of the swinging panel 39 of the table. The table also includes a diagonal brace 45. The

upper end of this diagonal brace is hinged, as indicated at 46, to the central part of the inner face of the cross bar 14 of the top frame. To the lower end of this diagonal brace is secured an angle bracket 48 the lower end of which projects longitudinally from the diagonal brace 45 and, in the erected condition of the table, is arranged to lie on top of the foot bar 41. This angle brace is removably secured to this foot bar 41, as by a wing bolt 49.

Assuming the table to be in the set up position as above described, it will be seen that the rectangular cutout 11 of the top panel 10 permits a sewing machine (not shown) to be placed upon the cross straps 29 arranged below this cutout. It will further be seen that the elevation of these supporting straps 29 to suit the height of the base of the particular sewing machine being used can be adjusted by removing the wing bolts 32 and selecting a higher or a lower one of the series of holes 31 in these straps and replacing the wing bolts 32 through these selected holes. It will further be seen that the top panel 10 can be slid lengthwise of the top frame 12 to suit the particular sewing operation and can also be removed completely, if desired. This sliding movement is provided by the grooves 18 in the longitudinal top frame side bars 13 and which receive the lugs 20 which form slide rails secured to the underside of the top panel 10. By virtue of the cutouts 16 in the end cross bar 14 the top panel 10, together with these lugs 20, can be completely removed from the top frame structure 12. When in the operative position shown in Figs. 1 and 3 the top panel 10 has full support from all of the cross bars 14, 15 and 26 as well as the inner longitudinal frame bars 28.

When it is desired to collapse the table for the purpose of transporting it or storing it as a compact structure, the table, with its top panel 10 arranged as shown in all of the figures is turned on its side to permit the parts of the leg structure to be freely manipulated. The wing bolt 49 is first removed and the diagonal brace 45 is swung toward the top panel 10 of the table into the top frame 12 as best shown in Fig. 4. The wing bolts 42 and 43 at the ends of the foot bar 41 are then removed and this foot bar is placed within the top frame 12 alongside the diagonal bar 45 as best shown in Figs. 4 and 6. The legs 36 are then swung toward the top panel 10 and into the top frame 12. Lastly, the swinging panel 39 is swung inwardly toward the top panel 10 until it engages the longitudinal side bars 13 thereof and is brought into mating relation with this swinging panel 34 connecting the upper end of the legs 36. In this position it will be seen that the table is in the form of a very compact rectangular box-like structure which can be conveniently transported and stored and which also is attractive in appearance so that it does not have to be put out of sight.

From the foregoing it will be seen that the present invention provides a very sturdy folding leg structure for a table which leg structure can be conveniently folded into a very compact structure for storage or transportation. It will further be seen that the table and its folding leg structure are low in cost and that in both its set up and folded condition the table is attractive in appearance.

We claim:

1. A folding leg structure for the rectangular in plan top frame of a table, comprising an end panel of substantially the same length as the

width of said top frame, and forming, in the set up condition of said table, a downward continuation of one end of said top frame, hinge means connecting said end panel with said one end of said top frame and permitting said end panel to be swung toward the other end of said top frame to a horizontal position under said one end of said top frame, at least one leg projecting downwardly from said end panel in the set up condition of the table and secured to the inner face of said end panel so as to be received in said top frame when said end panel is swung to said horizontal position, a second end panel of substantially the same length as said first end panel and forming in the set up condition of the table a downward continuation of said other end of said top frame, and hinge means connecting said second end panel with said other end of said top frame and permitting said second end panel to be swung toward said one end of said top frame to a horizontal position under said top frame, the height of said second end panel, when erect, being approximately equal to the combined height, when erect, of said first panel and leg and the combined height, when erect, of said first and second panels being approximately equal to the distance between the axes of their hinges whereby in said horizontal position said end panels have closely spaced meeting ends.

2. A folding leg structure for the rectangular in plan top frame of a table, comprising an end panel of substantially the same length as the width of said top frame, and forming, in the set up condition of said table, a downward continuation of one end of said top frame, hinge means connecting said end panel with said one end of said top frame and permitting said end panel to be swung toward the other end of said top frame to a horizontal position under said one end of said top frame, at least one leg projecting downwardly from said end panel in the set up condition of the table and secured to the inner face of said end panel so as to be received in said top frame when said end panel is swung to said horizontal position, a second end panel of substantially the same length as said first end panel and forming in the set up condition of the table a downward continuation of said other end of said top frame, hinge means connecting said second end panel with said other end of said top frame and permitting said second end panel to be swung toward said one end of said top frame to a horizontal position under said top frame, the height of said second end panel, when erect, being approximately equal to the

combined height, when erect, of said first panel and leg, and a horizontal foot bar removably connected to the lower ends of said leg and second end panel.

3. A folding leg structure for the rectangular in plan top frame of a table, comprising an end panel of substantially the same length as the width of said top frame, and forming, in the set up condition of said table, a downward continuation of one end of said top frame, hinge means connecting said end panel with said one end of said top frame and permitting said end panel to be swung toward the other end of said top frame to a horizontal position under said one end of said top frame, at least one leg projecting downwardly from said end panel in the set up condition of the table and secured to the inner face of said end panel so as to be received in said top frame when said end panel is swung to said horizontal position, a second end panel of substantially the same length as said first end panel and forming in the set up condition of the table a downward continuation of said other end of said top frame, hinge means connecting said second end panel with said other end of said top frame and permitting said second end panel to be swung toward said one end of said top frame to a horizontal position under said top frame, the height of said second end panel, when erect, being approximately equal to the combined height, when erect, of said first panel and leg, a horizontal foot bar removably connected to the lower ends of said leg and second end panel, a diagonal brace hinged to said top frame in position to have its free end swing toward said foot bar, and means removably securing said free end of said brace to said foot bar.

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