RAPID ASSEMBLY TABLE CONSTRUCTION

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ABSTRACT

A rapidly assemblable table construction in which the top, side and front elements are conveniently integrated from separated condition in the absence of tools, thereby enabling the table to be stored or shipped with the separated elements in superimposed condition. When in assembled condition, locking means associated with a top panel operates to prevent disengagement of plural interconnecting means, and assures rigidity of the composite structure.

1 Claim, 7 Drawing Figures
RAPID ASSEMBLY TABLE CONSTRUCTION

This invention relates generally to the field of lightweight metallic tables and similar constructions, which find use as typewriter supports and the like. More particularly, it relates to devices of this type which may be conveniently assembled from knocked-down condition without resort to even simple tools.

BRIEF DESCRIPTION OF THE PRIOR ART

Knocked-down table constructions of this general type are well known in the art, in most cases the component parts thereof being assembled by means of nuts and bolts extending through abutted parts. While tables of this type are relatively sturdy, they are not easily assembled, and where the devices are shipped to a user in knocked-down condition, the user is not always willing to assemble the device where it involves more than ordinary complication. On the other hand, the high cost of shipping such devices in assembled condition over long distances, often approximates the entire value of the device itself, so that as a practical matter, only knocked down shipping is practised in the industry.

BRIEF DESCRIPTION OF THE PRESENT INVENTION

Briefly stated, the invention contemplates the provision of a disassemblable table in which the component parts are interlocked in a progressive or serial fashion in such manner that each successive interconnection prevents disengagement of a previous connection, the final connection being accomplished by means of concealed rotary locking means which not only prevents disengagement of the previously engaged parts, but provides for improved rigidity of the entire structure. This is accomplished, for the most part, by providing the interlocking components with corresponding tongue and groove interconnections, and subsequently fitting other parts which overly the previously interconnected parts.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings, to which reference will be made in the specification, similar reference characters have been employed to designate corresponding parts throughout the several views.

FIG. 1 is a front elevational view showing an assembled embodiment of the invention.
FIG. 2 is a rear elevational view thereof.
FIG. 3 is a top plan view thereof.
FIG. 4 is an end elevational view thereof.
FIG. 5 is an enlarged fragmentary sectional view as seen from the plane 5—5 in FIG. 3.
FIG. 6 is a horizontal sectional view as seen from the plane 6—6 in FIG. 5.
FIG. 7 is a vertical sectional view as seen from the plane 7—7 in FIG. 2.

DETAILED DESCRIPTION OF THE DISCLOSED EMBODIMENT

In accordance with the invention, the device, generally indicated by reference character 10, comprises broadly: a first or front frame element 11, a second or rear frame element 12, a top panel element 13, first and second side panel elements 14 and 15, respectively, and a front panel element 16.

The front frame element 11 includes first and second leg members 17—18, interconnected at the upper ends thereof by a horizontal member 19. These members are preferably formed from hollow metallic tubing, suitably welded or otherwise interconnected. Each leg element 17—18 includes an inner surface 20 from which upper and lower screw heads 21—22 project. The lower ends 23 thereof may be provided, optionally, with conventional casters 24. The horizontal member 19 includes an inner surface 25 partially covered by a lip member 26 secured by suitably means such as welding or screws 27 to a lower surface 28. The lip member includes a horizontal mounting portion 29 and a vertical member 30 defining an elongated interstice 31 (see FIG. 7).

The rear frame element 12 is of corresponding size, and includes first and second leg members 33—34 interconnected to a horizontal member 35 at the upper ends 36 thereof. Screws 37 provide means for interconnecting the front panel element 16 to be described hereinafter.

The top panel element 13 includes an upper lamina 40 of plywood or fiberboard, and a lower metal lamina 41 of co-extensive dimensions. The upper lamina 40 includes an upper surface 42, which may be covered with a decorative material, a lower surface 43, longitudinal edges 44 and 45 and end edges 46 and 47. The lower lamina 41 is bounded by a normally concealed inner surface 48 and an exposed lower surface 49. One end 50 is provided with a downwardly turned lip portion 51 adapted to engage the interstice 31 when the device is assembled. A separately welded sheet metal member 52 includes a curved lip 53 having a free edge 54. Rotary fasteners 55 (FIGS. 6 and 7) pivot on member 41 serve to secure the top panel element 13 in assembled condition between the frame elements 11 and 12.

The side panel elements 14—15 are substantially similar and symmetrically configured, each including a planar main wall 57 bounded by an inner surface 58 (FIG. 6), an outer surface 59, (FIG. 7), an upper edge 60, a lower edge 61, and side edges 62—63. An upper flange 64 provides a support upon which the top panel element 13 rests. An inner end flange 66 is provided with upper and lower keyhole openings 67—68 permitting engagement with the screw heads 22, and a laterally extending projection 69 provides for engagement with the front panel element 11, by way of an angularly disposed lip 70. A lower edge flange 72 prevents the appearance of a sharp edge on the exterior of the panel.

The front panel element 16 is preferably permanently attached to the front frame element 11, by means of screws. It includes a front wall 76 having a forward surface 77, a top edge 78, a bottom edge 79, and side edges 80 and 81. Rearwardly extending flanges 82 are engaged by screw means 37 and 38 (FIG. 7). A rearwardly extending top flange 85 communicates with a vertical flange 86, in turn communicating with a second rearwardly extending flange 87. A lower flange 88 prevents the occurrence of sharp edge.

Assembly of the device is a relatively simple matter. Holding the integrated front frame and front panel elements 11 and 16 in one hand, the side panel elements 14 and 15 are engaged by projecting the lip 70 of each into the interstice formed by the corresponding lip 84. This engagement commences with the side panel elements lying in parallel relation to the plane of the front panel element, followed by a 90 degree rotation to re-
Next, the rear frame element 12 is engaged by engaging the screw heads within the upper and lower keyhole slots 67–68. Following this operation, the top panel element 13 is engaged by first engaging the free edge 54 beneath the flange 87, and abutting the inner surface of the flange 86. With a clockwise pivotal motion, as seen in FIG. 7, the lip 51 is positioned within the interstice 31, which will result in the upper surface 42 being placed in co-planar relation with respect to the upper surface of the horizontal members 19 and 35. In this condition, the rotary fasteners 55 are moved from the position shown in the upper right hand portion of FIG. 6 to the positions shown in the upper and lower left hand portions of the same figure to lock the top panel element 13 in position. Once this locking action has been accomplished, the side panel elements 15 have no available room in which to disengage themselves from the keyhole openings 67–68, and thus disengagement of the lips 70 is also effectively prevented.

Should it be desired to disassemble the table, the reverse of the above procedure is followed, following which the component elements may be stacked in co-planar relation for storage or subsequent packing and shipping.

I wish it to be understood that I do not consider the invention limited to the precise details of structure shown and set forth in this specification, for obvious modifications will occur to those skilled in the art to which the invention pertains.

I claim:

1. A rapid assembly table construction comprising: a first frame element having first and second leg members and a mutually interconnected horizontally disposed member, a front panel element interconnected to said first frame element and having lip means positioned parallel to the principal axis of each leg member thereon; a pair of side panel elements, each having an edge having corresponding lip means swingably engaged with said lip means on said first frame element with the principal plane of said side panel elements extending substantially perpendicular to the principal plane of said first frame element, said side panel elements each having an oppositely disposed edge flange having openings therein; a second frame element including third and fourth leg members and an interconnected horizontally disposed member, said third and fourth leg members having projections thereon selectively slidably engaged within said openings; a top panel element having means engaging said then interconnected front and rear frame elements, and locking means on said top element engaging said side panel elements to prevent disengagement of said top panel element from said side panel elements, and simultaneously preventing relative movement of said side panel elements with respect to said first and second frame elements.

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