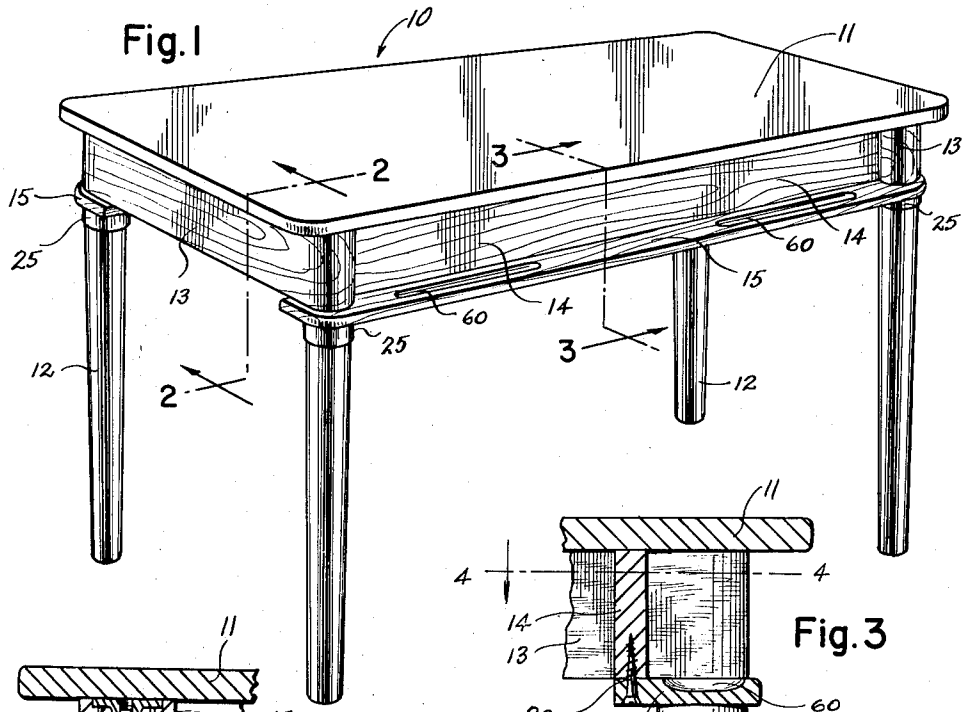
Jan. 4, 1955 R. M. COURTWRIGHT 2,698,775

TABLE LEG AND ATTACHING MEANS THEREFOR

Filed May 4, 1953

Fig. 1



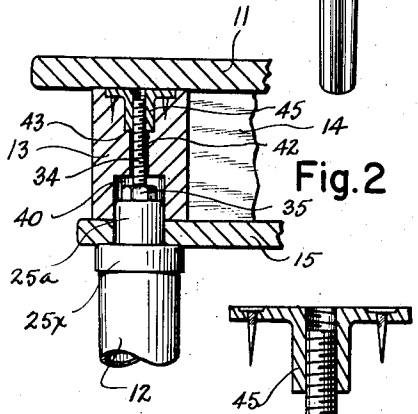


Fig. 2

Fig. 3

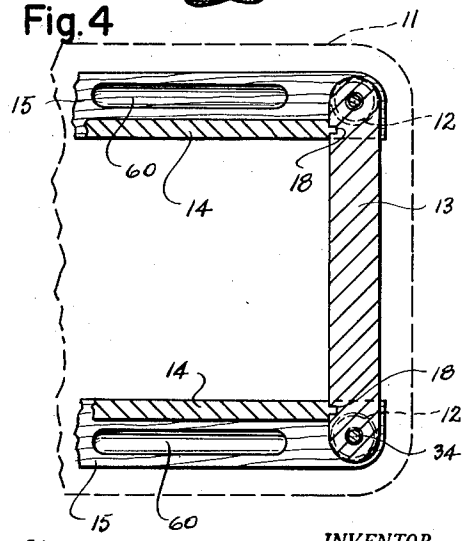


Fig. 4

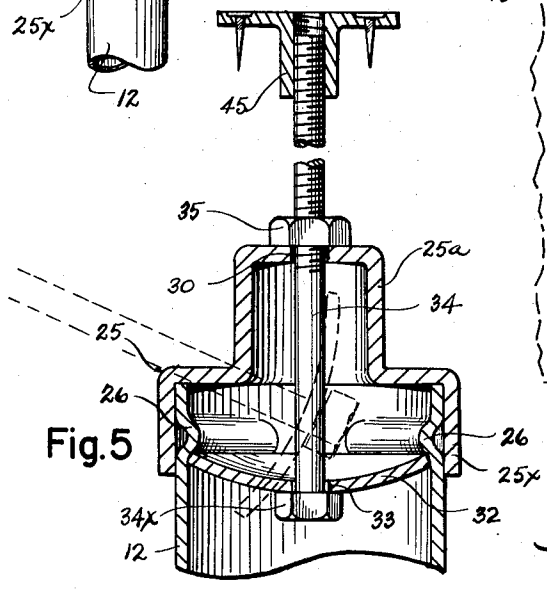


Fig. 5

INVENTOR.

Robert M. Courtwright

BY

Cook & Robinson

ATTORNEYS

United States Patent Office 2,698,775 Patented Jan. 4, 1955

2,698,775

TABLE LEG AND ATTACHING MEANS THEREFOR

Robert M. Courtwright, Tacoma, Wash., assignor to Furniture Arts, Inc., Tacoma, Wash., a corporation of Washington

Application May 4, 1953, Serial No. 352,902

4 Claims. (Cl. 311—114)

This invention relates to improvements in tables and has for its principal object to provide a leg mounting means that is especially suited for the attaching of a tubular metal leg to the wooden frame structure of the table.

Still further objects and advantages of the preesnt invention reside in the details of construction of the parts constituting the table; in the mode of assembly and securement of parts together and in the particular overall design of the table that renders it attractive in appearance and especially desirable for school use.

In accomplishing these and other objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a table embodying the improvements of the present invention therein.

Fig. 2 is a cross-sectional detail of the table, taken on the line 2—2 in Fig. 1.

Fig. 3 is a sectional detail, taken on the line 3—3 in Fig. 1.

Fig. 4 is a sectional view, taken through the table structure in a horizontal plane, substantially on the line 4—4 in Fig. 3.

Fig. 5 is an axial sectional view of the leg mounting means of the present invention as applied to a leg.

Referring more in detail to the drawings:

In Fig. 1, I have illustrated a table constructed in accordance with the objects and embodying the various improvements of the present invention therein. The table, which is designated in its entirety in Fig. 1 by reference numeral **10**, comprises a flat, rectangular top panel **11**, which may be of wood or other suitable material, secured upon a rectangular, horizontal frame structure which is supported at its four corners by legs **12**.

The horizontal frame structure comprises opposite end rails **13—13**, preferably of wood and of substantial dimensions as best understood by reference to Fig. 4, and opposite side members which extend between and join the said end rails. Each of these side members, as well shown in Fig. 3, comprises a vertical plate **14** and a horizontal plate **15**, both of wood. The vertical plates **14** at opposite sides of the frame, extend between the opposite end portions of the rails **13—13** and, at their ends, are mortised into the rails as shown at **18** in Fig. 4. The horizontal plates **15** also extend between and slightly beyond the opposite end rails and underlap their under surfaces as has been sheown in Figs. 2 and 4. The bottom edge surfaces of the vertical plates **14** rest upon the top surfaces of the companion horizontal plates **15**, along the inside or inner edge portions thereof, and the companion plates **14** and **15** are secured together at close intervals by screws **20** that are applied thereto as shown in Fig. 3.

The table top **11** may be secured to the top face of the horizontal frame structure by use by nails, screws or by a suitable adhesive applied between the parts along the top edges of the frame members **13** and **14**.

The supporting legs **12** of the table structure are tubular, round in cross-section and preferably made of aluminum. Also, they may be slightly tapered in a downward direction. Each leg is fitted at its upper end with a metal cap **25** that has a downwardly directed peripheral flange **25***x* fitted over the upper end portion of the leg. The leg, within that part covered by the cap flange, is formed with oppositely disposed, circumferentially directed and inwardly formed beads **26—26** as observed in Fig. 5. Each of these beads extends through an arc of about 120° thus leaving the ends of the opposite beads spaced apart.

Each cap **25** is formed, coaxially thereof, with an upwardly directed cylindrical boss or extension **25***a* of reduced diameter. The upper end wall of this boss is formed with a centrally located hole **30**. An anchor disk **32** is fitted within the upper end of the leg with its peripheral edge portions engaged against the under sides of the two oppositely disposed beads **26—26**. This disk is substantially of the same diameter as the interior diameter of the tubular leg and as disposed therein against the beads **26—26** is downwardly concaved, and is formed centrally with a hole **33**. An anchor bolt **34** extends upwardly through the hole **33** of the disk, and continues up through the hole **30** of the cap boss or extension **25***a*. A nut **35** is threaded onto the bolt and tightened downwardly against the upper end wall of the cap extension as shown in Fig. 5, thus the head **34***x* at the lower end of the bolt draws the anchor disk **32** upwardly and seats it firmly against the beads **26—26** as the nut **35** forces the cap **25** down over the end of the leg. Continued tightening of the nut **35** results in causing the anchor disk **32** to slightly expand the upper end portion of the tubular leg and cause it to be tightened within the cap flange **35***x*.

For mounting the legs on the table, the horizontal frame structure is formed at its under side at each of its four corners with downwardly opening sockets **40**, as shown in Fig. 2. These sockets are bored upwardly through the ends of the plates **15** and into the cross-rails **13**. They are of such diameter that they will snugly receive the extension portions **25***a* of the leg caps therein when the parts are assembled as observed in Fig. 2. Also, continuing upwardly from and coaxial of the sockets, are bores **42** of smaller diameter leading into upwardly opening sockets **43** that are formed in the top surfaces of the cross-rails **13**, and within which sockets **43** flanged anchor nuts **45** are fitted and secured coaxial of the bores **42** as seen in Fig. 2.

To assembled the leg securing cap with a leg, a bolt **34** is first passed through the central hole **33** of an anchor disk **32**. Then the disk, tipped as indicated in dotted lines in Fig. 5, is passed downwardly into the top end of the tubular body of the leg and between the spaced ends of the anchor beads **26—26**, and turned to its horizontal holding position by swinging the bolt to a vertical position. The disk then assumes the full line position of Fig. 5. Then the upper end portion of the bolt is passed upwardly through a cap **25** and the cap is slipped downwardly therealong to a position over the upper end of the leg. The nut **35** is then threaded onto the bolt and drawn down tight against the upper end wall of the extension part **25***a* of the cap to secure the cap on the leg. Then, holding the leg in proper position, the upper end portion of the bolt is extended upwardly into a frame socket **40** and through the bore **42** that is coaxial thereof, and is threaded into the anchor nut **45** and is thereby drawn tight. This tightening is easily accomplished by use of a strap wrench. Thus the leg is anchored and parts secured in accordance with the showing in Fig. 2.

The tightening of the four legs **12** in place not only renders the leg structure rigid but it also adds strength and rigidity to the frame structure, since the cap portions of the four legs serve to tie the side and end members of the horizontal frame together.

The relationship of the parts **14** and **15** of the front and back members of the horizontal frame provide outwardly opening recesses extending along opposite sides of the table. The plates **15** are longitudinally grooved, as shown at **60** in Figs. 1 and 4, to better retain pencils or pens thereon.

Tables of this construction are exceptionally sturdy, yet light in weight and free of objectionable cross bracing between legs. They may be made in various sizes, shapes and heights to meet requirements.

Having thus described my invention, what I claim as new therein and desire to secure by Letters Patent, is:

1. In a table, a frame member having a flat surface for seating the upper end of a table leg thereagainst, a bore formed in said member and opening therefrom to said surface, an anchor nut fixed in the said member coaxial

of said bore, a tubular table leg open at its upper end and formed within its upper end portion at diametrically opposite sides with inwardly projecting stops, an anchor disk of substantially the full diameter of said tubular leg and adapted to be inserted therein through its open upper end by passing it edge wise between and to a position below the stops and then turned and seated against the under sides of the stops, and a leg securing bolt anchored at its lower end centrally and coaxially to said disk and extended upwardly therefrom and through said bore of the frame member and threaded onto said anchor nut to draw the upper end of the leg against said flat surface and secure the leg.

2. A combination, as in claim 1, wherein a cap is fitted over and about the upper end portion of the leg, and said cap has a central hole through which the anchor bolt extends, and wherein a nut is threaded onto the bolt against the top of the cap to clamp it against the leg and provide a holding connection between leg and bolt whereby the leg may be employed to effect the threading of the anchor bolt onto said anchor nut.

3. A combination as in claim 2 wherein the tubular leg is expandable under pressure, and wherein the anchor disk is downwardly dished and is adapted to be drawn toward a flattened condition by the tightening of the said nut on the bolt to exert expanding force against the leg to tighten it within the cap.

4. A construction as in claim 3 wherein the said cap has a reduced cylindrical extension projecting upwardly from its top wall coaxial of the bolt, and said frame member has a socket formed in said leg seating surface to receive said extension in a tight fit.

References Cited in the file of this patent

UNITED STATES PATENTS

361,992	Cron	Apr. 26, 1887
468,042	Holstein	Feb. 2, 1892
509,135	McGlinchy	Nov. 21, 1893
678,888	Luger	July 23, 1901
705,653	Davis	July 29, 1902
821,876	Lauth	May 29, 1906
843,656	Andersen	Feb. 12, 1907
1,174,278	Prier	Mar. 7, 1916
1,576,353	Olsen	Mar. 9, 1926
1,675,827	Shrader	July 3, 1928
1,734,340	Overton	Nov. 5, 1929
1,837,346	Thomas et al.	Dec. 22, 1931
1,948,724	Laun	Feb. 27, 1934
2,630,857	Cohen	Mar. 10, 1953