Oct. 30, 1951 B. B. BRONSTEIN 2,573,305

LEG LOCK CONSTRUCTION MEANS FOR METAL TABLES

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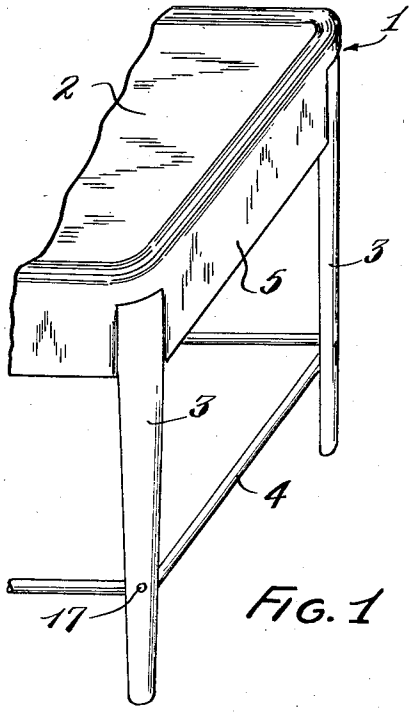



FIG. 1

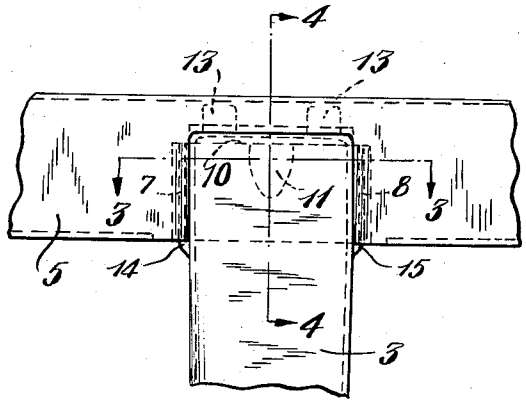



FIG. 2

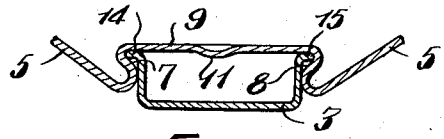



FIG. 3

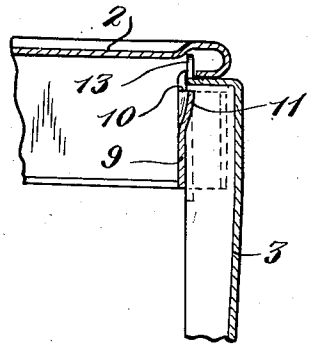



FIG. 4

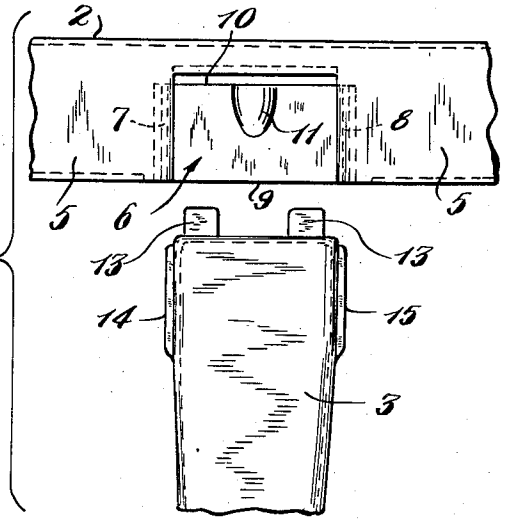



FIG. 5

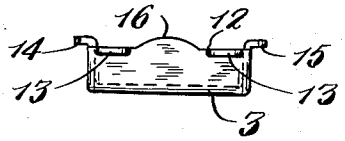



FIG. 6

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## LEG LOCK CONSTRUCTION MEANS FOR METAL TABLES

Benjamin B. Bronstein, Shaker Heights, Ohio

Application October 14, 1950, Serial No. 190,112

1 Claim. (Cl. 311—110)

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This invention relates to furniture, especially furniture such as tables, stools and the like and especially relates to furniture of that type which is particularly adapted to be shipped in a compact unassembled condition for convenient assembly by the retailer or ultimate purchaser of such articles.

The type of furniture covered in the present invention, and construction of such furniture, is generally similar to that disclosed in and claimed by my copending application, Serial No. 109,662, filed August 11, 1949.

A general object of this invention is to provide furniture of the type described which is characterized by the ease of assembly of the components of the article of furniture, and the rigid permanent connection which can readily be obtained between components of the article of furniture when assembled.

Another object of the invention is to provide a table or similar article wherein special cooperating means are provided on a table top and table legs for forming a locked connection therebetween when assembled.

Another object of the invention is to provide leg lock means for a metal table or similar article wherein the components of the leg lock means are of a sturdy construction.

The foregoing and other objects and advantages of the present invention will be made more apparent from the reading of the following specification and claim together with a study of the structure shown in the accompanying drawings.

For a better understanding of the present invention, attention is directed to the accompanying drawings, wherein:

Fig. 1 is a perspective view of the portion of a metal table made in accordance with this invention;

Fig. 2 is an enlarged front elevation of the table top and leg assembly showing one of the legs in its assembled locked position;

Fig. 3 is a cross-sectional view through the leg and top taken along the line 3—3 of Fig. 2;

Fig. 4 is a vertical sectional view taken along the line 4—4 of Fig. 2;

Fig. 5 is an exploded elevation of the table top and one of the legs in their unassembled condition; and

Fig. 6 is a top plan view of one of the leg members.

Corresponding reference characters are used in the following specification and in the drawings to refer to corresponding parts to facilitate reference therebetween.

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The details of the drawing disclose a table which is generally referred to hereinafter by the numeral 1. This table 1 includes a top 2, a plurality of legs 3, and a leg brace 4 which is suitably secured to and extends between the legs 3, as will be hereinafter described.

The table top 2 may be of any desired conventional shape and usually is formed from sheet metal that is shaped to have a downturned flange 5 provided extending around the periphery thereof.

A plurality of inset leg receiving sockets 6 are provided in the lower portion of the flange 5 at the corners thereof, or at equally spaced circumferential portions of same. Each bracket has opposed, spaced substantially vertically extending channels 7 and 8 provided therein which are slightly inclined toward each other from lower toward their upper ends. Each of the sockets 6 has an inset wall 9 provided therein and a slot 10 is formed in the flange 5 immediately at the upper end of each of the sockets 6 so that an exposed upper edge portion is provided on each of the walls 9.

As an important feature of the present invention, the upper ends or edges of the walls 9 each are provided with an outwardly extending protuberance, or one-half of a dimple 11, that is provided thereon to facilitate locked engagement between the sockets and one of the support legs 3 that is seated therein. Each of the legs 3 preferably is formed from a channel-like metallic strip which has its extreme upper end offset inwardly as shown in Fig. 6, to form a horizontally extending stop 12 that may be located between two upwardly extending ears 13 usually formed on each of the legs. Laterally outwardly extending flanges 14 and 15 are provided on each of the legs 3 for sliding engagement with the channels 7 and 8 provided in each of the inset sockets 6. The flanges 14 and 15 are complementary with the sockets 6 so that the legs can be slid or forced into engagement with the sockets from the lower ends thereof and have a wedging or locking action to aid in securing the legs in position.

As another feature of the invention, I prefer to form a small rounded protuberance 16 on the middle portion of the stop 12 of each of the legs 3 and this rounded protuberance 16 is adapted to engage with the upper edge of the protuberance 11 formed in the upper portion of each of the sockets 6 so that a locked arrangement between the table leg and table top is automatically

provided when the table leg is slid into proper engagement with the top.

Fig. 5 of the drawing shows that the protuberance 11 formed in the flange in the table top increases gradually in size from the lower portion thereof and this plus the smooth contour provided on the protuberance 16 formed on the stop 12 of the leg facilitates the sliding action required to push these two members past each other when engaging the legs and the table top. Also, it is thought that the inherent resiliency provided in the walls 9 in the flange 5 in the table top by virtue of the channels 7 and 8 formed therein also aids in temporarily deforming or deflecting the contacting surfaces formed on the flange 5 and the portions of the stops 12 engaged therewith.

The construction disclosed herein is of sufficiently sturdy nature that it will insure the fact that the operative parts of the leg lock means will position themselves in locking relationship after the components of the table have been assembled and that such leg lock means will retain desired positions indefinitely to maintain a sturdy, rigid assembly of the table components. If desired, the legs 3 can be sprung or pulled out of engagement with the inset sockets 6 and later be reengaged therewith without impairing the locking action obtained by the construction of the invention.

Fig. 4 also shows that the ears 13 provided on the leg 3 engage with the inner surface of the flange 5 as the ears protrude into the slots 10 and may engage an edge portion of the flange 5. Also, usually the stops 12 may abut against this portion of the flange 5, which may be inwardly turned with relation to the table and form the upper end of the inset sockets 6. It will be appreciated that the table legs cannot be released until and unless the protuberance 16 on the table leg is sprung past the upper edge of the protuberance 11 provided in the flange of the table. It should be noted particularly that this protuberance 11 on the table flange is terminated at its portion of maximum protrusion to form an edge for locking association with the stop 12 on the legs.

The leg brace 4 may be suitably secured to the legs 3 as by bolts 17 and this brace, or shelf if used in place of a brace rod, may be of any desired size dependent upon the table or other article to be produced. Usually the dimensions of the brace 4 are such as to bring the legs 3 under sufficient inward tension to cause them to take a vertical position when the bolts are tightened and aid in binding them in the sockets 6.

In the embodiment of the invention illustrated and described herein, the table legs have flanges thereon that slidably engage positioning channels formed in the inset sockets but these parts could be reversed, if desired.



In some instances, a satisfactory locking action may be secured by the protuberance, or embossment 11 engaging the under surface of the stop 12 which may not have a protuberance thereon. However, the protuberance 16 has an additional function, i. e., to provide a substantially point contact with the socket wall when sliding the leg into engagement therewith.

Further details of the present construction are described more completely in my copending application referred to hereinbefore and in general the construction of the present structure is similar to that disclosed in my previous application.

While one complete embodiment of the invention has been disclosed herein, it will be appreciated that modification of this particular embodiment of the invention may be resorted to without departing from the scope of the invention as defined by the appended claim.

Having thus described my invention, what I claim is:

A metallic table structure or the like, comprising in combination, a generally horizontal sheet metal top including a peripheral flange having a downwardly extending lower portion, the said flange having a plurality of circumferentially extending slots formed therein and a plurality of inset sockets formed integral therewith, one socket being provided below each of the said slots, each of the said sockets including leg edge engaging means and having an exposed upper edge at the said slot; and a leg for each of said sockets, said leg having its upper portion offset to provide an inwardly extending stop and having laterally extending side edges, an inwardly extending protuberance being provided on each of the stops on said legs and a protuberance having an outwardly extending upper edge being formed on the upper edge of each of said sockets to engage said stops when said legs are slid into said sockets, said protuberances engaging by substantially line contact when said legs are slid into said sockets, and the upper edges of said sockets being continuous from side to side thereof.

BENJAMIN B. BRONSTEIN.


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