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PATENTED MAY 8, 1906.

R. L. RICHARDSON.
EXTENSION AND OTHER TABLE.

APPLICATION FILED JAN. 18, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

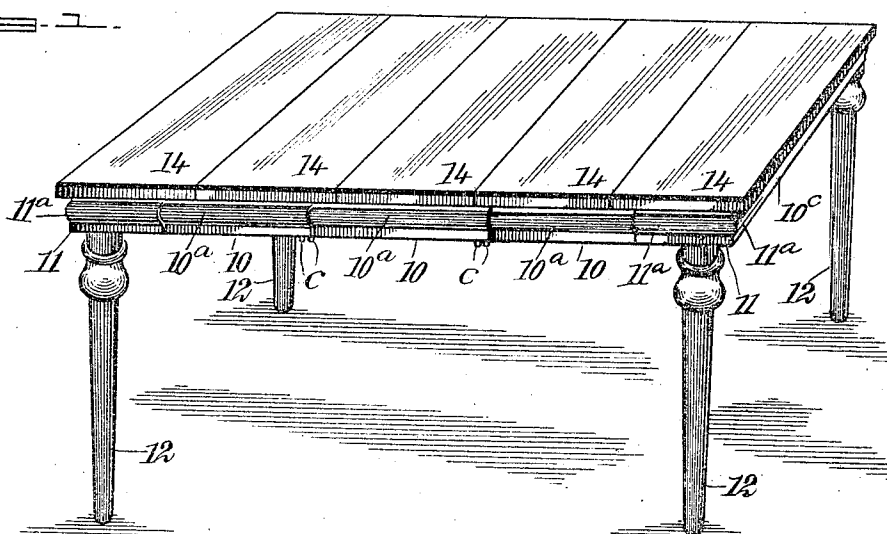
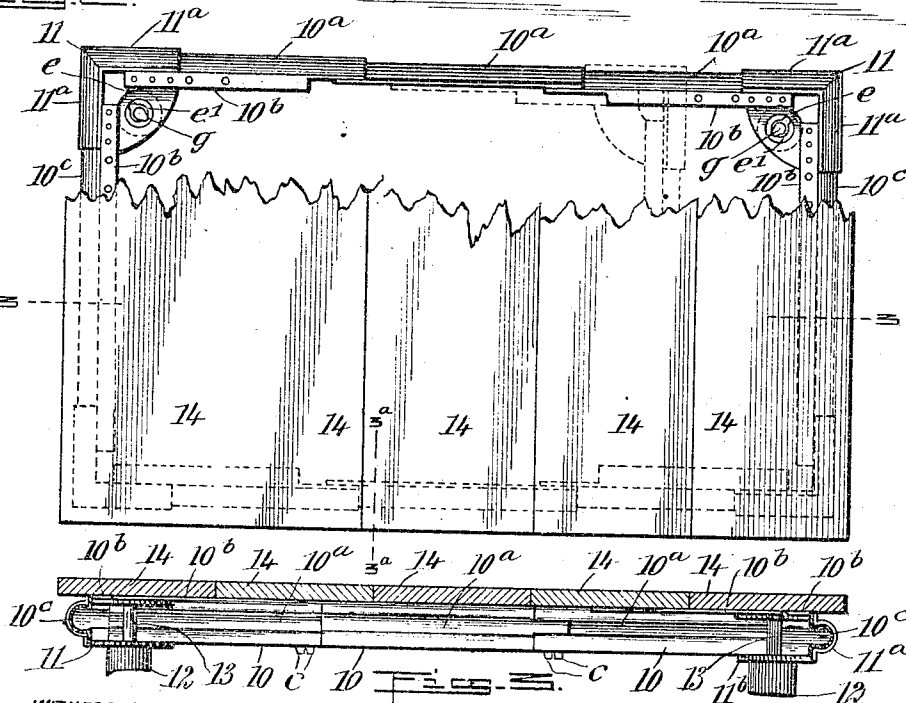


Fig. 2.



WITNESSES:
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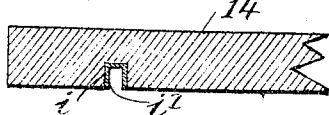
INVENTOR

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Fig. 3.



UNITED STATES PATENT OFFICE.

ROBERT LEE RICHARDSON, OF KEOTA, IOWA, ASSIGNOR OF ONE-HALF
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EXTENSION AND OTHER TABLE.

No. 819,802.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed January 18, 1905. Serial No. 241,571.

To all whom it may concern:

Be it known that I, ROBERT LEE RICHARDSON, a citizen of the United States, and a resident of Keota, in the county of Keokuk and State of Iowa, have invented new and useful Improvements in Extension and other Tables, of which the following is a full, clear, and exact description.

The nature of my invention consists, essentially, in the employment of a plurality of side sections for the top-frame of an extension-table or for a non-extension table, said sections being formed of plate metal and each provided with a longitudinally-extending tubulation which is open at one side, but exceeds a half-circle in cross-section, whereby said frame-sections are adapted for telescopic connection in sequence and when so engaged are prevented from lateral disengagement.

The invention furthermore comprises a novel construction for the corner portions of the top frame of the table, other features of improvement being shown, which will be hereinafter fully described.

The invention consists in the novel construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of an extension-table embodying features of the invention. Fig. 2 is a plan view of the same partly broken away. Fig. 3 is a longitudinal sectional view substantially on the line 3 3 in Fig. 2. Fig. 3^a is an enlarged longitudinal sectional view of an end portion of a table-leaf, showing a detail of the invention. Fig. 4 is an enlarged perspective view showing one corner of a table-top frame of novel construction. Fig. 5 is a broken perspective view of a corner-bracket that is a detail of the invention. Fig. 6 is a perspective view of one of a plurality of top-frame sections employed. Fig. 7 is a transverse sectional view of a locking-plate that is a portion of each corner-bracket employed, the section being taken substantially on the line 7 7 in Fig. 4. Fig. 8 is a transverse sectional view of the same substantially on the line 8 8 in Fig. 4; and Fig. 9

is a perspective view of portions of two top-frame sections for the improved table, showing their telescopic engagement and means carried by said frame-sections that limit their sliding movement one within the other.

The table-top frame is rectangular and comprises a suitable number of sections for each side and end thereof, to be determined by the dimensions given to the completed table. The frame-sections 10 are formed of blanks cut from plate metal, steel plate of proper gage being preferably employed, which affords requisite strength and lightness. Each frame-section 10 is formed with an integral tubulation 10^a, extending throughout its length, preferably at the center of width, and, as shown, said tubulation on each frame-section is projected from the exterior side thereof. The tubulation 10^a of each frame-section 10 is of a suitable diameter to afford necessary rigidity to the section, the diameters of the plurality of sections forming the sides of the top-frame being so proportioned that they have close-fitting telescopic engagement one with the other in sequence. It is essential for the proper sliding engagement of one tubulation 10^a with the next one in sequence that said tubulations be more than a semi-circle in their curved wall, transversely considered, so that when introduced endwise one into the other the smaller one cannot be displaced through the gap *a* left between the flat portions of the frame-section and that occupy the same vertical plane when the parts of the table are assembled for service.

To further stiffen the top-frame sections 10, each of them adjacent to the corners of the frame should have a flange 10^b turned inwardly at a right angle from the flat portion thereof that extends above the tubulation 10^a, said flanges being disposed practically in a horizontal plane when the table-frame is set up for use. It is to be understood that the like end portions of the table-top frame are to be formed of plate metal and tubulated in a manner similar to the side frame-sections 10, these end portions 10^c being each made up of one or more sections, as may be preferred, (see Figs. 3 and 8,) and each provided with a top flange corresponding with the flanges 10^b on the side sections 10.

Four similar corner-brackets are provided

as complementary portions of the table-top frame, and, as shown, each consists of a preferably cast-metal structure having two integral side portions that are disposed at a right angle one with the other. The side walls 11 of each corner-bracket are formed with tubulations 11^a, similar to the tubulations 10^a, and it will be noted in Figs. 2 and 4 that the tubulations on the side and end sections of the table-top frame fit neatly within the tubulations 11^a, into which they are inserted endwise. The side and end frame-sections are secured upon the corner-brackets by screws or rivets, as is indicated in Fig. 4 at *b*, and as the cast corners of the top-frame may be quite thin and given any desired style of ornamentation on their outer surfaces they add to the ornate appearance of the table.

The side sections 10 of the top-frame are each provided with an abutment-toe *c*, formed on the lower edge of a depending flange thereof, and these abutments on the adjacent ends of said frame-sections are so formed and arranged that an abutment on one depending flange will be adapted to impinge upon the abutment on the frame-section 10 in which it slides, which contact will prevent the inner frame-section from leaving the outer one when the frame-sections are fully extended, this relative arrangement of parts being shown in Figs. 3 and 9.

Four legs 12 of any ornamental design are provided for the support of the table at its corners and are detachably connected therewith, the novel means for effecting such a connection as shown consisting of the following details:

On the angularly-connected sides of each corner-bracket 11 and flush with their lower edges a base-plate 11^b is integrally formed and extends across the bracket in a normally horizontal plane, said flat base-plate having a keyhole-slot *d* formed in it opposite the corner of the bracket and near the center of the plate, as indicated in Figs. 5 and 8. Beneath the flanges 10^b on the top-frame sections 10, that are secured to each corner-bracket, a locking-plate 11^c is secured thereto, each locking-plate being a duplicate of the base-plate 11^b, above which it is directly located. In each locking-plate 11^c a keyhole-slot *e* is formed, which is located in a recess *e'*, formed in the upper side of said locking-plate; and, as indicated in Figs. 4, 7, and 8, the depression in the upper side of each locking-plate is inclined somewhat on the bottom, being lowest at the narrow end of the keyhole-slot *e* opposite and comparatively near the corner of a respective bracket where the side walls 11 join, and it will be noted in Fig. 8 that the slots *d* and *e* are disposed one directly above the other.

In the flat upper end of each leg 12 is secured the lower end of a locking-bolt 13 and preferably is projected axially therefrom,

each of these similar bolts for a set of legs 12 having a head *g* on the upper or free end of the same. The head *g* of each locking-bolt 13 is projected laterally from the body of the bolt and is of such shape and size as adapts it to fit loosely in the keyhole-slots *d e*, through which it is to be passed upward, and the distance between the lower side of each bolt-head and the flat top face of a post 12, from which it projects, is such that when the bolt-body is passed up through the aligned slots *d* and *e* the head *g*, which may be turned around by a rotatable movement of the post, will ride upon the inclined bottom surface of the recess *e'* and by its cam-like action draw the leg into close contact with the lower surface of the base-plate 11^b, thus firmly securing the leg in place on the corner-bracket. It will be seen that if the legs 12 are of an equal length and the base-plates 11^b are disposed in the same plane when the corner-brackets and side sections of the table are assembled the table as an entirety will have the upper surface of its frame supported level if the legs are seated upon a horizontal support.

A suitable number of table-leaves 14 are furnished to form the table-top, and these are placed transversely on the upper surfaces of the top-frame sections 10, the corner-brackets and the end frame members thus affording a continuous level table-top that may be formed of any suitable wood that is properly finished.

The table if designed to be altered in length has its leaves or top-boards 14 at and near the ends of the top-frame secured upon the flanges 10^b by means of screws that engage perforations therein, but the leaves which are removable and which are seated upon the upper edges of the frame-sections 10 may with advantage be transversely grooved at a proper distance from each end in the normally lower side.

The transverse grooves *f* in each table-leaf 14 are preferably rectangular and are lined with sheet-metal shoes *f'*, which are secured in place by any suitable means, and it is to be understood that the depth of the lined grooves is so proportioned that when the leaves are placed upon the upper edges of the frame-sections 10 the upper surfaces of the leaves will be level one with the other. This construction of the removable leaves insures their retention on the top-frame, as they will be prevented from longitudinal movement in an obvious manner, and the employment of the ordinary dowel-pins and sockets in the edges of the leaves is dispensed with.

By the removal of all the loose leaves 14 the table-top frame may be correspondingly shortened by pushing the end portions thereof toward each other, which will slide the tubulations of the side frame members into each other, respectively. If a table is designed to have its top boards rendered sta-

tionary, then all of the latter may be secured upon the respective top flanges 10^b, and the table rendered square or of any desired length, depending upon the length of the end portions of the top-frame.

It will be seen that by constructing the entire upper portion of the table, except the leaves 14, of sheet metal and very light cast metal an exceedingly light but strong table is afforded that may be changed for length quickly, and as the tubulations 10^a on the side-frame sections, as well as on the corner-brackets, are, in effect, slotted tubes, one fitting neatly but slidably in a mating one, the table-top frame at any point of sliding adjustment is strong and rigid, resisting torsional strain, as well as pressure, on its upper side to a remarkable degree.

As the abutments *c* on the lower edges of the plate-metal side frame-sections 10 may be caused to pass each other by springing the frame members laterally, it will be seen that the top-frame members may be separated from each other, and they may also be disconnected from the bracket-frame members 11, if their connecting means is in the form of screws, so that a table in finished condition may be "knocked down" and all parts packed into a very compact package for transportation, and said parts may be again assembled for use as a table very expeditiously and in a perfect manner with but the use of a screw-driver.

Owing to the material used and the peculiar novel construction of the table, the use of a center leg is dispensed with and the weight of a table of given dimensions is very much less than a table of like size formed of wood in the usual style.

It is obvious that the table may be finished throughout in any preferred manner and be

rendered a highly-ornamental piece of furniture.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A table-top frame, comprising a plurality of plate-metal sections, each having a laterally-projected cylindrical tubulation that has a slot-like opening therein, said tubulations slidably engaging one within the other through said openings, whereby they are held from lateral displacement.

2. A table-top frame, comprising a plurality of plate-metal side sections, each provided with an integral outwardly-projected cylindrical tubulation longitudinally thereon, each tubulation having a narrow gap or slot-like opening extended throughout its length, the diameters of said tubulations being varied so as to adapt one tubulation to slide in the adjacent tubulation that is of greater diameter, the inner tubulation having a neck where it joins the flat portions of the side section it is on, said neck working in the gap or slot and thus adapting one tubulation to slide in a corresponding one.

3. In a table of the character described, the plurality of removable wooden table-leaves, each having a rectangular transverse groove near each end and in the lower side, and a thin metal shoe embedded in each groove, said channeled shoes receiving the upper edges of the top-frame sections when said sections are extended.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT LEE RICHARDSON.

Witnesses:

C. A. LACEY,
RALPH C. HAMILTON.