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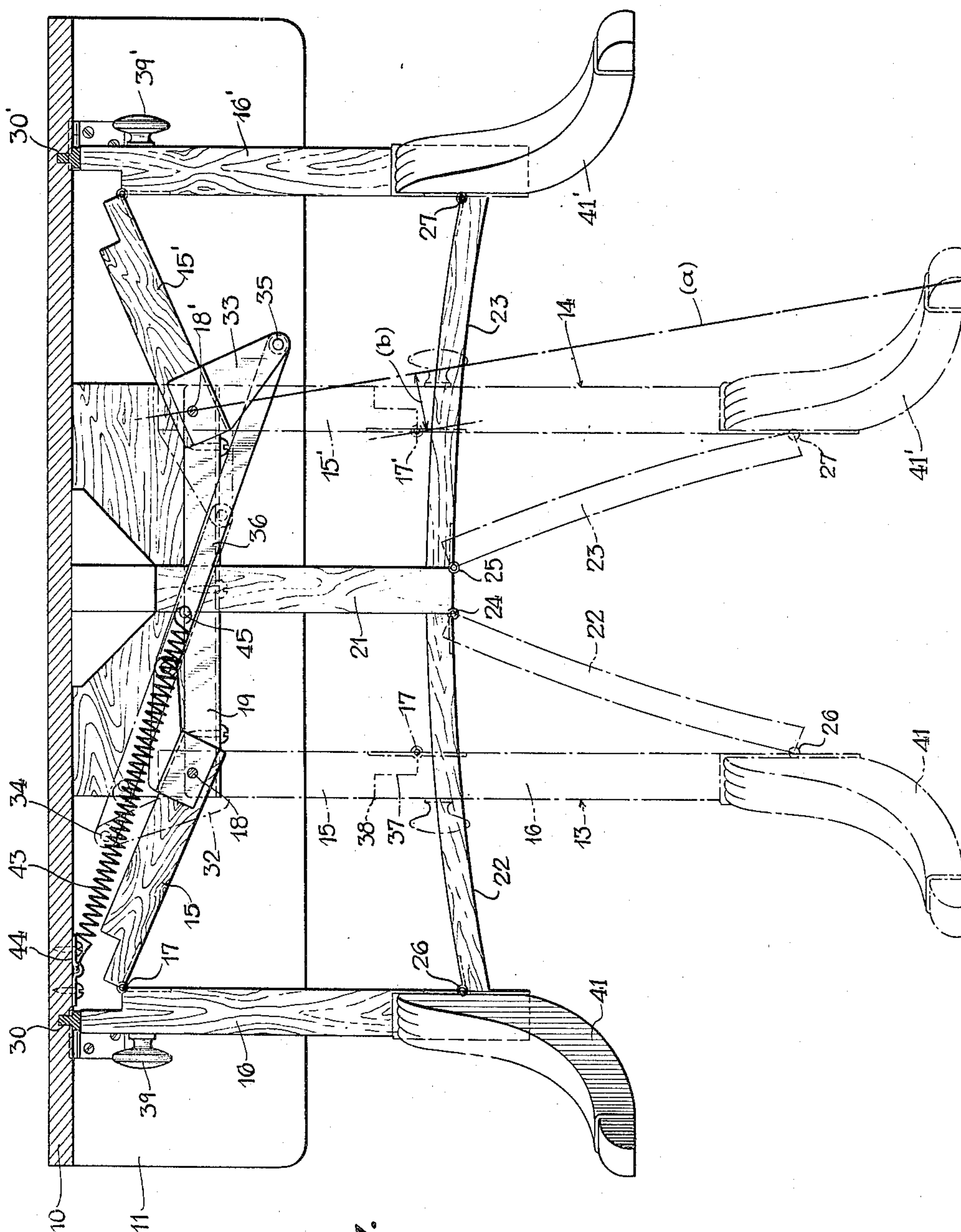
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2,544,229

VERTICALLY ADJUSTABLE TABLE CONSTRUCTION

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2 Sheets-Sheet 1



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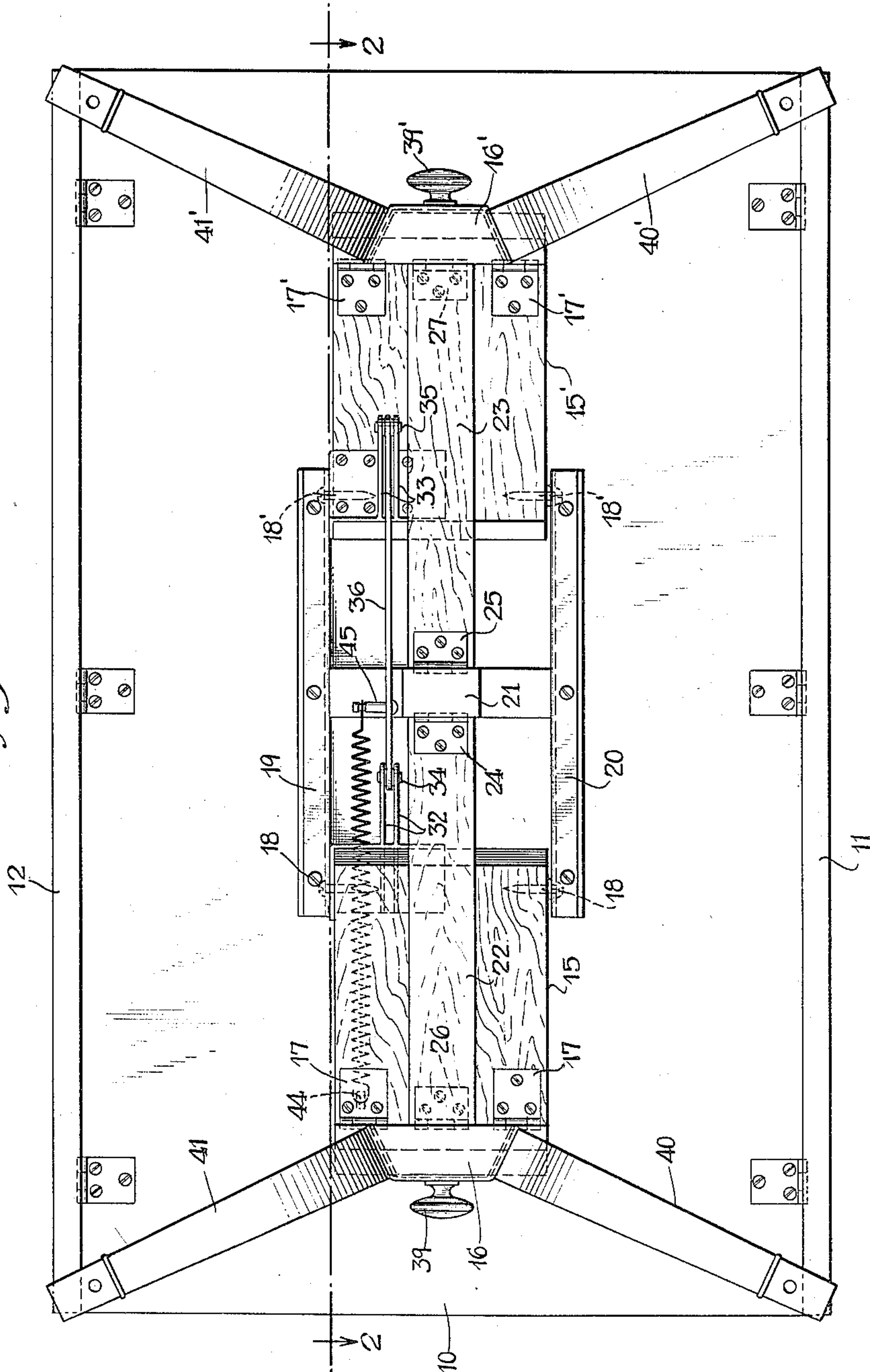
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Fig. 2.



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VERTICALLY ADJUSTABLE TABLE
CONSTRUCTION

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1 Claim. (Cl. 311—39)

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This invention relates to table constructions of types adapted for ready conversion from one useful height to another so that, for example, the same table may be used either as a so-called coffee table with the top in relatively low position or as a dinette or card table with the top in a higher position.

The provision of convertible tables of the type indicated involves several problems which, so far as I am aware, have not been fully and satisfactorily solved in such manner as to provide a structure which will be attractive in use when the table top is in either its elevated or lowered position, and which will not give the appearance of being mechanized and which will be simple and easy to construct and operate.

The present invention provides a construction which overcomes these difficulties and which has been highly satisfactory in practical use.

Further and more specific objects, features and advantages of the invention will appear from the following detailed description taken in connection with the appended drawings which form a part of this specification and illustrate by way of example a preferred form of the invention.

In the drawings,

Fig. 1 is a view, partly in section, showing a preferred form of the invention in side elevation, the table in its lowered condition being shown in full lines, and the dotted lines showing the position of parts when the table top is elevated, and

Fig. 2 is a bottom view of the construction of Fig. 1.

Referring now to the drawings in further detail, the table as shown may comprise a table top 10 having, if desired, hinged drop-leaves as at 11, 12 of conventional form and adapted to be swung to horizontal position and supported by any conventional well-known means (not shown).

Two spaced-apart leg structures indicated generally at 13, 14, are provided, each of these including an upper leg portion as at 15 and a lower leg portion as at 16, the latter being pivotally connected adjacent its upper end by pairs of hinges as at 17 to the lower end of the upper leg portion 15. Each of the upper leg portions is pivotally connected with respect to the under side of the table top as by shaft means or pins as at 18 mounted in any suitable depending supporting means as at 19, 20 fixed to the under side of the table top.

A member 21 is also rigidly secured to the under side of the table top in a depending position intermediate the two leg structures. At the lower

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end of the member 21 a pair of brace members as at 22, 23 are pivotally connected as by hinges 24, 25. The other ends of these brace members respectively are pivotally connected with respect to the lower leg portions as by hinges 26, 27. Thus when the table top is in its lower position, the parts are so constructed, arranged and connected with the brace members 22, 23 that they will normally assume a generally horizontal end-to-end relationship but, as indicated by dotted lines in Fig. 1, when the table top is in elevated position, these two brace members will be directed from lower or intermediate portions of the lower leg members toward an upwardly converging relation.

Certain of the corresponding portions of the two leg structures are identified by the same reference numerals but the numerals being accompanied by prime marks in the case of the right hand leg structure as it appears in Fig. 1.

Assuming that the table top is in its lower position for use as a so-called coffee table, then it will be apparent from Fig. 1 that the lower leg portions 16, 16' will be in generally vertical positions with their upper ends supporting the under side of the table top. Rubber or other yieldable buffer means may be inserted in the under side of the table top as at 30, 30' to resiliently engage the upper ends of the lower leg portions when the table is in this condition. At this time it will be noted that the upper leg portions 15, 15' will be swung inwardly and downwardly toward each other, the positions of their inner ends being controlled by their pivoting pins at 18, 18'.

As will now be described, a mechanism (which will hereinafter be referred to as "rotary motion reversing means") is provided so that when one of the leg structures is operated, the other will be concurrently operated. This means preferably comprises a pair of sheet metal arms as at 32 both suitably secured at one end to, and rotatable with leg portion 15, and a similar pair of oppositely rotatable arms 33 secured at one end to, and rotatable with the other upper leg portion 15'. These arms act in conjunction with the upper leg portions 15, 15' in the manner of bell crank arms. Their outer ends are pivotally connected as at 34, 35, respectively, to the opposite ends of a link member 36. Thus when the upper leg portion 15 is moved counterclockwise from the position shown in full lines in Fig. 1, the linkage is such that the other upper leg portion 15' will be moved clockwise about its pivot pins at 18'. Such movement may be accomplished as by grasping one or both of the lower leg portions

or by pushing one or the other of hand buttons 39, 39' downwardly and inwardly with respect to the table top, or in some cases by similarly lifting the table top. The upper and lower leg portions may thus be moved into the end-to-end relation indicated by dotted lines in Fig. 1 to support the table top in its upper position.

The upper end of each lower leg portion as at 37 (Fig. 1) may be recessed to receive the lower end of the upper leg portion having a complementary recess and in a manner so that when the leg portions come together as shown in dotted lines in Fig. 1, a firm knuckle-like joint will be provided and the exposed outer line of demarcation at the joint, viz., at 38, will be somewhat higher than the pivot 17 and thus be more nearly concealed from view than would be the case if a butt joint straight across were provided between the two leg portions at this point.

With the particular form of the invention as shown, it will be noted that the lower portions of each of the two leg structures are substantially of a conventional Duncan Phyfe design. That is, the lower portions of members 16, 16' each terminates in a pair of foot portions as at 40, 41, which diverge outwardly at angles conventional for such design, toward positions so that contact with the floor is at or adjacent points directly under the corners of the table top. In addition to the highly stable, attractive design which is thereby afforded, the use of foot portions diverging in this way is particularly advantageous with the present invention for a reason which will now be explained in conjunction with the dot-dash lines (a) (b) at the right hand side of Fig. 1. That is, it will be noted that if straight lines are drawn from the pivoting pins as at 16' to the floor contacting points of the foot portions, such lines will fall considerably outside the axes of the hinges at 17' (by a distance equal to the length of line (b)). Thus the weight of the table and any pressure exerted thereon will tend to hold the knuckle-like joint at 17' in position to maintain the table top elevated, whereas if the leg structures contacted the floor at points directly under or in line with the joints 17, 17', the structure would be more readily collapsible and the table top would not be so securely locked in effect in its upper position. Thus the divergent foot portions of the Duncan Phyfe design cooperate with the knuckle-like joints at 17, 17' to afford a stable structure while still making it possible to have leg structures which always present an upright graceful appearance.

If desired in order to aid in elevating the table top from its lower to its upper position, a helical tensioned spring as at 43 may be provided having one end connected to the under side of the table top as at 44, its other end being connected as at 45 to the link 36.

It will be noted that when the table top is in lowered position, especially if the drop-leaves 11, 12, are down, the resulting structure will present substantially the appearance of a coffee table of conventional Duncan Phyfe design. The mechanism and all parts which are particularly distinguishable from conventional furniture will be effectively hidden. Then to raise the table top to its upper position for dinette or card playing purposes it will be necessary for the user to simply grasp the table top and raise it whereby the parts will be quickly and very easily brought into their dotted line positions shown in Fig. 1 with the table top elevated. Due to the fact that the knuckle-like joints 17, 17' will automatically come into

stabilized positions as explained, it is unnecessary to provide any particular means for locking the table top in its uppermost position. Also when the table top is in its upper position, particularly if the drop-leaves are down, no unsightly mechanism or parts will be exposed. To persons standing about the table it will still present the appearance of the conventional Duncan Phyfe design, and even when the drop-leaves are raised, all mechanism of non-conventional appearance will be so close to the under side of the table top that it will not be exposed to view.

To move the table top to its lower position again it is merely necessary to grasp one of the hand buttons 39, 39' in one hand and pull same outwardly as the table top is grasped in the other hand. During the resulting movement of the parts it will be noted that the braces 22, 23 and the upper leg portions 15, 15' will serve to control the positions of the lower leg portions with respect to the vertical and in the particular example shown the parts are so proportioned that the leg portions 16, 16' will be maintained upright whether the table top is in its lower or upper position. In some cases it might of course be preferred to have the leg portions 16, 16' at slight angles to the vertical.

Modifications of the inventions are disclosed and claimed with respect to certain of the embodiments of my copending application, Serial No. 761,690, filed July 17, 1947.

While a preferred form of the invention has been illustrated and described, it is to be understood that the invention is not limited thereto but may be embodied in various modified forms as will be apparent to those skilled in the art. Reference will be had to the appended claim for a definition of the invention.

What is claimed and desired to be secured by Letters Patent is:

In a table construction having a top adjustable for use at either a lower or upper elevation while being retained horizontal, the combination comprising two lower leg structures which are spaced apart when the top is adjusted to the upper elevation and further spaced apart when the top is at the lower elevation, said leg structures each having an upstanding upper part and a pair of foot parts which diverge downwardly and outwardly toward points beneath the corners of the table, a pair of members which form vertical upward continuations for said leg structures respectively when the top is at the upper elevation and which are directed inwardly toward each other in folded positions along below the level of the table top when the latter is at the lower elevation, one end of each of said members respectively being pivotally connected to points fixed with respect to the upper ends of said leg structures, the other ends of said members respectively being pivotally connected at spaced points with respect to the underside of the top, a brace-retaining member fixed to the underside of the top and depending downwardly from the mid-portion thereof for a substantial distance, a pair of brace links each pivotally connected at one end to the lower end of said brace-retaining member, said brace links also being pivotally connected at their other ends respectively at points on said leg structures adjacent the upper ends of said foot parts, and additional linkage means with connections to control the relative movement of said pair of members with respect to the underside of the mid-portion of the table top to cause said pair of members to pivot through equal

and opposite angles when the table top is raised or lowered.

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