Oct. 14, 1952 J. C. C. YUAN 2,614,012

COFFEE TABLE WITH VERTICALLY ADJUSTABLE TOP

Filed June 16, 1950 2 SHEETS—SHEET 1

Fig. 1.

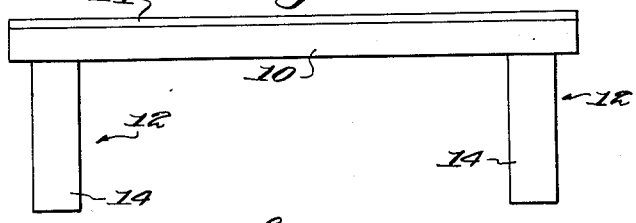


Fig. 7.

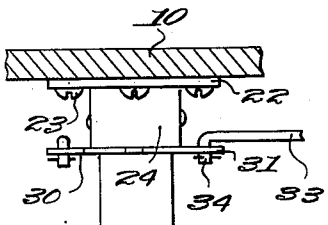
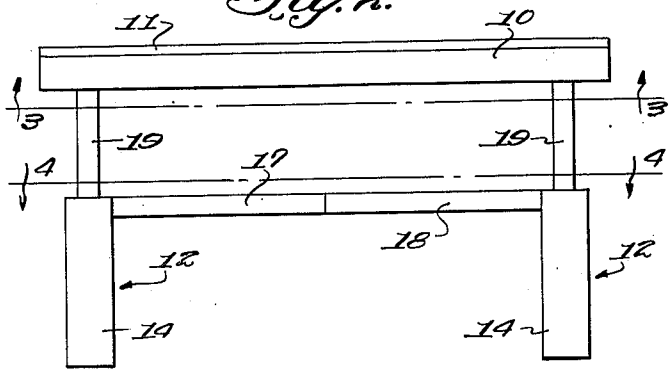


Fig. 2.



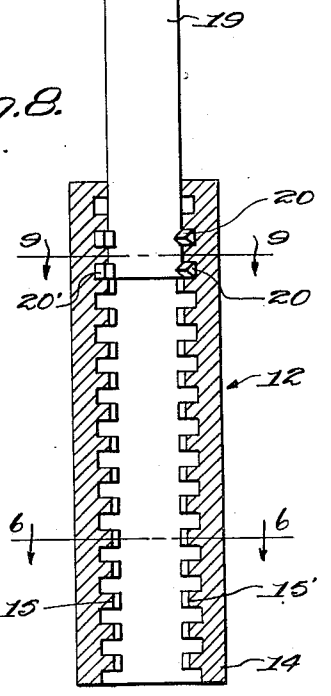


Fig. 8.

Fig. 9.

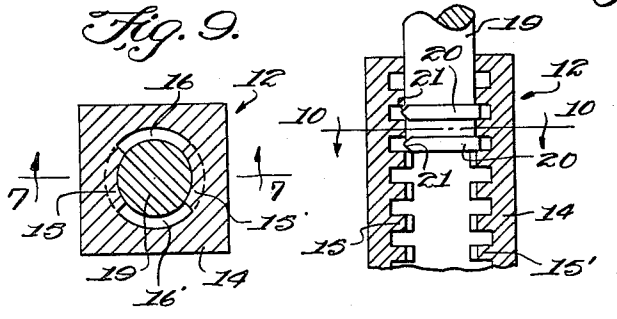


Fig. 10.

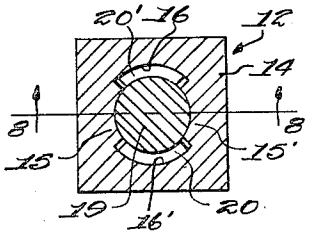
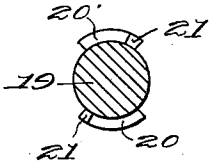


Fig. 11.



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Fig. 3.

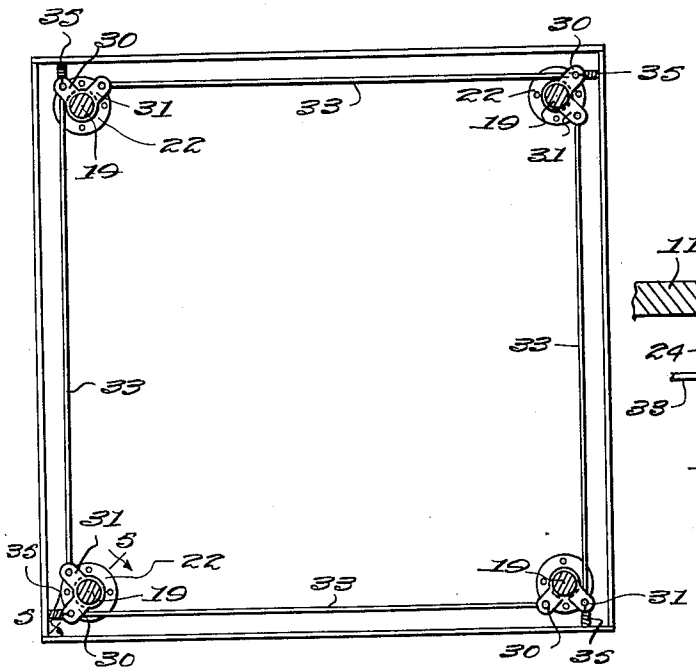


Fig. 5

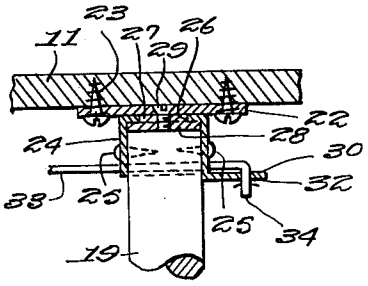


Fig. 6.

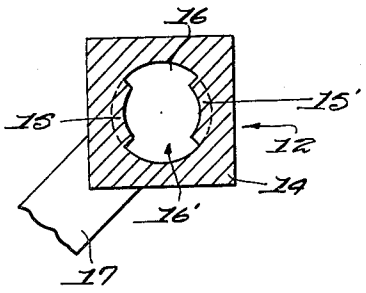
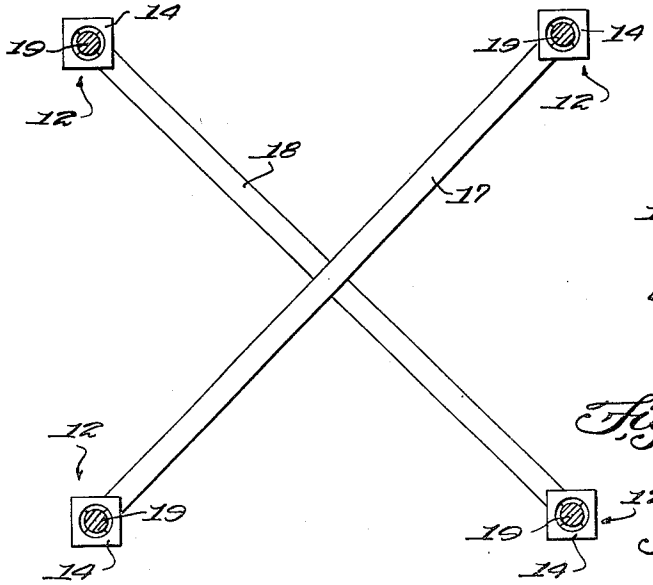


Fig. 4.



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COFFEE TABLE WITH VERTICALLY ADJUSTABLE TOP

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Application June 16, 1950, Serial No. 168,425

1 Claim. (Cl. 311—39)

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This invention relates to an article of furniture, and more particularly to an adjustable table.

The object of the invention is to provide a table which includes a top that may be quickly and conveniently adjusted to different elevations.

Another object of the invention is to provide a table that includes legs that are adjustable, whereby the height of the table top can be readily raised or lowered by actuating any one of the legs, or by actuating any of the rods connecting the legs together.

Still another object of the invention is to provide a table whose height can be readily adjusted to permit use of the table as a card table, if desired, the height of the table being adjustable in order to permit use of the table as a cocktail table, sewing table, or any other desired use.

Other objects and advantages will become apparent during the course of the following description.

In the accompanying drawings forming a part of this application, and in which like numerals are used to designate like parts throughout the same:

Figure 1 is a side elevational view of a table with the top in its lowermost position;

Figure 2 is a view similar to Figure 1, but showing the table top and legs in their raised position;

Figure 3 is a sectional view taken on the line 3—3 of Figure 2;

Figure 4 is a sectional view taken on the line 4—4 of Figure 2;

Figure 5 is an enlarged sectional view taken on the line 5—5 of Figure 3;

Figure 6 is a sectional view taken on the line 6—6 of Figure 7;

Figure 7 is a sectional view taken on the line 7—7 of Figure 9;

Figure 8 is a sectional view taken on the line 8—8 of Figure 10;

Figure 9 is a sectional view taken on the line 9—9 of Figure 7;

Figure 10 is a sectional view taken on the line 10—10 of Figure 8;

Figure 11 is a horizontal sectional view taken through the inner leg or stem of the table.

Referring in detail to the drawings, the numeral 10 designates a horizontally disposed top which may be fabricated of any suitable material, and the top can be adjusted or raised and lowered to various heights, so as to permit the table to be used as a sewing table, cocktail table, dining table, and the like. A suitable covering

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11 may be secured to the upper surface of the top 10. The table of the present invention further includes a plurality of vertically disposed legs 12, and each of the legs 12 has the same construction.

Each of the legs 12 consists of a vertically disposed, hollow sleeve 14, and arranged in the sleeve 14 as an integral part therewith, is a first set or plurality of superimposed, spaced lugs 15, there being a second set of superimposed, spaced lugs 15' arranged opposite from the lugs 15, Figures 7 and 6. It will be seen that the lugs 15 are spaced from the lugs 15', so as to define a pair of smooth portions 16 and 16' in the sleeve 14. In other words, the lugs 15 and 15' are arranged in a ladder-like formation and are in the nature of interrupted threads.

Extending between the sleeves 14 and secured to the sleeves and to each other are braces 17 and 18, Figures 2 and 4, the braces 17 and 18 serving to maintain the sleeves 14 in their proper spaced relation. Telescopically mounted in each of the sleeves 14 is a vertically disposed stem or standard 19. Arranged adjacent the lower end of each of the stems 19 is a first set of spaced, parallel teeth 20, and arranged diametrically opposite from the teeth 20 is a similar set of teeth 20'. Each of the teeth 20 and 20' is provided with a pointed or tapered end 21, Figures 7 and 11, the pointed ends 21 serving to facilitate movement of the teeth 20 and 20' into the spaces between the lugs 15 and 15'. Thus, it will be seen that by properly rotating or positioning the stems 19, the teeth 20 and 20' can be moved completely out of engagement with the lugs 15 and 15', so that the stems 19 can be raised or lowered in order to position the top 10 at any desired elevation. In other words, with the teeth 20 and 20' extending into the smooth portions 16 and 16' of the sleeves 14, there will be no obstruction to vertical adjustment of any of the stems 19.

A means is provided for operatively connecting the upper end of each of the stems 19 to the table top 10. This means is shown in Figures 5 and 7, and includes a plate 22 which is secured to the under surface of the top 10 by suitable securing elements, such as screws 23. Surrounding the upper end of each of the stems 19 is a bracket or cap 24, the bracket 24 being secured to the stem 19 by suitable screws 25. The upper end of the bracket 24 is provided with a circular opening 26, and a disc 27 is rotatably arranged in the opening 26. Positioned below the disc 27 is a spacer member 28 which may be formed

integrally with the disc 27, the spacer member 28 being of larger diameter than the disc 27. A suitable screw 29 serves to connect the parts 22, 27 and 28 together so as to maintain these parts in assembled relation. By means of this construction, the stem 19 and bracket 24 will be free to rotate below the table top 10.

Formed integrally with each of the brackets 24, or secured thereto, is a pair of horizontally disposed ears 30 and 31, Figure 3. Each of the ears 30 and 31 is provided with an aperture 32. A plurality of connecting rods 33 are provided, and it will be seen that each of the rods 33 is provided with a transverse end portion 34, Figure 5, the transverse end portions 34 of each of the rods 33 extending through the apertures 32 in the proper ears 30 and 31. By means of the connecting rods 33, it will be seen that when any of the stems 19 are rotated manually, the connecting rods 33 will cause all of the other stems 19 to rotate the same amount in the same direction. If desired, the user can also grip any of the connecting rods 33 and by properly reciprocating or moving that connecting rod, all of the stems 19 can be rotated in order to free the teeth 20 and 20' from the lugs 15 and 15', in order to permit raising and lowering of the table top. A spring member 35 is arranged contiguous to each of the brackets 24, and the spring members 35 serve to normally urge or maintain the lugs 20 and 20' in engagement with the teeth 15 and 15', so that the table top 10 will be maintained immobile in its various adjusted positions.

In use, the table top 10 can be moved to any desired elevation in order to adapt the table for various uses. To adjust the top 10, any one of the stems 19 is gripped in the hand and rotated 90°, so that the teeth 20 and 20' move into the smooth portions 16 and 16'. This rotation of any one of the stems 19 causes a similar rotation of all of the other stems 19, due to the connecting rods 33. Also, instead of gripping one of the stems 19 and rotating such stem, the same effect can be accomplished by gripping any one of the rods 33 and reciprocating this rod, and thereby causing rotation of all of the stems 19. Now, with the stems 19 arranged so that their teeth 20 and 20' are positioned in the smooth portions 16 and 16' of the sleeves 14, the stems 19 can be raised or lowered to the desired position. After the top 10 has been adjusted to the desired position, the stems 19 or connecting rods 13 are released, whereby the spring members 35 will cause the stems 19 to rotate 90° until the teeth 20 and 20' are again arranged in meshing engagement with the lugs 15 and 15', so that the table top 10 will be maintained immobile in this adjusted position.

By means of the previously-described construction, the stems 19 of the table legs 12 can be operated from all sides of the table, so that the user can adjust the table to the desired height, regardless of his or her position. Also, the adjustable table of the present invention permits one table to be used as a coffee table, card table, sewing table, typing table, or other types of table, since the height can be adjusted as desired. Also, the table can be adjusted in order to properly position the top relative to various heights of chairs, or according to the way different people sit. The table of the present invention is sturdily constructed and will remain immobile in its adjusted position. The operating mechanism is simple and easy to adjust, and also, the table is attractive in appearance. The stems 19 are so connected to the table top 10 that these stems can turn independently of the table top. Also, the four stems 19 are connected to each other by the rods 33 so that by moving any stem or any connecting rod, the four stems will turn in the same direction and in the same degree. As soon as pressure on the rods or stems is released, the teeth 20 and 20' will return or move back into meshing engagement with the lugs 15 and 15', due to the spring members 35.

I claim:

An adjustable table comprising a horizontally disposed top, a plurality of spaced parallel vertically disposed hollow sleeves, each of said sleeves being provided with a first and second set of superimposed spaced ladder-like lugs, the first set of lugs being spaced oppositely from the second set of lugs to define a pair of oppositely arranged smooth portions in said sleeves, a vertically disposed stem telescopically arranged in each of said sleeves, a first and second set of diametrically opposed teeth projecting from the lower end of each of said stems and mounted for movement into and out of engagement with the lugs of said sleeves, said teeth being each provided with a tapered end so as to facilitate movement of said teeth between said lugs, means operatively connecting each of said stems to said top, said means comprising a plate secured to the undersurface of said top, a bracket surrounding the upper end of each of said stems and secured to the upper end of each of said stems, said bracket being provided with a circular opening in the upper end thereof, a disc rotatably seated in said opening, a spacer member positioned below said disc and formed integral with said disc, said disc being of less diameter than said spacer member, a securing element pivotally connecting said plate, disc and spacer member together, a pair of spaced ears projecting from each bracket and each provided with an aperture, rods each having a transverse portion engaging said apertures for pivotally connecting the ears of said brackets together whereby rotation of one stem causes all of said stems to rotate in unison, and spring members having one end engaging one of said apertures and the other end secured to said top for normally maintaining said teeth in engagement with said lugs.

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