

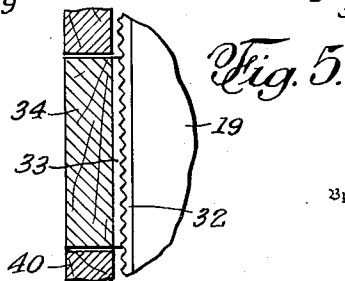
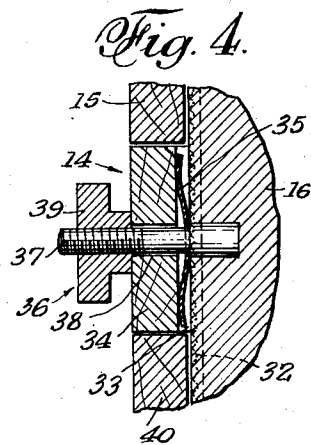
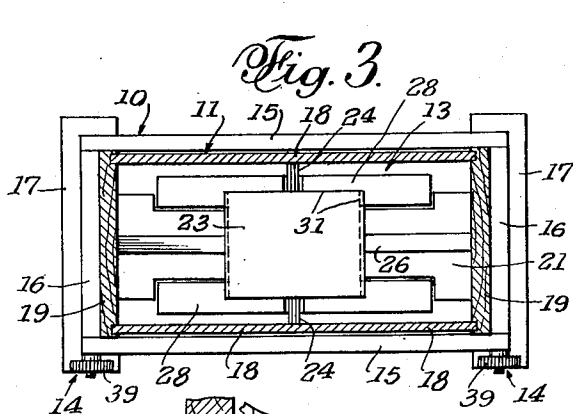
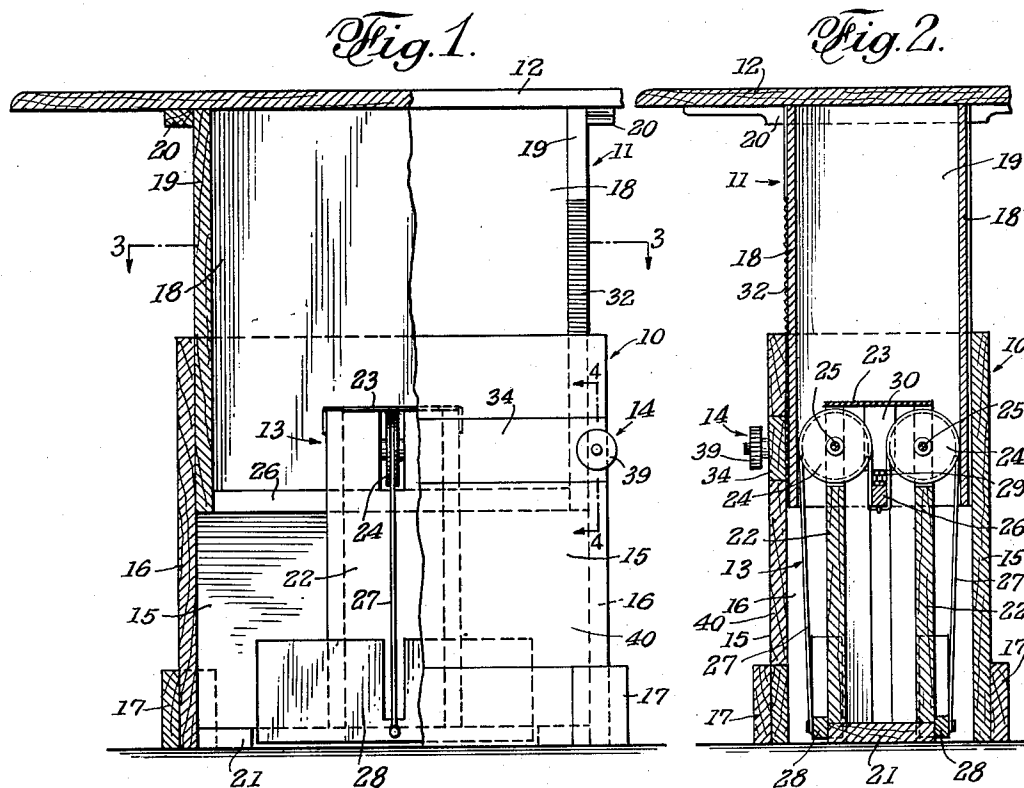
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HEIGHT-ADJUSTABLE TABLE

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HEIGHT-ADJUSTABLE TABLE

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This invention relates to a height-adjustable table to provide an article of this type that is convertible for different purposes.

An object of the present invention is to provide, in a table having a base or pedestal portion and a relatively extensible column or top portion, novel and improved means, carried by the former portion and operatively connected to the latter portion, for so counter-balancing said latter portion as to render easy and facile the positional adjustment of said latter portion.

Another object of the invention is to provide novel and improved means to lock the adjustment of the above-mentioned portions to adapt the table for use as a coffee or cocktail table in its low position of adjustment, as a full-height table, and as a table of any intermediate height for particular purposes.

The invention also has for its objects to provide such means that are positive in operation, convenient in use, easily installed in a working position and easily disconnected therefrom, economical of manufacture, relatively simple, and of general superiority and serviceability.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description. However, the drawing merely shows and the following description merely describes one embodiment of the present invention, which is given by way of illustration or example only.

In the drawing, like reference characters designate similar parts in the several views.

Fig. 1 is a partial side elevational and partial vertical sectional view of a height-adjustable table according to the present invention.

Fig. 2 is a vertical sectional view taken at right angles to Fig. 1.

Fig. 3 is a plan sectional view as taken on line 3-3 of Fig. 1.

Fig. 4 is an enlarged fragmentary sectional view as taken on line 4-4 of Fig. 1.

Fig. 5 is a similar view taken in a plane immediately to the left of said line 4-4.

The present height-adjustable table comprises, generally, a pedestal 10, a column 11 telescopically fitted into said pedestal and provided at the upper end thereof with a table top 12, means 13 mounted within said pedestal and operatively connected to said column to upwardly project the latter and the top 12, and means 14 to releasably lock the adjusted position of said column and table top at the height desired for the latter.

As shown, the pedestal 10 comprises a box-like

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structure having side walls 15 and end walls 16, said structure having an open top into which column 11 extends. In practice, the height of pedestal 10 is made to be such that, when the table top rests thereagainst, the latter is at the minimum height—the usual height of a coffee or cocktail table. The stability of pedestal 10 may be increased as by cleats or the like 17 provided to enlarge the base dimensions of the pedestal. While shown of elongated rectangular form in plan, the pedestal may be square, if desired.

The column 11 that is shown also comprises a box-like structure and is of a size to slidably fit within pedestal 10 with sufficient clearance to obviate friction or binding. Said column comprises side walls 18 and end walls 19. A table top 12 of any suitable size and shape is affixed to the top of said column. If desired, suitable cleats 20 may be employed to effect the interconnection of the column and table top so that nails or screws, used to effect the interconnection, may be applied from beneath. Comparable means, other than cleats 20, may be employed for this purpose.

From the foregoing, it will be seen that a telescoping structure is provided that is interiorly hollow to provide ample space for accommodation of means 13.

The means 13, in the present case, is shown as a counter-balancing means that functions in a quiet manner. As shown, said means comprises a base member 21 that is affixed to and spans between end walls 13 and is disposed in the lower portion of the pedestal, a pair of fixed standards 22 extending upward from member 21, a cap 23 connecting the standards at the top, a pair of coplanar grooved pulleys 24 mounted on axles 25 in the upper portions of said standards 22, a longitudinal member 26 spanning between column walls 19 and disposed between the pair of standards 22, a rope, chain or cable 27 fixedly secured to said member 26, trained over each pulley 24, and extending downward therefrom, a weight 28 connected to the lower end of each said rope, chain or cable, and an adjustable stop 29 carried by member 26 or by a depending member 30 beneath cap 23 to limit the uppermost position of member 26 and, therefore, of table top 12.

The above-described components of the means 13 are arranged symmetrically and centrally of pedestal 10 with member 26 midway between side walls 18 of the column 11, pulleys 24 on either side of side member 26 and in a plane

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transverse to the plane of said member, and weights 28 on the outer sides of standards 22 and preferably formed to nest thereagainst. Said weights are guided by the standards during the movement up and down, the weights being preferably notched at 31 to slidably fit around the standards for guiding engagement.

The weights 28 are equal and, together, are made to be somewhat greater than the weight of the column 11 and its top 12. Therefore, from any position of the latter, below its topmost position, the weights 28 are automatically effective as counterweights that raise said column and top. Stop 29 limits this upward movement of the column. Since weights 28 are only slightly heavier than said column and table top, only a slight downward push on the latter is needed to depress the same against the counter-balancing force of the weights. It will be noted that both weights exert their pull on member 26. Since the latter is at the center of gravity of the table top, this equalized pull causes the column to slide upward in the pedestal without side tilt and also downwardly without such tilt when the approximate middle of the table top is pushed. Because of this balanced application of the weights, the accuracy of fit between the pedestal and column may be made on broad tolerances at considerable saving in the cost of manufacture.

The means 14 to lock the height-adjustment of the column and table top is shown as comprising a finely serrated member 32 on the edge of each wall 19 on one side of the column, a mating serrated member 33 for each member 32, carried by a loosely fitted board or plank 34 of one wall 15, a spring 35 interposed between the ends of said board and the edges of walls 16 to normally outwardly urge said board and, thereby, separate the respective mating members 32 and 33, and means 36 to press said board inwardly against the force of springs 35 to engage the serrations of members 32 and 33 and, thus, lock together the column and pedestal. The means 36 is shown as a threaded stud 37 tightly fitted in each wall 16 and extending through a clearance hole 38 in each end of board 34, and a knob 39, in the form of a nut, on each stud. The springs 35 are shown as bowed leaf springs strung on said studs.

Loosening of knobs 39 allows the weights 28 to automatically raise the table top and allows depression of said table top. Tightening the knobs locks the parts, as above described.

To give access to the interior of the pedestal for assembly of the means 13, board 34 may be readily removed. Also, a substantial portion of wall 15, indicated by panel 40, also may be made removable for this purpose.

While the invention that has been illustrated and described is now regarded as the preferred embodiment, the construction is, of course, subject to modifications without departing from the spirit and scope of the invention. It is therefore not desired to restrict the invention to the particular form of construction illustrated and described, but to cover all modifications that may fall within the scope of the appended claims.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. A height-adjustable table having a hollow pedestal and a telescopically fitted column provided with a table top, counter-balancing means for said column and table top comprising a support standard in the interior of the pedestal and affixed thereto, a pair of coplanar grooved pulleys

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rotationally carried by the upper portion of said standard, a member disposed substantially between said pulleys and affixed to the lower portion of the column, a cable connected to said member and trained over each pulley to extend downward from the opposite edges of said pair of pulleys, and a weight on the end of each downwardly extending part of the cables, the weights being equal and the weight of both weights being greater than the weight of the column and its table top.

2. A height-adjustable table having a hollow pedestal and a telescopically fitted column provided with a table top, counter-balancing means for said column and table top comprising a support standard in the interior of the pedestal and affixed thereto, a pair of coplanar grooved pulleys rotationally carried by the upper portion of said standard, a member disposed substantially between said pulleys and affixed to the lower portion of the column, a cable connected to said member and trained over each pulley to extend downward from the opposite edges of said pair of pulleys, an adjustable stop between said member and an upper portion of the pedestal to limit the extension of the column and table top relative to the pedestal, and a weight on the end of each downwardly extending part of the cables, the weights being equal and the weight of both weights being greater than the weight of the column and its table top.

3. A height-adjustable table according to claim 1: said weights being slidably engaged with the support standard and the latter constituting a guide for said weights.

4. A height-adjustable table according to claim 1: said weights, at all times, providing a lifting force on the column and table top, and interengageable means to the pedestal and column to lock the pedestal and column to resist said force.

5. In a height-adjustable table having a hollow pedestal and a top-provided column, means carried by the pedestal interiorly thereof to exert a constant lifting force on the column, said means comprising a pair of standards extending upwardly in the pedestal, a grooved pulley revolvably carried by the upper end of each standard, said pulleys being arranged in spaced edge-to-edge relation and in a common plane, the lower end of the column being provided with a member disposed in a plane between the adjacent edges of the pulleys, a cable connected to said member and trained over each said pulley and each having a free end extending downwardly of each respective opposite edge of said pulleys, and a weight on the end of each said free end, said weights being equal and their sum being greater than the weight of the column.

6. In a height-adjustable table according to claim 5: said weights being arranged to slidably engage the standards which thereby guide them.

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