

# UNITED STATES PATENT OFFICE

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#### VERTICALLY ADJUSTABLE DROP-LEAF TABLE

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The present invention relates to adjustable tables and more particularly to a table which is adjustable to different heights.

Various types of adjustable or foldable tables have been devised. Many of them are relatively complicated or are too impracticable for commercial manufacture and use. A highly desirable feature of an adjustable table is that it be readily and easily adjustable to different heights; if it is necessary to assemble or interfit various 10 parts or to disassemble parts in order to raise or lower a table, the particular table is not readily saleable and there is an understandable aversion to its use. In addition to the foregoing drawbacks, previous adjustable tables have generally 15 embodied a supporting surface of limited area and have not provided an enlarged supporting area for certain conditions of usage.

The present invention aims to overcome the above and other difficulties or disadvantages by providing a new and improved table which may normally be used as a low coffee table, and which is readily and easily adjustable to a height suitable for use as a dining table or the like. The invention further contemplates the provision of a 25 table having an enlarged supporting surface when in elevated position.

An object of the present invention is to provide a new and improved adjustable table.

Another object of the invention is to provide a 30 new and improved adjustable table adapted to serve either as a relatively low coffee table or as a higher dining table.

Another object of the invention is to provide a new and improved adjustable table having an 35 enlarged supporting surface when in raised position:

Another object of the invention is to provide an adjustable table which may be more readily and easily raised or lowered to different eleva- 40 which may be used. The legs 2a-3a and 2b-3btions.

Still another object of the invention is to provide an adjustable table having a supporting surface, the area of which automatically varies in moving from a low to a high position, or vice 45 versa.

A still further object of the invention is to provide improved means for raising or lowering an adjustable table.

be obvious upon an understanding of the illustrative embodiment about to be described, or will be indicated in the appended claims, and various advantages not referred to herein will occur to one skilled in the art upon employment of the 55invention in practice.

A preferred embodiment of the invention has been chosen for purposes of illustration and description. The preferred embodiment illustrated is not intended to be exhaustive nor to limit the invention to the precise form disclosed. It is chosen and described in order to best explain the principles of the invention and their application in practical use to thereby enable others skilled in the art to best utilize the invention in various embodiments and modifications as are

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best adapted to the particular use contemplated. In the accompanying drawings,

Fig. 1 is an end view showing the present table in lowered position;

Fig. 2 is an end view, partly in section, showing the present table in elevated position; and Fig. 3 is a bottom plan view of the table illustrated in Fig. 2.

Referring again to the drawings, there is shown 20 a table comprising a main upper surface or top member I supported away from a floor by pairs of spaced legs 2 and 3, each pair of legs comprising spaced individual legs 2a, 2b and 3a, 3b, respectively.

The upper portions of two of the legs (pair 2) are movably attached by suitable brackets 5 and pins or pivots 6 to the underside of the top member I adjacent one edge thereof so that the pair of legs 2 may move freely about the axes of the pins 6, as will be hereinafter more fully brought out. Each leg comprising the other pair of legs 3 is shown movably or pivotally connected intermediate its ends with the legs 2a and 2b of the first pair of legs 2 by a cross bar 10. Adjacent legs of each pair of legs may be maintained at correctly spaced intervals by spacer washers 11 and a sleeve or hollow member 12. The particular cross bar 10, sleeve 12 and spacer washers II are shown merely as one form of construction

may be connected together in any suitable manner; for example, it is not essential that the cross bar 10 and sleeve 12 extend across the entire length of table.

If desired, the lower ends of the supporting legs may be connected by cross braces 15 and 18 to provide a stronger and more rigid construction.

The upper ends of the pivotally connected legs Other and further objects of the invention will 50 3a and 3b are shown in contact with an underneath surface of the top member I at locations spaced from the upper attached ends of the first pair of legs 2. This spaced relationship of the upper ends of the supporting legs serves to support the top member 1 at appropriate spaced locations. Movement of the lower and upper

ends of the pairs of legs 2 and 3 toward or away from each other varies their intermediate angles and their effective lengths, and is thus effective to move the top member I away from or toward the floor against which rest the lower ends of 5 the supporting legs. When the ends of the legs are moved toward each other, they are in effect lengthened and the table top I moves upwardly from the position shown in Fig. 1 to that illustrated in Fig. 2. legs are allowed to separate from each other, they are in effect shortened and the table top I moves from the elevated position illustrated in Fig. 2 toward the lower position illustrated in Fig. 1.

When in the low position for use of a coffee table (Fig. 1), the slidable upper ends of the pair of legs 3 rest against stop members or blocks 13, which serve to limit the extent of their outward movement and hence to limit the extent of down-20 ward movement of the table top member I toward the floor. Any other means for limiting the extent of movement of the upper ends of the pair of legs 2 may be used. In instances where the stop members 13 are placed closely adjacent the edge 14 of the top member 1, the table may be moved to a lowermost position; if it is desired to limit the amount of downward movement of the top member 1 to some position which is not quite so close to the floor, the stop members 13 may be positioned an appropriate distance inwardly from the edge 14 of the top member.

During use as a low coffee table, a large supporting surface is generally not desired and leaf 35 members 16 and 17, shown secured to opposite edges of the top member | by hinges 19 and 20, may hang downwardly along opposite edges of the top member I. In such position the leaf members 16 and 17 tend to conceal the support- 40 ing legs and thus provide a coffee table of very pleasing appearance.

Ready and easy raising of the table from the low position shown in Fig. 1 to the elevated position shown in Fig. 2 is achieved by operatively 45connecting the leaf member 16 with the mov-able or slidable upper portions of the pair of supporting legs 3. As shown, the leaf member 16 is pivotally connected at its underside with one end of a link member 21 by brackets 22 and a con- 50necting pin 23. The opposite end of the link member 21 is operatively connected with the upper portion of the slidable pair of legs 3 through a cross bar 25, which serves to join the upper pairs of the spaced legs 3a and 3b. The latter- 55 mentioned connected end of the link member 21 may be maintained in desired position on the cross bar 25 by suitable spacing members 26; the spacing members 26 also serve to maintain the upper ends of the supporting legs 3a and 3b in 60 correctly spaced position.

By the above-described construction the leaf member 16 is so interconnected with the supporting pairs of legs that movement of the leaf member 16 is effective to shift the upper ends of 65 table which may be used in low position as a the pair of movable legs 3 along the underside of the top member 1. Since the other pair of legs 2 is movably connected adjacent its upper end with the underside of the top member I and intermediate its ends with the pair of legs 70 3, this other pair of legs 2 moves about the retaining pins or pivots 6 in response to movements imparted thereto by the leaf 16 through the link member 21, cross bar 25 and pair of legs 3. When it is desired to raise the table from the position 75 connecting link in a manner tending to

illustrated in Fig. 1 to the position illustrated in Fig. 2, a user may place one foot against a lower end 4 of the cross brace 15 or the supporting legs 3 and then lift upwardly and outwardly on the leaf member 16; as the free end of the leaf member 16 moves upwardly and outwardly the link member 21 serves to pull the upper ends of the spaced legs 3 toward the movably mounted but fixedly positioned upper ends of the opposite

When the ends of the pairs of 10 pair of legs 2. As the legs move toward each other, their effective lengths increase and the table top | raises upwardly toward the position illustrated in Fig. 2.

When the leaf 16 has been fully rotated about 15 its hinges 19 to the position illustrated in Fig. 2, its upper surface will be substantially flush with the upper surface of the top member I and the connecting link member 21 holds the upper ends of the pair of legs 3 in the position illustrated in Fig. 2. In this relationship an extension brace 28 may be pulled outwardly beneath the underside of the leaf 16 to retain it in the flush position illustrated in Fig. 2. The extension brace 28 may be normally held to the underside of the top member I and guided therealong by retaining and guiding brackets 29. A wedging member 30 may be utilized to assist in retaining the leaf members 16 firmly in its flush position. A stop block or member 31 may be provided for limiting the extent of inward movement of the extension brace 28.

The oppositely disposed foldable leaf 17 may be maintained in a flush position by a similar extension brace retained at the underside of the top member I by supporting and guiding brackets similar to those used with the extension brace shown at the opposite side of the table. It will be noted that the opposite leaf member 17 is not connected with the pairs of supporting legs 2 and 3. The leaf member 17 is merely lifted upward-

ly without affecting in any way the height of the table or the relative positions of the supporting legs. In addition to providing an enlarged supporting surface when the table is elevated and utilized as a dining table, the leaf member 17 may be used to provide a lower coffee table of temporarily enlarged area. When in the low position the leaf 17 may be lifted upwardly to enlarge the coffee table area without in any way disturbing the supporting legs and without changing the height of the table.

The top member 1 and leaf members 16 and 17 may be of any appropriate sizes. The pairs of supporting legs 2 and 3 may be of any suitable lengths. The invention is not limited to the exact proportions, dimensions or the like illustrated in the drawings. While the table has been referred to herein chiefly for use as a coffee table when in low position and as a dining table when in elevated position, it will be clear that the table may be utilized for various other purposes when in either the low or high positions.

It will be seen that the present invention provides a new and improved adjustable height coffee table and which may be readily, easily and conveniently elevated for use as a dining table or the like. The table is simple and sturdy in construction and provides a highly useful article of furniture which serves a dual function. The table may be raised by the simple operation of putting one's foot against a lower portion of the supporting legs and thereafter lifting upwardly on the drop-leaf to pull upwardly on a 5

straighten the supporting legs and thus raise the table top to an elevated position. An extension brace serves to retain the table in elevated position. When it is desired to lower the table, an extension brace may be moved inwardly to release the supported drop leaf; the weight of the table tends to spread apart the interconnected supporting legs and the table top may descend to provide a low coffee table or the like.

As various changes may be made in the form, 10 construction and arrangement of the parts herein without departing from the spirit and scope of the invention and without sacrificing any of its advantages, it is to be understood that all matter herein is to be interpreted as illustra- 15 tive and not in a limiting sense.

We claim:

1. In an adjustable height table of the character described, the combination of a first leg member rotatably connected with the table ad- 20 jacent an upper end of the leg and a second leg member having an upper end movable toward and away from the upper end of said first leg member in accordance with the height of the table, a leaf member hingedly connected with 25 the upper portions of said legs. the table and movable in the same general direction as said leg members, means rotatably connecting said first leg member with one of said other members, and means including a link member rotatably connected adjacent one end there- 30 of with said leaf member and adjacent an opposite end thereof with said second leg, movement of the leaf about its hinge connection being effective to move said link generally longitudinally and to move said leg members to thereby 35 change the height of the table.

2. In an adjustable table of the character described, the combination of a top structure having opposite side and end edges, a support leg movably connected adjacent its upper end with said top structure adjacent a side edge of said top structure, a second support leg rotatably connected with said first leg and having an upper portion movable beneath said top structure, a leaf member extending along a side edge of the top structure and foldably connected with said top structure adjacent said side edge, and means movable in a plane generally parallel to said end edges of the top structure connecting said leaf member with one of said support legs so that movement of the leaf moves said support leg and thereby varies the height of said top structure.

3. In an adjustable table of the character described, the combination of a top structure, a first support leg rotatably connected adjacent its upper end with said top structure, a second support leg rotatably connected with said first leg and having an upper portion movable toward and away from the upper end of said first leg, means for limiting the extent of separation of the upper portions of said first and second legs, a leaf member movably connected with said top structure and movable in the same general direction as said support legs, and means connecting said leaf member with said second support leg adjacent the upper part thereof for moving said legs and varying the effective lengths thereof simultaneously with movement of said leaf member.

4. In an adjustable table of the character de- 70 scribed, the combination of a top member, a support leg rotatably connected adjacent its upper end with said top member, a second support leg rotatably connected intermediate its ends with

having an upper portion slidable along an underside of said top member toward and away from the upper end of said first-mentioned support leg, a leaf member foldably connected with said top member along a joint generally parallel with the axis of rotation of said first-mentioned support leg, and means connecting said leaf member with one of said legs for movement thereof

5. An adjustable table of the character described, comprising the combination of a top structure; a first pair of spaced legs rotatably connected adjacent their upper ends with said top structure, a second pair of spaced legs rotatably connected intermediate their ends with said first pair of legs and having their upper portions movable toward and away from upper portions of said first pair of legs, a leaf member foldably connected with said top structure, and movable in the same general direction as said pairs of spaced legs, means including a link member connecting said leaf member with upper portions of said second pair of legs, and stop means for limiting the extent of separating movement of

6. An adjustable table of the character described comprising the combination of a top structure, a first pair of spaced legs movably connected adjacent their upper ends with said top structure, a second pair of spaced legs rotatably connected intermediate their ends with said first pair of legs and having their upper ends movable toward and away from the upper ends of said first pair of legs, a cross bar interconnecting upper portions of said second pair of legs, a leaf member foldably connected with said top structure along a fold line generally parallel with said cross bar, a link member connecting said leaf member with said interconnecting cross

40 bar so that movement of the leaf member is effective to move said cross bar and said second pair of legs, and stop means for limiting the extent of movement of the upper ends of said second pair of legs away from the upper ends of said first pair of legs.

7. In an adjustable height table of the character described, the combination of a top member, a pair of crossed leg members supporting said top member at spaced locations, means rotatably interconnecting said leg members, additional means rotatably connecting one of said leg members with the top member, an upper end of the other leg member being movable to and fro beneath the top member, a leaf member hingedly connected with said top member ad-55 jacent said additional means for rotation about an axis generally parallel with the axis about which said leg members rotate, and a movable link rotatably connected adjacent one end there-60 of with said leaf member and rotatably connected adjacent an opposite end thereof with said other leg member, movement of said leaf moving said link generally longitudinally and varying the spacing between said leg members 65 and the effective height of said leg members and of the top member supported thereby.

8. In an adjustable height table of the character described, the combination of a top member, leg members supporting said top member. means rotatably connecting at least one of said leg members with the top member, another of said leg members being free of rotatable connection with the top member, means pivotally interconnecting said other leg member and said said first leg intermediate the ends thereof and 75 rotatably connected leg member, a leaf, hinge

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means connecting said leaf with said top member for rotation about an axis generally parallel with the axis about which said leg members pivot, a link member directly underlying said top member at all times, hinge means adjacent 5 one end of said link member securing said link member with said leaf member, means adjacent an opposite end of said link member rotatably connecting it with an upper portion of said other leg member, movement of the leaf member about 10 its hinge connection with the top member being effective to shift the position of said link member and move said other leg member toward and away from the rotatably connected leg member to thereby change the effective height of the 15 top member.

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