

Sept. 10, 1957

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2,805,906

FOLDING VERTICALLY ADJUSTABLE TABLE

Filed Nov. 8, 1956

4 Sheets-Sheet 1

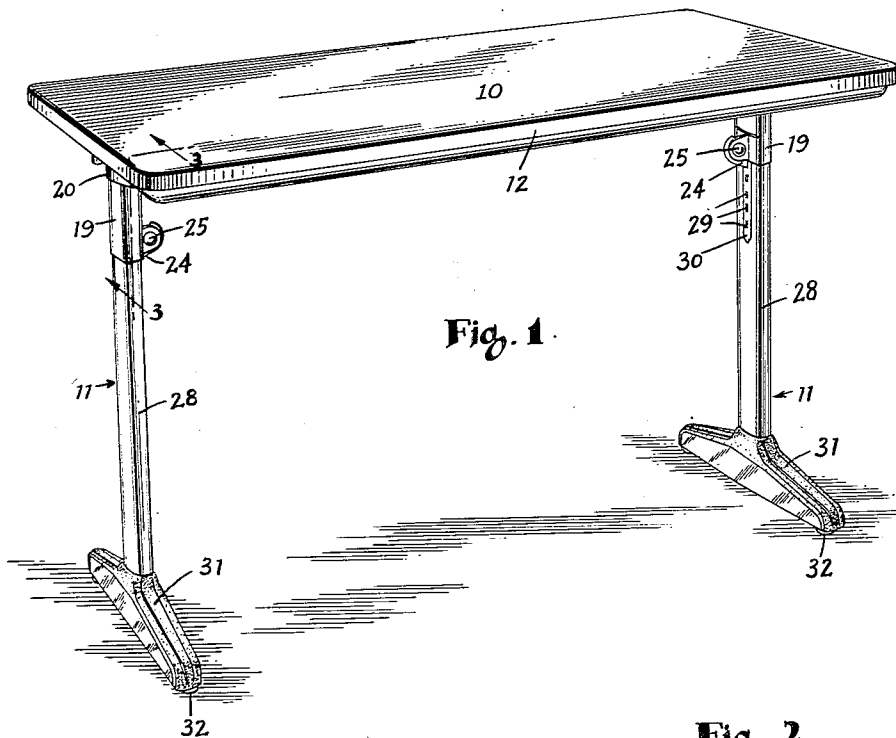


Fig. 1.

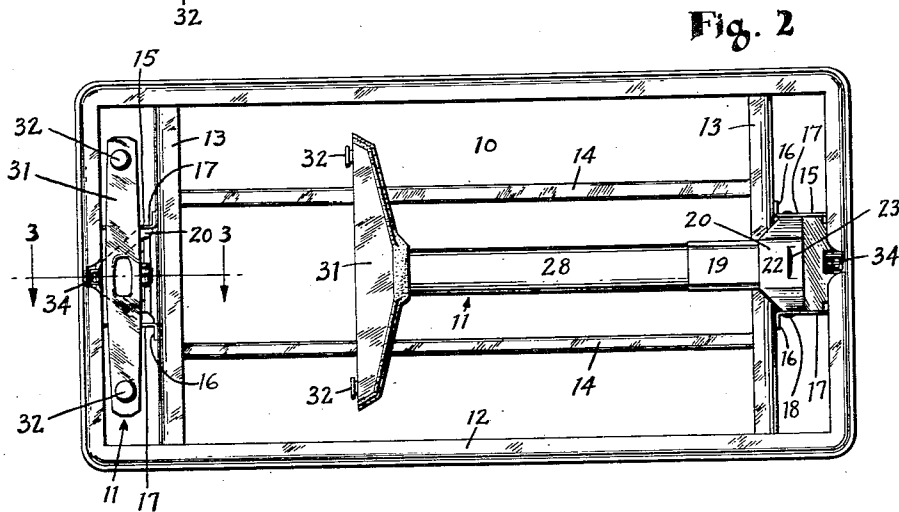


Fig. 2

WITNESS

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4 Sheets-Sheet 2

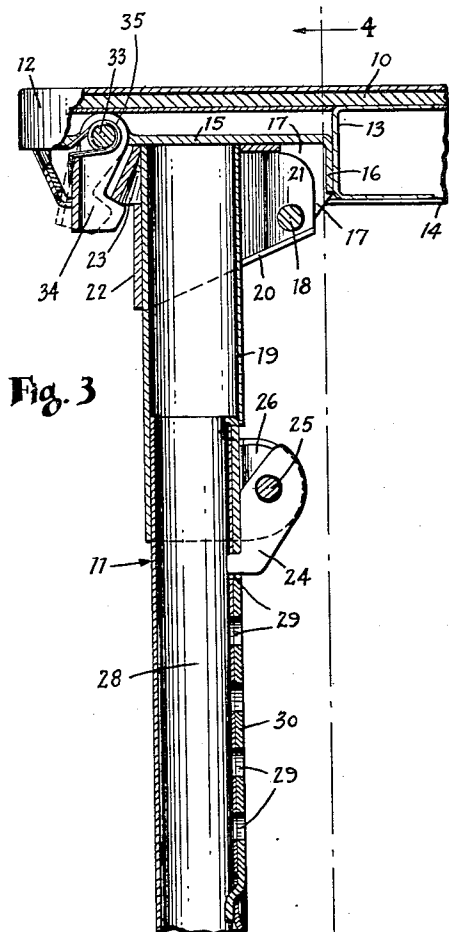


Fig. 3

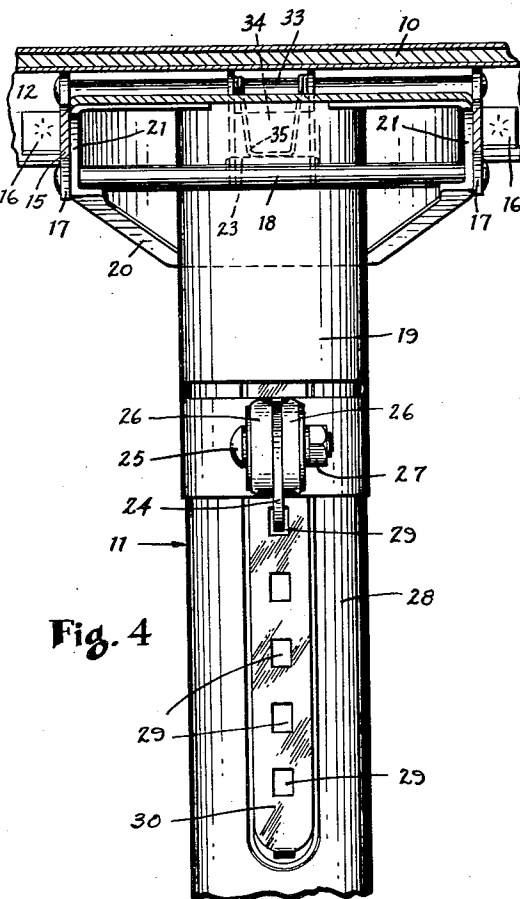


Fig. 4

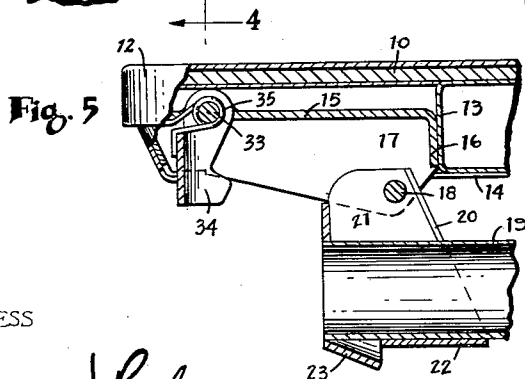


Fig. 5

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4 Sheets-Sheet 3

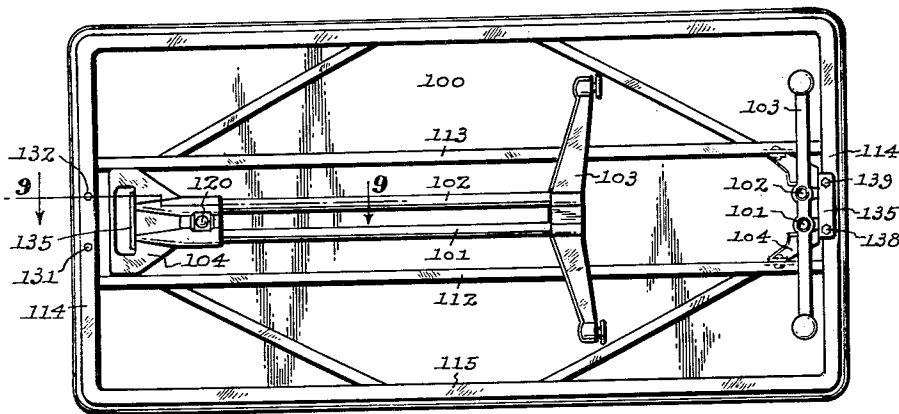


Fig. 7

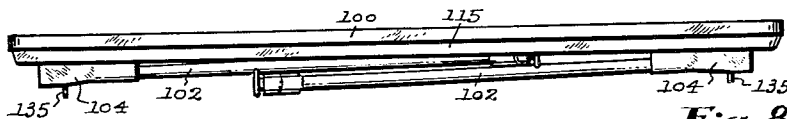


Fig. 8

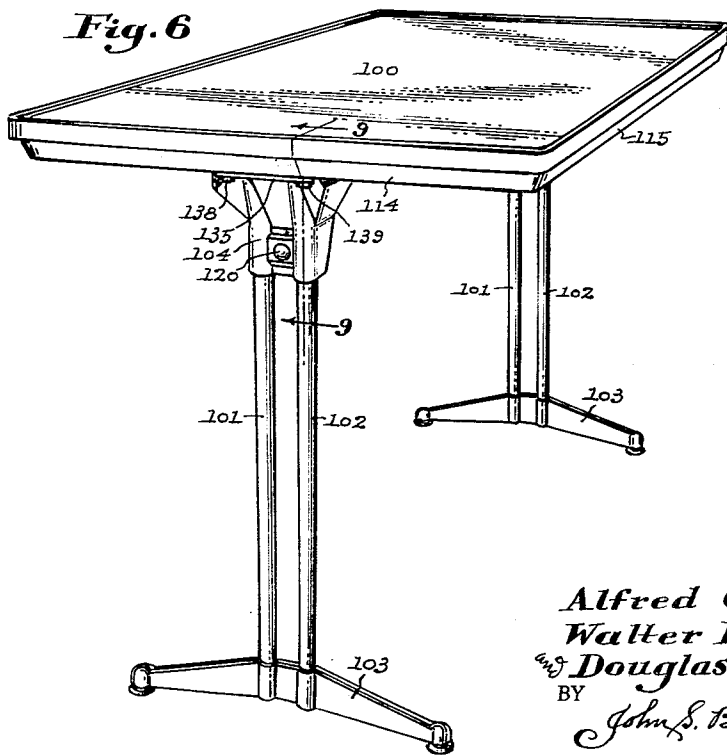


Fig. 6

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4 Sheets-Sheet 4

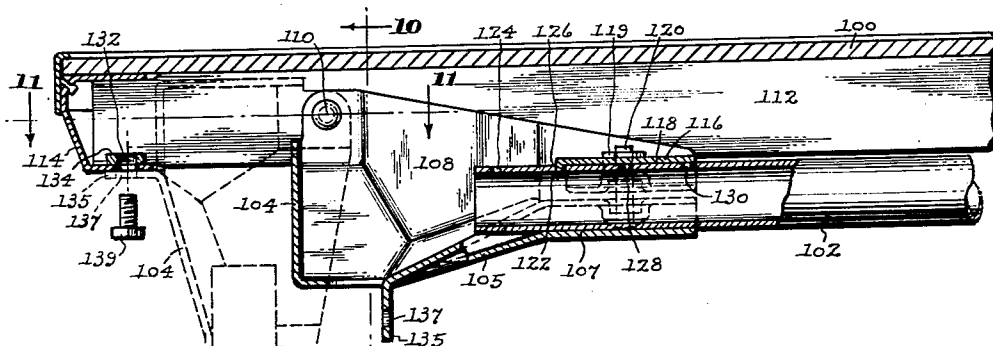


Fig. 9

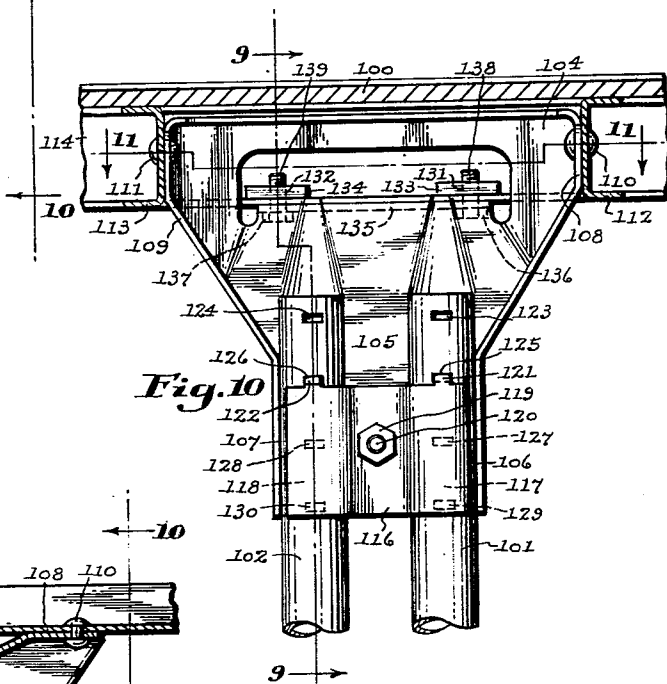


Fig. 10

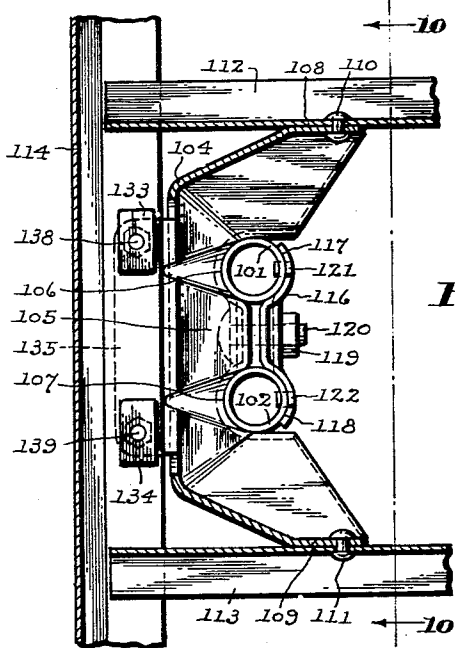


Fig. 11

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1

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FOLDING VERTICALLY ADJUSTABLE TABLE

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9 Claims. (Cl. 311—95)

The present invention relates to tables and more particularly to folding, vertically adjustable tables designed primarily for use in classrooms but suitable for other uses. This application is a continuation-in-part of our co-pending application, Serial No. 496,542 filed March 24, 1955, which application will now be permitted to lapse without prejudice, in view of its being superseded by this present application.

The primary objects of the invention are to provide a table which is adjustable for height so that when used in a school it can be adapted to different age groups seated in chairs of the proper height to go with the adjusted height of the table; to provide such a table the supporting standards for which can be folded up adjacent the underside of the table top so that the table can be more easily transported and will occupy less space in storage and also in shipping; and in general to provide such a vertically adjustable folding table which is rugged and sturdy in construction, reasonably economical in manufacture and attractive in appearance.

Illustrative embodiments of the invention are shown in accompanying drawings, wherein:

Figure 1 is a perspective view of the table in its unfolded or extended position of use;

Figure 2 is a bottom plan view of the table with one of the supporting standards therefor in its extended position and with the other supporting standard in a folded or collapsed position adjacent the underside of the table top;

Figure 3 is an enlarged fragmentary vertical sectional view of parts of the table taken on lines 3—3 of Figures 1 and 2;

Figure 4 is a fragmentary vertical sectional view of the same taken on line 4—4 of Figure 3;

Figure 5 is a fragmentary, sectional view similar to Figure 3, the supporting standard shown being indicated in its folded position in this view;

Figure 6 is a perspective view of a table embodying a modified form of the invention;

Figure 7 is a bottom plan view of the modified form of table shown in Figure 6 with one of the supporting standards therefor in its extended position and with the other supporting standard in a folded or collapsed position adjacent the underside of the table top;

Figure 8 is a side elevational view of the modification in its folded condition of non-use;

Figure 9 is a fragmentary vertical sectional view of parts thereof taken on lines 9—9 of Figures 6, 7 and 10;

Figure 10 is a fragmentary vertical sectional view of said parts taken on lines 10—10 of Figures 9 and 11; and

Figure 11 is a fragmentary horizontal sectional view of said parts taken on lines 11—11 of Figures 9 and 10.

Referring now in detail to this drawing wherein like parts are designated by the same numerals in the several views, and referring first to the form of the invention shown in Figures 1—5, the table there shown generally comprises a table top 10 and supporting standards 11 therefor. The top 10 is mounted on a frame comprising

2

an outer rectangular rim 12, transverse struts 13 near the opposite ends of the top 10, and longitudinal struts 14 extending between the struts 13 near the opposite sides of the top 10.

Brackets 15 are secured adjacent the underside of the table top 10 in the middles of the opposite ends of the top and between the end portions of the rim 12 and the adjacent transverse struts 13. These brackets 15 have tabs 16 secured to the struts 13 and to the outer rim 12 as by means of spot welding, and each bracket 15 is provided with a pair of laterally spaced flanges 17 depending below the table top. A pair of pintles 18 are secured to the brackets 15 inwardly from the adjacent ends of the table top 10, each pintle 18 extending between the flanges 17 of its bracket 15.

A pair of elongated members here shown as tubular sleeves 19 each has a yoke 20 secured as by welding to its upper end, the arms 21 of which yoke extend inwardly and are pivotally mounted on the adjacent pintle 18, and the bight 22 of which yoke is stamped outwardly to provide a latch 23. Each tubular sleeve 19 is thus mounted on its upper inner end on a pintle 18 and is provided on its upper outer end with a latch 23. Each tubular sleeve 19 is also provided with a pivoted detent 24 on its lower inner end such detent 24 being mounted on a pivot pin 25 passing through juxtaposed inner arms 26 on the lower end of the sleeve 19 and provided with a threaded nut 27 (see Figure 4).

A pair of tubular supporting columns 28 have their upper ends slidably fitted to, and as here shown telescopically disposed in, the tubular sleeves 19. These columns 28 are provided with corresponding series of longitudinally spaced apertures 29 along their inner walls adapted for engagement by the pivoted detents 24 to secure the columns in selected telescopically adjusted positions relative to the sleeves 19, thus to selectively adjust the height of the table when unfolded. As shown the apertured inner walls of the columns 28 are provided with reinforcing plates 30 which are also apertured to register with the columns 28.

A pair of pedestals 31 are mounted on the lower ends of the columns 28. These pedestals extend from the columns laterally in both directions and are provided with slides 32 thus making a four-point support for the table. The pedestals 31 may be of any suitable type, e. g., as shown in our co-pending application Serial No. 490,806, filed February 28, 1955. The pedestals form with the columns 28 supporting standards which are swingable with the sleeves 19 to extend use positions for supporting the table top 10 and to non-use positions lying adjacent the underside of the table top.

A second pair of pintles 33 is provided, each pintle 33 extending between the flanges 17 of one of the brackets 15 and being secured thereto outwardly from the upper end of the adjacent sleeve 19. A pair of manually operable keepers 34 are pivotally mounted on this second pair of pintles 33 and are swingable inwardly to positions of engagement with the latches 23 on sleeves 19 in the extended positions of the supporting standards, as seen in full lines in Figure 3. These keepers 33 may be manually swung outwardly to the positions of disengagement indicated by dotted lines in Figure 3, whereupon the standards may be folded alongside the table top 10. When the standards are being unfolded the latches 23 cam the keepers 34 out of their paths of movement, but when fully extended the keepers 34 are urged by springs 35 to positions of locking engagement beneath the latches 23. Springs 35 circumscribe pintles 33 and have their opposite ends bearing against brackets 15 and keepers 34 so that the keepers are normally urged inwardly toward their positions of engagement.

3

In the modified form of the invention seen in Figures 6-11, the table top 100 is supported at its opposite ends by a pair of standards each of which comprises a support consisting of twin, parallel tubular columns 101, 102 having their lower ends mounted on a horizontally elongated pedestal 103. A pair of elongated members here shown as plates 104 are each fabricated to provide a medial portion 105 having inwardly opening sockets 106, 107 into which the upper ends of the adjacent pair of columns 101, 102 are slidably fitted, and a pair of inwardly extending wings 108, 109 which are pivotally connected by rivets or pins 110, 111 to channel struts 112, 113 extending between the middle portions of opposite end flanges 114 forming part of the rim 115 on which the table top 110 is mounted.

A pair of clamping members 116 are associated with the elongated members or plates 104, each clamping member being provided with a pair of outwardly opening sockets 117, 118 which are complementary to the sockets 106, 107 in the plates 104. The upper ends of each pair of tubular columns 101, 102 may be securely clamped between the adjacent plate 104 and clamping member 116 in longitudinally adjusted position, by tightening a nut 119 threaded on a bolt 120 which passes through aligned openings in said members. Prior to such clamping the columns 101, 102 are positioned in preselected longitudinally adjusted positions by engaging the outwardly projecting pair of tongues 121, 122 on each clamping member in a selected pair of apertures 123 and 124, 125 and 126, 127 and 128, or 129 and 130 in the upper ends of the adjacent pair of columns 101, 102 respectively. The height of the unfolded table may thus be selectively adjusted.

The end flanges 114 of the rim 115 extend downwardly and inwardly from the table top 100, and the inwardly extending portion of each flange 114 has a pair of threaded sockets 131, 132, here shown formed by means of nuts 133, 134 welded to said flanges. The elongated members or plates 104 are each provided with an outwardly extending flange 135 thereon having apertures 136, 137 therethrough adapted to register with the threaded sockets 131, 132 when the standards are swung to their unfolded positions depending vertically from the table top. Screws 138, 139 are provided, which may be passed upwardly through the apertures 136, 137 and threadedly engaged in the sockets 131, 132 thus securing the standards in their extended or unfolded positions of use.

It will thus be seen that the invention provides a sturdy and attractive table having both the feature of foldability and the feature of height adjustability, and while but two specific embodiments of the invention have been herein shown and described it will be understood that numerous details thereof may be altered or omitted without departing from the spirit of the invention as the same is defined by the following claims.

We claim:

1. A table of the type in which the table top is supported at its opposite ends by a pair of standards each comprising a support depending from the middle portion of one end of the table top and a pedestal mounted on the lower end of each support and extending laterally therefrom in both directions, the table being characterized by having connections between the top and the upper ends of the supports comprising: a pair of elongated members pivotally connected to the table top in the middle portions of the opposite ends thereof for swinging movement from positions depending vertically from the table top inwardly to positions paralleling the underside of the table top, the upper ends of said supports being fitted to said elongated members longitudinally slidably relative thereto to adjusted positions, and said standards being swingable with the elongated members from positions depending vertically from the table top to positions paralleling the underside of the table top.

4

2. A table of the type in which the table top is supported at its opposite ends by a pair of standards each comprising a supporting column depending from the middle of one end of the table top and a pedestal mounted on the lower end of each column and extending laterally from the column in both directions, the table being characterized by having connections between the top and the upper ends of the columns comprising: a pair of elongated members pivotally connected to the table top in the middles of the opposite ends thereof for swinging movement from positions depending vertically from the table top inwardly to positions paralleling the underside of the table top, the upper ends of said columns being fitted to said elongated members longitudinally slidably relative thereto to adjusted positions, and said standards being swingable with the elongated members from positions depending vertically from the table top to positions paralleling the underside of the table top.

3. A table according to claim 2 further characterized by having the elongated members in the form of tubular sleeves in which the upper ends of the columns are telescopically disposed.

4. A table according to claim 3 further characterized by having corresponding series of longitudinally spaced apertures along the upper inner walls of the columns, and detents pivotally mounted on the lower inner ends of the tubular sleeves adapted to engage in said apertures for securing the columns in longitudinally adjusted positions relative to said tubular sleeves.

5. A table according to claim 2 further characterized by having latches on the upper outer ends of the elongated members, and keepers pivotally mounted on the underside of the table top adapted to engage said latches to releasably maintain the elongated members and the standards in their vertically depending positions.

6. A folding, vertically adjustable table comprising: A table top; a pair of spaced supporting standards each comprising a horizontally elongated pedestal and a pair of parallel columns having their lower ends mounted on said pedestal; a pair of elongated members pivotally connected to the table top in the middle portions of the opposite ends thereof for swinging movement from positions depending vertically from the table top inwardly to positions paralleling the underside of the table top, the upper ends of said columns being fitted to said elongated members longitudinally slidably relative thereto to adjusted positions, and said standards being swingable with the elongated members from positions depending vertically from the table top to positions paralleling the underside of the table top.

7. A folding, vertically adjustable table according to claim 6 characterized by having the columns of tubular form and by having each elongated member provided with a pair of inwardly opening sockets into which the upper ends of the adjacent pair of columns are slidably fitted, a pair of clamping members each provided with a pair of complementary outwardly opening sockets into which the upper ends of an adjacent pair of columns are slidably fitted, and fastening means passing through each elongated member and the adjacent clamping member for drawing said members together with the upper ends of the columns securely clamped therebetween in longitudinally adjusted position.

8. A folding, vertically adjustable table according to claim 7 characterized by having corresponding series of longitudinally spaced apertures along the upper inner walls of the columns, and outwardly projecting tongues on the clamping members adapted to engage in said apertures for positioning said columns in preselected longitudinally adjusted positions prior to the clamping thereof.

9. A folding, vertically adjustable table according to claim 6 characterized by having flanges at the ends of the table top extending downwardly and inwardly and provided with threaded sockets on the inwardly extending portions thereof, and by having outwardly extending

5

flanges on the elongated members provided with apertures therethrough adapted to register with said sockets when the standards are swung to unfolded positions depending vertically from the table top, and screws adapted to pass through said apertures and threadedly engage in said sockets for securing said standards in their said unfolded positions.

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