March 10, 1959 A. OBERRAUCH 2,877,074

ADJUSTABLE TABLE

Filed March 21, 1957 2 Sheets-Sheet 1

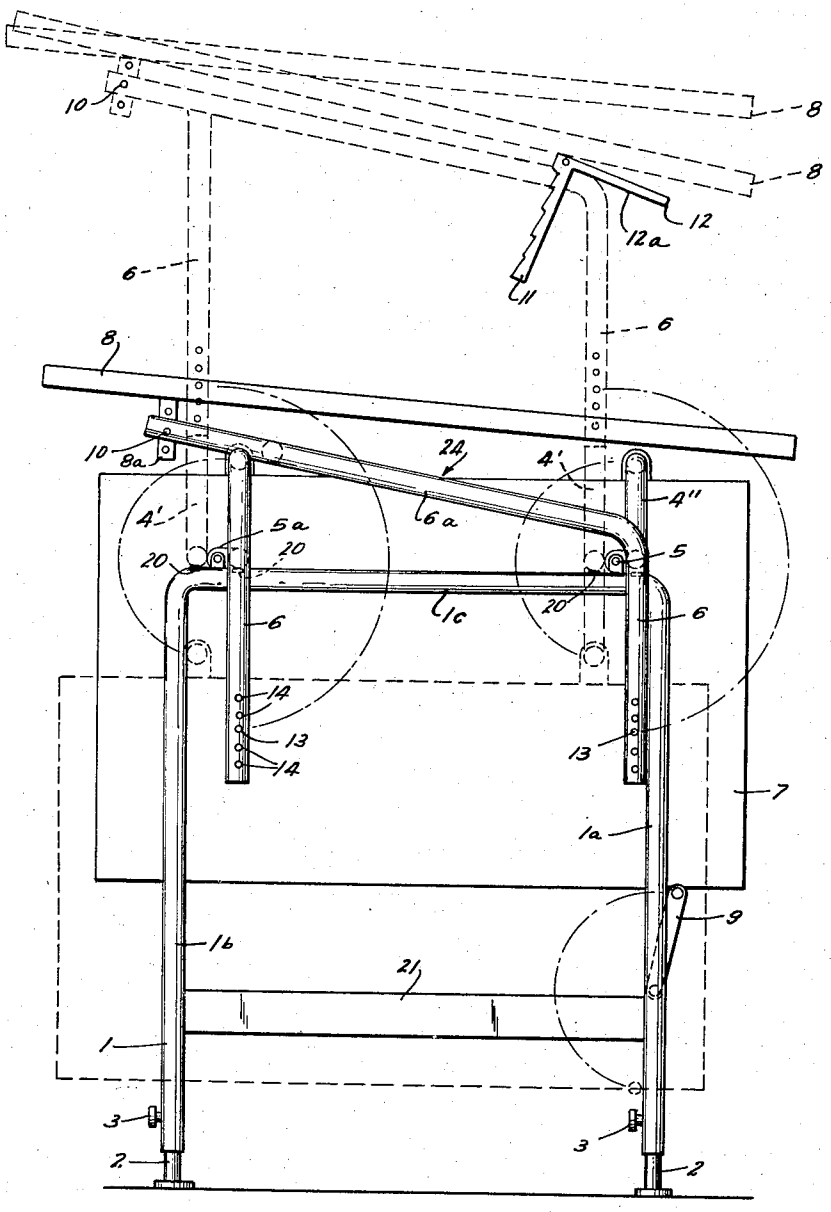

FIG. 1

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ADJUSTABLE TABLE

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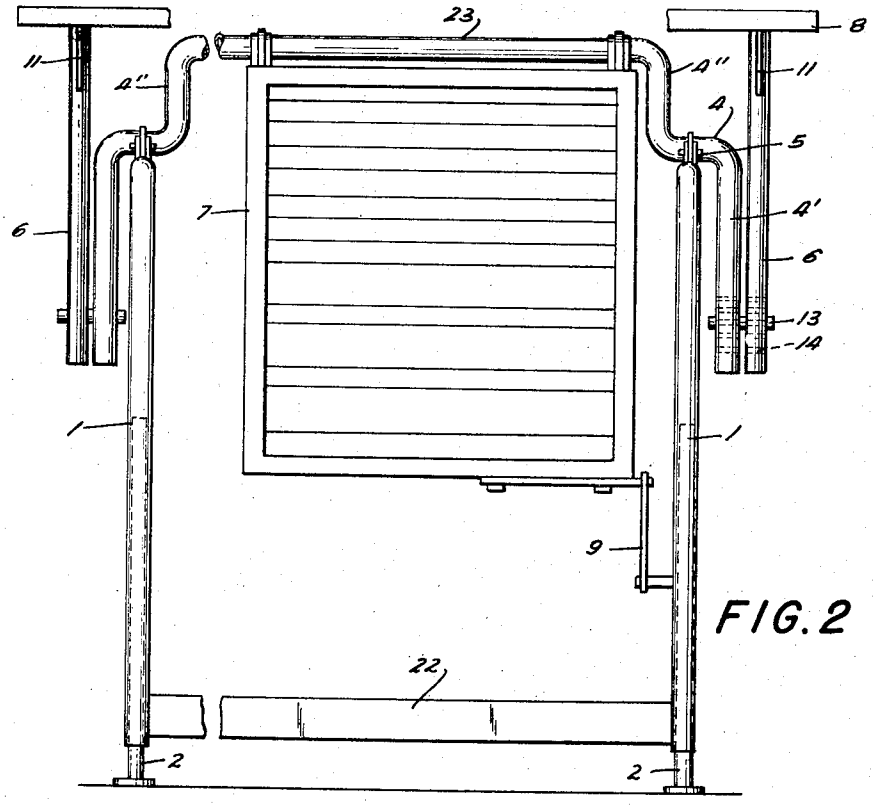

FIG. 2

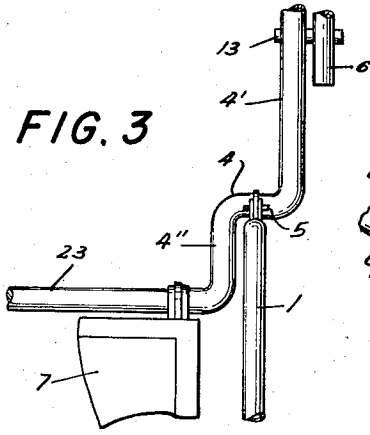

FIG. 3

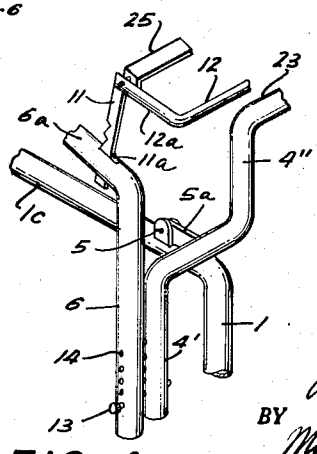

FIG. 4

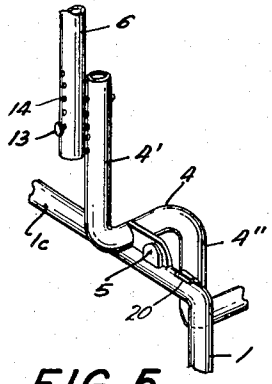

FIG. 5

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ADJUSTABLE TABLE

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Application March 21, 1957, Serial No. 647,563

Claims priority, application Italy March 22, 1956

20 Claims. (Cl. 311—36)

The present invention relates to tables.

More particularly, the present invention relates to tables of the type where the elevation of the table top may be regulated. For example, the table top of the table of the present invention has a lower working position enabling the user to sit at the table and an upper working position enabling the user to stand at the table when it is desired to use the table for making drawings or the like.

One of the objects of the present invention is to provide a table of the above type which can be very easily manipulated by the operator so as to be moved between its working positions.

Another object of the present invention is to provide a table which will reliably and stably remain in each of its working positions without the use of any locking devices of any type.

A further object of the present invention is to provide a table whose table top has upper and lower working positions and which renders it possible to adjust the elevation of the table top in each of its working positions independently.

An additional object of the present invention is to provide a table capable of accomplishing the above objects and composed of simple, light weight elements of rugged construction which can be easily assembled and disassembled.

With the above objects in view the present invention mainly consists of a table which includes a support means adapted to rest on a floor or the like. The table also includes a table top which has upper and lower working positions. A table top carrying frame carries the table top and has a plurality of downwardly extending arms. A plurality of levers are pivotally connected to the support means for turning movement about predetermined pivot axes, and these levers are respectively connected pivotally with the frame arms to form pivotal connections therewith. The levers support the frame arms for elevational movement without changing their inclination and the above pivotal connections respectively turn through circular arcs whose centers are in the pivot axes during movement of the table top between its upper and lower working positions.

The novel features which are considered as characteristic for the invention are set forth in particular in the appended claims. The invention itself, however, both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best understood from the following description of specific embodiments when read in connection with the accompanying drawings, in which:

Fig. 1 is a side elevational view of a table according to the present invention, the table being shown in solid lines in Fig. 1 in the position the parts thereof take when the table top is in its lower working position and Fig. 1 indicating in dotted lines the position of the parts when the table top is in its upper working position, Fig. 1

also showing in dotted and dot-dash lines, respectively, two angular positions which the table top may take;

Fig. 2 is a front elevational view of the table of Fig. 1, part of the table being broken away and not shown in Fig. 2 for the sake of compactness;

Fig. 3 is a fragmentary front elevational view showing the position which levers of the table take when the table top is in its upper working position;

Fig. 4 is a fragmentary, perspective view showing the position which levers take when the table top is in its lower working position, Fig. 4 also illustrating structure for releasably holding the table top in an adjust angular position; and

Fig. 5 is a fragmentary, perspective view showing the position which levers of the table of the invention take when the table top is in its upper working position.

Referring now to the drawings, the table of the invention includes a support means which is adapted to engage and rest on a floor or the like, and this support means is formed by a pair of lateral supporting frames **1**. As is apparent from Fig. 1 each supporting frame has a front leg **1***a*, a rear leg **1***b*, and an upper bar **1***c* extending between and interconnecting the front and rear legs **1***a* and **1***b*, respectively. Each supporting frame **1** may be composed of a single length of tubular metal, for example. In addition, a bar **21** extends between and is fixed to the front and rear legs of each frame **1**, and the two frames **1** are rigidly interconnected with each other by cross bars such as the bar **22** shown in Fig. 2 extending between and fixed to the rear legs of the frames **1** adjacent the lower ends of these legs.

In accordance with one feature of the present invention the entire table may have its elevation adjusted by adjusting the elevation of the supporting frames **1**, and this is brought about by inserting elongated bars **2** into the hollow legs **1***a* and **1***b*, as shown in Figs. 1 and 2. These legs carry set screws **3** which fix the bars **2** within the legs of the frame supports **1** when these frame supports have the desired elevation, and in this way one elevational adjustment is provided.

A plurality of lever means **4** are connected to the support means for turning movement about predetermined pivot axes. Each lever means **4** includes, as is most clearly shown in Fig. 2, a first lever **4'**, an intermediate portion extending across the bar **1***c* of the support frame, and a second lever **4''** extending upwardly from the intermediate portion in the position of the parts shown in Fig. 2. Furthermore, each lever means includes a lever arm **5***a* fixed to the intermediate portion of each lever and extending therefrom along the bars **1***c*, as is shown most clearly in Figs. 1, 4 and 5. These lever arms **5***a* are pivotally connected at **5** to the bar **1***c*. Thus, it is apparent that each lever arm **5***a* forms with the lever **4'** a bell crank while the lever **4''** forms an extension of the lever **4'**.

It will furthermore be noted that a pair of lever means **4** are connected to each side of the support means formed by the interconnected frames **1** adjacent the front and rear of the support means, respectively. Also, a pair of cross pieces **23**, one of which is visible in Fig. 2, are located one behind the other, and one of these cross pieces **23** extends between and is fixed to the front pair of levers **4''** while the other of the cross pieces **23** extends between and is fixed to the rear pair of levers **4''**. Thus, the front cross piece **23** compels the two front lever means **4** to turn together as a unit about a common pivot axis while the rear cross piece **23** compels the two rear lever means **4** to turn together as a unit about another pivot axis which is parallel to and spaced rearwardly from the pivot axis of the front pair of lever means. Actually, the two front pair of lever means **4** and the cross piece **23** are formed from one continuous length

of hollow tubing, and the same is true of the two rear lever means and the cross piece extending between the same.

The table of the invention further includes the table top 8 which is movable between the lower working position shown in solid lines in Fig. 1 and the upper working position shown in dotted lines in Fig. 1.

The table top 8 is carried by a table top carrying frame 24 which includes a plurality of downwardly extending portions or arms 6. The frame 24 is composed of a pair of lateral units each of which includes a front arm 6 and an upper arm 6*a* extending rearwardly and upwardly from the front arm 6 and a rear arm 6 fixed to and extending downwardly from the upper arm 6*a* forwardly of the rear end of the latter, as is evident from Fig. 1. A pair of brackets 8*a* are fixed to the underside of the table top 8 and are pivotally connected at 10 to the free rear end portions of the arms 6*a*, as is evident from Fig. 1, so that in this way the table top is pivotally connected to the table top carrying frame 24. It will be noted from Fig. 1 that the brackets 8*a* are formed with a plurality of openings located at different elevations so that the pivot pin may cooperate with any of these openings to regulate the elevation of the table top 8 with respect to the frame 24.

A further bracket 25 (Fig. 4) is fixed to the underside of the table top 8 and has at its opposite ends a pair of downwardly extending ears to which a pair of pivot pins are respectively fixed. These pivot pins respectively extend through a pair of openings formed in the free ends of a pair of legs of an elongated manually operable member 12 which extends across and beneath the table top 8 and which has at its opposite ends the rearwardly extending legs 12*a* one of which is shown in Figs. 1 and 4. Each of these legs 12*a* has fixedly connected thereto a toothed member 11, and these toothed members 11 have teeth similar to ratchet teeth and extend downwardly from the legs 12*a*, respectively. Each front arm 6 and the upper arm 6*a* connected thereto is formed from one continuous tubular member, and the arm 6*a* is formed adjacent its front end with a pair of aligned slots 11*a* through which a toothed member 11 freely passes. In the position shown in Fig. 4 one of the teeth of the toothed member 11 extends rearwardly beyond the upper slot 11*a* to rest on the bar 6*a* so as to maintain the table top 8 in this way at a desired elevation. The slots 11*a* are long enough to enable member 12 and toothed members 11 to be turned as a unit by the operator in a counterclockwise direction, as viewed in Fig. 4, to disengage the teeth of the toothed members 11 from the bars 6*a* to enable the toothed members 11 to be moved up or down until desired inclination of the table top 8 is attained. Then the operator releases the member 12 so that the parts turn by their own weight in a clockwise direction, as viewed in Fig. 4, and one of the teeth of each member 11 again engages the bar 6*a* to maintain the table top 8 in the adjusted angular position. The legs 12*a* are located close enough to the side edges of the table top 8 to enable the user to grasp both the side edges of the table top and the arms 12*a* so that the angular adjustment can very easily be carried out. The transverse portion of member 12 which extends across the table is also located near enough to the front edge of the table top 8 to enable the operator to grasp both this front edge and the transverse front portion of the member 12 to accomplish the same result.

The several arms 6 extend downwardly along the sides of the levers 4', respectively, in the position of the parts shown in Fig. 2 and in solid lines in Fig. 1, and both the levers 4' and the arms 6 are formed with aligned transverse bores 14, as is shown most clearly in Fig. 2. Pivotal connections between the arms 6 and the levers 4' are provided by pins 13 which extend through aligned bores 14 in the manner shown most clearly at the right of Fig. 2. With this arrangement it is possible to locate a pin 13 in any bore 14 of an arm 6 and any other bore 14 of the cooperating lever 4' so that in this way the effective lengths of the arms 6 and/or the levers 4' may be regulated.

A stop means cooperates with each lever means to determine a pair of end positions thereof respectively corresponding to the upper and lower working positions of the table top 8, and this stop means may be formed by portions of each bar 1*c* although it is preferred to provide stop means in the form of resilient pads, or the like, 20 fixed to the top face of each bar 1*c*, as shown in Fig. 1. These pads are located beneath the intermediate portion of each lever means in the end positions of the latter, as is indicated in Fig. 1, although if desired they could also be located beneath the lever arms 5*a*. These pads serve to prevent banging of the lever means against the support means when the lever means approach one of their end positions, as will be apparent from the description below.

The structure of the invention further includes a counterbalance means in the form of a counterweight 7 which counterbalances the table top 8 during its movement between its upper and lower working positions. In the illustrated example the counterbalance means 7 is in the form of a casing which is adapted to receive instruments such as drawing instruments or the like, and as is evident from Fig. 2 this casing 7 is located at the right side of the table so that there is plenty of leg room to the left of the casing 7. The counterweight or casing 7 is fixed at its upper portion to a plurality of eyes through which the cross pieces 23 pass in the manner shown in Figs. 1–3. Furthermore, a lever 9 is pivotally connected at one end to the casing 7 and at its opposite end to the front right leg of the support means in order to guide the casing 7 during movement of the table between its operating positions.

Referring to Fig. 4 and to the solid line illustration of Fig. 1, it will be seen that when the table top 8 is in its lower working position both the weight of the table top acting through the table top carrying frame 24 as well as the weight of this frame and the weight of the counter balance 7 acting through the lever means 4'' urge the lever means to turn in a clockwise direction about the pivot axes formed by the pivots 5, and the upper bars 1*c* of the support means prevent such turning of the lever means so that without the use of any locking devices whatsoever the parts stably remain in the position shown. In this lower working position a person may comfortably sit at the table in order to write thereon, for example.

When it is desired to manipulate the table so as to locate the table top 8 at its upper working position the user need only grasp the front edge of the table top 8 and push it rearwardly so that the plurality of lever means 4 turn simultaneously in a counterclockwise direction, as viewed in Fig. 1. It will be noted that during this movement the several arms or frame portions 6 move upwardly to a higher elevation without having their inclination changed, and moreover, the upward movement of the table top is very easy to carry out because the counterweight 7 acts on the levers 4'' to turn the latter downwardly while the levers 4' turn upwardly. The parts are carefully designed with respect to the lengths of moment arms and the forces acting thereon so that a minimum of force is required to move the table between its operating positions. It will be noted from Fig. 1 that the pivotal connections 13 simultaneously turn through circular arcs whose centers are in the pivot axes of the lever means during movement of the table top between its upper and lower positions. When the plurality of lever means 4 have turned through 180° so that the lever arms 5*a* extend forwardly rather than rearwardly from the intermediate portions of each lever means these intermediate portions engage rear pads 20 as shown in the dotted line position of the parts in Fig.

1 so as to limit the movement of the lever means and thus determine the upper position of the table top 8. It will be noted that in this latter position the arms 6 exend upwardly beyond the levers 4', as is shown most clearly in Figs. 3 and 5. In the lower position of the table top 8 the levers 4' extend downwardly from the bars 1c and the arms 6 are respectively located along the sides of the levers 4', while in the upper position of the table top 8 the levers 4' extend upwardly from the bars 1c.

It will be noted that when the parts are in the dotted line position shown in Fig. 1, the weight of the table top 8 and the table top carrying frame 24 act downwardly through the levers 4' on the left of the pivot axes of the levers, as viewed in Fig. 1, to tend to urge the plurality of lever means 4 to continue to turn in a counterclockwise direction, as viewed in Fig. 1, and the counterweight 7 also tends to turn the lever means in the same direction, this turning movement being prevented by the bars 1c, so that the table remains stably in the position shown in dotted lines in Fig. 1 without the use of any locking devices of any type. When it is desired to return the table to the solid line position of Fig. 1, the operator need only pull forwardly on the front edge of the table top 8.

It will be noted that with the use of the bars 2 and set screws 3 it is possible to adjust the elevation of the table top either in its lower or in its upper working position, and then quite independently either through the use of the brackets 8a or through locating the pivot pins 13 in desired bores 14 it is possible to adjust the elevation of the table top 8 in the other working position thereof.

Moreover, it will be noted that all of the levers and frame works of the table are composed of hollow tubular members which are relatively light and which are easy to assemble and disassemble. The turning movement of the lever 9 is indicated in dot-dash lines in Fig. 1.

It will be noted that in the illustrated example the levers 4'' are shorter than the levers 4'. The reason for this is that the counterweight 7 is heavier than the table top 8 and the table top carrying frame 24 so that in this way the heavier counterweight 7 acts through shorter moment arms in order to counterbalance the table top 8 and the table top carrying frame 24.

It will be understood that each of the elements described above, or two or more together, may also find a useful application in other types of tables differing from the types described above.

While the invention has been illustrated and described as embodied in an adjustable table, it is not intended to be limited to the details shown, since various modifications and structural changes may be made without departing in any way from the spirit of the present invention.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can by applying current knowledge readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention and, therefore, such adaptations should and are intended to be comprehended within the meaning and range of equivalence of the following claims.

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

1. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending portions rigid with the remainder of said frame; and a plurality of lever means pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said plurality of lever means supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof.

2. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending portions rigid with the remainder of said frame; and a plurality of lever means pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said plurality of lever means supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof, each lever means and the frame portion connected thereto respectively having predetermined effective lengths and said lower working positions of said table top being determined by the difference between said lengths while said upper working positions of said table top is determined by the sum of said lengths.

3. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending portions rigid with the remainder of said frame; and a plurality of lever means pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said plurality of lever means supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof, each lever means and the frame portion connected thereto respectively having predetermined effective lengths and said lower working position of said table top being determined by the difference between said lengths while said upper working position of said table top is determined by the sum of said lengths, each lever means and frame portion connected thereto forming a pair of pivotally connected members and at least one of said members including means for changing the location of the pivotal connection along said one member whereby the effective length of at least said one member may be be changed.

4. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending portions rigid with the remainder of said frame; a plurality of lever means pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said plurality of lever means supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof; and elevation adjusting means operatively connected to said support means for adjusting the elevation thereof.

5. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of

downwardly extending portions rigid with the remainder of said frame; a plurality of lever means pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said plurality of lever means supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof; and counterbalance means operatively connected to said levers for counterbalancing the movement of said table top between said positions thereof.

6. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending arms rigid with said frame; a plurality of first levers pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said arms to form pivotal connections therewith, said first levers supporting said arms for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof; a plurality of second levers respectively forming extensions of at least some of said first levers so that said second levers are also turnable about at least one of said pivot axes; and a counterweight carried by said second levers and cooperating therewith to counterbalance the movement of said table top, frame, and first levers.

7. A table comprising, in combination, support means adapted to rest on a floor or the like and having a pair of opposite sides; a pair of first levers respectively located adjacent the front and rear of said support means one behind the other at each side of said support means and connected to the latter for turning movement respectively about a pair of pivot axes extending across said support means, the levers on one side of said support means being respectively turnable about the same axes as the levers on the other side of said support means; a plurality of second levers respectively forming extensions of said first levers; a pair of cross pieces located one behind the other, one of said cross pieces extending between and being fixed to a pair of levers adjacent the front of said support means and the other of said cross pieces extending between and being fixed to a pair of levers adjacent the rear of said support means, whereby the levers adjacent the front of said support means are turnable as a unit about one of said pivot axes and the levers adjacent the rear of said support means are turnable as a unit about the other of said pivot axes; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending arms respectively connected pivotally with said first levers; and a counterweight carried by said plurality of second levers.

8. A table comprising, in combination, support means adapted to rest on a floor or the like and having a pair of opposite sides; a pair of first levers respectively located adjacent the front and rear of said support means one behind the other at each side of said support means and connected to the latter for turning movement respectively about a pair of pivot axes extending across said support means, the levers on one side of said support means being respectively turnable about the same axes as the levers on the other side of said support means; a plurality of second levers respectively forming extensions of said first levers; a pair of cross pieces located one behind the other, one of said cross pieces extending between and being fixed to the pair of second levers adjacent the front of said support means and the other of said cross pieces extending between and being fixed to the pair of second levers adjacent the rear of said support means, whereby the levers adjacent the front of said support means are turnable as a unit about one of said pivot axes and the levers adjacent the rear of said support means are turnable about the other of said pivot axes; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending arms respectively connected pivotally with said first levers; and a counterweight carried by said pair of cross pieces.

9. A table comprising, in combination, support means adapted to rest on a floor or the like and having a pair of opposite sides; a pair of first levers respectively located adjacent the front and rear of said support means one behind the other at each side of said support means and connected to the latter for turning movement respectively about a pair of pivot axes extending across said support means, the levers on one side of said support means being respectively turnable about the same axes as the levers on the other side of said support means; a plurality of second levers respectively forming extensions of said first levers and respectively being angularly displaced by 180° about said pivot axes from said first levers; a pair of cross pieces located one behind the other, one of said cross pieces extending between and being fixed to a pair of levers adjacent the front of said support means and the other of said cross pieces extending between and being fixed to a pair of levers adjacent the rear of said support means, whereby the levers adjacent the front of said support means are turnable as a unit about one of said pivot axes and the levers adjacent the rear of said support means are turnable as a unit about the other of said pivot axes; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending arms respectively connected pivotally with said first levers; and a counterweight carried by said plurality of second levers.

10. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending arms; and a plurality of bell cranks respectively having first arms connected pivotally with said frame arms to form pivotal connections therewith and respectively having second arms pivotally connected to said support means for turning movement about predetermined pivot axes, said cranks supporting said frame arms for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof.

11. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending portions; a plurality of levers pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said levers supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof; and stop means carried by said support means and cooperating with each lever for determining two end positions thereof, said end positions of said levers determining said upper and lower working positions of said table top.

12. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of

downwardly extending arms; a plurality of bell cranks respectively having first arms connected pivotally with said frame arms to form pivotal conections therewith and respectively having second arms pivotally connected to said support means for turning movement about predetermined pivot axes, said cranks supporting said frame arms for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof; and stop means carried by said support means and cooperating with each second arm of each bell crank for determining a pair of end positions of each bell crank, said end positions of said bell cranks determining said upper and lower working positions of said table top.

13. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending portions rigid with the remainder of said frame; a plurality of lever means pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said plurality of lever means supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof; and counterbalance means operatively connected to said lever means for counterbalancing the movement of said table top between said positions thereof, said bounterbalance means being hollow and forming a casing for instruments and the like.

14. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending portions rigid with the remainder of said frame; a plurality of lever means pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said plurality of lever means supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof; counterbalance means operatively connected to said lever means for counterbalancing the movement of said table top between said positions thereof, said counterbalance means being hollow and forming a casing for instruments and the like; and lever means connected to said support means and counterbalance means for guiding the latter during movement of said table top between said positions thereof.

15. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending portions rigid with the remainder of said frame, said table top being connected to said frame for pivotal movement with respect thereto so that the angular position of said table top may be changed; manually releasable means for holding said table top on said frame in an adjusted angular position; and a plurality of lever means pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said lever means supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof.

16. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top said having a plurality of downwardly extending portions rigid with the remainder of said frame; and a plurality of lever means pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said plurality of lever means supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof, said support means, frame, and levers being composed of hollow tubular members.

17. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending portions rigid with the remainder of said frame; and a plurality of lever means pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said plurality of lever means supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof, said frame portions being respectively located beside and at the same elevation as said lever means when said table top is in its lower working position and said frame portions extending upwardly beyond said levers when said table top is in its upper working position.

18. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending portions; and a plurality of levers pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said levers supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof, said frame portions being respectively located beside and at the same elevation as said levers when said table top is in its lower working position and said frame portions extending upwardly beyond said levers when said table top is in its upper working position, said levers extending downwardly from said pivot axes when said table top is in its lower working position and upwardly from said axes when said table top is in its upper working position.

19. A table comprising, in combination, a pair of lateral supports each having a front leg and a rear leg and an upper bar extending between and connected to said front and rear legs; means extending between and fixing said supports to each other; a pair of levers respectively located adjacent said legs of each lateral support, each lever having a first elongated portion extending downwardly from said bar, an intermediate portion extending across said bar, and a second elongated portion extending from said intermediate portion upwardly from said bar; a plurality of lever arms respectively fixed to said intermediate portions of said levers, respectively extending rearwardly therefrom along said bars, and respectively

connected pivotally to said bars; a table top; a table top carrying frame carrying said table top and having a plurality of downwardly extending arms respectively connected piovtally to said first elongated portions of said levers; and counterbalance means carried by said second elongated portions of said levers.

20. A table comprising, in combination, support means adapted to rest on a floor or the like; a table top having upper and lower working positions; a table top carrying frame carrying said table top and having a plurality of downwardly extending portions; a plurality of levers pivotally connected to said support means for turning movement about predetermined pivot axes and respectively connected pivotally with said frame portions to form pivotal connections therewith, said levers supporting said frame portions for elevational movement without changing their inclination and said pivotal connections respectively turning through circular arcs whose centers are in said pivot axes during movement of said table top between said positions thereof; and stop means carried by said support means and cooperating with each lever for limiting the latter to turning movement through 180° between a pair of end positions respectively corresponding to said positions of said table top.

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