March 4, 1958 H. H. WATSON 2,825,612

ADJUSTABLE DRAWING TABLE

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FIG. 1.

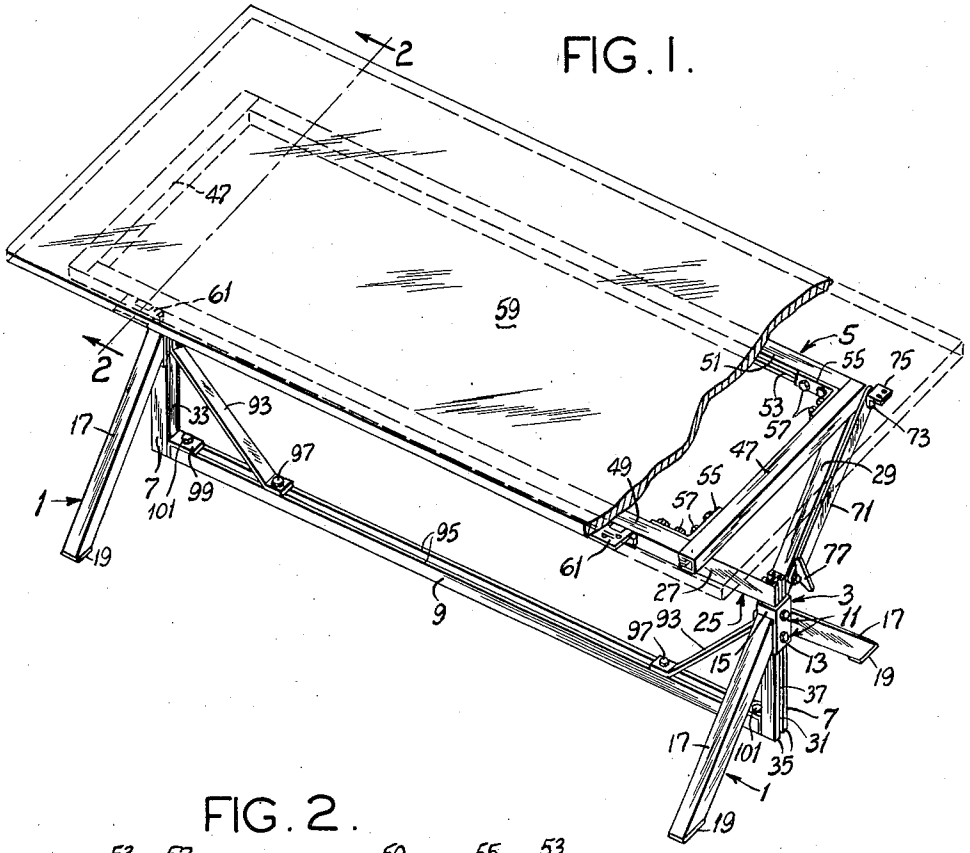


FIG. 2.

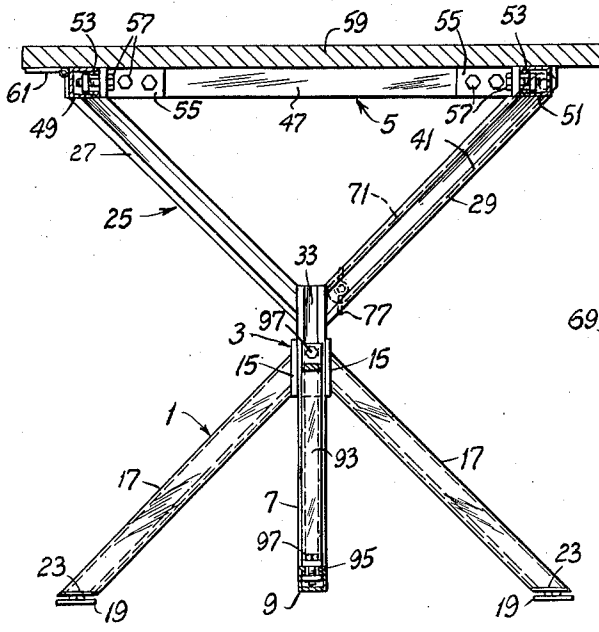
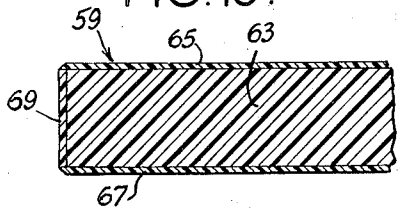


FIG. 10.



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FIG. 3.

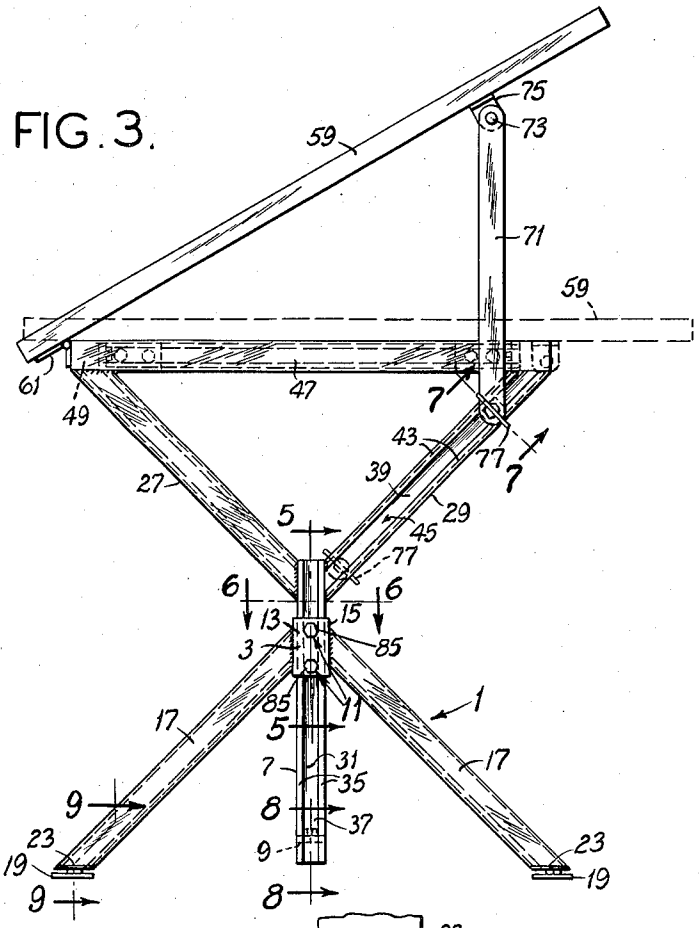


FIG. 6.

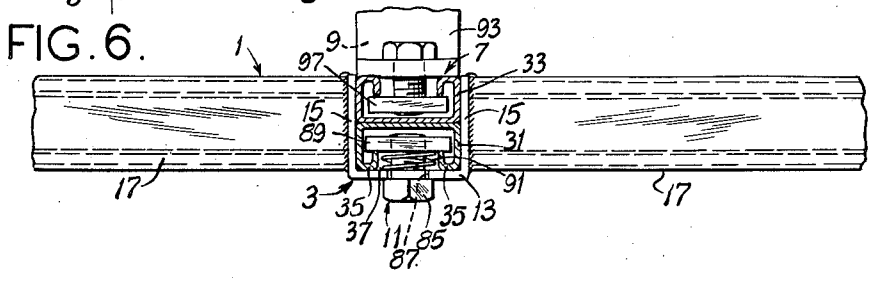
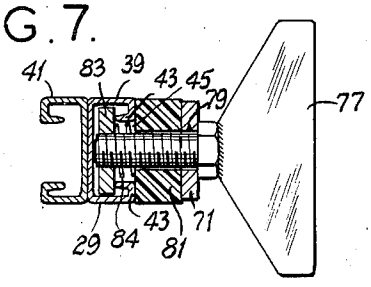


FIG. 7.



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FIG. 4.

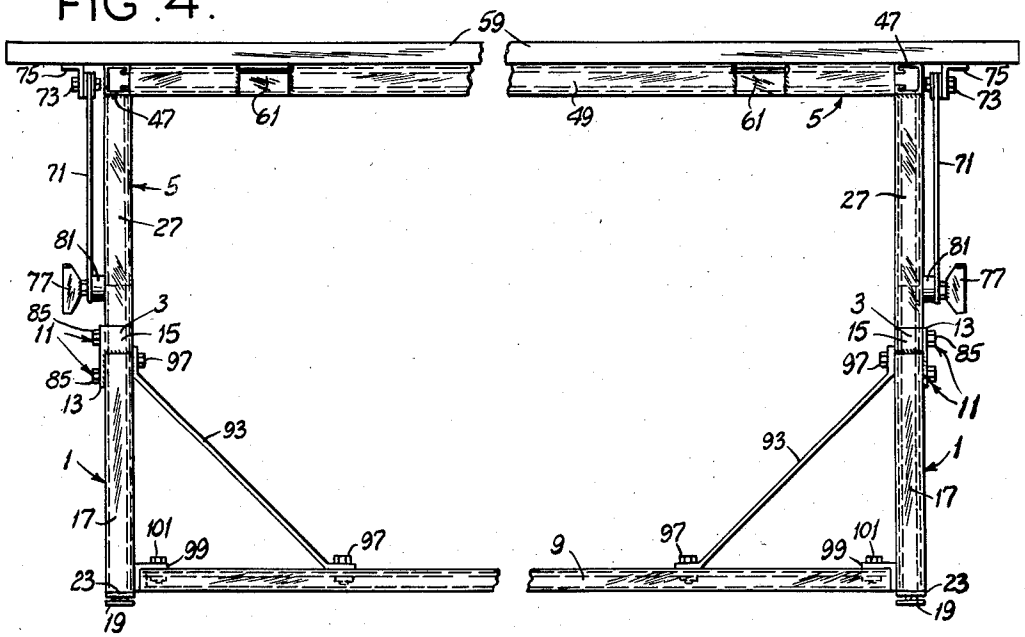


FIG. 5.

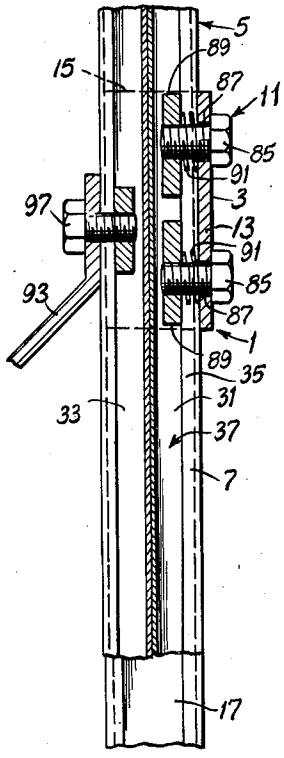


FIG. 8.

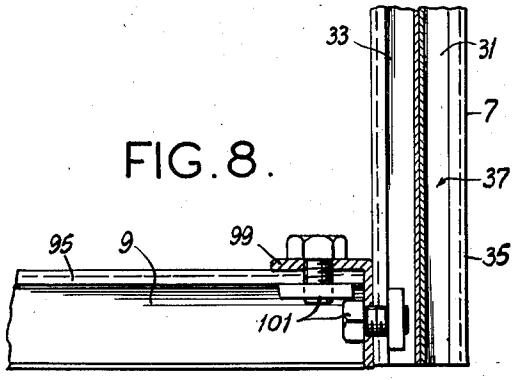
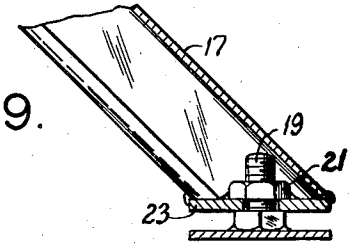


FIG. 9.



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United States Patent Office 2,825,612 Patented Mar. 4, 1958

2,825,612

ADJUSTABLE DRAWING TABLE

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Application June 7, 1956, Serial No. 590,006

8 Claims. (Cl. 311—36)

This invention relates to tables, and more particularly to adjustable-height tilt-top tables such as used by draftsmen.

Among the several objects of the invention may be noted the provision of an improved economical construction for a table of the class described which may be readily adjusted as to height from opposite ends of the table without binding; the provision of a table of the class described which provides for maximum utilization of space under the table for file cabinets, desks or the like; the provision of a table of the class described which provides for such space utilization at both front and back of the table so that a number of tables may be arranged in a row with a desk, cabinet or the like under the back of each table to provide each draftsman with a table surface and drawer space behind him while affording considerable space-saving as regards the length of the row; and the provision of a table of the class described which is economical to construct, and which may be transported knocked-down and then readily assembled. In general, a table of this invention comprises a pair of end pedestals each having a vertical guide, a table top unit having a pair of vertical bars extending downward through the guides and vertically slidable therein, the table top unit and bars forming a rigid frame, and means for clamping the bars at various positions of height adjustment in the guides, the pedestals being free of one another apart from the rigid frame whereby one of the bars may be raised or lowered in its guide without binding independently of the other bar. Other objects and features will be in part apparent and in part pointed out hereinafter.

The invention accordingly comprises the constructions hereinafter described, the scope of the invention being indicated in the following claims.

In the accompanying drawings, in which one of various possible embodiments of the invention is illustrated,

Fig. 1 is a perspective of a table of this invention, parts being broken away and shown in section;

Fig. 2 is a vertical section taken on line 2—2 of Fig. 1 showing a tilting table top in its lowermost (and horizontal) position;

Fig. 3 is an end elevation of the table showing the table top in a tilted position;

Fig. 4 is a front elevation of the table, parts being broken away;

Figs. 5–9 are enlarged sections taken on lines 5—5, 6—6, 7—7, 8—8 and 9—9, respectively, of Fig. 3; and,

Fig. 10 is an enlarged detail section illustrating a type of table top that may be used.

Corresponding reference characters indicate corresponding parts throughout the several views of the drawings.

Referring to the drawings, a table constructed in accordance with this invention is shown to comprise a pair of identical end pedestals, each designated 1. Each pedestal has a vertical guide designated 3. At 5 is indicated a table top unit which includes a pair of vertical bars each designated 7 at the ends thereof. These bars extend downward through the guides 3 and are vertically slidable in the guides. A rigid stringer 9 in connected between the bars 7 at their lower ends, below the guides 3. The table top unit 5, the bars 7 and the stringer 9 form a rigid frame. Means such as indicated at 11 is provided for clamping the bars 7 at various positions of height adjustment in the guides 3. The pedestals 1 are free of one another apart from the frame constituted by parts 5, 7 and 9, whereby one of the bars 7 may be raised or lowered in its guide 3 without binding independently of the other bar as will be made clear.

More particularly, each pedestal 1 is shown as being of inverted V-shape, with the guide 3 at the apex of the inverted V. As to each pedestal, the guide 3 consists of a short length of a square-formed metal channel (see Fig. 6), the web of the channel being designated 13 and its flanges being designated 15. The legs of the inverted V, each of which is designated 17, consists of a length of metal channel. The legs are welded at their upper ends to the flanges 15 of the channel-section guide 3, and angle outward and downward from the guide on opposite sides thereof. In the assembled table, the web 13 of each channel-section guide is on the outside and the open side of the channel-section guide faces inwardly. At the lower end of each leg 17 is a leveling screw 19 (see Fig. 9) which is threaded in a nut 21 welded to a plate 23 in turn welded to the leg 17 at its lower end.

Each of the vertical bars 7 comprises the stem of a Y-shaped frame designated in its entirety by the reference character 25. One arm of the Y-shaped frame is designated 27 and the other arm is designated 29. Arm 27 is the front arm of the frame 25, arm 29 is the back arm. Each bar 7 consists of two rectangular-form steel channels 31 and 33 (see Fig. 6) welded together back-to-back, the overall cross-sectional dimensions of bar 7 being such that it has a sliding and nonrotatable fit in the channel-section guide 3. The channel 31 is on the outside in the assembled table and has its open side against the web 13 of the channel-section guide 3. Channel 31 has inturned clamping rims 35 defining a slot 37. Channel 33 may be identical to channel 31. The back arm 29 of the Y-shaped frame 25 consists of two rectangular-form steel channels 39 and 41 (see Fig. 7) welded together back to back. The front arm 27, as shown, may consist of a single steel channel. Arms 29 and 31 are welded at their lower ends to opposite sides of the bar 7 at its upper end. The channel 39, which is on the outside in the assembled table, with its open side directed outward, has inturned clamping rims 43 defining a slot 45. Channel 41 may be identical to channel 39.

Extending between and welded to the upper ends of the arms 27 and 29 of each Y-shaped frame 25 is a top bar 47. The top bars 47 of the two frames 25 constitute top end bars for the table top unit 5. Extending between these bars 47 at the front and back of unit 5 are front and back top stringer bars 49 and 51. Bars 47, 49 and 51 may be of channel shape in cross section provided with inturned clamping rims such as indicated at 53 in Fig. 2, and removably secured together by angle straps 55 and nut and bolt fasteners as indicated at 57 in Figs. 1 and 2.

A table top 59 is pivoted on the front bar 49 by hinges such as indicated at 61. As illustrated in Fig. 10, this top 59 may consist, for example, of a core 63 of any suitable rigid light-weight material of such character as to be able to hold screws for attaching the top 59 to hinges 61, with top, bottom and edge facings 65, 67 and 69, respectively, of any suitable hard-finish material. The core may consist of a three-quarter inch thick board

of expanded polystyrene (sold under the trade designation "Styrofoam") or plastic-bonded wood particles, for example, and the facings of one-sixteenth inch thick multiply resin-impregnated sheet material such as that sold under the name Nevamar by the Nevamar Company of Odenton, Maryland. The facings are adhered to the core by any suitable adhesive.

For holding the table top **59** in various tilted positions, there is provided, at each end of the table, a link **71** pivoted at one end as indicated at **73** to a bracket **75** secured to the underside of the top **59**. A wing bolt **77** extends through a bolt hole **79** in the other end of the link and through a washer **81** on the inside of the link and is threaded in a square clamping nut **83** which is slidable in the channel **39** of arm **29**. A coil compression spring **84** is interposed between the washer **81** and the nut **83**. The arrangement is such that by tightening the bolt **77**, the nut **83** is drawn into clamping engagement with the inturned clamping rims **43** of channel **39** to lock the lower end of the link in predetermined position along the length of the arm **29**.

The clamping means for each bar **7** comprises a pair of bolts **85** (see Fig. 5) extending through bolt holes **87** in the web **13** of the channel-section guide **3** and threaded in square nuts **89** which are slidable in the channel **31** of bar **7**. Coil compression springs **91** are interposed between the web and the nuts. The arrangement is such that by tightening the bolts, the nuts are drawn into engagement with the clamping rims **35** of channel **31** to lock the bar **7** to the guide.

Braces **93** are provided between the bars **7** and the lower stringer **9**. The latter, as shown, is of channel shape in cross section with inturned clamping rims **95**, and the braces are removably secured to the bars **7** and stringer **9** by nut and bolt fasteners as indicated at **97** in Figs. 1, 2 and 4. The stringer **9** is removably secured at its ends to bars **7** by angle members **99** and nut and bolt fasteners as indicated at **101** in Figs. 1, 2, 4 and 8.

To adjust the height of the table top, the clamping bolts **85** at one end of the table is loosened, and the Y-shaped frame **25** at that end of the table raised (or lowered). Then the bolts **85** are tightened. Both ends of the table tilt freely during this operation, and there is no binding to interfere with the operation. This results from the fact that there is no connection between the end pedestals **1** apart from the frame constituted by parts **5**, **7** and **9**. Then, the operation is repeated for the other end of the table to bring the top to horizontal position. The pedestals cannot rotate relative to the bars **7** because of the square form of the guides **3** and the bars **7**. The table top may then be tilted to any desired angular position by loosening the bolt **77**, tilting the top (as a result of which the nut **83** slides up in channel **39**), and then tightening the bolt.

The absence of any connections between the end pedestals **1** other than that of the frame constituted by parts **5**, **7** and **9** leaves the space under the table both in front and in back of the stringer **9** free to receive such furniture as cabinets, drawer files, desks and the like. This makes possible considerable saving of space in large drafting rooms. The bolted construction described makes it possible to ship tables knocked down, the parts being easily assembled.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As various changes could be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I claim:

1. A table comprising a pair of end pedestals, each pedestal having a vertical guide at the upper part thereof and being open below the guide, a table top unit having a pair of vertical bars extending downward through the guides into the open parts of the pedestals below the guides and being vertically slidable in the guides, a stringer extending between said vertical bars at their lower ends, said table top unit vertical bars and said stringer forming a rigid frame, and means for clamping said vertical bars at various positions of height adjustment in said guides, said pedestals being free of one another apart from said rigid frame whereby they may tilt so that one of said vertical bars may be raised or lowered in its guide independently of the other vertical bar without binding.

2. A table as set forth in claim 1 wherein each pedestal is of inverted V-shape with the vertical guide thereof at the apex of the inverted V and wherein said guides and said vertical bars are shaped to hold the pedestals against rotation relative to said vertical bars and in front-to-back planes with respect to the table.

3. A table as set forth in claim 1 wherein the table top unit comprises at least one member extending from end-to-end of the table, this member being disconnectable from said vertical bars, and wherein said stringer is disconnectable from said vertical bars.

4. A table comprising a pair of end pedestals, each pedestal having a vertical guide at the upper part thereof and being open below the guide, a table top unit having end members of Y-shape, the stems of said Y-shaped end members extending downward through the guides into the open parts of the pedestals below the guides and being vertically slidable therein, a stringer extending between said stems at their lower ends, said table top unit, end members and said stringer forming a rigid frame, and means for clamping said stems at various positions of height adjustment in said guides, said pedestals being free of one another apart from said rigid frame whereby they may tilt so that one of said stems may be raised or lowered in its guide independently of the other stem without binding.

5. A table comprising a pair of end pedestals, each pedestal being of inverted V-shape and having a vertical guide at the apex of the inverted V, a table top unit having end members of Y-shape, the stems of said Y-shaped end members extending downward through the guides between the legs of the inverted V and vertically slidable in the guides, a rigid stringer extending between said stems at their lower ends, said table top unit, end members and said stringer forming a rigid frame, and means for clamping said stems at various positions of height adjustment in said guides, said pedestals being free of one another apart from said rigid frame whereby one of said stems may be raised or lowered in its guide without binding independently of the other stem.

6. A table as set forth in claim 5 wherein said guides and said stems are shaped to hold the pedestals against rotation relative to said stems and in front-to-back planes with respect to the table.

7. A table as set forth in claim 5 wherein the table top unit comprises top end bars secured to the upper ends of the arms of the Y-shaped end members and top stringers extending between and detachably connected to said top end bars, and wherein said rigid stringer which extends between the stems is detachably connected to the stems.

8. A table comprising a pair of end pedestals, each pedestal having a vertical guide channel, the web of the channel being on the outside, a table top unit having a pair of bars extending downward through the guide channels and vertically slidable in the guide channels, each of said bars comprising a channel having its open side against the web of the respective guide channel and having inturned clamping rims at its open side, said top unit and bars forming a rigid frame, and means for clamping said bars at various positions of height adjustment in said guide channels comprising at least one bolt extending

through a bolt hole in the web of the guide channel and threaded in a nut slidable in the bar and adapted to be drawn into clamping engagement with said rims, said pedestals being free of one another apart from said rigid frame whereby one of said bars may be raised or lowered in its guide without binding independently of the other bar.

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