July 20, 1954 B. E. BAILEY 2,684,276

FOLDING DRAWING TABLE HAVING ADJUSTABLE TOP AND VERTICAL LEGS

Filed Oct. 9, 1951 2 Sheets-Sheet 1

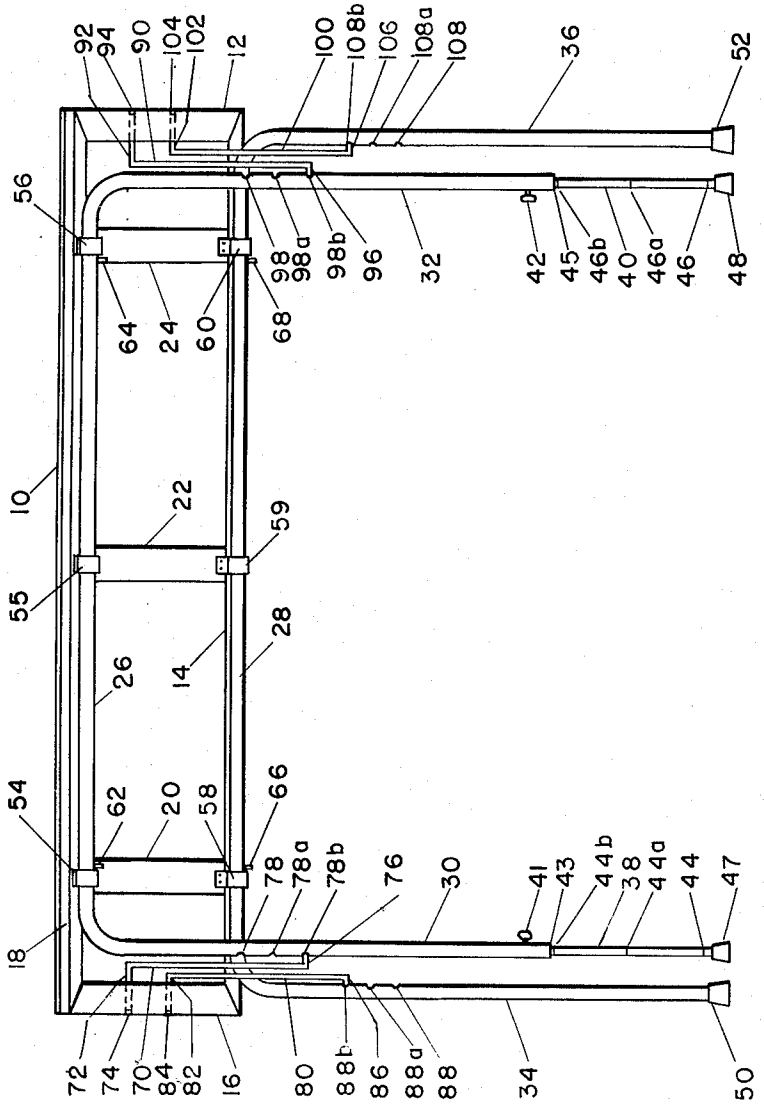

FIG-1

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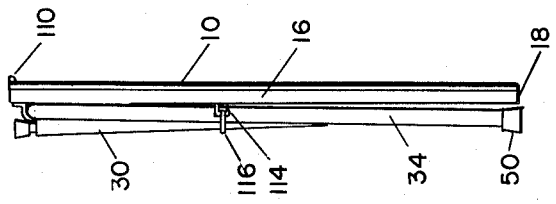

FIG-3

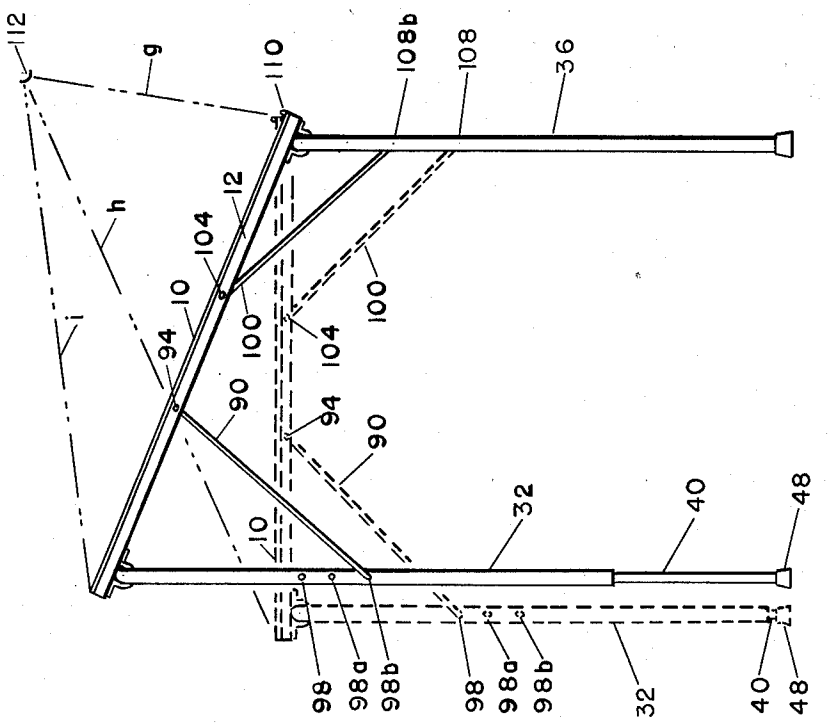

FIG-2

Inventor Bradford E. Bailey

Patented July 20, 1954

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UNITED STATES PATENT OFFICE

2,684,276

FOLDING DRAWING TABLE HAVING ADJUSTABLE TOP AND VERTICAL LEGS

Bradford E. Bailey, Elizabeth, N. J.

Application October 9, 1951, Serial No. 250,405

1 Claim. (Cl. 311—94)

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The present invention relates to a table and more particularly to a folding table having a top with a variable tilt which is particularly adaptable as a drafting table.

One object of the present invention is to provide a drawing table which may be folded for storage as a card table.

A further object is to provide a table which is adjustable so that the top may be either horizontal or which may be adjusted at various tilts.

A still further object is to provide a folding table which has legs that may be maintained vertical while at the same time the top may be adjusted to various angles.

The above and other objects, features and advantages of my invention will be fully understood from the following description, considered in conjunction with the accompanying drawings, which are to be taken as illustrative of the invention but not in limitation thereof.

Figure 1 is a rear view of the table with the legs in unfolded position and with the top tilted.

Figure 2 is a side view of the table with the legs unfolded and with the top tilted.

Figure 3 is a side view of the table with the legs in folded position.

Referring now to Figure 1, reference character 10 shows the rectangular shaped plane top.

Underneath the top 10 is a wooden frame to which the top is attached by means of small finishing nails driven down through the top into the frame. The top may also be attached to the frame by using glue. This frame consists of edge members 12, 14, 16 and 18, and middle support members 20, 22 and 24.

Underneath the back edge of the wooden frame and attached thereto in hinged relation are tubular elements 26 and 28. Element 26 has the end portions bent at 90° angles to the midportion forming a shape like an inverted letter U. The end portions of element 26 comprise part of rear legs 30 and 32. Element 28 is bent in a similar fashion as element 26. The ends of element 28 comprise front legs 34 and 36.

The front legs 34 and 36 are made wider apart than rear legs 26 and 28 in order that the front legs and rear legs may pass each other in the folded position.

Leg extension elements 38 and 40 comprise tubes which fit loosely inside of legs 30 and 32. These elements are fixed at a certain extension by means of thumb screws 41 and 42 threaded through the wall of legs 30 and 32. In Figure 1 element 38 is extended until the end 43 of leg 30 coincides with circumferential mark 44–*b* around

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element 38 and when at this extension adjustment, the top 10 has tilt B. Likewise element 40 is extended until the end 45 of leg 32 coincides with circumferential mark 46–*b* which also corresponds to tilt B of the top 10. A multiple number of additional marks are provided such as 44 and 44*a* on element 38 and marks 46 and 46–*a* on element 40. Marks 44 and 46 correspond to the top 10 being in a horizontal position and marks 44*a* and 46*a* correspond to the top being at tilt A. Rubber thimble-like feet 47, 48, 50 and 52 are slipped over the extension elements 38 and 40 and legs 34 and 36.

Straps 54, 55 and 56 hold tubular element 26 to the wooden frame members 18, 20, 22 and 24 in hinge relation as previously mentioned and straps 58, 59 and 60 hold tubular element 28 to wooden frame members 14, 20, 22 and 24 in hinge relation. Screws 62, 64, 66 and 68 are threaded into elements 26 and 28 in order to prevent elements 26 and 28 from slipping longitudinally to the right or left through the straps. Circumferential clamps may be used in place of these screws.

Brace 70 is a rod with a 90° angle bend in each end and with the bent ends pointing in opposite directions as a letter Z. One end 72 of brace 70 is almost as long (approximately 1½'') as member 16 is wide (approximately 1½'') and extends through a hole 74 passing through frame member 16. The other end 76 is inserted into a hole-like connection 78–*b* through one wall of leg 30. A multiple number of hole-like connections such as 78, 78–*a*, and 78–*b* are provided in leg 30 so that the top 10 can be made horizontal or given various degrees of tilt. When brace end 76 is in hole 78 the top 10 is horizontal; when in hole 78–*a* the top 10 is at tilt A; and when in hole 78–*b*, the top is at tilt B, etc.

Brace 80 is a rod with a 90° angle bend in each end and with the ends pointing in the same direction as for a letter U. One end 82 is almost as long as frame member 15 is wide and extends through a hole 84 passing through member 15. The other end 86 is inserted into a hole-like connection 88–*b* passing through one wall of leg 34. A multiple number of hole-like connections such as 88, 88–*a*, and 88–*b* are provided in leg 30 so that the top 10 can be made horizontal or given various degrees of tilt. When brace end 86 is in hole 88 the top 10 is horizontal; when in hole 88–*a* the top 10 has tilt A; and when in hole 88–*b*, the top has tilt B, etc.

Brace 90 is installed in a fashion similar to brace 70 and has end 92 in hole 94 and end 96

in hole 98–*b* with a multiple number of additional holes such as 98, 98–*a* and 98–*b* provided.

Brace 100 is installed in a fashion similar to brace 80 and has end 102 in hole 104 and end 106 in hole 108–*b* with multiple additional holes 108, 108–*a* and 108–*b* provided.

It is pointed out in regard to the position of the holes employed for the horizontal top position that holes 78 and 98 in the rear legs 30 and 32 are the highest holes in these two legs; whereas holes 88 and 108 in the rear legs 34 and 36 are the lowest holes in these latter two legs.

These tilts A and B discussed in connection with the braces are the same tilts A and B mentioned in regard to the adjustment of leg extension elements 38 and 40. It is evident that the positions of the leg extension elements must have corresponding positions for the braces in order for the legs to be maintained vertical.

Brace holes 78, 78*a*, and 78*b* in rear leg 30 are spaced further apart than holes 88, 88*a*, and 88*b* in front leg 34. Likewise holes 96, 96*a* and 96*b* in rear leg 32 are spaced further apart than holes 108, 108*a*, and 108*b* in front leg 36. This specific hole spacing is clearly evident in Figure 1 and is absolutely necessary in order to permit maintaining both front and rear legs in a vertical position when the top is tilted.

Tension is maintained on the braces of a nature which tends to keep the lower ends of the braces in the holes of the leg elements. In this regard Z-shaped brace 70 is in tension which tends to rotate frame member 16 in a clockwise direction, while U-shaped brace 80 is in tension which tends to rotate member 16 in a counter-clockwise direction. The clockwise and counter-clockwise forces in member 16 cancel each other with the important result that member 16 is not actually rotated or distorted. Likewise braces 90 and 100 are arranged so that the opposing rotational forces on element 12 cancel out.

Figure 2 is a side view of the table. The solid lines show the top 10 adjusted to be at tilt B the same tilt as shown in Figure 1. In this position the four legs are all in a vertical position. The dashed lines of Figure 2 show the top 10 adjusted to be in a horizontal position.

Figure 3 is a side view of the table in folded position. Front legs 34 and 36 fold flat against the frame as illustrated by leg 34 and frame element 16. The ends of the feet 50 and 52 preferably extend a short distance beyond the edge of the top 10 in order that the table can rest on these feet instead of on edge of frame element 18. This prevents the table from sliding out and away from the wall and also protects thumb tacks placed in the edge of wooden frame element 18. Leg extension elements 38 and 40 do not need to be retracted if it is likely that the same top tilt adjustment will be employed when the table is put to use again. Tubular element 28 serves as a comfortable and convenient handle when carrying the table. Hook 114 is provided in the frame element 12 with a strap or rubber band 116 for holding the legs in folded position.

I claim:

A folding table having an adjustable top and vertical legs comprising, a top, two rear legs attached in hinged relation to said top, said rear legs having adjustable extension elements at the bottom ends thereof and a multiple number of holes spaced longitudinally in the sides thereof, two front legs attached in hinged relation to said top, said front legs having a multiple number of holes spaced longitudinally in the sides thereof, four braces consisting of rod-like members with a substantially right-angle bend in each end thereof, one end of each said brace attached to the said table top in pivoting relation and the other end of each brace inserted in one of the said holes in said legs, the said holes in said rear legs being spaced wider apart than the said holes in said front legs in such manner that the legs will be maintained in a vertical position when the said table top is tilted and the said rear leg extension elements are extended.

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