United States Patent [19]

Sooker

[11] **3,744,845**

[45] **July 10, 1973**

[54] **COMBINATION BENCH, STOOL, AND PLAQUE TABLE**

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[22] Filed: **Feb. 24, 1972**

[21] Appl. No.: **228,938**

[52] **U.S. Cl.**..... **297/439**, 108/12, 108/150, 297/451, 297/461, 297/445, 312/194

[51] **Int. Cl.**..... **A47c 9/12**, A47c 7/00, A47c 7/14

[58] **Field of Search**..... 108/12, 19, 150; 297/1, 3, 218, 439, 445, 451, 461, 283; 312/194

[56] **References Cited**

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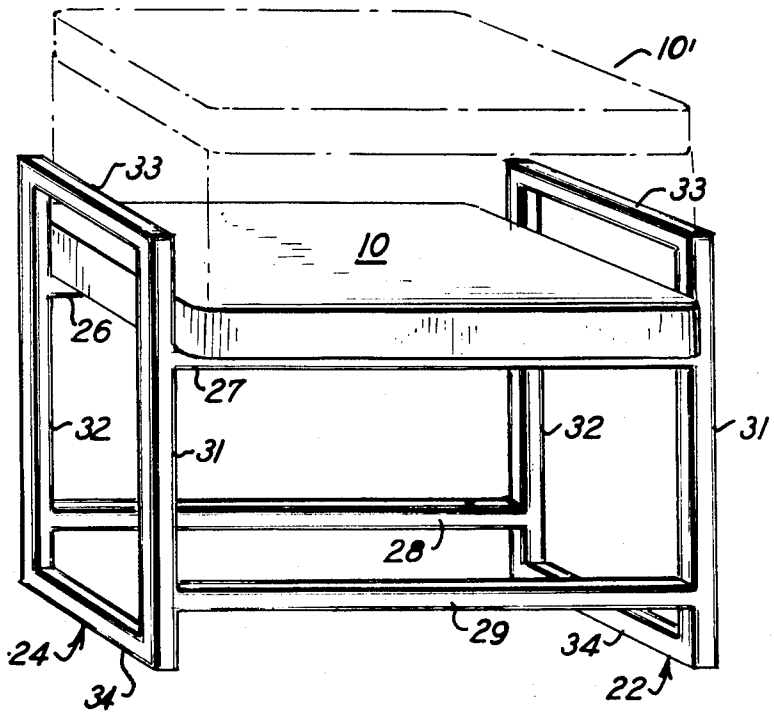
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Primary Examiner—Casmir A. Nunberg
Attorney—Jesse David Wall

[57] **ABSTRACT**

A combination bench, stool and plaque-table which provides maximum flexibility in use by utilizing a multiple position frame of solid integral construction. This frame has two rectangular frame members connected by cross bars attached to the longer sides of said frame members at various distances from the shorter sides. A seat cushion is provided which may rest upon the multiple position frame when it is in various positions to attain various height positions. One or more plaque-table tops may be provided to rest on the multiple position frame member so that several heights of table options are available. Special securing means are provided on the plaque-table top to hold it to the multiple position frame in any of its positions. The plaque-table top may have wall mounting means to secure it to a wall as a wall plaque or art piece for storage when not in use.

7 Claims, 12 Drawing Figures



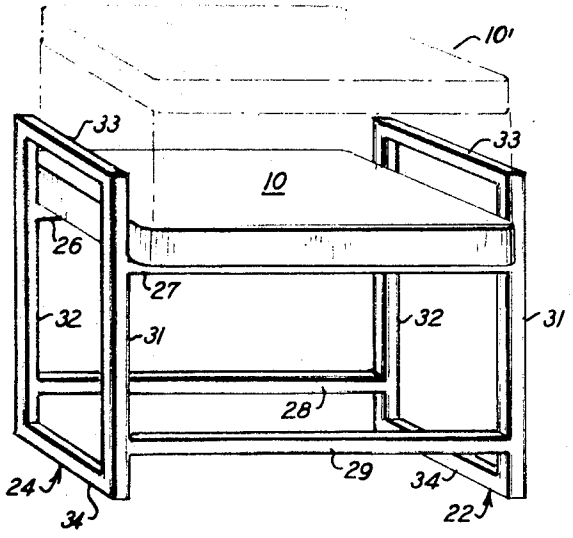


FIG. 1

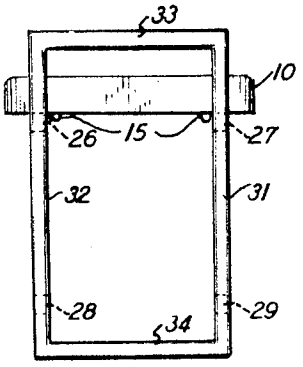


FIG. 3

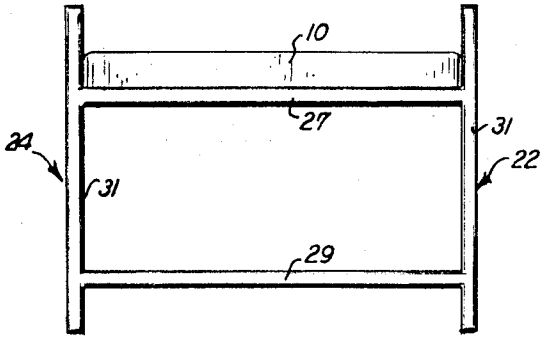


FIG. 2

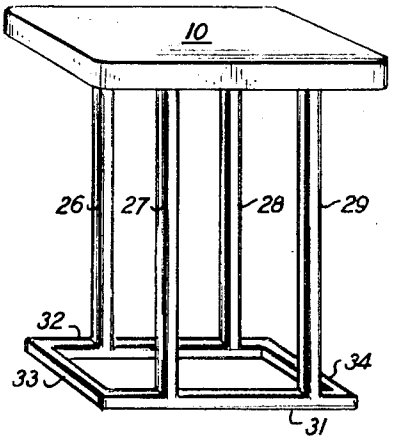


FIG. 4a

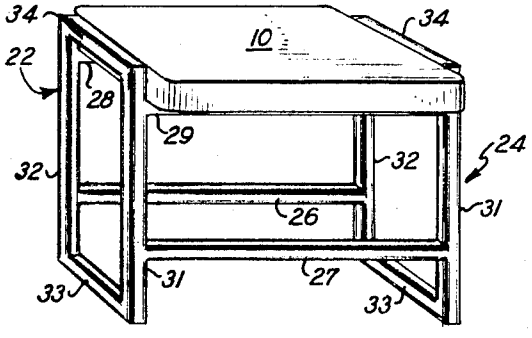


FIG. 4c

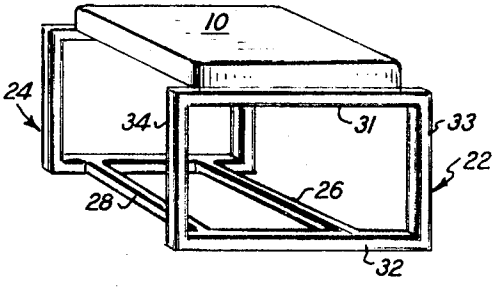


FIG. 4b

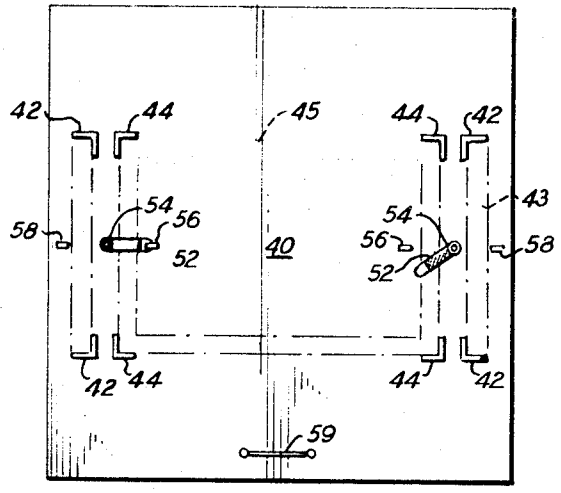


FIG. 5

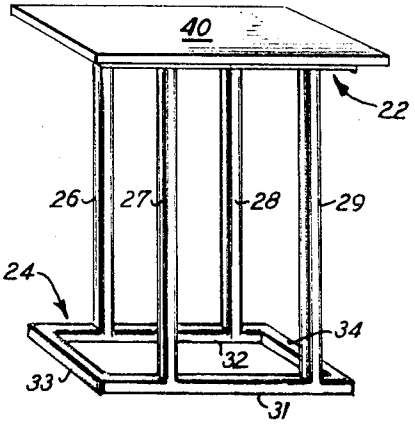


FIG. 6a

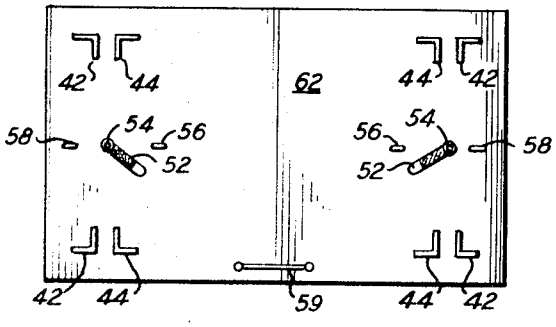


FIG. 7

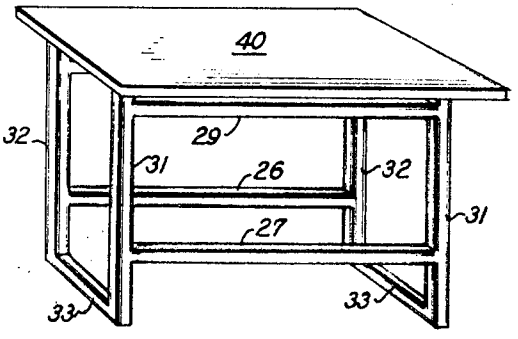


FIG. 6b

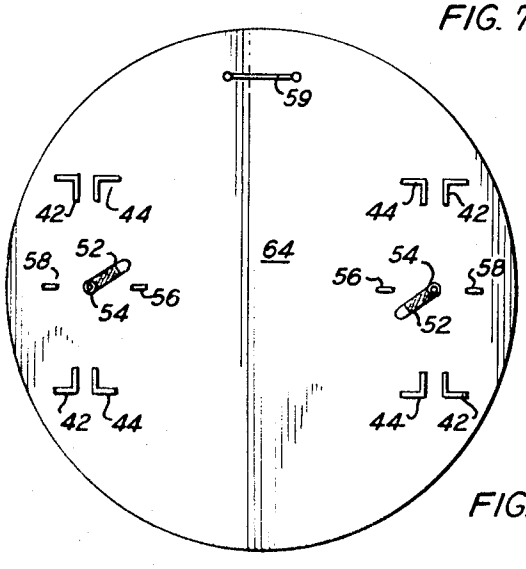


FIG. 8

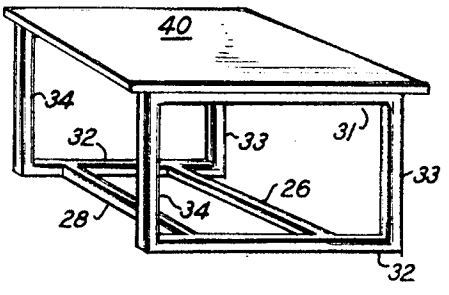


FIG. 6c

COMBINATION BENCH, STOOL, AND PLAQUE TABLE

BACKGROUND OF THE INVENTION

This invention is concerned with a combination bench, stool, and plaque-table which provides a piece of furniture which can be used in many different ways. In our modern society, there is a need for maximizing the usefulness of objects in our environment and for conserving space. Accordingly, it is desirable to have a single piece of furniture having plural functions to answer divergent needs.

It is an object of this invention to provide a piece of furniture which provides for flexibility in use by providing plural stable height positions.

It is further an object of this invention to provide a piece of furniture which can be used as either a stool or a table.

It is also an object of this invention to provide for maximum flexibility for use of a stool support so that it may be used to support a seat cushion at several different heights or a table top at several different heights.

It is further an object of this invention to provide a combination bench, stool, and plaque-table in which means are provided to attach the table securely to the stool support when it is in any of a plurality of heighth positions and in which means are provided to use said table top as a decorative wall plaque when it is not in use as a table.

It is finally an object of this invention to provide a plural height furniture support in which there is a great deal of structural stability in each height position.

Plural function furniture is known in the prior art. It is known, for example, that a supplementary table top may be provided for a supporting structure. In the patent to Reisman, U.S. Pat No. 2,556,943, and the patent to Derman, U.S. Pat. No. 2,634,183, a supplemental table top is provided for a supporting structure which is, itself, a table. Further, securing means are provided to stabilize the table top when on the supporting structure. However, in neither Reisman nor Derman is the supporting structure capable of providing plural height configurations or is it useful in any other than a table function. Consequently, the securing means do not have to accommodate the supporting structure in different positions.

Further, it is known to provide a table top with vertical storage capability. In the patent to Jacques, U.S. Pat. No. 2,857,227, for instance, a tray top for use with a folding support is provided with means for attaching it to said folding support in a vertical position when said tray is not to be in use. However, the support is not disclosed to be useable apart from the tray, and no provision is made for hanging said tray from the wall as a decorative wall plaque.

BRIEF DESCRIPTION OF THE INVENTION

The present invention contemplates the use of a solid frame of integral construction which can support either a seating cushion or a table top when it is in either one of several support positions. Each support position offers a separate height to the seat cushion or table top. The table top or tops are useable as wall plaques when not in use as a table, and are provided with securing means for attaching them to the frame when the latter is in either of the supporting positions.

BRIEF DESCRIPTION OF THE DRAWING

FIG. **1** is a view in perspective of an embodiment of the invention showing the combination bench set up as a low seating bench with handrails.

FIG. **2** is a side elevation view of the embodiment shown in FIG. **1.**

FIG. **3** is an end elevation view of the embodiment shown in FIG. **1.**

FIGS. **4***a*, **4***b*, and **4***c* are views in perspective of the embodiment of FIG. **1** set up as a high stool, foot stool, and high seating bench without handrails.

FIG. **5** is a plan of the bottom of a table top useable in the present invention.

FIGS. **6***a*, **6***b*, and **6***c* are views in perspective of embodiments of the present invention set up as high, medium and low tables.

FIGS. **7** and **8** are plans of other table tops usable in the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Referring to the drawings and more particularly to the embodiment shown in FIGS. **1** to **3**, a rectangular seat cushion **10** is positioned on a multiple position frame which is made up of rectangular frame members **22** and **24** which are connected by cross bars **26, 27, 28,** and **29.**

Both of the rectangular frame members **22** and **24** are made up of two longer sides **31** and **32** and two shorter sides **33** and **34.** The longer sides are of the same length, are parallel to each other, and are perpendicular to the shorter sides so as to form a rectangle.

The connecting bars **26** to **29** are all attached to the longer sides of the rectangular frame members **22** and **24** and are perpendicular thereto. All of the connecting bars are of the same length so that planes passing through the rectangular frame members would be parallel. Connecting bars **26** and **27** are attached at points that are the same distance from shorter sides **33,** and connecting bars **28** and **29** are attached at points that are also equidistant from shorter sides **34.** However, the distance from shorter sides **33** is greater than the thickness of seat cushion **10** while the distance from shorter sides **34** is about the same as the cushion thickness. The length of the shorter sides **33** and **34** is less than the width of the seat cushion **10** as is distance between cross bars **27** and **29** as well as the distance between cross bars **26** and **28** so that the seat cushion can be supported by any two adjacent cross bars. The length of the seat cushion **10** is a bit less than the length of the cross bars so that it will fit between the shorter sides **33** or **34** of the rectangular frame members **22** and **24.** When the cushion **10** is resting on cross bars **26** and **27,** as is shown in FIGS. **1** to **3,** shorter sides **33** act as hand rails, in that they extend above the level of the cushion **10.**

However, cushion **10** does not need to rest on cross bars **26** and **27;** as it may be easily removed as shown in dotted lines at **10'** in FIG. **1.** It should be noted that the entire frame unit made up of rectangular frame members **24** and **25** and connecting bars **26** to **29** is of solid integral construction in that all of the joints between the sides of the frame with themselves and the cross bars are of a solid permanent nature so that the frame forms a single unit. But in spite of its solid unchanging shape, its unique positioning of parts allows this frame unit to support the seat cushion **10** at many

different height levels as shown in FIGS. 4*a* to 4*c*. This solid integral construction lends stability to the various seating configurations. Further, no tools are needed to change the height configuration.

FIG. 4*a* shows the seat cushion in its highest position, resting on the face of one of the rectangular frame members while the other frame member **22** is resting flat on the floor. In this position, the stool gets its height from the length of cross bars **26** to **29**. Both of the longer sides **31** and **32** of rectangular frame member **22** as well as both of the shorter sides **33** and **34** are resting firmly on the ground in this position; so that there are four side members resting on the ground to give stability to the stool in its highest position.

FIG. 4*b* shows the stool of the present invention in the lowest or foot stool position. The seat cushion **10** is resting on two cross bars which are attahced to the same longer sides of the rectangular frame members. The height of the foot stool in this position is just the length of the shorter sides plus the thickness of the seat cushion. The availability of the low foot stool position depends on the distance between the cross bars being less than the width of the seat cushion **10**.

FIG. 4*c* shows the stool of the present invention in the high bench position. The seat cushion **10** is resting on the two cross bars **28** and **29** which are attached to opposite longer sides **31** and **32** of rectangular frame members **22** and **24** at points which are only the thickness of cushion **10** from the shorter sides **34**. The shorter sides then serve to stabilize the position of the cushion **10**, but do not extend above its surface. The heighth of the cushion in this position is greater than in FIG. **1** because of the relative distances of the cross bars from the shorter sides of the rectangular frame members. Since cross bars **28** and **29** are closer to shorter sides **34** than cross bars **26** and **27** are to shorter sides **33**, it is clear that cross bars **28** and **29** are further from shorter sides **33** than cross bars **26** and **27** are from shorter sides **34**. Hence the cushion will be higher when resting on cross bars **28** and **29** while shorter sides **33** are on the ground than it will be when resting on cross bars **26** and **27** while shorter sides **34** are on the ground.

There are therefore four separate seat cushion heights available for multiple uses when the novel configuration of frame supports is combined with the seat cushion as disclosed herein. In each of these seat cushion position, the cushion is supported in a solid and stable fashion. This stability is aided by providing the cushion with four plastic guide button members **15**, securely fastened to the underside of the cushion as shown in FIG. **3**. These button members are spaced in the four corners of the cushion equidistant from each other so that when the cushion rests in any of the positions illustrated in FIGS. **1** to **4***c*, said button members will engage the corresponding rectangular frame members or connecting bars upon which the cushion rests. In this manner, the cushion is held in stable fashion and cannot slide off the multiple position frame but must be lifted off.

In FIG. **5**, there is shown a table top **40** which may be used in the present invention to give even more versatility to the furniture. In this embodiment, the table top **40** is square and has various stabilizing means underneath to hold it on to the multiple position frame when the latter is in various height positions as shown in FIGS. **6***a* to **6***c*.

FIG. **6***a* shows the table top in the highest position with the multiple position frame in such a position that one of its rectangular frame members **22** is resting on the ground. Here, as in FIG. **4***a*, there is a high degree of stability associated with the highest position since there are four frame elements (all of the rectangular frame member sides) resting solidly on the ground. In this position, the table would be useful as a serving table, lamp table or a high dining table.

FIG. **6***b* shows the table top in the intermediate position with the multiple position frame in such a position that the shorter sides **33** of the rectangular frame members are resting on the ground. In this position, the table would be useful as a low dining table or desk. Cross bras **26** and **27** act in this position as parallel bars which could be utilized as storage of various household items or boxes. Cross bars **28** and **29** similarly act as cross bars for storage at another height. Seat cushion **10** or another cross member could be placed across either set of cross bars to form a shelf below the table top. The table top could be supported in the same height position with the other set of shorter sides **34** resting on the ground to attain a configuration similar to that shown in FIG. **6***b* but with the cross bars at a different level above the ground.

FIG. **6***c* shows the table top in the lowest position with the multiple position frame in such a position that the longer sides **32** of the rectangular frame members are resting on the ground. In this position, the table is useful as a coffee table, play table, or work table.

With closer reference to FIG. **5**, it is seen that the securing means uses a set of L-shaped corner brackets **42** to engage the corners of the rectangular frame members when they are in the position shown in dotted lines at **43**. Another set of L-shaped corner brackets **44** is shown to engage the corners of the rectangular frame members when in the position shown in dotted lines at **45**. In the positions shown, the set of brackets **42** would engage the multiple position frame when in the configuration shown in FIG. **6***b* while the brackets **44** would engage the frame when in the configuration shown in FIG. **6***a*.

The securing means also may use a multiple position strap **52** of either strong elastic or heavy fibre cloth which is attached to the table **40** by a swivel which has a metallic finger frame **54** to which the strap is connected. The other end of the strap is attached to a V-shaped tongue which can hook either onto latch hook **56** to hold the frame in position **45** or onto latch hook **58** to hold the frame in position **43**.

Another set of L-shaped brackets and securing straps may be provided, if desired to hold the table in the lowest position as shown in FIG. **6***c*.

The table top of the present invention may have a surface which is durable for practical objects such as eating, drinking, and playing games; and may also be decorated with views, murals, figures such as birds, and other illustrated effects. The decorated feature offers a particular advantage in that the table top may function as a wall plaque when it is not in use. Storage in this fashion thus serves a double function, and a wall hanging bracket **59** may be provided for this purpose.

FIGS. **7** and **8** show alternative embodiments of the table top. FIG. **7** shows a table top **62** which is rectangular rather than square. FIG. **8** shows a round table top **64**. For some purposes a rectangular top may be of more advantage than for a square, and for other pur-

poses a round top may be used to best advantage. For still other uses, different size tops may be used to best advantage. Accordingly, a further embodiment of the present invention employs plural table tops of different sizes and shapes, all of which may be stored on the wall as wall plaques, but any of which may be taken down and used in conjunction with the multiple position frame of the present invention.

In this way, a single piece of furniture may be used in many different ways to form many different levels of stool or bench or to form any different levels, sizes and shapes of table. A large degree of stability is associated with each function of the furniture. Further a very small amount of storage space is needed for the furniture when it is not in use.

I claim:

1. A combination bench and stool which provides for maximum flexibility in use by providing plural stable height positions, said bench and stool comprising;

a multiple position frame of solid integral construction having two rectangular frame members having longer and shorter sides, said rectangular frame members being connected by four cross bars attached perpendicularly to the longer sides of the rectangular frame members;

at least one rectangualr seat cushion having a shorter dimension and a longer dimension, said longer dimension being slightly less than the length of the cross bars, and said shorter dimension being greater than the distance between the cross bars;

stabilization means incorporating a plurality of plastic guide button members securely fastened to the underside of said seat cushion whereby the cushion is held in position on the frame in the various adjustable height positions,

two of the cross bars being connected to the longest sides of the rectangular frame members at a distance from the shortest sides which is equal to the thickness of the seat cushion so that when the cushion is resting on the bars, the shorter sides serve to stabilize the seat cushion,

the other two of the cross bars being connected to the longest sides of the rectangular frame members at a distance from the shortest sides which is greater than the thickness of the seat cushion so that when the cushion is resting on the other two cross bars, the shortest sides serve as hand rails, whereby four separate height positions of the seat cushion are available,

at least one table top having dimensions greater than the length of said cross bars, whereby said combination bench may be used either as a multi-level stool or a multi-level table with plural available height positions depending on whether said table top is resting on the long sides of said opposite rectangular frame members, upon the short sides of opposite rectangular frame members, or upon the face of one rectangular frame member with other rectangular frame members resting on the ground,

and whereby said seat cushion can be positioned either on two cross bars attached to the same longer side of the rectangular frame members, on two cross bars attached to opposite sides of said rectangular frame members, or on the face of one of said rectangular frame members to provide plural height positions of said seat cushion for use as a foot stool, a seating bench, or a high stool.

2. The combination bench and stool of claim **1** wherein the cross bars are longer than the longest side of the rectangular frame member, whereby the highest position of the seat cushion is attained by positioning it on one of the rectangular frame members so that the opposite frame member is flat on the floor for maximum stability in the highest position, and whereby the longest dimension of the seat cushion is greater than the longest side of the rectangular frame members.

3. The combination bench of claim **2** further comprising:

stabilization means for holding said table top to said multiple position frame whereby the top is held in position on the frame in the various available height positions.

4. The combination bench of claim **3** in which the stabilization means incorporates a plurality of L-shaped corner members attached to the table top at points where the top engages the corners of the rectangular frame members when in the various available height positions.

5. The combination bench of claim **3** in which the stabilization means further incorporates flexible straps with one end attached to the table top and the other end engaging one of a plurality of hooks depending on the position of the multiple position frame.

6. The combination bench of claim **5** in which the flexible straps are elastic and are attached to the table by a swivel by means of a metallic finger frame, and the other end of said flexbile straps is attached to a V-shaped tongue; and in which a plurality of finger hooks are attached to the table for engagement with the V-shaped tongues.

7. The combination of claim **2** in which the stabilization means comprises both L-shaped corner members attached to the table top at points where the top engages the frame when it is in various height positions, and flexible straps attached to the table top with one end and attachable by hooks to the table top at the other end.

* * * * *