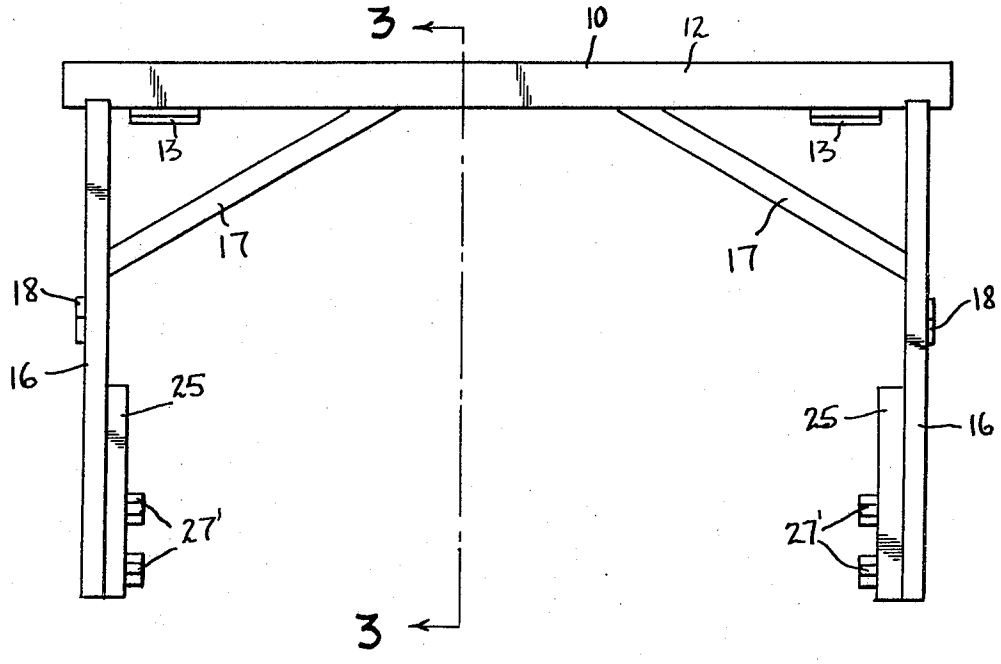
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FOLDING PORTABLE SAWHORSE

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FIG. 1



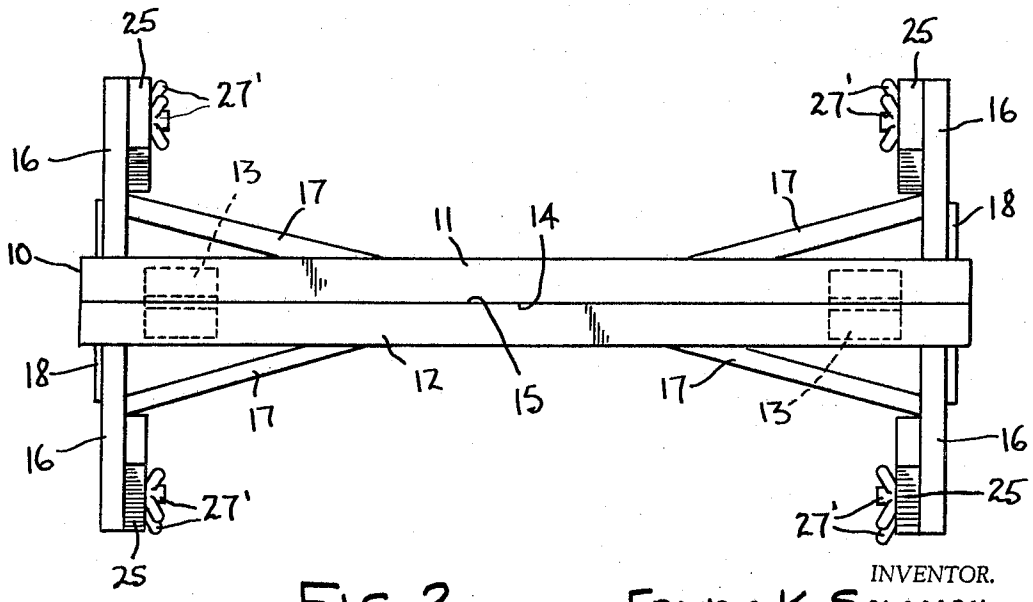


FIG. 2

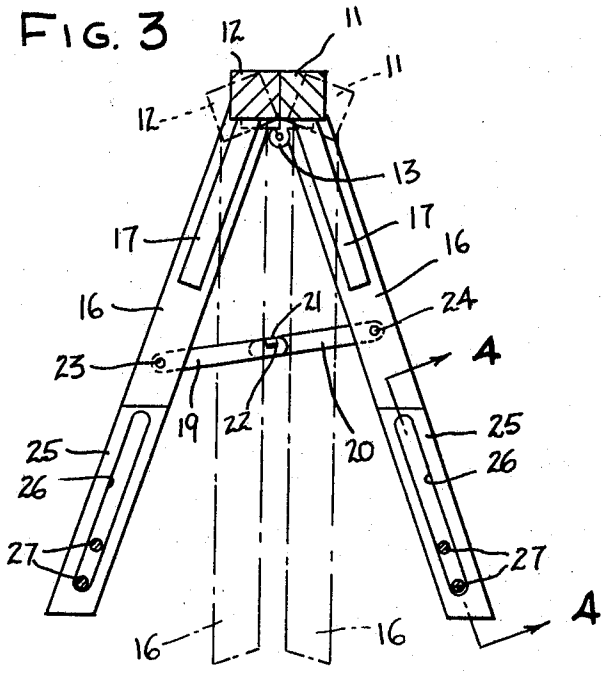
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FIG. 3



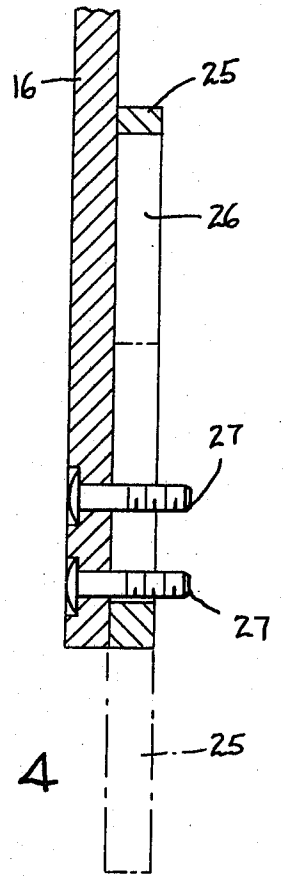


FIG. 4

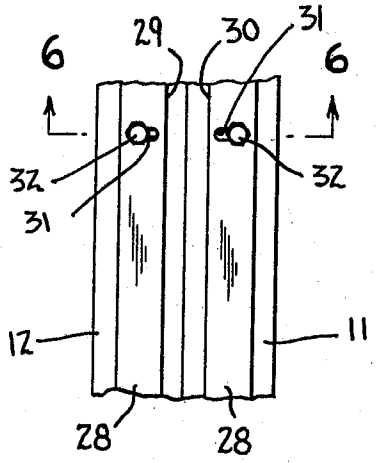


FIG. 5

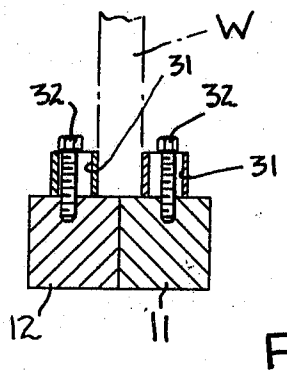


FIG. 6

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FOLDING PORTABLE SAWHORSE

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Int. Cl. E04g 1/34, 1/00
U.S. Cl. 182—153 1 Claim

ABSTRACT OF THE DISCLOSURE

A folding sawhorse having a divided upper support surface, whose halves are hinged to each other and fixedly secured to supporting legs. The supporting legs are connected to each other by a folding bracket which maintains them in predetermined space relationship when the sawhorse is being used. Adjustable leg extensions are provided for elevating the height of the support surface of the sawhorse. Adjustable clamping blocks may be provided on the support surface to clampingly secure a workpiece in the sawhorse.

BACKGROUND OF THE INVENTION

The invention relates to a folding portable sawhorse of the type upon which carpentry work can be performed or which can be utilized in pairs to provide spaced support members for work surfaces, tabletops or the like.

Sawhorses are old and well-known in the art, but are ordinarily of a non-collapsible nature, so that they are primarily suitable for professional, continuous use, rather than the occasional use by a home owner who has little available space in which to store the non-collapsible sawhorses when they are not being used.

To overcome this problem, the prior art has provided sets of folding legs between which a piece of wood can be mounted for purposes of assembling a sawhorse for temporary use. Although such component kits for assembling a sawhorse are advantageous in minimizing the storage problem when the sawhorse is not being used, the assembled structure does have the disadvantage of not being very strong or rigid in character and of having loose, disconnected parts which can easily be separated from each other or lost, so that they are not available when assembly of the sawhorse is required.

SUMMARY OF THE INVENTION

I provide a sawhorse which is unitary in structure, but which is capable of being folded into a compact unit for ease of storage. Thereby, I retain the characteristics of strength and rigidity which are desired in a sawhorse, while at the same time attaining the desired compact storage characteristics. In addition, I also provide for selective height adjustment of the sawhorse so that it can be elevated to table supporting height or lowered to work surface height, as desired. The pivotal folding structure of my sawhorse also permits utilization of auxiliary clamping blocks which utilize the clamping force exerted by the pivotally joined legs to hold a workpiece in place on the sawhorse.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a side elevation of a folding sawhorse embodying the features of my invention.

FIG. 2 is a top plan view of the sawhorse shown in FIG. 1.

FIG. 3 is a vertical cross-sectional view, taken as indicated on line 3—3 of FIG. 1 and showing in phantom outline the position of the parts when the sawhorse has been folded for storage.

FIG. 4 is a fragmentary cross-sectional view, taken as indicated on line 4—4 of FIG. 3 and showing in phantom outline an elevating position of the height-adjusting means.

FIG. 5 is a fragmentary top plan view of my folding sawhorse with auxiliary clamping blocks mounted thereon.

FIG. 6 is a cross-sectional view taken as indicated on line 6—6 of FIG. 5.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring more particularly to FIGS. 1–4 of the drawings, I have shown a longitudinally extending support member **10** which is divided into two longitudinally extending halves **11** and **12**. The support member may be in the form of a divided piece of wood of conventional 2 x 4 cross-section. The halves **11** and **12** are pivotally secured to each other by means of spaced leaf hinges **13** which are secured to the underside of the pieces **11** and **12** in position to permit the opposed surfaces **14** and **15** to be brought into parallelism with each other.

Fixedly secured to the half-pieces **11** and **12**, adjacent each end thereof is a supporting leg **16**, which is positioned at an angle to the plane of the parallel surfaces **14** and **15** so that the legs at each end of the divided support member **10** diverge downwardly to ground-engaging position. Each pair of diverging legs **16** should define an included angle of sufficient magnitude to provide a steady suport for the sawhorse, and this may nominally be on the order of 45° for most purposes.

The rigidity of the connection of each leg **16** to its half-piece **11** or **12** is further reinforced by a brace **17** which is fixedly secured between the underside of a half-piece **11** or **12** and an intermediate portion of its adjacent leg **16**. Each half-piece **11** or **12** and its pair of braced legs **16**, rigidly secured thereto, move as a unit.

The diverging legs **16** at each end of the divided support member **10** are connected to each other by a folding toggle brace or bracket **18**, consisting of a notched link **19** which is pivotally connected to a tongue link **20**. The link **20** is provided with a transversely extending projection **21** which is accomodated in a notch **22** provided in the link **19**, so as to limit opening pivotal movement of the joined links **19** and **20** to a substantially colinear position which locks the links under load. One end of the toggle brace **18** is pivotally connected to one of the legs **16**, as at **23**, and the other end of the brace **18** is pivotally connected to the other leg of the diverging pair, as at **24**.

When the toggle bracket **18** is in its fully extended locked position, as shown in solid lines in FIG. 3, each pair of end legs **16** is rigidly maintained in predetermined space relationship for operative use of the sawhorse. However, as shown in phantom outline in FIG. 3, when the toggle brace **18** is manually collapsed, the half-pieces **11** and **12** and their attached leg assemblies can be moved pivotally relatively to each other so as to draw the divergent pairs of legs **16** toward each other, while at the same time the opposed surfaces **14** and **15** are rotated away from each other about the axis defined by the hinges **13**. Thus, the volume of space occupied by the sawhorse, when folded for storage, is considerably less than the space occupied by it when the legs **16** are locked in widespread position for operative purposes. In its folded position, the sawhorse can be readily stored in a small ground level area, or it can be hung from a peg or other suitable support from a wall surface. In either case, none of the parts of the sawhorse are disconnected or disassembled from each other in its folded or storage position, so that the unit is at all times ready for immediate operative use.

When the sawhorse is utilized for supporting a piece

of wood which is to be sawed, planed or otherwise worked upon while being supported, it is generally desirable that the height of the support member **10** be about 24" above ground level. On the other hand, when a pair of such sawhorses is used as support for a work surface or a dining surface, a height of 24" may be inconvenient and uncomfortable, so that a height of at least 30" for the sawhorses is desirable. Due to these varied uses to which sawhorses may be put and the varying height requirements that such uses may require, I have provided means for adjustably elevating the height of the sawhorse, as best shown in FIG. 4 of the drawings.

Each of the legs **16** has slidably mounted thereon a leg extender **25** which, in the form shown, is provided with a longitudinally extending slot **26** traversed by longitudinally spaced bolts **27** projecting from the leg **16**. Overlying wing nuts **27'** threadedly engage the bolts **27** and serve to frictionally secure the leg extender to the leg **16** in any selected position of extension within the range of its height adjusting movement. If the minimum heights of the sawhorse is 24" when the leg extenders **25** are not in ground engaging position, and the maximum height-elevating adjustment of the extenders **25** is 12", it will be apparent that the height of the sawhorse is adjustable anywhere within the range of 24" to 36", depending upon the purpose for which the sawhorse is to be utilized.

Inasmuch as the height of each leg **16** is independently adjustable, the leg extenders **25** can be manipulated and set to obtain a longitudinal canting of the sawhorse or a transverse canting of the sawhorse, if such a position is desired for making certain angular saw cuts or for other purposes.

Referring to FIGS. 5 and 6 of the drawings, I have shown a pair of opposed clamping blocks **28** mounted on the upper surface of the half-pieces **11** and **12** respectively, with the opposed surfaces **29** and **30** of the clamping blocks **28** being maintained in selected spaced parallel relationship for clamping engagement with a workpiece W, shown in phantom outline in FIG. 6.

Each of the clamping blocks **28** is provided with a pair of longitudinally spaced, transversely extending slots **31** which are traversed by bolts **32** which overlie the slots **31** and are threadedly connected to the underlying half-piece **11**or **12**. When the bolts are loosened, each block **28** is slidable relatively to its underlying support piece so that a preselected spacing between the opposed surfaces **29** and **30** of the blocks **28** can be established for the thickness of the particular workpiece W which is to

be clamped there between. When the end pairs of legs **16** are in a closed position such as shown in phantom outline in FIG. 3 or in a position intermediate that of the fully closed position and the fully divergent position shown in solid lines in FIG. 3, a workpiece can be held in place between the opposed clamping blocks **28** and when the legs **16** are then more widely positioned, the workpiece is firmly clamped between the clamping surfaces **29** and **30** in response to the high clamping leverage exerted by the legs **16** on the support pieces **11** and **12** through the fulcrum provided by the axis of the hinges **13**.

It is to be understood that the forms of my invention, herewith shown and described, are to be taken as preferred examples of the same, and that various changes in the shape, size and arrangement of parts may be resorted to, without departing from the spirit of my invention, or the scope of the subjoined claim.

Having thus described my invention, I claim:

1. In a folding sawhorse, the combination of longitudinally-extending support members, hinge means pivotally securing said support members to each other, a ground-engageable leg fixed adjacent each end of each support member to provide a pair of legs at the like ends of said support members, said legs of said pair being divergent with each other toward ground-engaging position, a toggle brace pivotally secured between each pair of legs to releasably maintain said legs in predetermined divergent relationship, opposed surfaces movably mounted on said support members for adjustable clamping engagement with a workpiece, each of said legs being angularly disposed relatively to the plane of the opposed surface of its associated support member, and said opposed surfaces being rotatably into parallelism to define a workpiece clamping area in response to spreading of said legs into said predetermined divergent relationship.

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REINALDO P. MACHADO, Primary Examiner

U.S. Cl. X.R.

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