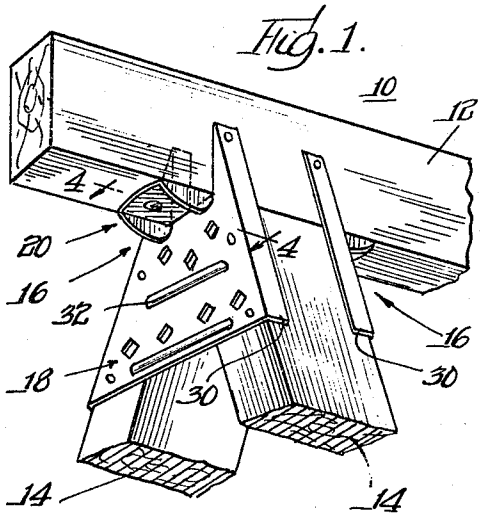
Nov. 25, 1969 C. O. LARSON 3,480,111

SAWHORSE BRACKET ASSEMBLY

Filed April 1, 1968

Fig. 1.



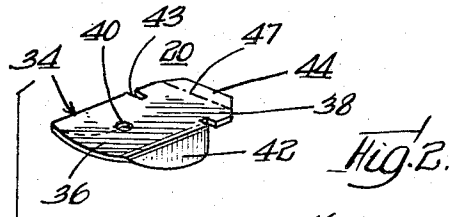


Fig. 2.

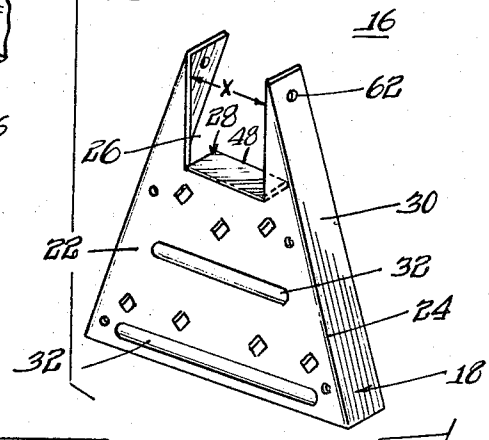


Fig. 3.

Fig. 4.

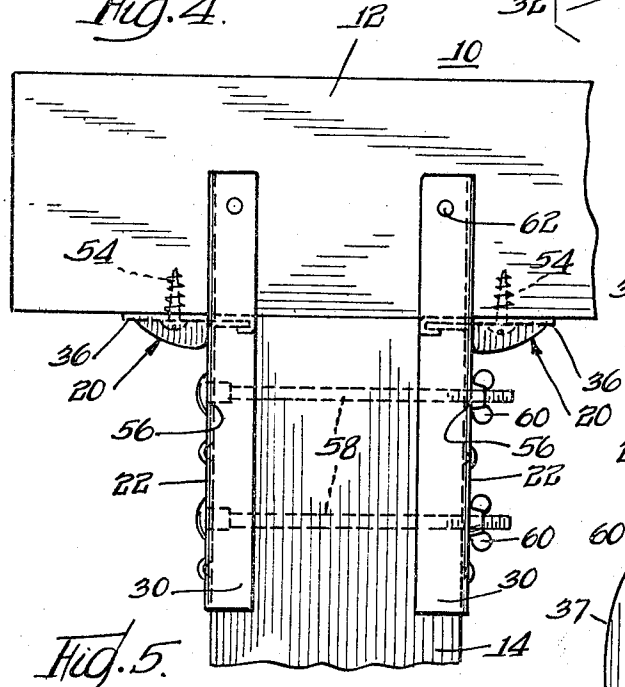


Fig. 5.

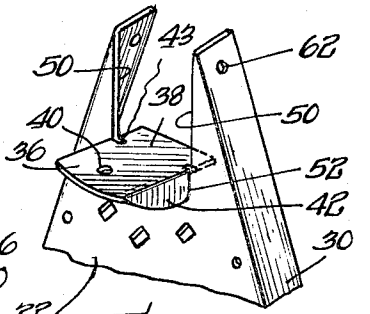
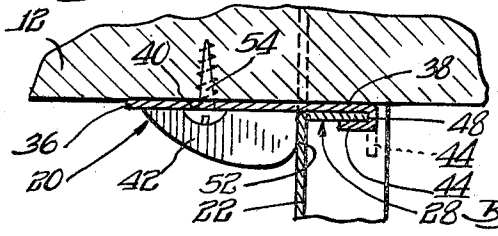
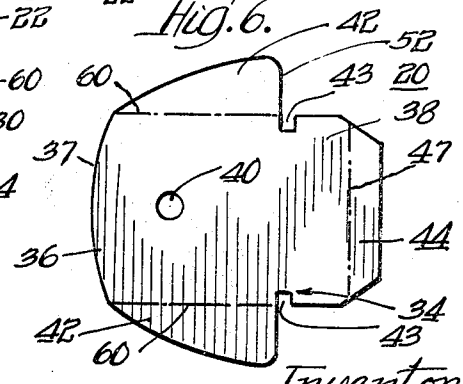


Fig. 6.





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3,480,111

SAWHORSE BRACKET ASSEMBLY

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Filed Apr. 1, 1968, Ser. No. 717,653
Int. Cl. E04g 1/32
U.S. Cl. 182—224 10 Claims

ABSTRACT OF THE DISCLOSURE

A bracket assembly for use in the formation of a sawhorse or the like structure. The assembly includes a main support bracket having a generally triangular face plate with a slot of a predetermined width extending inwardly from the apex thereof and a shelf portion extending outwardly from a first surface of the face plate at the base of the slot; and an auxiliary bracket mounted on the main bracket. The auxiliary bracket includes a plate portion having a width at least at a predetermined point therealong equal to the width of the slot in the main bracket and being received thereat in the slot. A first section of the plate portion extends from the first surface of the face plate and rests on the shelf portion. The free end of the first section overhangs the end of the shelf portion and is reversely bent thereabout. A second section extends from the opposite surface of the face plate and includes flanges along the sides thereof, the ends of which are butted against the second surface of the face plate. The cross member of the sawhorse structure rests on the auxiliary bracket and an aperture in the latter serves to allow for the insertion of a fastener into the cross member.

Background of the invention

This invention relates to support forming brackets such as those used in the formation of sawhorses or the like structures.

Summary of the invention

It is a general object of this invention to provide a new and improved bracket assembly for use in forming sawhorses or the like.

It is a more specific object of this invention to provide an auxiliary bracket for use with a support forming bracket such as shown in my Patent No. 3,042,144, which provides added stability and strength to a sawhorse, etc., formed with the last-mentioned bracket.

It is another object of this invention to provide an auxiliary bracket for use with a support bracket like the one described above, which provides for added ease of assembly of a sawhorse or the like structure and which is simple and inexpensive to produce.

Description of the drawings

A better understanding of the present invention and its organization and construction may be had by referring to the description below in conjunction with the accompanying drawings, wherein:

FIG. 1 is a fragmentary perspective view of a sawhorse structure formed through the use of a plurality of bracket assemblies according to the invention;

FIG. 2 is an exploded perspective view of a bracket assembly according to the invention;

FIG. 3 is a perspective view of the bracket assembly of FIG. 2 in an assembled condition;

FIG. 4 is a side elevational view of the sawhorse structure of FIG. 1;

FIG. 5 is a side sectional view of a bracket assembly according to the invention, illustrating the manner in which the main and auxiliary brackets thereof are assembled; and

FIG. 6 is an enlarged top plan view of an auxiliary bracket of a bracket assembly according to the invention shown prior to being shaped for use with a main bracket of the assembly.

Detailed description

Referring now to the drawings more in detail, FIG. 1 thereof illustrates a portion of a sawhorse **10** including a crosspiece or member **12**, a pair of legs **14** and a pair of bracket assemblies **16** according to the invention, each including a main support bracket **18** and an auxiliary bracket **20** for interconnecting the crosspiece **12** of the sawhorse structure to the legs **14** thereof.

Turning to FIGS. 2 and 3, a bracket assembly **16** according to the invention is shown both in an assembled and unassembled condition, respectively. The main bracket **18** of the bracket assembly, as shown in the figures, and which is discussed in greater detail in the aforementioned patent, includes a face plate **22** of a generally triangular shape. The face plate is preferably formed as an equilateral triangle including an angle of thirty-three degrees between the equal length sides **24** thereof, for it has been found that at this angle the supporting legs **14** (FIG. 1) provide more strength and stability to the sawhorse or the like structure.

The bracket **18** further includes a rectilinear slot or opening **26** of a predetermined width indicated as "X," which extends downwardly from the narrowest apex of the face plate **22**, and which has been provided to receive therein a length of lumber or the like material to form a crosspiece, such as **12** of FIG. 1, of the sawhorse. A shelf or ledge **28** is disposed at the base of the slot **26** and extends rearwardly from the face plate **22** and substantially perpendicularly thereto. The shelf is provided as a support upon which the crosspiece **12** may rest as well as a stop for legs **14** therebeneath.

The equal length sides **24** of the face plate **22** are provided with flanges **30** which extend rearwardly and perpendicularly therefrom. The converging flanges **30** (FIG. 1) define channels for constraining legs **14** of the sawhorse structure **10**. To impart additional strength to the main bracket **18**, embossed, reinforced ribs **32** are provided along the face plate **22**.

The auxiliary bracket **20**, according to the invention, comprises an elongated plate **34** having first and second sections **36** and **38**, respectively. The first section **36** includes an aperture **40** extending through the section, a rounded free edge **37** and a pair of flanges **42** extending downwardly along the sides thereof perpendicularly to the plate **34**. The second section **38** is preferably narrowed or tapered at the free end **44** thereof and includes a pair of notches **43** on opposite sides thereof, the purpose of which will be explained hereinafter. The end **44** of section **38**, as will be shown below, is able to be bent (along dotted line **47** as shown in FIGS. 2 and 6 for illustrative purposes) about the outwardly extending end **48** of shelf **28** of the main support bracket **18**, to secure the auxiliary bracket **20** to the latter.

FIG. 3 of the drawings shows the auxiliary bracket **20** in position on shelf **28** of the main support bracket **18**. As can be seen in the figure, the width of the auxiliary bracket **20** is slightly larger than the width ("X," FIG. 2) of slot **26**, so that the bracket may be mounted between the edges **50** defining the slot only at notches **43** thereof whereat the width is approximately equal to the width of the slot **26**. Thus, edges **50** are received in notches **43** as auxiliary bracket **20** is slipped downwardly onto the shelf **28**. If desired, however, the width of bracket **20** may be equal to that of slot **26** and notches **43** eliminated. This

provides for a more simple and less costly construction of the auxiliary bracket **20**. The vertically oriented ends **52** of flanges **42** of the auxiliary bracket are butted against face plate **22** when the bracket **20** is in position on shelf **28** to further support section **36** of the bracket **20** against the weight of a crosspiece **12** placed thereon.

FIG. 4 illustrates the manner in which a pair of bracket assemblies **16**, according to the invention, maintain legs **14** and crosspiece **12** of the sawhorse structure **10** in an assembled relation. A pair of bracket assemblies **16**, as shown in FIG. 4, are combined with a pair of legs **14** by disposing the bracket assemblies back-to-back in a spaced-apart relation and situating the legs **14** within the channels formed by the adjacent flanges **30** of the main brackets **18** of the respective assemblies. In order to establish positive alignment between the two bracket assemblies, a number of preferably rectangular holes **56** are provided in the face plate **22** of each of the main brackets. Carriage bolts **58** or other suitable fasteners may be inserted through aligned holes **56** in each of the two main brackets **18** to have wing nuts **60** threaded about their free ends so as to draw the bracket assemblies together closely about legs **14** to secure them therebetween.

Crosspiece **12** is inserted into slot **26** of both main support brackets **18**. A small nail or screw may be inserted through aperture **62** near the apex of the bracket **18** in flanges **30** thereof to aid in securing the crosspiece **12** thereto.

It will be noted that crosspiece **12**, due to the addition of auxiliary brackets **20** is provided with added area for the support thereof and for the distribution of weight carried thereby when the sawhorse is being used. In addition, to better secure the crosspiece **12** to the bracket assembly **16**, a fastener **54**, such as a screw or nail, may be inserted from beneath crosspiece **12** through aperture **40** in auxiliary bracket **20** and into the lower surface of the crosspiece. Because the section **36** of the bracket **20** is spaced from the leg assembly and extends outwardly from the main bracket **18**, easy access to aperture **40** for the insertion of fastener **54** therein is provided.

Referring now to FIG. 5 of the drawings, the mounting of auxiliary bracket **20** on main bracket **18**, discussed briefly heretofore, will now be described in greater detail.

As mentioned above, the auxiliary bracket **20** is positioned between sides **50** of slot **26** with section **38** thereof resting on shelf **28** of main support bracket **18**. The end **44** of the auxiliary bracket is reversely bent, as shown in FIG. 5, from the position shown in dotted lines, about the free end **48** of shelf **28** to the position shown in solid lines. This secures the auxiliary bracket **20** to the shelf and prevents it from being moved either to the left or the right, as shown in the figure. To explain, the bracket **20** cannot be moved to the left because of the reversely bent end portion **44** butting against the free end **48** of shelf **28**, and cannot be moved to the right because of the notches **43** (FIG. 2 and 3) which receive therein edges **50**, and because of the edges **52** of flanges **42** of auxiliary bracket **20** butting against face plate **22** of the main bracket. If, however, the bracket **20** were of the type which did not include notches **43**, it would still be securely held and immovable due to the reversely bent end portion **44** and the abutting edges **52** of the flanges **42** thereof.

After crosspiece **12** is positioned between respective slots **26** of main bracket **18** and comes to rest on the auxiliary brackets **20**, a screw or nail **54** may be easily inserted through aperture **40** in section **36** of the auxiliary bracket **20**, into the lower surface of the crosspiece **12**.

The manufacture of bracket **20**, as can be seen from FIG. 6, is relatively simple, since each bracket **20** is of a one-piece construction and is stamped from a sheet of relatively rigid metal, such as that used in the manufacture of the main support bracket **18**. After being stamped in a shape as shown in FIG. 6, flanges **42** are bent downwardly (into the page as shown in FIG. 6) along the imaginary lines **60**. The bracket is now in condition for use with a main bracket **18**. The bending of the end portion **44** of section **38** of the bracket **20** about shelf **28** (FIG. 5) to secure the former to the latter may be accomplished by the user of the bracket assembly merely by hammering the end **44** into a reversely bent position, or the bracket assembly may be preassembled, if desired.

Thus, the bracket assembly including the auxiliary bracket according to the invention provides an efficient, easy to use, reliable and durable arrangement for use in the formation of sawhorse or the like structures. The auxiliary bracket provides a greater area for a wider distribution of weight carried by the cross member of a sawhorse structure and an accessible place for the insertion of a fastener to better secure the cross member to the remaining structure of the sawhorse.

While a particular embodiment of the invention has been shown and described, it should be understood, of course, that the invention is not limited thereto since many modifications may be made. It is therefore contemplated to cover by the present application any and all such modifications as fall within the true spirit and scope of the appended claims.

What is claimed is:

1. An auxiliary bracket for use with a support bracket in the formation of a sawhorse or the like structure including a generally triangularly shaped face plate having a slot of a predetermined width extending inwardly from the apex of the face plate with a shelf portion extending outwardly from a first surface of said face plate at the base of the slot substantially perpendicularly to said first surface of said face plate, said auxiliary bracket comprising: a plate portion having a width at least at a predetermined point therealong substantially equal to the width of said slot and being received thereat in said slot, said plate portion having a first section extending outwardly from said first surface of the face plate of said main support bracket and resting on said shelf portion, and a second section extending outwardly from a second, opposite surface of said face plate with means preventing movement of the auxiliary bracket in one direction relative to the support bracket, said first section having means securing the same to the shelf portion to interconnect said auxiliary and main support brackets and prevent movement of the auxiliary bracket in the opposite direction relative to the support bracket.

2. An auxiliary bracket as claimed in claim **1** wherein said first section of said auxiliary bracket overhangs the free end of said shelf portion and is reversely bent over the latter to secure said auxiliary bracket to said main bracket.

3. An auxiliary bracket as claimed in claim **2** wherein said second section of said auxiliary bracket includes at each side thereof, a flange member extending outwardly therefrom, and wherein first edges of said flange members are butted against a second surface of the face plate of said main support bracket further to secure said brackets to each other and to prevent relative movement therebetween.

4. An auxiliary bracket as claimed in claim **2** and further including at said predetermined point therealong, a pair of notches, the width between the inner edges thereof being substantially equal to the width of said slot, and said notches receiving therein the edges of said face plate defining said slot, thereby to further prevent movement of said auxiliary bracket with respect to said main support bracket.

5. An auxiliary bracket as claimed in claim **3** wherein said second section includes an aperture extending therethrough for receiving therein a fastener thereby to aid in the attachment of a portion of said sawhorse structure to said auxiliary bracket.

6. An arrangement for interconnecting a cross member and a pair of legs of predetermined lengths and sizes in converging relation to form a support, said arrangement

comprising a pair of bracket assemblies, each said assembly including a main support bracket member having a triangularly shaped face plate with a slot of a predetermined width extending downwardly thereinto from the apex, with a shelf portion extending outwardly from a first surface of said face plate at the base of said slot, said shelf portions of said pair of brackets being in an aligned opposing relation, each of said brackets further including flanges on each side thereof extending toward the flanges of the other bracket for receiving and engaging therebetween said legs, and a pair of auxiliary brackets, each one of said pair being associated with a corresponding main support bracket and each comprising a plate portion having a width at least at a predetermined point therealong substantially equal to the width of said slot and being received thereat in said slot, said plate portion having a first section extending outwardly from said first surface of the face plate of said corresponding main support bracket and resting on a corresponding shelf portion and a second section extending outwardly from the opposite surface of said face plate with means preventing movement of the auxiliary bracket in one direction relative to the support bracket, said first section overhanging the free end of said shelf portion and being reversely bent over said end to secure said auxiliary bracket to a corresponding main bracket and prevent movement of the auxiliary bracket in the opposite direction relative to the corresponding main bracket, said cross member being received in said slots of said main brackets and being supported by said auxiliary brackets therein.

7. An arrangement as claimed in claim 6 wherein each of said auxiliary brackets further includes at each side of the second section thereof, a flange member extending outwardly and downwardly therefrom and wherein first ends of said flange members are butted against said second surface of said face plate of a corresponding main support bracket, thereby to aid in preventing movement of said auxiliary brackets with respect to a respective main support bracket and to provide added support to said cross member.

8. An arrangement as claimed in claim 7 wherein each of the second sections of said auxiliary brackets includes an aperture extending therethrough for receiving therein a fastener to be engaged with said cross member, thereby to securely attach said cross member to said bracket assemblies.

9. An arrangement as claimed in claim 8 wherein each of said auxiliary brackets includes at said predetermined point therealong, a pair of notches, the width between the inner edges thereof being substantially equal to the width of said slot, said notches receiving therein the side edges of said face plate defining said slot thereby to aid in securing said auxiliary brackets and main support brackets to each other, and to aid in preventing relative movement therebetween.

10. An arrangement as claimed in claim 9 wherein said auxiliary brackets are each of a one-piece, metal construction with said flange members being integrally formed therewith, and wherein the reversely bent end of said first section is tapered to provide for ease in bending said overhanging portion about the free end of said shelf portion.

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U.S. Cl. X.R.

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