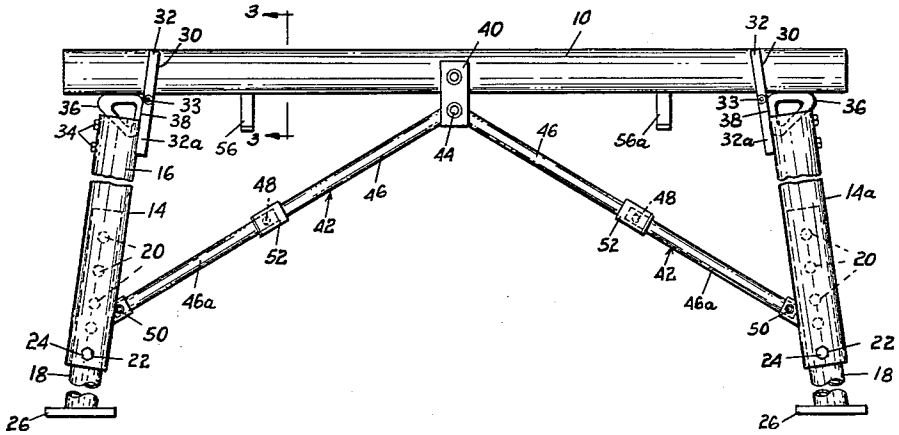
Nov. 12, 1963 J. E. HEARN 3,110,360

SAW HORSE

Filed Sept. 29, 1961

Fig. 1



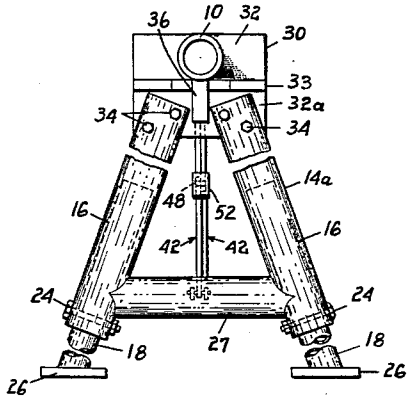


Fig. 2

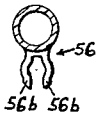


Fig. 3

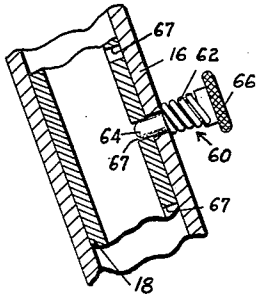


Fig. 4

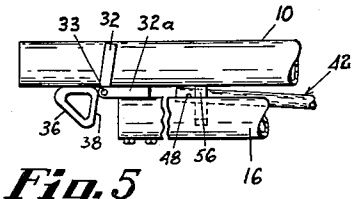


Fig. 5

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This invention relates generally to saw horses or work horses as they are sometimes known in the art, and more particularly to a saw horse which may be collapsed or folded into a relatively compact package, for ease and convenience in transporting and/or storing the same.

Saw horses are well known in the art, but such articles of manufacture are generally of more or less rigid construction, and due to the relative bulkiness of the article, transporting or storing thereof presents space problems.

The present invention provides a saw horse construction which is light in weight, and which is readily collapsed or folded for convenience in storing or transporting the saw horse, but which when unfolded into its conventional form, provides a generally rigid frame for work purposes.

Accordingly, an object of the invention is to provide an improved saw horse construction.

Another object of the invention is to provide a saw horse construction of light weight, but sturdy construction, and including means for readily folding or collapsing the saw horse into a relatively compact package.

Another object of the invention is to provide a saw horse construction of the above type which is easily folded or collapsed into a compact package for transporting or storage, but which is just as easily unfolded and set up for working purposes.

A still further object of the invention is to provide a saw horse construction including means for selectively varying the height of the saw horse.

A still further object of the invention is to provide a saw horse construction of the above type which is comparatively economical in construction, and which can be readily manufactured.

Other objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a broken, side elevational view of a saw horse produced in accordance with the instant invention;

FIG. 2 is an end elevational view of the FIG. 1 showing;

FIG. 3 is a fragmentary, sectional view taken generally along the plane of line 3—3 of FIG. 1, looking in the direction of the arrows;

FIG. 4 is an enlarged, sectional, fragmentary elevational view of a modified form of retaining the legs of the saw horse in predetermined telescoped condition;

FIG. 5 is a fragmentary, side elevational view showing the component parts of the saw horse in folded condition.

Referring now again to the drawings, the saw horse may comprise a longitudinally extending rail or body element 10, with paired leg assemblies 14, 14_a depending therefrom adjacent the ends of the body element 10.

Each of the legs of each leg assembly 14 or 14_a may comprise an upper portion 16 in which is disposed in telescoping relation, a lower portion 18. The lower leg portion 18 may have a plurality of openings 20 extending therethrough, which openings 20 are adapted for selective alignment with an opening 22 extending through the upper leg portion 16. A holding element 24, such as a bolt and nut assembly, may be disposed in the aligned of said openings 20, 22, for selectively holding the lower leg portion 18 in predetermined telescoped relation in the upper leg portion 16 to thereby provide for selective varying of the length of each leg. A supporting plate or foot portion 26 may be provided at the lower end of each lower

leg portion 18, for steadying the saw horse when disposed in non-collapsed or working condition. Cross element 27 may be provided between the legs of each leg assembly, for rigidifying the latter. Each leg assembly 14, 14_a is connected to the longitudinally extending body element 10 as by means of a hinged connecting plate 30.

Plate element 30 comprises an upper portion 32 secured to the body 10 of the work horse, and a lower portion 32_a pivotally connected or hinged to the upper portion 32 and as at 33. The leg assemblies 14, 14_a may be connected to the lower portion 32_a of the respective plate element 30 by any suitable means, such as for instance, the threaded fastener means 34, or, as for instance, by welds.

Abutment elements 36 are provided in secured relation to the underside of the body element 10, adjacent a corresponding end thereof, and adapted for abutting engagement with the lower portion 32_a of the respective hinge plate 30, for limiting outward pivotal movement of the corresponding leg assembly. The abutting face or portion 38 of each abutment element 36 is preferably disposed at a diagonal with respect to the body element 10 and as shown, so that the leg assemblies diverge outwardly in a downward direction, and with respect to one another, when the saw horse is in its non-collapsed or working condition.

A bracket 40 is secured to the body element 10 generally centrally thereof, and brace assemblies 42 are pivotally mounted or connected, as at 44, to such bracket for swinging movement in a vertical plane. Each brace assembly comprises a paired arrangement of elongated strut elements 46, 46_a which are pivotally coupled together as at 48 adjacent corresponding ends, and as by means of a pin, and with the strut elements 46_a being preferably generally loosely pivotally connected as at 50, to the respective cross member 27, for swinging movement in a generally vertical plane. A preferably tapered sleeve or collar member 52 is provided on each brace assembly 42 so that when the collar is slid down over the pinned adjacent ends of the strut elements 46, 46_a, such strut elements are held in generally rigid condition with respect to one another. In this connection, the interior opening through the sleeve or collar is tapered divergingly in a downward direction so that the collar will be frictionally retained in place when in encircling or encompassing relation with the respective ends of strut elements 46, 46_a.

Flexible bracket members 56, 56_a are secured to the underside of the body 10, intermediate bracket 40 and each hinge plate 30, so that when the leg assemblies are swung inwardly to collapse the saw horse, the strut elements 46, 46_a can be engaged with the resilient legs 56_b of a bracket and be releasably held or clamped in position, thus holding the leg assemblies in collapsed condition.

Referring now in particular to FIG. 5, when it is desired to collapse the saw horse for transporting or storage purposes, each of the collar members 52 may be slid lengthwise in a upward direction along the respective brace assembly to thereby permit pivotal movement between the articulated ends of the strut elements of each brace assembly. The leg assemblies 14, 14_a are then swung inwardly about their respective pivots 33, which may cause inward collapsing movement of the strut elements 46, 46_a with respect to one another, until such strut elements are received in held relationship in the respective bracket 56, 56_a thereby holding the leg assemblies in collapsed condition.

The brace assemblies 42 are preferably so arranged that they may also be collapsed or pivoted outwardly with respect to one another about their pivot points 48, whereupon the brace assembly on, for instance, the left hand end (with reference to FIG. 1) of the saw horse would swing outwardly and upwardly about pivot point 44 and be received in held relation in bracket 56_a on the right hand side

of the saw horse, while the brace assembly on the right hand end of the saw horse would pivot outwardly and upwardly and be received in held coaction in the bracket 56 on the left hand side of the saw horse. Strut elements 46, 46_a are preferably disposed in side-by-side pivoted relation, as best shown in FIG. 2, so that in the event that outward pivotal collapsing movement of the bracing assemblies is effected, they will not interfere with one another during such outward and upward swinging movement.

Referring now to FIG. 4, there is shown a modified form of means for holding the leg portions 16, 18 in predetermined telescoped relation. In this embodiment, the outer or upper leg portion 16 is provided with a locking pin assembly 60 which includes a spring 62 secured at one end to the outer leg element 16 and at the other end to a reciprocable pin member 64. Pin member 64 may include a head portion 66, for convenience in gripping the pin, and moving it outwardly against the resistance of the spring and out of locking coaction with a selected opening 67 in the lower leg portion 18.

The saw horse may be constructed of light weight materials, such as for instance high strength aluminum, and can be produced from standard forms of tubular and/or rod configurations of such aluminum. The lightness of weight is desirable in facilitating handling and use of the saw horse device.

From the foregoing discussion and accompanying drawings, it will be seen that the invention provides a novel saw horse construction which may be readily collapsed into a compact easily transported or stored package, and including means for selectively varying the length of the legs of the saw horse, for facilitating working operations. The invention also provides a saw horse construction which may be readily collapsed or folded and which can be just as readily unfolded and set-up into working condition, and which when in the latter condition, provides a substantially rigid frame for working purposes.

The terms and expressions which have been used, are used as terms of description and not of limitation, and there is no intention in the use of such terms and expressions of excluding any equivalents of any of the features shown or described, or portions thereof, but it is recognized that various modifications are possible within the scope of the invention claimed.

I claim:

In a saw horse comprising, a longitudinally extending tubular body of light weight material, leg assemblies depending from said body adjacent opposite ends thereof for supporting said body in spaced relation to ground level, each of said leg assemblies including a pair of generally laterally spaced tubular legs of light weight material, with the legs being disposed on opposite sides of the body and extending diagonally outwardly with respect to one another in a downward direction, a transversely projecting connecting element extending between and being connected to the legs of each pair, means pivotally attaching each of said leg assemblies to said body whereby said leg assemblies may be folded inwardly under said body to collapse the saw horse into a compact package, said attaching means including hinge-like members extending transversely of the body and each having a lower abutment plate portion to which the legs of the respective leg assembly are attached, abutment means depending from said body in outwardly oriented relation to said hinge-like members and adapted for abutting coaction with the respective plate portion, for limiting the outward pivotal movement of the respective leg assembly with respect to the body, selectively collapsible bracing means extending between each leg assembly and said body for rigidifying said saw horse in the latter's non-collapsed condition, said bracing means of both leg assemblies being generally co-planar, with each of said bracing means comprising a pair of elongated strut elements, a bracket depending from said body centrally thereof, one of said strut elements of each bracing means being pivotally connected at one end thereof to said transverse connecting element of the respective leg assembly, and the other of said strut elements of each bracing means being pivotally connected at one end thereof to said bracket along a common transversely extending axis, said strut elements being adapted for swinging movement in a generally vertical direction, the other ends of said strut elements of each of said bracing means being disposed in generally laterally juxtaposed condition and being pivotally connected together along a transversely extending axis adjacent the juxtaposed ends thereof, collar means selectively movable along respective of said strut elements for selectively holding said juxtaposed ends thereof in non-pivotal relation with respect to one another in the non-collapsed condition of the saw horse, and clamping means for each of said bracing means, including laterally spaced resilient fingers depending from said body inwardly of the respective hinge-like member and intermediate the latter and said bracket, adapted to receive in snap-fastening releasible relation the respective bracing means when the latter is in the collapsed condition and the respective of said leg assemblies is in folded condition, for releasably holding said leg assemblies in said folded condition, said resilient clamping means in the last mentioned condition of the sawhorse being adapted to extend intermediate the legs of the respective leg assembly, and with the distance between each clamping means and the pivotal connection of the respective leg assembly being less than the distance between said transverse connecting element and the last mentioned pivotal connection of the respective leg assembly.

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