April 23, 1968 E. W. KNUTH 3,379,282

SCAFFOLD HORSE

Filed June 30, 1966 2 Sheets-Sheet 1

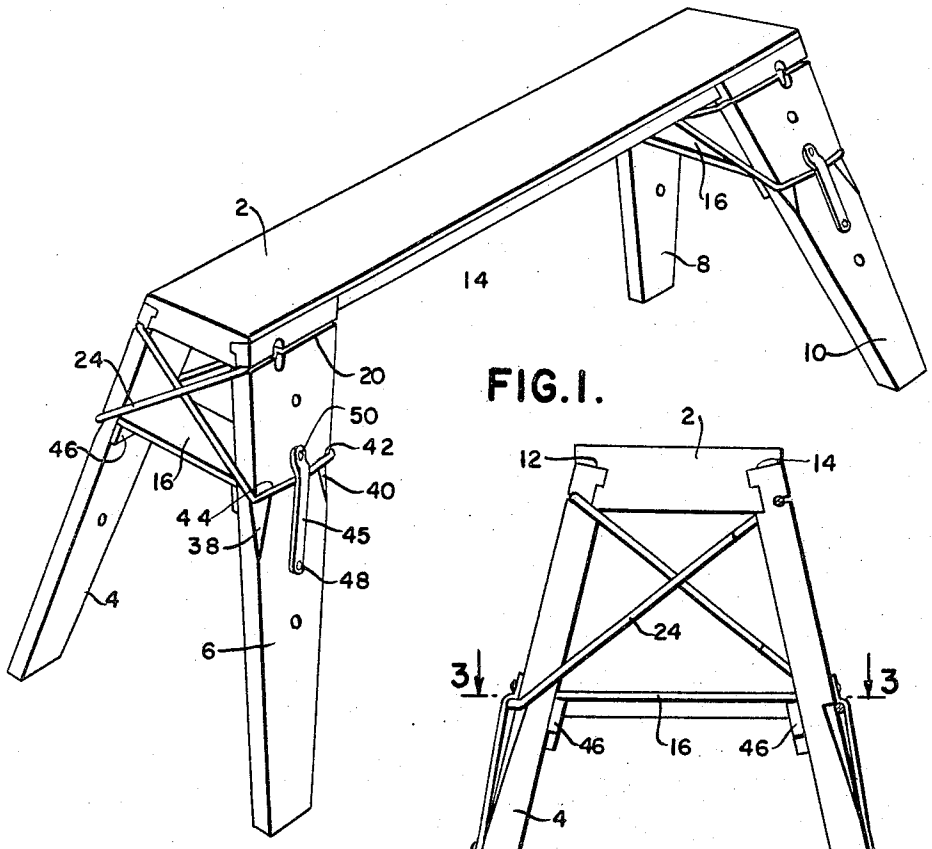


FIG. 1.

FIG. 2.

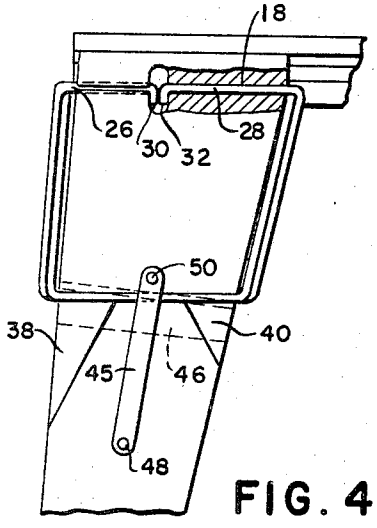


FIG. 4.

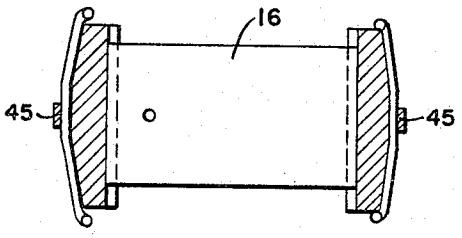


FIG. 3.

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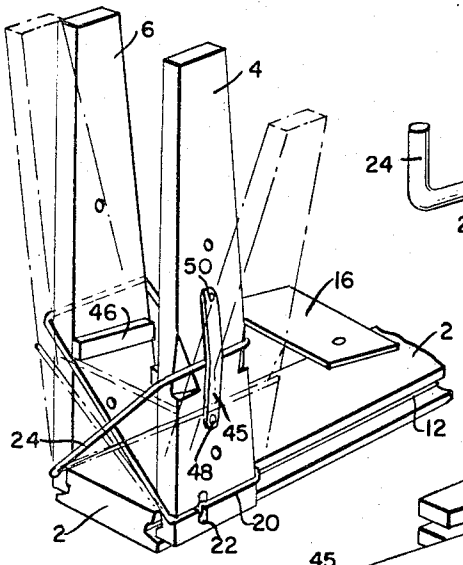


FIG. 5.

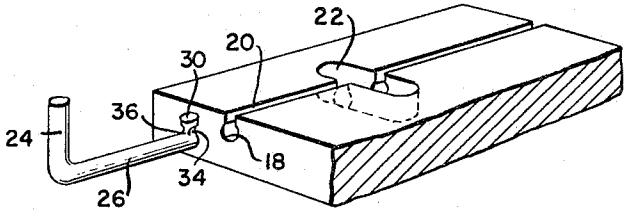


FIG. 9.

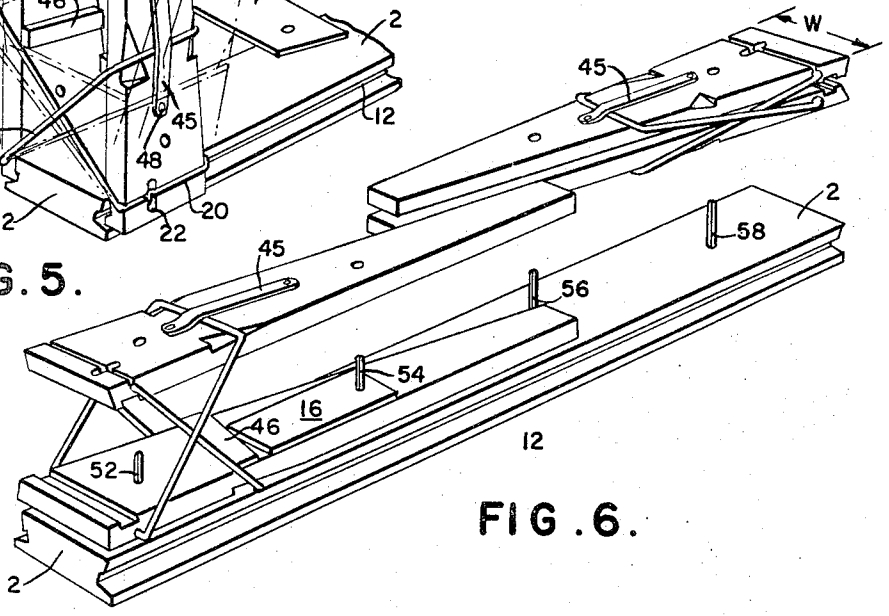


FIG. 6.

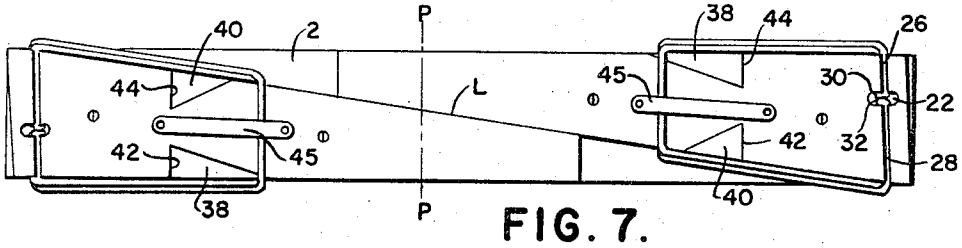


FIG. 7.

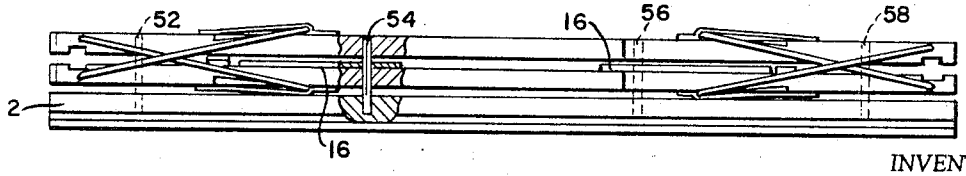


FIG. 8.

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United States Patent Office 3,379,282
Patented Apr. 23, 1968

3,379,282

SCAFFOLD HORSE

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Filed June 30, 1966, Ser. No. 561,896
6 Claims. (Cl. 182—136)

ABSTRACT OF THE DISCLOSURE

A scaffold horse in which the parts are dimensioned to form a compact package and which can be easily assembled from the packaged form. The legs are tapered and retained in pairs. The maximum width of the legs is substantially equal to the width of the plank so that by laying one pair of legs with their maximum width adjacent one end of the plank and the other pair with the maximum width adjacent the other end, the legs and plank form a package with an outline substantially the same as the plank and with a thickness equal to the thickness of plank and a pair of legs.

This invention relates to a scaffold horse and more particularly to an improvement over the scaffold horse of my Patent No. 3,103,988.

In the aforementioned patent there is disclosed a scaffold horse which can be readily assembled from a knocked down structure in package form to provide a rigid horse. It is an object of this invention to provide a similar structure in which the individual parts are so made that the package formed by the parts in knocked down form is of reduced thickness and increased rigidity whereby to provide for ease of transportation and protection from breakage due to rough handling. It is a further object of this invention to provide a scaffold as aforesaid which is made of simple shapes and is rigid when assembled. These and other objects of the invention will become manifest upon reading the following description in conjunction with the accompanying drawing wherein:

FIG. 1 shows a perspective view of the invention;

FIG. 2 is an end view of FIG 1;

FIG. 3 is a view taken along the line 3—3 of FIG. 2;

FIG. 4 is a view partly in section showing the connection of the legs to the plank;

FIG. 5 shows a step of the assembly operation;

FIG. 6 is a partially exploded view of the package;

FIG. 7 is a plan view of the package;

FIG. 8 is an elevation view of the package; and

FIG. 9 is a view showing a detail of assembly.

In accordance with one form of the invention the legs are tapered to provide a maximum width substantially equal to the width of the support plank and to provide a width along the length thereof such that the sum of the widths of the legs as they lay on the plank in packaged form are substantially equal to the width of the plank. When the legs are thus dimensioned there is provided a thin package and a strong structure made of simple shapes when the packaged parts are assembled. In order to provide a strong package the plank has affixed thereto a plurality of dowel pins upon which the legs and wedging struts are impaled.

A further feature of the invention comprises leg pairs which are retained assembled by bails which are pivoted in each leg and held captive by a strap on the opposite leg.

A further feature of the invention comprises a pivoting structure for the bail in each leg which provides for easy assembly and positive locking in each leg.

As shown in the drawings the horse comprises a rectangular support plank 2 having leg pairs 4, 6 and 8, 10 secured to the edges of plank 2 at the opposite ends. The

maximum width W of each leg is equal to the width of the plank.

The edges of the plank are grooved as at 12, 14 to slidingly receive the legs during assembly. The legs are formed with complementary shaped ends to fit in the grooves. When the legs are slid into final position, which may be anywhere along the plank, the wedging strut member 16 is forced into position to lock the legs to the plank as explained more fully below.

Each leg has a cylindrical hole 18 therethrough and a cut 20 along the length of the hole connecting the hole with the surface of the plank. Between the ends of the hole is a well 22.

A bail 24 is formed as an open wire loop having free ends 26, 28 each provided with a lateral extension 30, 32. In the preferred form of the invention the extensions are provided with grooves 34 to form necks which are substantially equal to the width of cut 20. In assembling the bail to the leg the free ends of the wire loop are bent out of the plane of the loop and the neck of one of the extensions is slid along the cut to locate the extension in the well. The bail is then pivoted to allow the neck on the other extension to be slid along the cut to locate the other extension in the well. When both extensions are in the well they serve to lock the free ends of the bail against spreading.

Each leg is provided with notches 38 and 40 providing abutments 42 and 44. A strap 45 of a flexible plastic is secured to each leg by fasteners 48, 50 and serves to hold captive that bail which is pivoted in the opposite leg of the leg pair.

In assembling the horse the plank 2 is layed on a supporting surface with the upper face of the plank on said surface. A leg pair is then assembled as shown in FIG. 5 by placing the complementary shaped ends of the legs in the grooves of the plank edges and then forcing the legs apart from the solid line position to the dotted line position. The bails are engaged in the notches 38, 40 and are moved into contact with the abutments 42, 44 to limit the spreading of the legs. The wedging member 16 is longer than the width of the plank and it is fitted between the legs. It is located by strips 46 to bear against the legs at zones which maintain the ends of the legs in tight gripping contact with the edges of the plank.

The package from which the horse is assembled is shown in FIGS. 6–8. The plank forms a support for the leg pairs and wedge. As is shown in FIG. 8 the undersurface of plank 2 has secured therein two pairs of dowel pins 52, 54 and 56, 58. The pins are of sufficient length to extend at least through one leg of each of the leg pairs and into the other leg. As shown in FIG. 7 one leg pair is arranged to lie with the maximum width adjacent one end of the plank and with one of the sides substantially in the same plane with one edge of the plank. The other leg pair is similarly arranged. Each pair of legs is impaled on a pair of pins and lies in overlapping arrangement with the adjacent pair of legs and in contact therewith along line L. The sum of the widths of the legs on transverse planes P—P is equal to the width of the plank 2. As seen in elevation in FIG. 8 the strips 46 of each leg pair are in contact and the strut member 16 of each pair is of less thickness than the sum of the thicknesses of the struts and receives a dowel pin such as 54.

What I claim is:

1. A carpenter's horse comprising a rectangular plank and a leg pair secured to the opposite edges at the opposite ends of said plank, the maximum width of each leg being substantially equal to the width of the plank, the securing means comprising a bail pivotally mounted in each leg at the end thereof adjacent the plank, abutment means on each leg in abutting contact with the bail of the leg mounted at the opposite edge, and means forcing the

legs apart against the reaction of the bail, the bail comprising an open loop frame of round wire and wherein the pivotal mounting comprises a cylindrical hole within each leg receiving the free ends of the loop.

2. A device as defined in claim 1 further including a well between the ends of the hole, a lateral extension on each of the free ends of the open loop, and a cut along the length of the hole.

3. A device as defined in claim 2 further including a groove on each side of the lateral extensions defining a neck having a width substantially equal to the width of the cut.

4. A device as defined in claim 3 wherein the means forcing the legs apart comprises a wedging strut member having a length greater than the width of the plank bearing against the legs at preselected zones and having a width substantially equal to the width of the legs at said zones.

5. A carpenter's horse package comprising a rectangular plank, a pair of similar tapered legs supported one on the other on one end of the plank with the maximum width of the legs adjacent said one end and being substantially equal to the width of the plank, a similar pair of legs similarly supported adjacent the other end of the plank, the pairs of legs having portions adjacent each other, the sum of the widths of the adjacent portions being substantially equal to the width of the plank, and means securing the legs and planks to each other, wherein the securing means comprises dowel pins secured to the plank beneath each pair of legs and a pair of openings in each pair of legs aligned with and receiving said pins.

6. A package as defined in claim 5 where each pair of legs is disposed in overlying relation adjacent opposite ends of said plank, a strut member disposed between each pair of legs, an opening passing through each of said legs and strut member, and dowel pins secured in said plank and passing through said openings and securing said legs and strut members in compact aligned relation on said plank.

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