

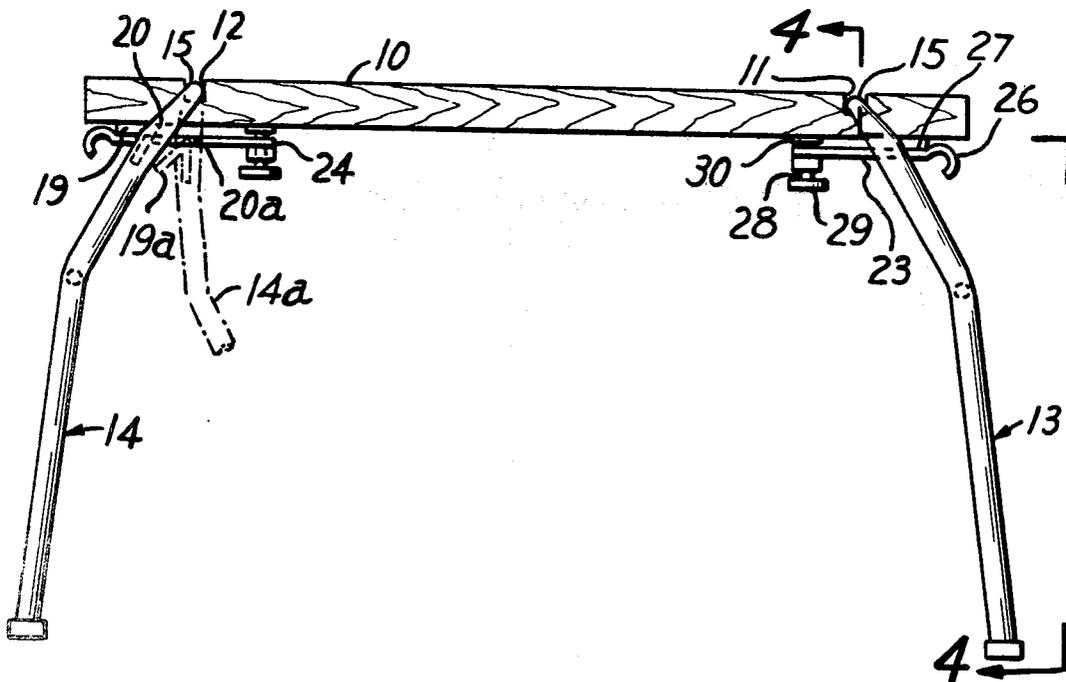
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[54] **SAWHORSE TRESTLE**
5 Claims, 5 Drawing Figs.
 [52] U.S. Cl. **182/185,**
 182/186, 182/226
 [51] Int. Cl. **E04g 1/32,**
 F16m 11/00
 [50] Field of Search 182/186,
 185, 181, 224, 226, 155
 [56] **References Cited**
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ABSTRACT: A demountable sawhorse with a beam and separable leg units. The leg units are of preferably tubular steel construction and have a closed frame construction with top bar engaging a groove in the top surface of the beam for location, and locking in position, and a lever force system on each leg frame reacting through a screw on the lever and a pivot point on the other end of the lever so that a closed force system reacts against the beam undersurface and a reaction pad on the leg frame to lock the legs to the beam. Releasing the locking screw allows the lever to be shifted and swung out of locking position and the leg frames to be removed from the beam quickly.



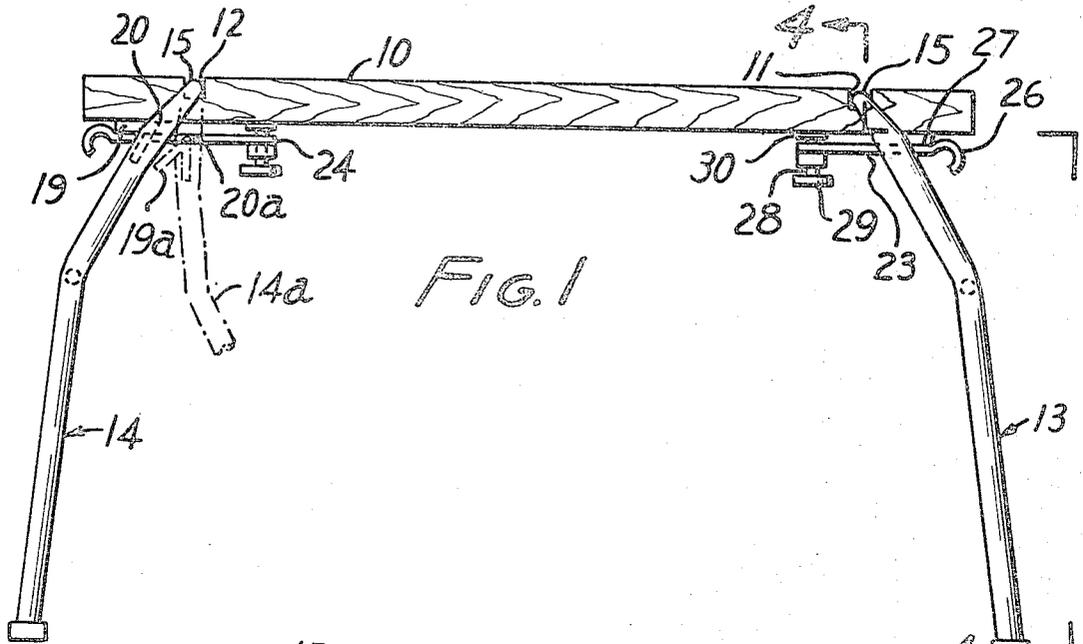


FIG. 1

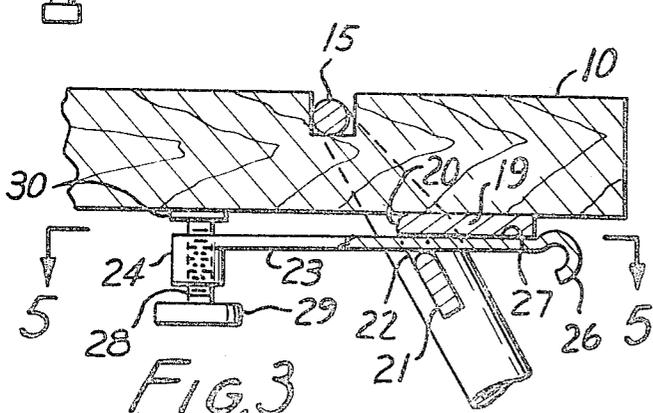


FIG. 3

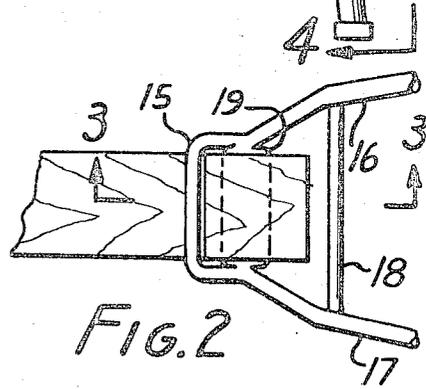


FIG. 2

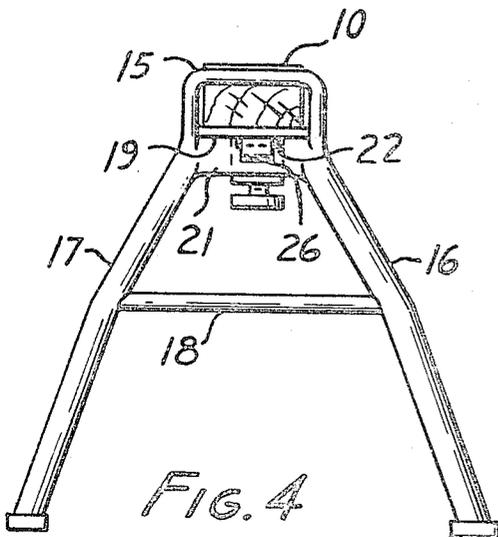


FIG. 4

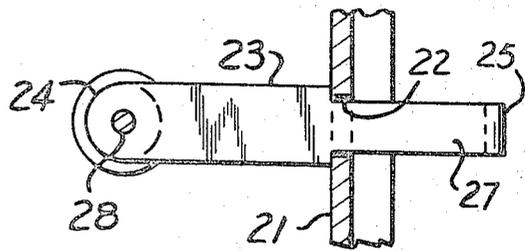


FIG. 5

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SAWHORSE TRESTLE

This invention relates to demountable sawhorse trestles.

Sawhorse structures generally include a horizontal beam element and a pair of leg elements for supporting the beam. An object of this invention is to provide a sawhorse with removable leg elements that will lock rigidly in position on the beam yet be quickly demountable.

A further object of this invention is to provide for rapid and simple location of the demountable legs on the beam.

Another object of this invention is to provide for quick assembly of the leg elements to the beam without recourse to auxiliary hand tools.

Further objects and advantages of the invention will become apparent by reference to the accompanying drawings and description which illustrate a preferred embodiment of the invention.

FIG. 1 is a side elevation view of a preferred embodiment of the invention;

FIG. 2 is a fragmentary plan view of the embodiment of FIG. 1;

FIG. 3 is a cross section on line 3-3 of FIG. 2;

FIG. 4 is an end elevation view, partially in cross section, of the embodiment of FIG. 1;

FIG. 5 is a cross section taken on line 5-5 of FIG. 3.

In the preferred embodiment of the invention shown in FIG. 1 the beam 10 has two grooves 11 and 12 in its top surface. Two leg frames 13 and 14 are closed at the top by bar 15 typically shown on leg frame 13. Top bar 15 rests in groove 11 so that it is held in location with respect to the beam 10 and is recessed below the top surface of the beam 10. The legs 16 and 17 of the frame 13 are held rigidly in their position with respect to top bar 15 by brace 18 with further strength contributed by reaction plate 19. As illustrated in FIG. 1 on leg frame 14, when the leg frame is allowed to swing freely downward (as shown in phantom), the reaction plate 19 has sufficient distance between top bar 15 and end 20 of the reaction plate 19, so that the full thickness of the beam 10 can slide through the opening, but when leg frame 14 is swung up into assembly position, with the top bar 15 engaged in the groove and reaction plate 19 parallel to the underside of the beam 10, then the beam is stabilized laterally and vertically to the leg frame. A fulcrum plate 21 is conveniently welded to the leg frame 13 abutting the reaction plate 19 with its top edge. Fulcrum plate 21 has a cutout passage 22 adjoining the reaction plate 19, to permit passage of a locking lever 23. Locking lever 23 is a flat bar having a first end 24 wider than a second end 25. The narrow end 25 will pass through passage cutout 22 and has formed on it a hooked end 26 which protrudes above the top surface of locking lever 23 and 27. The end of hook 26 may conveniently protrude below the surface of locking lever 23 so that locking lever 23 may swing on the hooked end 26 when it is not engaged in locking position. The first end 24 of locking lever 23 is wider than the cutout passage so that the locking lever 23 is automatically located with respect to the leg frame when in position for applying force to make the leg frame 13 rigid in position with the beam 10. A locking screw 28 is conveniently provided with a knob 29 for hand tightening and a swivel pad 30 to prevent marring of the bottom surface of the beam 10 when locking. Locking lever 23 may be conveniently thickened at first end 24 to provide for increased thread length for locking screw 28.

To assemble the leg frame 13 to the beam 10, lever 23 is swung and slid through passage 22 in fulcrum plate 21 so that hooked end 26 has its surface 27 in contact with the lower surface of reaction plate 19. Leg frame 13 is swung up so that reaction plate 19 is parallel to beam 10 and in contact with the

lower surface of beam 10. Knob 29 is used to rotate screw 28 to force swivel pad 30 against the lower surface of beam 10, thus using fulcrum plate 21 and contact surface 27 against reaction plate 19 in a closed lever force system to lock beam 10 against the surface of reaction plate 19 and top bar 15 of the leg frame 13.

Thus, a rigid leg top beam assembly is provided within the self-contained force system but yet is instantly demountable and provides for a flush top surface for use as a work or load carrying device across the entire surface of the beam 10.

I claim:

1. A demountable saw horse trestle which comprises:

- a. a beam member;
- b. a pair of leg frames;
- c. a pair of reaction plate means;
- d. a pair of fulcrum plate means; and

e. a pair of locking lever means; one of said reaction plate means and one of said fulcrum plate means fixed to each of said leg frames adjacent each other and transverse to the length of said beam member, one of said locking lever means slidably engaged with each of said fulcrum plate means between said fulcrum plate means and said reaction plate means, each of said locking lever means adapted to apply lever action to said beam member reacting through said fulcrum plate means and said reaction plate means to lock said beam between said leg frames and said reaction plate means.

2. Apparatus as described in claim 1 which includes said beam member having a top surface and a bottom surface, said top surface having a pair of grooves, each of said grooves spaced substantially equidistant from each end of said beam member, each of said leg frames having a pair of legs and a top bar, said top bar connecting said legs, said top bar adapted to fit without protrusion in said grooves of said beam member, each of said reaction plate means spaced from said top bar, and said spacing adapted to admit the full thickness of said beam member when said leg frame is in the unlocked position, said reaction plate means angularly located on said legs and adapted to be substantially parallel to said beam member when the leg frame is locked to said beam member, each of said locking lever means having a first end and a second end, said fulcrum plate means having a passage cutout adjacent said reaction plate, said second end of said locking lever means of narrower dimension than said first end, said second end of said locking lever means adapted to pass through said passage cutout in said fulcrum plate means; said locking lever means including a locking screw, said locking screw threadably assembled to said first end of said locking lever means, said locking screw adapted to apply force to said lower surface of said beam member to react said locking lever means against said fulcrum plate means and said reaction plate means to lock said beam member in position against said top bar and said reaction plate means in a closed force system.

3. Apparatus as described in claim 1 which includes said second end of said locking lever means formed in a hooklike configuration, said hook having a portion of its curvature formed to protrude above the surface of said second end of said locking lever adjacent said reaction plate means, said protrusion adapted to contact said reaction plate means.

4. Apparatus as described in claim 3 which includes said hooklike end of said locking lever adapted by length and curvature to hang freely and to swivel about said fulcrum plate means when said leg frame is demounted from said beam.

5. Apparatus as described in claim 2 which includes a reinforcing bar fixed between said legs, said reinforcing bar adapted to provide a closed rigid leg frame with said legs and said top bar.