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BUILDER'S SAFETY HORSE CLAMP

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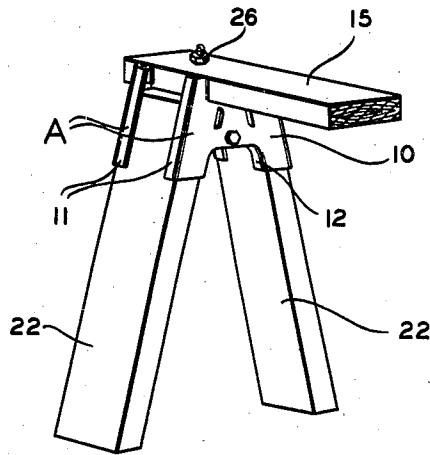


FIG. 1.

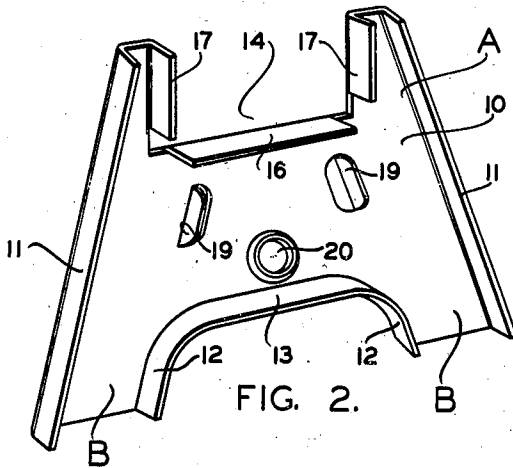


FIG. 2.

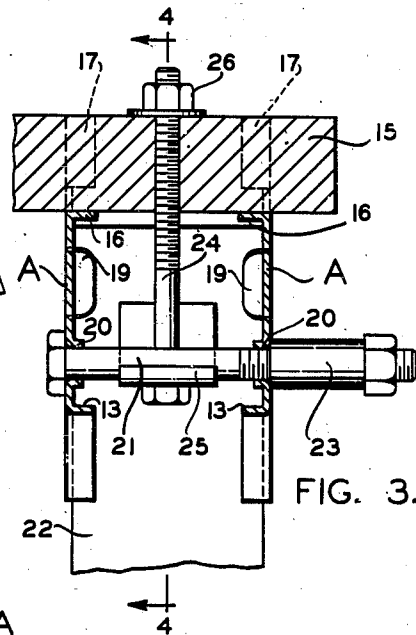


FIG. 3.

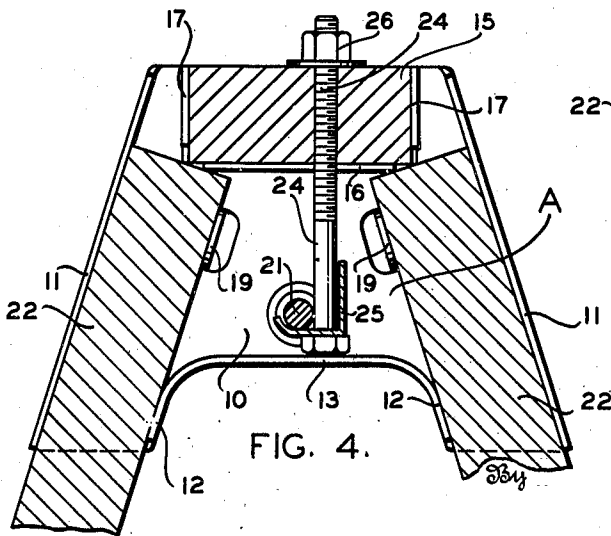


FIG. 4.

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BUILDER'S SAFETY HORSE CLAMP

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6 Claims. (Cl. 304-5)

My invention relates to a builder's safety horse clamp which is adapted to provide a quick and easy method of making sawhorses or low staging for either temporary or permanent set-ups.

My horse clamp may be assembled or knocked down in a few minutes. A feature resides in providing a pair of sheet metal safety clamps which may be used for each end of the builder's sawhorse. With these clamps, sawhorses may be made up for runways, mess tables, display stands, or any other place where a strong, rigid and quickly erected stage is needed.

A feature of my safety sawhorse clamp resides in providing a pair of strong plate-like members having reinforcing ribs projecting therefrom which are adapted to receive wooden two-by-fours which may form the legs of the sawhorse and which plate members are adapted to be bolted together on either side of the top of the two-by-fours to clamp the same. The top of the plates are formed with slots which interconnect. The slot across the top of the plates provides a wide shelf-like portion for receiving the two-by-four or larger timber in a flat state, so as to form a sawhorse with a flat top.

Furthermore, it is a feature of my invention to provide clamp means so that a builder's sawhorse may be made up quickly, can be readily disassembled for storage, and where the horizontal bolt which connects the two plates together may act as a stay-rod to connect with a hook-ended brace bolt for locking the members together when it is desired.

These features, together with other details and objects will be more fully and clearly hereinafter set forth as defined in the specification and claims.

In the drawing forming a part of this specification:

Figure 1 is a perspective detail of a portion of a builder's sawhorse, showing one manner in which builder's safety horse clamps may be used.

Figure 2 is a perspective view looking toward the inside of one of the plates of my horse clamp.

Figure 3 is a longitudinal sectional detail of the horse clamp as used in Figure 1.

Figure 4 is a section on the line 4-4 of Figure 3.

My builder's safety horse clamp is made up of a pair of plates A which are made of metal, having a plate-like body portion 10 which is flat on one side and which is formed by stamping the plate out of said metal to form inwardly projecting side flanges 11.

The plates A are formed with an inner flange

12, portions of which extend parallel to the side flanges 11 so as to form two-by-four or building timber channels B. The inner flange 12 has a horizontal portion 13 connecting the end portions which are parallel to the side flanges 11. The transverse rib portion 13 acts to reinforce the plate A, thereby providing a reinforcing means across the center of each plate which strengthens the plate in a material manner.

The top of each plate is formed with a recess or slot 14 which is adapted to receive a timber 15 in the manner illustrated in Figure 1, with the broad flat side of the timber extending horizontally and the bottom edge of the timber resting on the transverse shoulder flange 16 of the recess or slot 14. Thus the shoulder flange 16 provides a substantial shoulder for the timber 15 when positioned in the safety clamps A as illustrated in Figures 1 and 3. Vertical flanges 17 are formed on the vertical sides of the slot 14 against which the sides of the timber 15 engage.

Each clamp A is provided with a hole 20 for receiving a horizontally extending bolt 21 which clamps the plates A together against the side edges of the upper ends of the leg timbers 22. The bolt 21 may be of sufficient length as illustrated in Figure 3, so that the wooden timbers 22 which form the legs of the sawhorse may be either two-by-fours, two-by-sixes, two-by-twelves, or any other suitable size timber, depending upon the length of the bolt 21. A collar 23 may be used on the bolt 21 when the smaller timbers 22 are used.

A primary feature of my safety horse clamp resides in providing two simple, carefully-designed reinforced plates A stamped from sheet metal, which are comparatively light in weight yet extremely strong and durable, and which are clamped together by the bolt 21, thereby providing a pair of plate brackets stamped from sheet metal which are adapted to be locked together on the upper end of the leg portions 22 to form a sectional knocked-down assembly for sawhorses and the like.

Each of the plates A is formed with short guiding or shoulder flanges 19 which extend parallel to the outer flanges 11 and act to guide and hold the upper ends of the leg timbers 22.

In using my builder's horse clamps A, when it is desired a vertically extending brace bolt 24 may be used which is adapted to carry a right angular member 25 which in turn engages the bolt 21. The other end of the bolt 21 is threaded and held in place by the nut 26 so that the cross timber 15 may be locked in place in the recesses

14 to rigidly connect and lock the timbers together. When the cross timber which extends longitudinally between the clamps A is held locked in place as illustrated in Figures 1, 3 and 4, the timber 15 holds the top of the legs 22 from sliding upward in the clamp plates A.

The leg timbers 22 are inserted in the timber channels B. It is apparent that the timbers engaged in the timber channels B of the plates A may be rigidly clamped by the plates A by tightening the bolt 21. It is also apparent that I provide a builder's safety horse clamp means for quickly and easily making up sawhorses or low staging either for temporary or permanent setups. By this sectional clamping device the sawhorses may be readily knocked down for storage, or built up in just a few minutes with standard timbers, such as two-by-fours, two-by-sixes, two-by-eights, etc., and thereby provides a strong, safe horse clamp means for building purposes which is of a very desirable nature.

In accordance with the patent statutes I have described the principles of operation of my builder's safety horse clamp means, and while I have illustrated a particular form and design thereof, the same should be interpreted within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A builder's safety horse clamp means including a pair of metal plates, timber channels formed in the side of said plates, parallel reinforcing ribs adapted to form said channels in the surface of said plates, transverse reinforcing ribs connecting the inner of said ribs, slots formed in the upper edge of said plates adapted to form timber receiving recesses, a flanged shoulder at the base of said recesses for the top timber to rest on, a hole extending through each of said plates, and an adjustable clamping bolt extending through said holes and adapted to clamp the timbers held in said timber channels to lock said plates to said timbers, bolt and hook means extending downwardly from the top timber engaging said adjustable clamping bolt to lock said top timber to said clamp means, thereby forming a builder's safety bracket means for sawhorses.

2. A plate adapted to provide one side of a clamp means for sawhorses for building construction, said plate including timber channels formed on the inner surface thereof, notch and shelf means formed in the top of said plate adapted to receive a timber in a flat broadside position, said plate acting with a similar plate to clamp timbers together to form a knocked-

down safety horse clamp means for sawhorse, runway, table supports, and the like.

3. A builder's safety horse clamp means including a pair of metal plate members having an outer smooth plate-like face, timber receiving channels formed on the inner face of said plate, transverse reinforcing ribs formed in said plate, a hole for connecting two or more of said plates together by adjustable bolt means, and recesses formed in the top of said plate for receiving a timber in a flat broadside position.

4. A builder's safety horse clamp means for knocked-down assembly including, a pair of plate members, adjustable bolt means for clamping said plate means together, timbers adapted to form the legs of the saw horse clamped between said plates by said bolt means, a longitudinally extending timber adapted to form the top of the sawhorse, recess shoulder means in said plates for receiving said top timber, and adjustable bolt means connecting with said first adjustable bolt means and adapted to lock said top timber to said safety horse clamp means.

5. A builder's safety horse clamp means including a pair of sheet metal plates stamped from sheet metal, peripheral flanges projecting inwardly and formed on the side edges of said plates between which wood timbers are adapted to be clamped to form legs projecting downward from said pair of clamps, a horizontal flange formed on each of said clamps adapted to form a shoulder on which the top wood timber is adapted to rest, bolt means connecting said pair of clamps, and bolt and hook means engaging said first bolt and extending vertically through the top timber to clamp the same to said pair of clamps.

6. A pair of sheet metal sawhorse bracket plates, parallel flanges formed integral with said plates to provide guide and receiving channels for timbers adapted to form the legs of a sawhorse, bolt means for connecting said plates together on either side of the upper ends of the timber legs, horizontal and vertical flanges formed integral with said plates adapted to provide resting and guiding shoulders for a longitudinal top timber of the sawhorse which connects with another unit pair of said clamping plates, bolt and hook means engaging said first bolt and extending vertically through the top timber to clamp the same to said clamps, thereby to provide a sawhorse of the desired height and length which is sectional and which may easily be set up or knocked down.

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