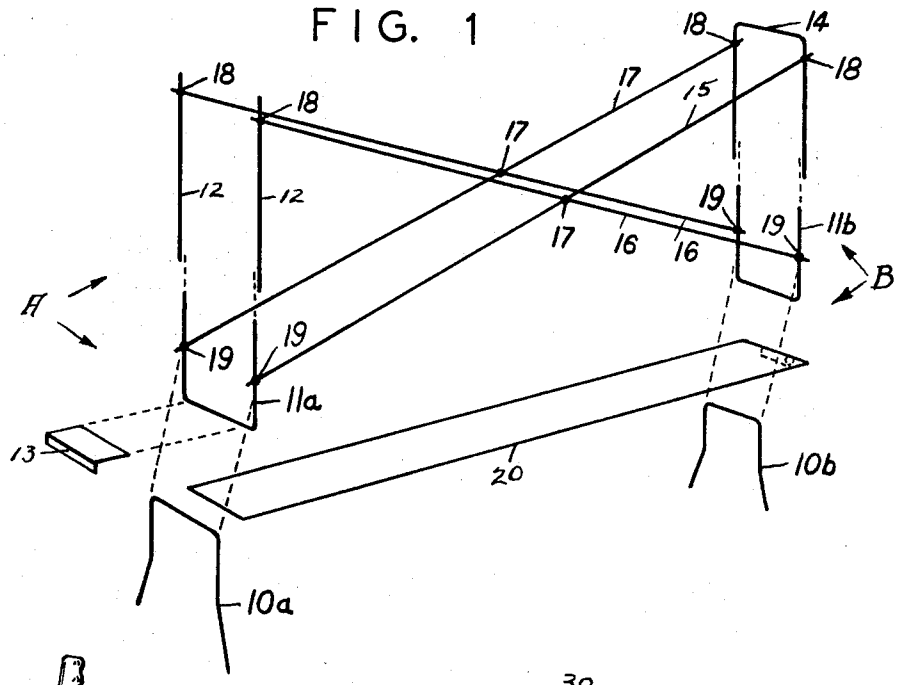
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FOLDING SCAFFOLD

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FIG. 1



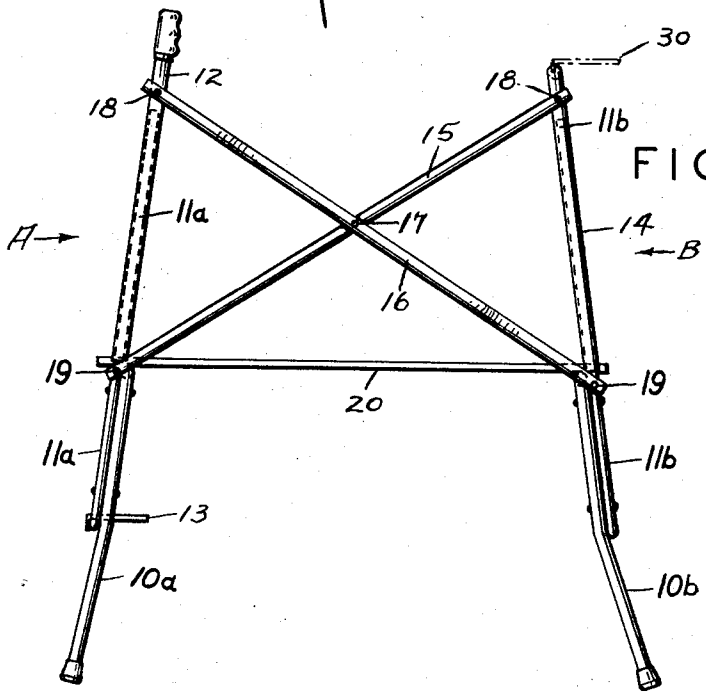


FIG. 2

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FIG. 5

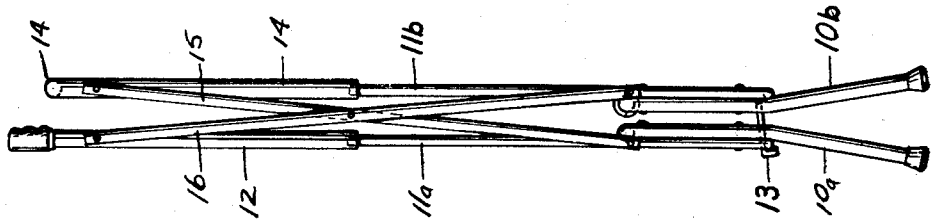


FIG. 4

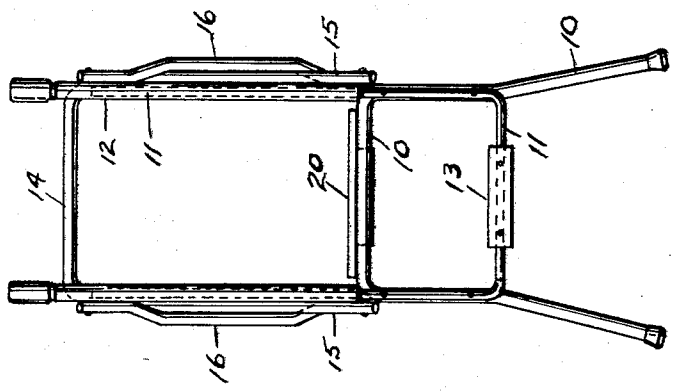
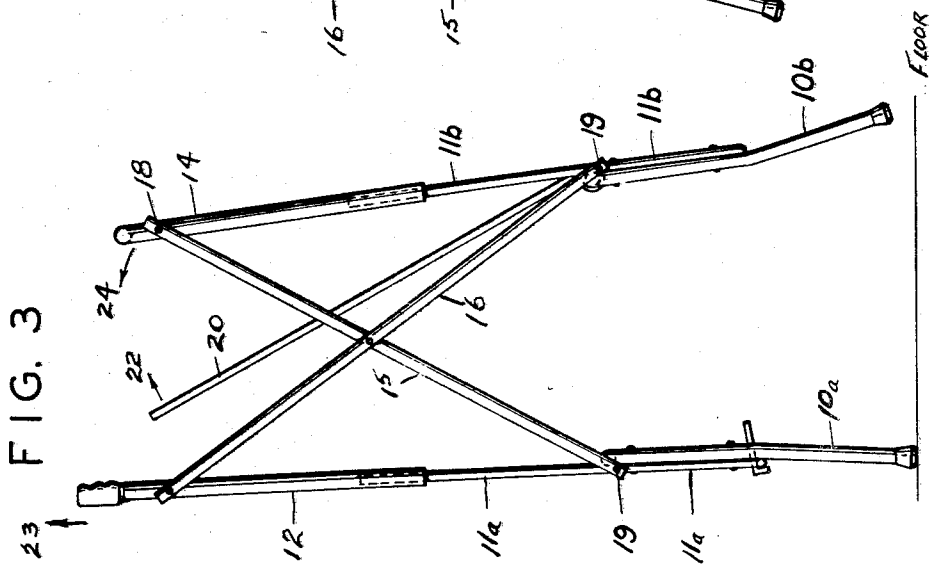


FIG. 3



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Patented Sept. 29, 1964

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FOLDING SCAFFOLD

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Filed July 30, 1963, Ser. No. 298,650
4 Claims. (Cl. 182—152)

This invention relates to a folding scaffold.

A scaffold constructed according to this invention is quickly and easily manipulated for folding and unfolding without the removal or assembly of parts and is of a sturdy noncollapsible construction. In addition, a scaffold constructed as hereinafter disclosed is economically manufactured from a minimum of uncomplicated parts.

Many scaffolds of known construction are characterized by hinged links or braces interconnecting the load carrying or structural members of the scaffold to provide foldability. However, these links or braces ordinarily introduce instability to the scaffold when in use. Various proposals have been advanced and put to use for overcoming this instability with varying degrees of success. Nevertheless, the known measures have resulted in costly and complicated structures. Scaffolds which do not utilize a hinged link construction are known, such as disclosed in U.S. Patent 2,599,670, to G. G. Thomas. However, a scaffold of this type, while stable if properly assembled for use, comprises many parts which greatly increase the weight of the scaffold and diminish its utility. In addition, such scaffolds are expensive to manufacture since many of the parts must be joined together by welding. As indicated above, the platform must be removed for folding and carefully replaced for use. If the platform is carelessly replaced the scaffold does not collapse in the usual sense but the platform can slide off the frame and the occupant subjected to an unexpected fall and the risk of serious injury.

Essentially a scaffold according to the invention comprises a plurailty of bendable steel tubing or channel parts having a generally U-shaped form defining a pair of end frames. Each end frame has a pair of telescopically associated members which are interconnected at each side by a pair of cross braces that are pivotally connected to each other. One end of opposed corresponding braces are pivotally connected to the telescoping members and the other end of each brace is connected to the end frames. By lifting either one of the telescoping members of an end frame, the end frames are drawn together. A platform hingedly connected with one end frame is movable between the side braces of the scaffold and spans the space between the end frame when they are moved apart. The platform is folded by pivotal movement into nested relation with the associated end frame when the scaffold is folded for storage or transit.

Accordingly, one object of this invention is to provide a sturdy scaffold which is economically manufactured and assembled with a minimum of sturdy uncomplicated parts.

Another object of the invention is to provide a foldable scaffold of a telescoping construction.

Another object of the invention is to provide a folding scaffold which is particularly suitable for household use.

The foregoing objects and advantages, as well as additional objects and advantages, will become apparent from the following description of the accompanying drawing of a presently prefererd embodiment of the invention particularly suited for household use, in which:

FIG. 1 is an exploded schematic perspective view of a scaffold in accordance with the invention;

FIG. 2 is an assembled side view of a scaffold according to the invention;

FIG. 3 is a side view of the scaffold in a partially folded position;

FIG. 4 is an end view of the scaffold as illustrated in FIG. 2; and

FIG. 5 is a side view of the scaffold according to FIGS. 2 and 3 in its folded position.

As seen in FIGS. 1 and 2, the scaffold according to the invention comprises a pair of end frames, generally designated A and B, comprising generally U-shaped inverted leg members **10***a*, **10***b* and a pair of upright U-shaped support members **11***a*, **11***b*. As indicated by the broken lines in FIG. 1, and seen in FIG. 2, the members **10** and **11** are juxtapositioned over a part of their length and secured together in any suitable manner. In FIG. 2, these parts are shown bolted together, suitable provison being made for passing the bolts through the steel tubing. In the illustrated embodiment, end frame A has a pair of posts or sleeves **12**, concentric within and slidable over each of the stems or legs of the upright U-shaped support **11***a*. A step **13** is suitably secured to the base of support **11***a* so that a convenient open access to the platform **20** is afforded. The end frame B has a similar arrangement except that an upright U-shaped post or slide **14** is provided for additional strength and stability. It is contemplated that for particular uses the sliding sleeves **12** can be replaced by a U-shaped slide, identical to slide **14**, so that a 4 foot by 8 or 12 foot panel of sheet rock may be supported in position above the head of a workman. In such an embodiment, the cross piece of the slides will be spaced well above the platform and will not obstruct access thereto. In the embodiment illustrated for household use, however, the end frame A is left open.

The end frames A and B are joined for movement together, for folding, and apart for setting up the scaffold by two pairs of cross braces **15** and **16**. Each of the cross braces of a pair are pivotally joined at **17**. One end of the opposite cross braces of a pair are pivotally joined at **18** with a sliding member of the end frames (sleeves **12**, and slide **14**) and the other end of these opposed frames is pivotally joined at **19** to the support members **11***a*, **11***b* of th end frames.

A platform **20** is pivotally connected to the cross piece of either of the leg members **10***a*, **10***b*. In the figures of the drawing, the platform is shown connected to end frame B but can be just as readily connected to the frame A.

As indicated in FIG. 2, tubular steel bent to the desired shape is preferred, however it will be apparent to those skilled in the art that the invention is not so limited and any suitable shaped channel or tubing may be used.

Referring to FIG. 3, it will be apparent that the scaffold is easily manipulated to fold it up by lifting the platform, which moves in the direction of arrow **22**. Then by rocking the scaffold slightly on the leg portion of one end frame and pulling the sleeves **12** in a vertical direction as indicated by the arrow **23**, the opposite end frame will be drawn in the direction of arrow **24** to the folded position illustrated in FIG. 5. As seen in FIG. 5, the platform can be nested within the end frame B when elevated to its maximum height. It will be apparent that the scaffold can be folded by manipulating the slide **14** in the same way.

By comparing FIGS. 4 and 5, it will be noted that the scaffold occupies a minimum of floor space in its folded or stored position and in its opened position the user is encompassed by the end frames and side brace so that any loss of balance can be overcome by grasping a part within easy reach. Also, the center of gravity of the scaffold, with an occupant, is well down in the scaffold frame and the legs **10** can be easily spread for maximum stability and economic manufacture.

While not readily apparent from the drawing, binding

between the telescoping or concentric members may be avoided in any suitable manner by stop means. In the embodiment illustrated, the pivot pins **18** and **19** are utilized as stops.

As seen in FIG. 2, a shelf **30** may be provided on the slide **14**.

From the foregoing description of the invention it will be seen that a sturdy, easily manipulated scaffold is provided which can be manufactured by efficient, economic methods, known in the tube bending art, and which requires a minimum number of easily assembled parts.

As heretofore noted, the presently preferred embodiment of the invention relates to a scaffold for household use. However, it will be apparent to those skilled in the art that industrial scaffolds may be made utilizing the teaching contained herein and therefore the foregoing description is not intended in a limiting sense but is given for the purpose of brief and clear disclosure of the invention. Likewise, steel tubing is disclosed but it will be apparent that channel other than tubular channel may be utilized.

Other variations wil be apparent also and therefore the subjoined claims are not to be taken as limited to the foregoing description.

What I claim is:

1. A folding scaffold comprising a pair of opposed end frame members, said end frame members each having a pair of freely extending parallel support members, a post member telescopically connected with each one of said support members, at least one pair of said post members having a cross member connecting one end thereof defining an inverted U-shape structure, side members interconnecting said end frames and said post members for moving said end frames and associated parts in parallel relation together and apart upon movement of one of said post members in a vertical plane, and a platform member pivotally connected with one of said end frame members, the other end of said platform being supported by the other of said end frames

2. A folding scaffold according to claim 1, with the addition of stop means operatively connected with said post members.

3. A folding scaffold according to claim 2, wherein said side members comprise a first and second pair of pivotally connected cross braces, one end of each of the corresponding braces of said first and second pair being pivotally connected with each said post members and the opposite end of said corresponding braces being connected with each said end frame

4. A folding scaffold comprising a pair of opposed end frame members, each end frame member having an inverted U-shaped leg portion of bent steel tube and an upright U-shaped support member of bent steel tube secured to said leg portion in overlapping relation, one of said end frames having a pair of sleeve members of steel tube concentric with and slidable relative to the arms of the corresponding support member, the other of said end frames having an inverted U-shaped post member of bent steel tube concentric with the arms of the corresponding support member and slidable relative thereto, a step secured on the cross piece of said U-shaped support having said pair of sleeves, a platform hingedly secured to the cross piece of the leg portion of said end frame having said post member and adapted to rest on the cross piece of the leg portion of the opposite frame, a pair of cross braces at each side of said end frames pivotally connected at their mid-point, each brace of said cross braces having one end pivotally connected to an end frame and the opposite end pivotally connected to said pair of sleeves and said post respectively, whereby said end frames are movable together and apart by vertical movement of either said sleeves or said post member, and tubular iron rivets passing through holes provided in said steel tubes at said pivot points, said rivets located at the pivot points associated with said end frames acting as stops supporting said movable parts of said end frames, the mass supported by said scaffold being borne by said leg portions and said platform.

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