

Dec. 2, 1947.

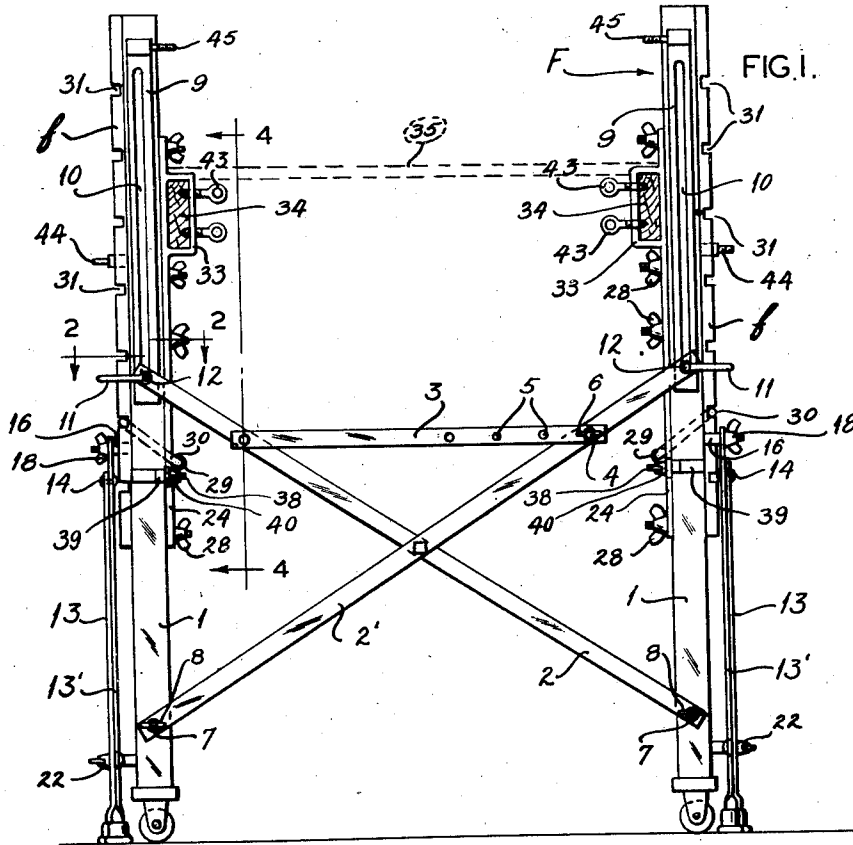
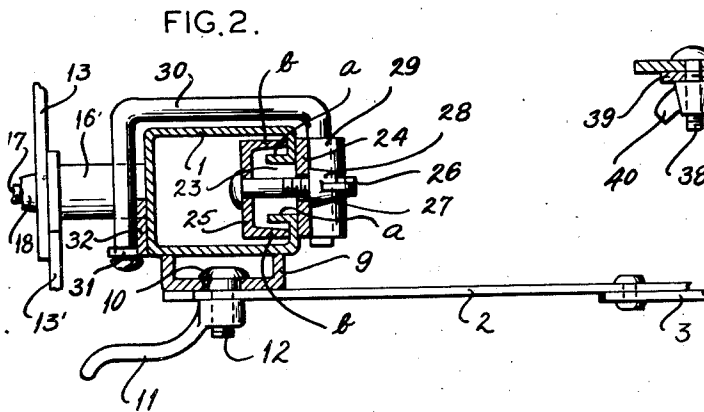
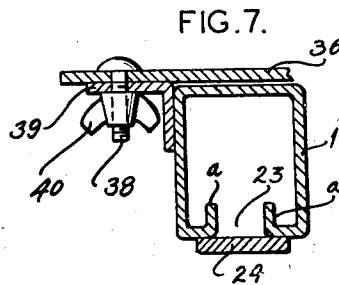
F. HARTMANN

2,431,933

COLLAPSIBLE SCAFFOLD

Filed Feb. 25, 1946

2 Sheets-Sheet 1



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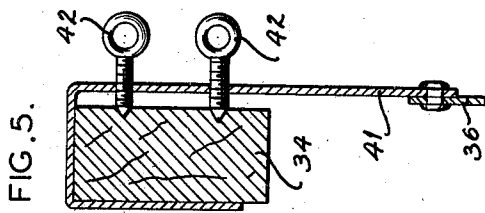
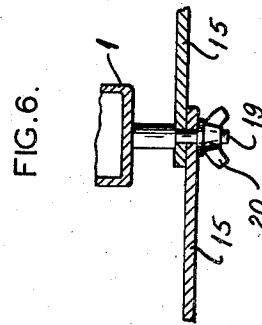
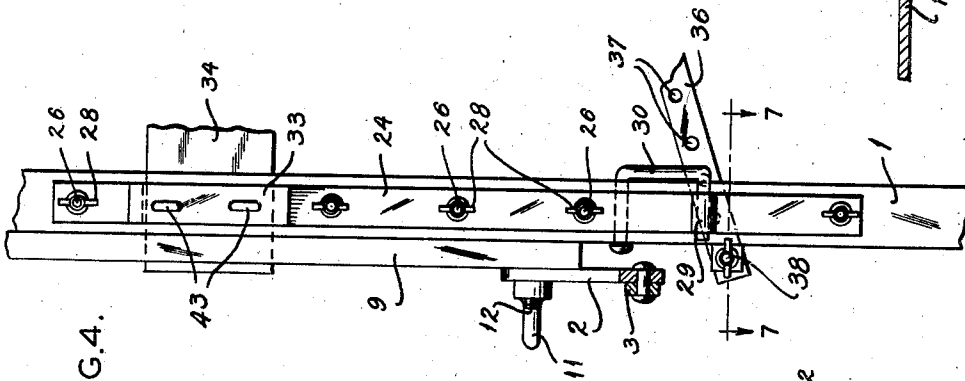
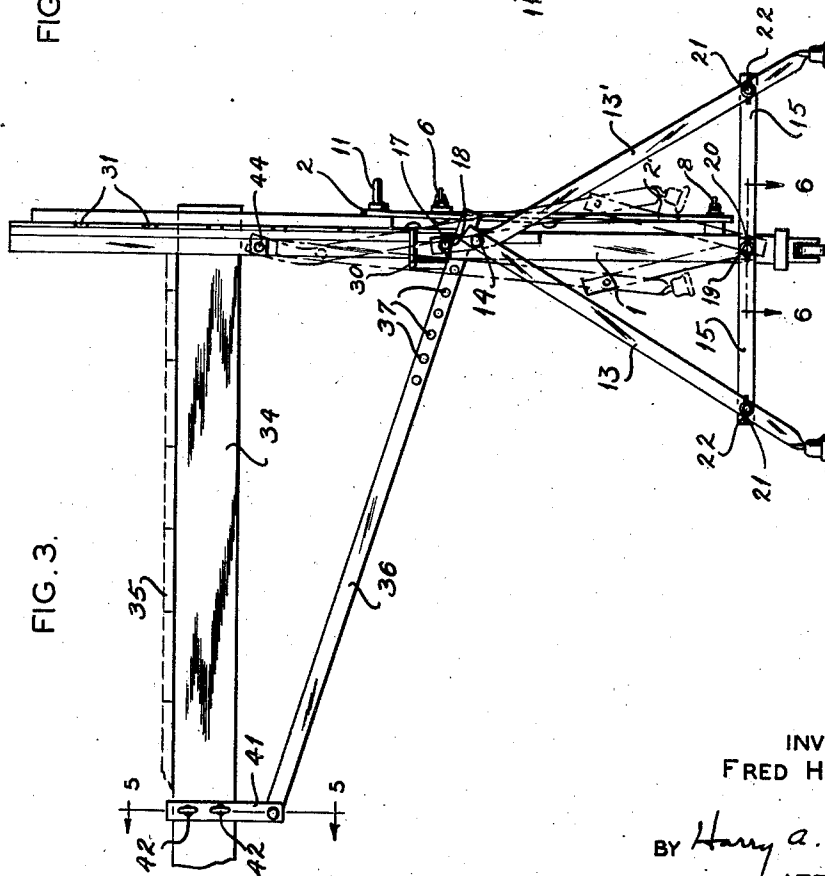
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UNITED STATES PATENT OFFICE

2,431,933

COLLAPSIBLE SCAFFOLD

Fred Hartmann, St. Louis, Mo.

Application February 25, 1946, Serial No. 649,997

1 Claim. (Cl. 304-4)

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My invention has relation to improvements in collapsible scaffolds and it consists in the novel features of construction more fully set forth in the specification and pointed out in the claim.

The present invention is an improving departure over that shown in my copending application Serial No. 620,907, filed October 8, 1945, in that it is a simpler structure although having the same general objects in view.

The principal object of the invention is to provide a scaffold that may be erected by one workman, and when knocked down, may be packed in a comparatively narrow space for shipment.

A further object is to provide a scaffold that may be adjusted to any length within its compass, a plurality of widths, and any height up to its maximum. All these adjustments may be effected by a single workman. These objects as well as other advantages embodied in the construction, will be better apparent from a detailed description of the invention in connection with the accompanying drawings, in which—

Figure 1 is an end elevation of one of the supporting frames extended to its maximum width; Fig. 2 is an enlarged cross-section through one of the standards taken on the line 2-2 of Fig. 1; Fig. 3 is a side elevation of one of the supporting frames showing a part of the rail which carries the scaffold platform; Fig. 4 is an enlarged cross-section taken on line 4-4 of Fig. 1 looking at the opposite side of the standard to that shown in Fig. 3; Fig. 5 is a cross-sectional detail taken on the line 5-5 of Fig. 3; Fig. 6 is an enlarged cross-sectional detail taken on the line 6-6 of Fig. 3 and Fig. 7 is a cross-sectional detail taken on the line 7-7 of Fig. 4.

Referring to the drawings, F represents one of the end frames (of which there are two of identical construction) comprising standards 1, 1 adjustably connected by cross-braces 2, 2' and a brace-bar 3, the latter being pivotally fixed to brace 2 and adjustably connected to brace 2' by a stud 4, adapted to pass through any one of a series of holes 5, 5, etc., evenly spaced for adjusting the space between standards 1, 1. A wing-nut 6 secures the braces 2, 2' and bar 3 firmly in place.

The lower ends of braces 2, 2' are secured to studs 7, 7 projecting from the standards 1, 1 by wing-nuts 8, 8, while the upper ends of the braces are adjustably secured to slotted channels 9, 9 fixed by welding (or otherwise) to the outer faces of standards 1, 1. In order that the braces 2, 2' may be secured in any position along the slots 10, 10, handle clamps 11, 11 are screwed over studs 12, 12 traversing the slots (Fig. 2).

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In order to assist the workman in erecting the end frames F, each of the standards 1 is braced by a triangular leg frame comprising inclined leg members 13, 13' pivotally connected adjacent to their upper ends by a loose rivet 14 (or equivalent) and diverge downwardly, being held in supporting position by braces 15, 15. One of the legs 13' has an extension 16 which is perforated to fit over a stud 17 projecting from the outer side face of the standard 1, and a wing-nut 18 holds the upper part of the leg frame in place. The inner ends of braces 15, 15 are mounted on a stud 19 projecting from the standard 1, near the bottom thereof, and are secured by a wing-nut 20, while the outer ends of the braces 15, 15 are secured to the legs 13, 13' by studs 21 and wing-nuts 22.

The standards 1, 1 are substantially U-shaped, each having slots 23 bounded by inwardly turned flanges a, a, said slots being on their inner side faces against which slide bars 24, 24 are clamped. Within each standard 1 is a channel bar 25 co-extensive with slide bar 24, the flanges b, b of said channel bar bearing against the inside surface of the standard on each side of the flanges a, a, and a plurality of studs 26 traverse the slot 23 and pass through openings 27 in the slide bar 24. Wing-nuts 28 are screwed over the studs to hold the slide bar firmly against the standard 1. Near the lower end of bar 24 is a perforated boss 29 in which is rotatably mounted a U-shaped hanger 30 which fits into any one of a number of evenly spaced notches 31 formed in flange f of a notch bar 32.

The hanger 30 serves to assist the wing-nuts 28 in holding the slide bar 24 in place and also supports the slide bar when the wing-nuts are loosened for the purpose of effecting adjustment of the slide bar.

The slide bar 24 has a rectangular frame 33 formed near its upper end to receive one end of rail 34 (of which there is one on each side). The rails support the platform 35.

In order to brace the scaffold against longitudinal slippage, each standard 1 is provided with a longitudinal brace member 36, the outer end of which has a series of holes 37, any one of which may be passed over a stud 38 projecting from lug 39 on the outer side wall of the standard and securely held by a wing-nut 40. The inner end of member 36 has a stirrup 41 pivotally connected to it and a pair of thumb screws 42, 42 traverse the stirrup to engage the rail 34 over which the stirrup is passed. Frame 33 is also traversed by thumb screws 43, 43 for engagement with rail 34.

When the scaffold is to be collapsed for stor-

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age or shipment, the rails 34, 34 and platform 35 are removed, after which brace-bar 3 is disconnected from brace 2' and handle clamps 11, 11 loosened. The workman may now bring the standards 1, 1 at each end into juxtaposition and again tighten the handle clamps 11, 11 to hold the standards together. The next operation in compacting the scaffold is to remove wing nut 18 and loosen wing nuts 20 and 22, so the leg frame comprising legs 13, 13' may be folded up as shown (dot and dash lines, Fig. 3) and leg member 13' secured over stud 44 above stud 17.

Obviously after rails 34 and platform 35 are removed the brace member 36 is also disconnected from standard 1.

When the scaffold is to be set up so the platform 35 is only a short distance above the floor, the slide bars 24 may be inverted so the frame 33 will be at the lower end of the slide bar instead of at the upper end. When this done the braces 36 are also inverted and are secured at their outer ends to studs 45 projecting from the top of channels 9.

Having described my invention, I claim:

A scaffold having collapsible end frames, said 25

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frames including supporting standards, hangers slidingly mounted on said standards, means for anchoring the hangers thereto, slotted members fixed to the standards, cross-braces operating in said slotted members to effect lateral adjustment of the standards, means for locking the cross-braces in a plurality of positions, and a collapsible leg frame fixed to each standard to form a tripod therewith.

FRED HARTMANN.

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The following references are of record in the file of this patent:

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