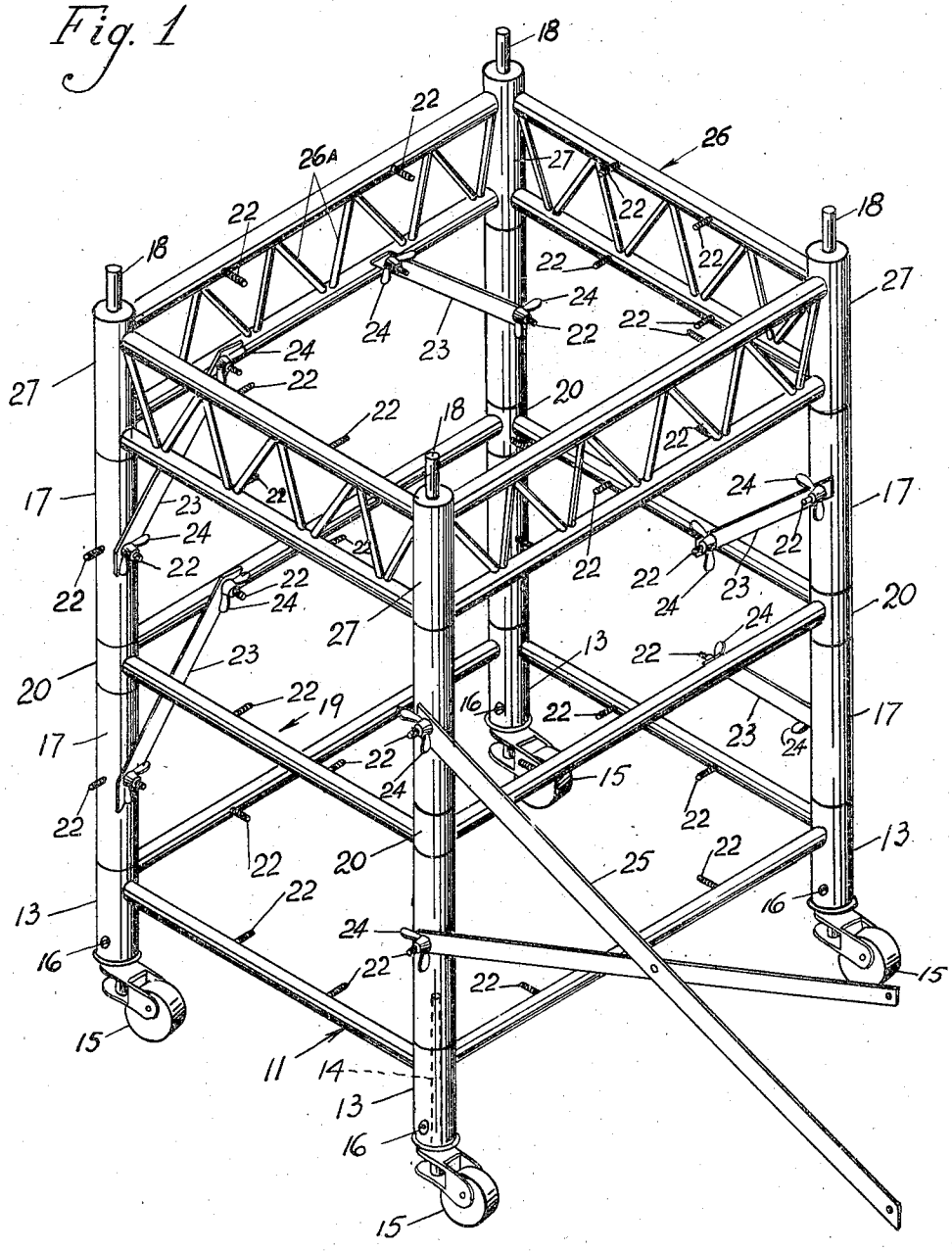
Feb. 22, 1949. M. SACHS 2,462,429

SCAFFOLD

Filed Aug. 30, 1945 4 Sheets-Sheet 1

Fig. 1



INVENTOR
Milton Sachs
BY Richard Seifer
ATTORNEYS

Feb. 22, 1949. M. SACHS 2,462,429

SCAFFOLD

Filed Aug. 30, 1945 4 Sheets-Sheet 2

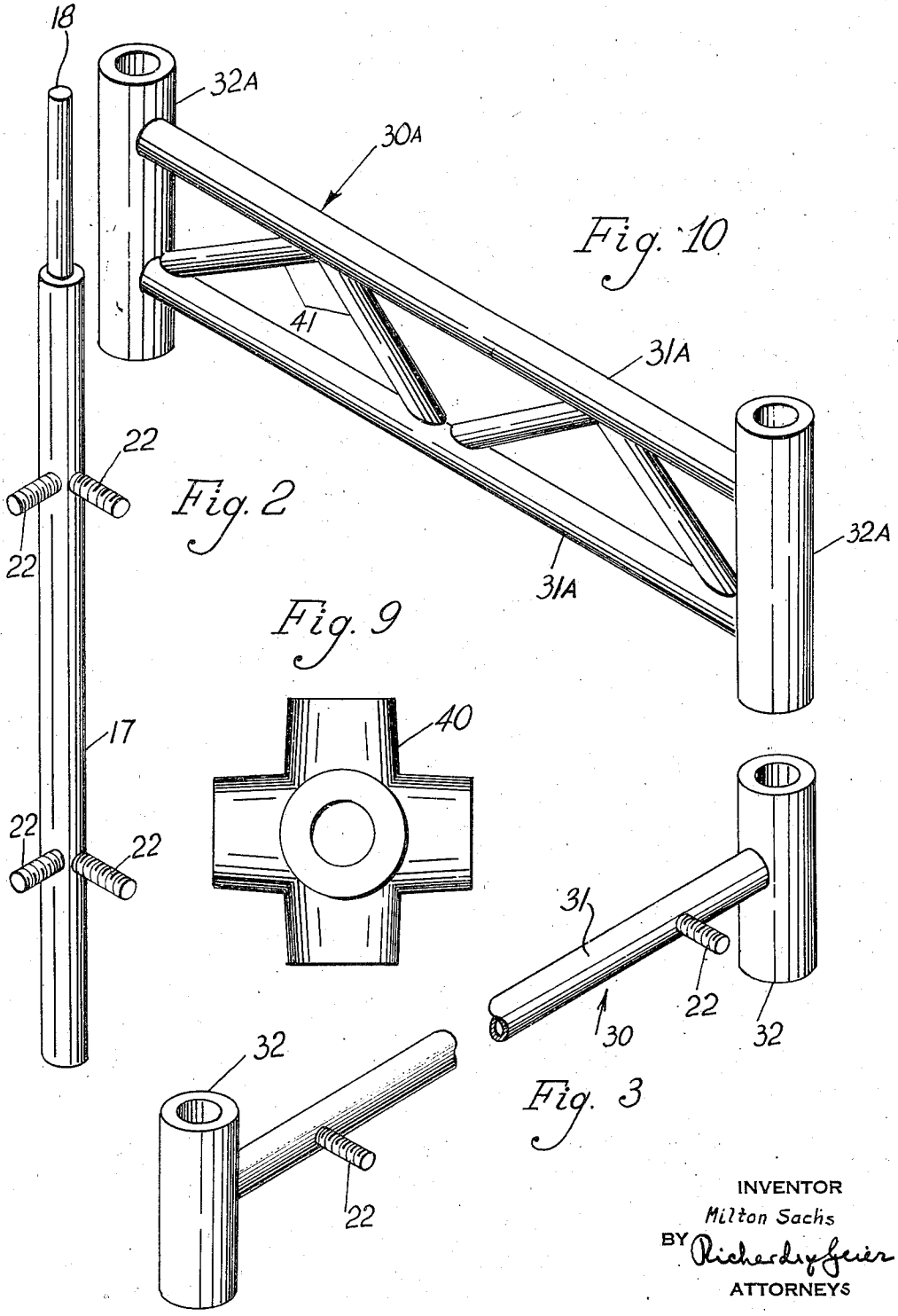


Fig. 10

Fig. 2

Fig. 9

Fig. 3

INVENTOR
Milton Sachs
BY Richards & Geier
ATTORNEYS

Feb. 22, 1949. M. SACHS 2,462,429

SCAFFOLD

Filed Aug. 30, 1945 4 Sheets-Sheet 3

Fig. 4

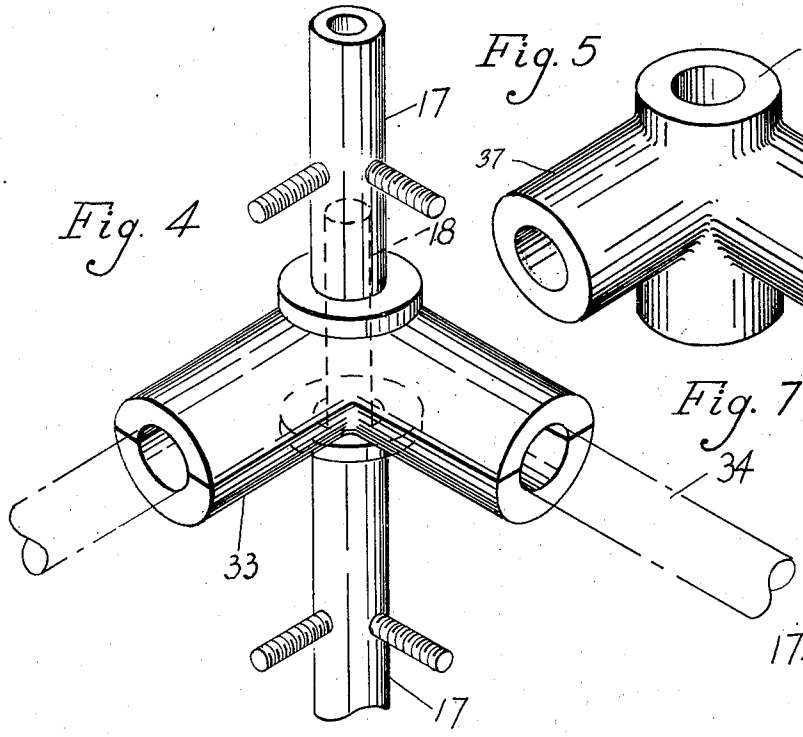


Fig. 5

Fig. 7

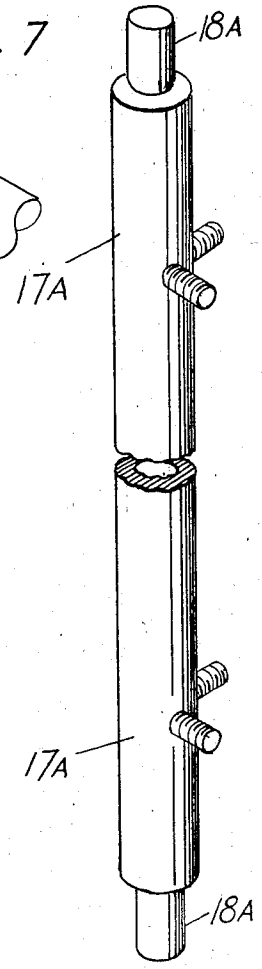


Fig. 6

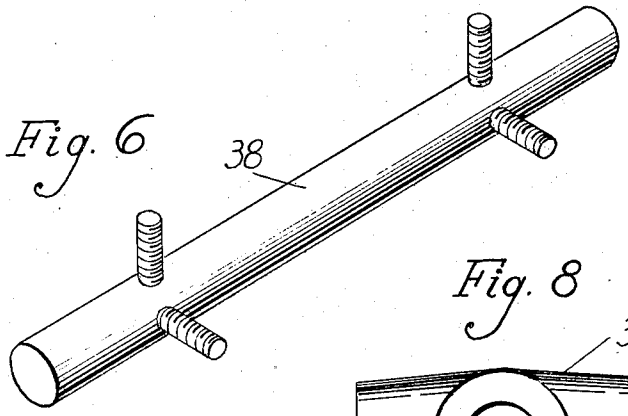
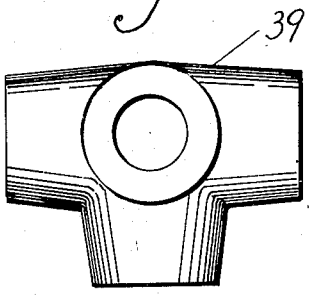


Fig. 8



INVENTOR
Milton Sachs
BY Richard Y. Geier
ATTORNEYS

Feb. 22, 1949. M. SACHS 2,462,429

SCAFFOLD

Filed Aug. 30, 1945 4 Sheets-Sheet 4

Fig. 13

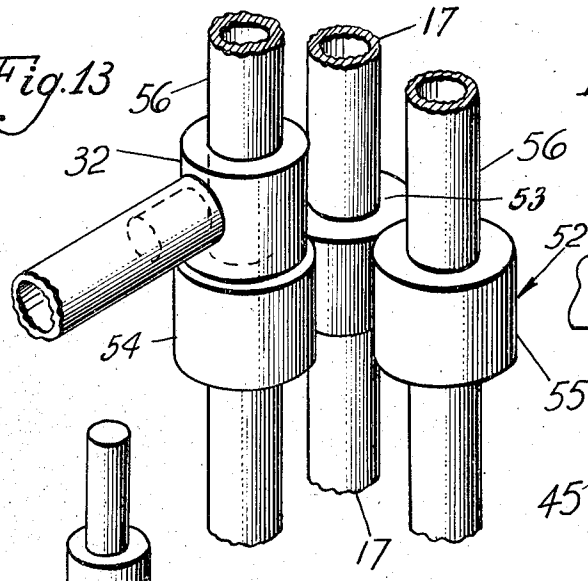


Fig. 12

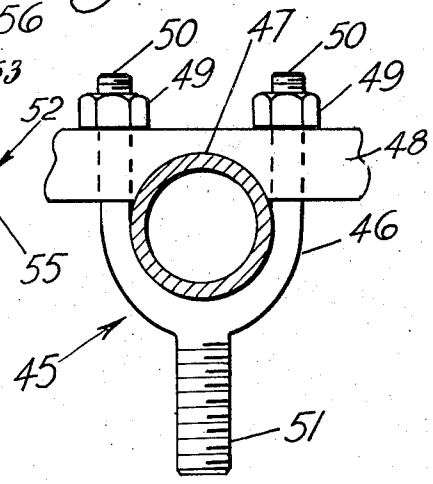
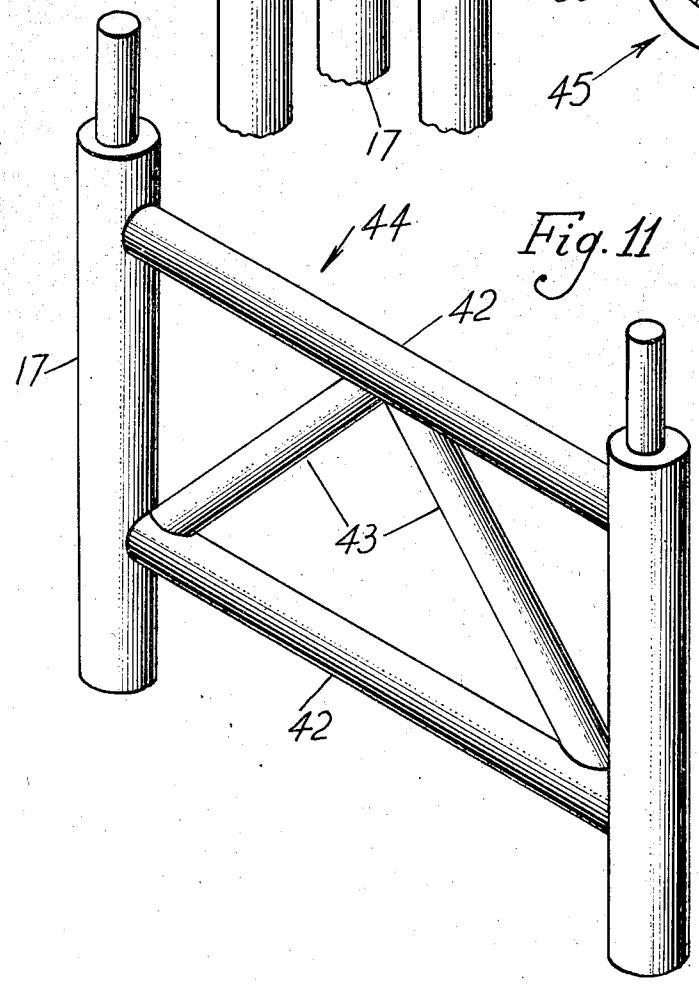


Fig. 11



INVENTOR
Milton Sachs
BY Richard Yegier
ATTORNEYS

Patented Feb. 22, 1949 2,462,429

UNITED STATES PATENT OFFICE

2,462,429

SCAFFOLD

Milton Sachs, New York, N. Y.

Application August 30, 1945, Serial No. 613,481

2 Claims. (Cl. 304—2)

1

This invention relates to scaffolding generally and more particularly to the type of scaffolding adapted for interior use.

One object of the invention is the provision of a scaffold unit comprising a tubular member, with a rod extending from one end thereof, in such a manner that a number of such units may be assembled with one or more frames to form a scaffold section.

Another object of the invention is the provision of such a scaffold that may be readily assembled and disassembled without the use of tools.

A further object of the invention is the provision of such a scaffold with means to make same portable when assembled.

Still another object of the invention is the provision of a scaffold of the character described which may be readily built up to any desired height, length or width.

Yet another object is the provision of means for uniting two or more scaffold sections together into one complete whole.

Other objects and advantages will become apparent as the nature of the improvements is better understood, the invention consisting substantially in the novel arrangement and corelation of parts herein fully described, and illustrated in the accompanying drawings, wherein similar reference characters are used to describe corresponding parts throughout the several views, and then finally pointed out and specifically defined and indicated in the appended claims.

The disclosure made the basis of exemplifying the present inventive concept suggests a practical embodiment thereof, but the invention is not to be restricted to the exact details of this disclosure, the latter, therefore, is to be understood from an illustrative, rather than a restricted standpoint.

In carrying out a preferred embodiment of the invention, it was found desirable to provide a plurality of tubular members having at one end thereof a protruding rod, and to assemble four such tubular members vertically in a horizontal frame to produce one scaffold section and if desirable, erect another such section on top of the first section. It was further found desirable to provide a portable base upon which the structure thus erected may be mounted. Various methods of uniting two or more such scaffold structures have also been provided.

In the drawings:

Figure 1 is a perspective view of a scaffold structure built in accordance with a preferred embodiment of the present inventive concept and also showing means for connecting same to another like scaffold structure;

2

Figure 2 is a perspective view of one of the upright tubular scaffold units;

Figure 3 is a perspective view of a different type of connecting unit than that shown in Figure 1;

Figure 4 is a perspective view of a modified form of the invention;

Figures 5, 6 and 7 are perspective views of details which when assembled form a further modified form of the invention;

Figure 8 is a top plan view of a T connection which may be used instead of the connection shown in Fig. 5;

Figure 9 is a top plan view of a cross T connection which may be so used;

Figure 10 is a perspective view of a modified form of the connecting means shown in Figure 3;

Figure 11 is a perspective view of a further modified form of a frame unit;

Figure 12 is a view in elevation and partly in section of a U bolt which may be adjustably mounted upon any of the tubular upright or horizontal frame members and

Figure 13 is a fragmental perspective view of a still further modified form of the invention.

Referring now in detail to Figs. 1 and 2 of the drawings, 10 indicates a scaffold constructed in accordance with a preferred embodiment of the present invention. The said construction comprises a bottom horizontal frame 11 made up of four tubular bars joined by short tubular sections, bosses or hubs 13 each of which is adapted to receive the stem or shank 14 of a caster 15, the said stems being maintained in place by means of screws 16, the frame and casters forming a portable truck. The said shanks 14 are sufficiently long enough to extend into the vertical tubular corner posts 17 which are provided at their upper ends with rods 18. The said rods 18 being preferably secured to the tubular posts 17 by spot welding or the like.

Over the said protruding rods 18 there may be placed a second horizontal frame 19, the said frame 19 being similar in construction to the frame 11 with the possible exception that the connecting corner hubs 20 may be somewhat shorter than the hubs 13. In order to brace the structure, the tubular corner posts 17 and the tubular horizontal bars of the frame 19 are provided with headless screws 22 which are adapted to receive the perforated ends of flat braces or bars 23. Wing nuts 24 are used to hold the said braces in place on the screws 22.

If desirable a second tier of corner posts 17 are

placed over the protruding rods 18 of the lower tubular posts 17, which upper posts may in turn be connected by a frame 19, or if additional height is desired, said height being less than a full tier, then a frame 26 as shown may be used. The said frame 26 preferably comprises tubular corner sections 27 connected by parallel spaced apart tubes 12 reinforced by angularly disposed tube sections 26A.

The structure thus far described may in itself form a complete scaffold frame, in which case, wooden planks may be placed over the top frame 19 to complete the scaffold. However, if desirable a second such structure may be erected and connected to the first structure by means of a pair of X-shaped connections 25, one on each side of the said structures, only one being shown in Fig. 1. The said X-shaped connections being secured in place by means of the screws 22 and wing nuts 24. Wooden planks may be placed across the individual frames 19 of the scaffold structures or they may extend from one frame to the other.

If desirable the scaffold section thus erected may be reinforced by the use of an X connection 25 between the upper and lower tiers of corner posts 17, this reinforcing connection being omitted from the drawing for the sake of clarity.

In Figure 3 of the drawings there is shown a modified form of the connecting means between two scaffold sections. Instead of using the X-shaped connection 25 there is provided a connecting member 30 which comprises a horizontal length of tubing 31 terminating at its ends in vertical tubular sections 32 adapted to fit over the protruding rod ends 18 of the uppermost corner posts 17. Two such connecting members 30 may be used to connect a pair of scaffold structures shown in Figure 1. The said connecting member 30 is also provided with the screws 22 for use with the braces 23 when and if necessary.

In Figure 4, a modified form of the corner post connecting means between two tiers of such posts is shown. In this form of the invention, the opposing ends of each pair of the vertical corner posts 17 are provided with complementary halves 33 of an elbow fitting. The said half elbows being preferably spot welded to the ends of the posts 17, the rod end 18 of one of the said posts extending into the interior of the other of said posts. By placing a tube 34 into the ends of opposing elbows a frame is formed equivalent to that of the frame 19 shown in Fig. 1.

In Figs. 5, 6 and 7 there are shown the elements of a modified form of the invention wherein a right angle elbow 35 is used, the said elbow having a vertically perforated hub 36 for the reception of the rod ends 18A of a corner post 17A and is further provided with horizontally perforated arms 37 for the reception of the horizontal tubular frame forming rails 38. A completed frame comprises four elbows 35 and four rails 38, the rails may be removably maintained in the elbow arms 37 and the rod ends 18A may be similarly maintained in the hub 36. The length of the rod end 18A is such that two of them, when inserted from the top and bottom of the boss 36 will clear each other.

Instead of the elbow 35 shown in Figure 5 it may be desirable in some instances to use either the T connection 39 shown in Figure 8 or the cross T 40 shown in Figure 9. The T connection 39 may be used as the center connection where it is desired to erect two scaffold sections side

by side or what may be termed a double scaffold section. The cross T connection 40 as will readily be seen may be used as the center connection for a quadruple scaffold section or unit.

In Figure 10 there is shown a modified form of the connecting unit 30 shown in Figure 3. In the said modified form instead of using a single length of tubing 31, two spaced apart lengths 31A are used, the ends of which are welded to tubular hubs 32A adapted for engagement with the rod ends 18 of a pair of corner posts. The connecting unit 30A thus formed may be braced or reinforced by angularly disposed tubular sections 41.

Instead of using individual corner posts 17, two such posts may be joined by a pair of spaced apart horizontal tubes 42 and reinforced by a pair of angularly disposed tubular sections 43 to form a scaffold-unit side 44 shown in Figure 11.

As already described the corner posts as well as the horizontal frame bars are provided with the screws 22 to support the braces 23, however in some instances it may be desirable to have such a screw adjustably mounted on said elements. Such an arrangement is shown in Fig. 12 wherein a U bolt 45 having a bifurcated yoke 46 is clamped against a tubular element 47 by means of a plate 48 held in place by a pair of nuts 49 in engagement with the threaded yoke ends 50. A screw threaded cylindrical extension 51 provides means for the reception of one end of a brace and wing nut or for any other structural scaffold element desired to be secured to same.

In Fig. 13 there is shown a modified form of the invention, wherein, by the use of a tripple bossed corner connection 52 provision may be made for interconnecting several scaffold sections at any desired angle. In the said modified construction the center boss 53 accommodates the opposing ends of the corner posts 17 and the outer bosses 54 and 55 respectively may accommodate suitable posts 56. Either or both of said posts 56 may have rotatably mounted thereon the sleeve hub or boss 32 or 32A of either the connectors 30 or 30A or of any other suitable connecting means adapted for the purpose. With the above means two parallel scaffold sections, or sections disposed at various angles to one another may be connected.

While the tubing from which the scaffold is made is shown as circular in cross section, it is to be understood that same may be made of any suitable cross section as for instance square or rectangular.

From the foregoing it will be seen that with the use of the improved tubular corner post and its projecting rod plus one or more frames a comparatively simple yet highly efficient scaffold may be readily erected by any unskilled person and without the use of any tools outside of a screw driver, the use of the screw driver being necessary only when using the portable truck or frame 11 provided with casters.

What is claimed is:

1. A pair of scaffold structures, each structure comprising a plurality of corner posts, said posts each comprising a tubular member open at one end, a rod extending outwardly of said tubular member at the opposite end, a second like number of similar corner posts mounted on said rods, a frame below the first-mentioned corner posts, said frame comprising interconnected hollow corner hubs in alinement with the corner posts, a caster extending through the hubs of said frame

into each of the first-mentioned corner posts, a frame above the first-mentioned corner posts, the last mentioned frame having openings formed therein for the reception of the post rods, scaffold bracing means between the corner posts and the frames, and means for connecting some of the corner posts of one structure, to corner posts of the other structure said means comprising crossed members, vertically disposed tubes at each end of said members for engagement with a pair of post rods of one of the structures and with a pair of posts on the other of said structures.

2. A scaffold, comprising a plurality of corner posts, said posts each comprising a tubular member open at one end, a rod extending outwardly of said tubular member at the opposite end, a second like number of similar corner posts mounted on said rods, a frame below the first-mentioned corner posts, said frame comprising interconnected hollow corner hubs in alinement with the corner posts, a caster extending through the hubs of said frame into each of the first-mentioned corner posts, a frame above the first-mentioned corner posts, the last mentioned frame having openings formed therein for the reception of the post rods, and scaffold bracing means between said corner posts and said frames, wherein

the second mentioned frame comprises a half elbow at each opposing end of the corner posts, and a tubular member carried between opposing ends of the half elbow structures.

MILTON SACHS.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
1,215,763	Beatty	Feb. 13, 1917
1,918,116	Mansfield	July 11, 1933
2,126,720	Beatty et al.	Aug. 16, 1938
2,303,113	Uecker et al.	June 4, 1940
2,272,349	Noser	Feb. 10, 1942
2,303,428	Black	Dec. 1, 1942
2,311,988	Lavin	Feb. 23, 1943
2,359,583	Reiner	Oct. 3, 1944
2,361,614	Dugan et al.	Oct. 31, 1944
2,383,163	Roten	Aug. 21, 1945

FOREIGN PATENTS

Number	Country	Date
235,766	Great Britain	June 25, 1925
649,695	Germany	Sept. 2, 1937