Jan. 3, 1961 H. A. IRELAND 2,966,957

SCAFFOLD SUPPORTING STRUCTURE

Filed Jan. 10, 1958 2 Sheets-Sheet 1

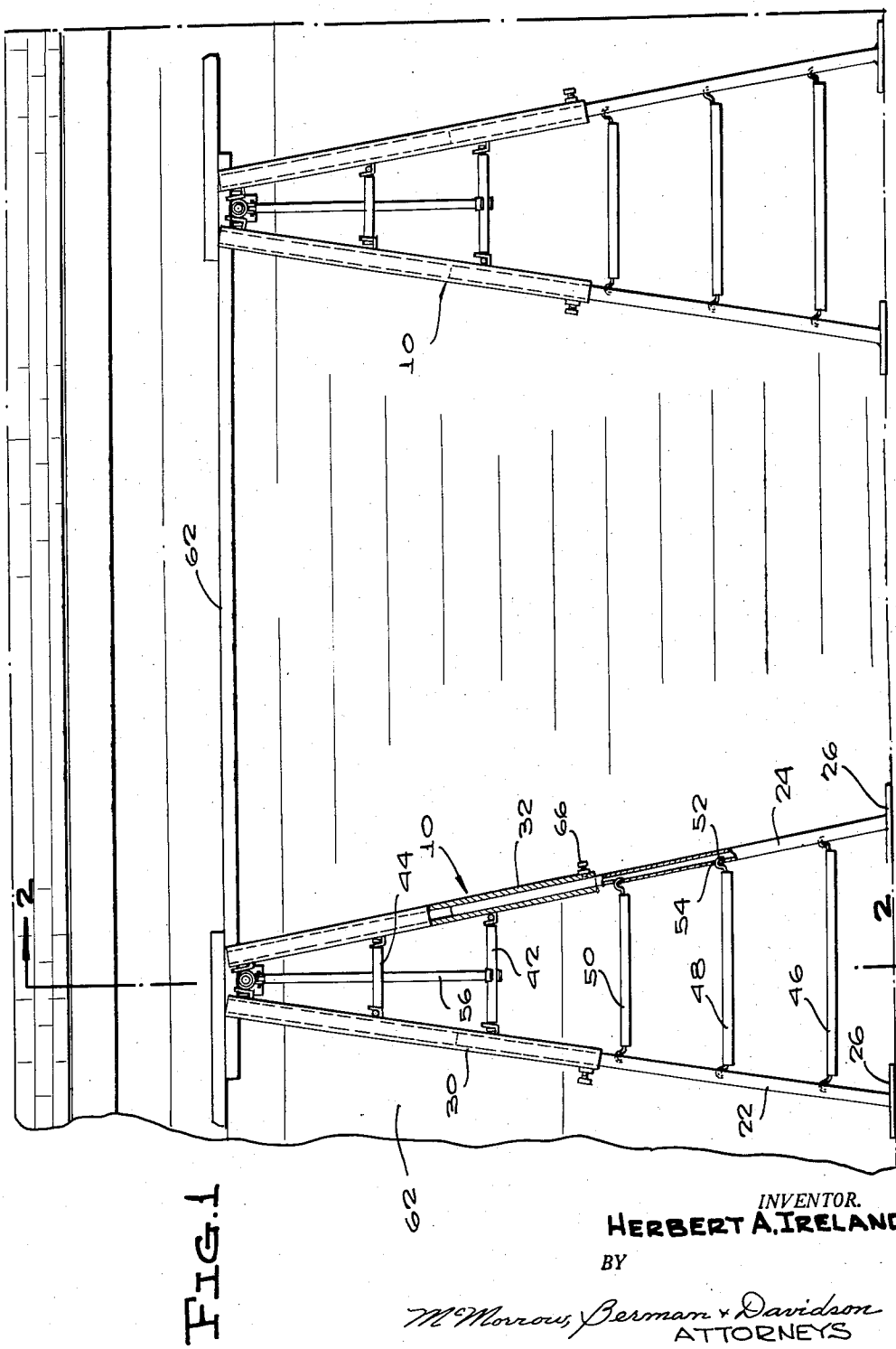


FIG. 1

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Filed Jan. 10, 1958 2 Sheets-Sheet 2

FIG. 2

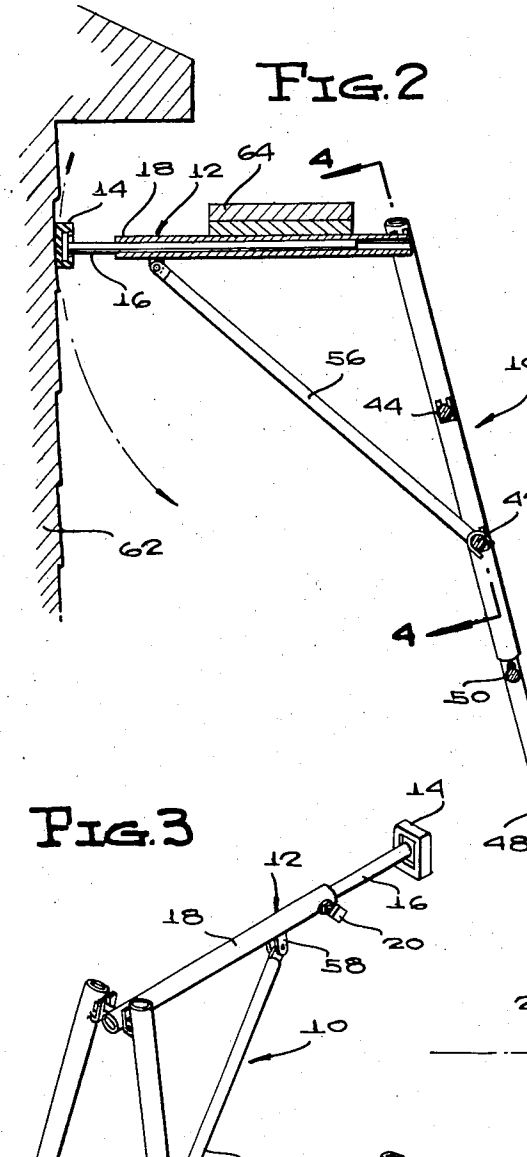


FIG. 4

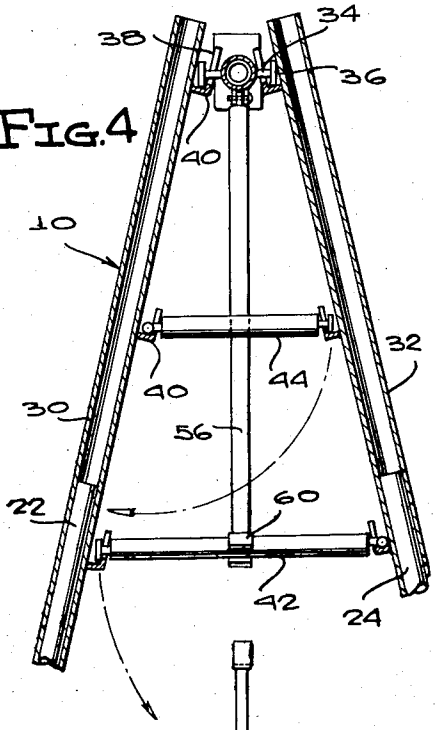


FIG. 3

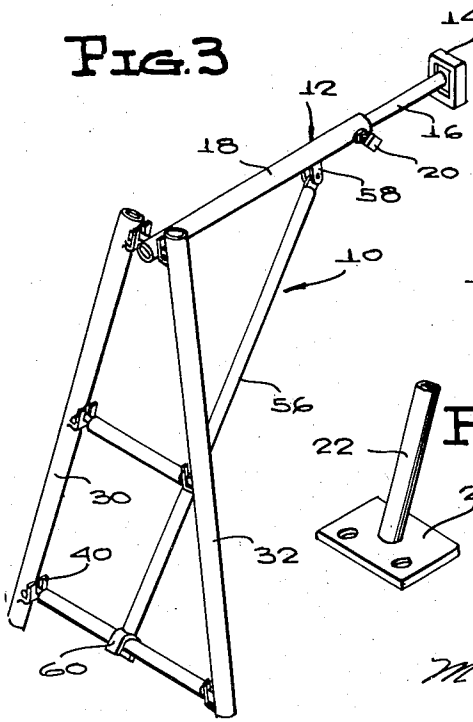
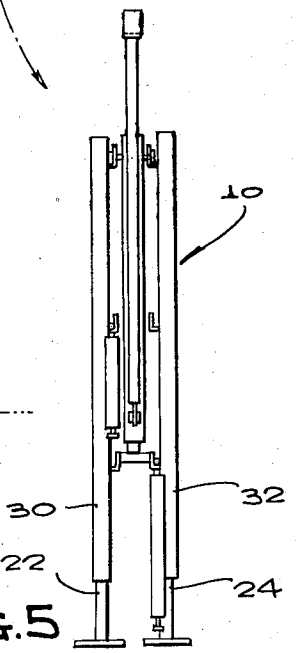


FIG. 6

FIG. 5



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SCAFFOLD SUPPORTING STRUCTURE

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3 Claims. (Cl. 182—224)

The preent invention relates to a supporting structure for a scaffold.

An object of the present invention is to provide a scaffold supporting structure which lends itself to ready and rapid assembly and disassembly, one sturdy in construction and of simple structure, and one which is economically feasible.

Another object of the present invention is to provide a scaffold supporting structure which may be collapsed to a relatively small package easy to carry and to store, one which may be adjusted for mounting a scaffold over uneven ground, and one which is highly effective in action.

These and other objects and advantages of the present invention will be fully apparent from the following description when taken in connection with the annexed drawings, in which:

Figure 1 is an elevational view of a pair of the supporting structures according to the present invention shown in a position supporting a plank scaffold,

Figure 2 is a sectional view taken on the line 2—2 of Figure 1,

Figure 3 is an isometric view on a reduced scale of the assembly shown in Figure 2 with the plank scaffold removed therefrom,

Figure 4 is a sectional view, on an enlarged scale, taken on the line 4—4 of Figure 2, showing the supporting structure in erected or expanded position,

Figure 5 is a view in elevation of the assembly shown in Figure 4 shown in a folded condition, and

Figure 6 is an isometric fragmentary view showing the foot on one end of the post or leg of the present invention.

Referring in greater detail to the drawings in which like numerals indicate like parts throughout the several views, the scaffold supporting structure of the present invention is shown in duplicate in Figure 1 and designated by the reference numeral 10. The scaffold supporting structure 10 includes a horizontally disposed timber supporting bar or member 12 having a rubber anchoring foot 14 on one end adapted to bear against an upright wall. The member 12 includes an inner rod 16 and an outer tubular member 18 telescopically arranged so that the member 12 is extensile and retractile and is secured in any position of its adjusted extensile or retractile movement by means of a set screw 20.

A pair of posts 22 and 24 are arranged in an upwardly converging direction and are positioned below the member 12 adjacent the end of the member 12 remote from the foot 14. The lower end of each of the posts 22 and 24 is provided with a foot 26 having holes herein for the receipt of a pin, shown in dotted lines in Figure 2 and designated by the reference numeral 28, when the feet 26 engage a ground surface.

A pair of standards 30 and 32 are arranged in an upwardly converging direction and are telescopingly mounted upon the posts 22 and 24, respectively, so that the portions adjacent the diverging ends are slidably received

on the portions adjacent the converging ends of the posts 22 and 24.

A portion of the outer tubular member 18 remote from the foot 14 is received between the converging ends of the standards 30 and 32.

Means is provided pivotally connecting the portion of the tubular member 18 which is between the converging ends of the standards 30 and 32 to the standards 30 and 32 for swinging movement of the member 12 from the horizontal position shown in Figure 2 to a position in which the member 12 is between the standards 30 and 32 with one end of the member 12 spaced below the upper ends of the standards 30 and 32 and with the pivotally connected end portion of the tubular member 18 projecting upwardly between the upper end of the standards 30 and 32. Specifically this means consists in a transversely arranged bolt or shaft 34 having a large head on each end thereof and projecting from each side of the tubular member 18 inwardly of the end remote from the foot 14. The heads of the shaft 34, designated by the reference numeral 36 in Figure 4, are received behind the bifurcated long legs 38 of L-shaped brackets 40 which project from the standards 30 and 32 and constitute cooperating opposed pairs of attaching elements arranged in spaced relation along the standards 30 and 32 between the converging and diverging ends of the standards 30 and 32.

Rungs 42 and 44 are positioned between and detachably secured to the other opposed pairs of attaching elements or brackets 40 on the standards 30 and 32 as shown in Figure 4. Each of such rungs has a headed bolt or shaft 46 projecting from each end engageable in the long leg of the respective bracket 40.

Other rungs 46, 48 and 50 extend between the posts 22 and 24 and have hooks on their ends receivable in holes provided in the posts 22 and 24, the holes in such posts constituting cooperating opposed pairs of attaching elements arranged in spaced relation along the posts. One such hook is shown in Figure 1 with the cooperating hole shown in the post 24, the hook being designated by the reference numeral 52 and the hole by the reference numeral 54.

A brace bar 56 is arranged in an upwardly sloping direction and is positioned below the supporting member 12 and has its upper end pivotally connected to a bifurcated lug 58 depending from the outer tubular member 18 inwardly of the end having the set screw 20. The lower end of the brace bar 56 has an inverted U-shaped saddle member 60 which rests upon and loosely embraces the one rung 42 when the latter is positioned between the standards 30 and 32 and supported in the respective brackets 40.

In use, the scaffold supporting structures 10 are arranged in parallel spaced relation adjacent an upright wall 62 and planks 64 are laid over the members 12 for the support thereon of individuals employed in working on the wall or roof of a building. With the rungs removed from the posts and standards, the posts may be withdrawn into the standards, there being provided set screws 66 for securing the posts in the standards in any position of their adjusted movement relative to each other. When the posts have been telescoped within the standards and the standards moved to the parallel spaced position shown in Figure 5, the brace bar 56 may be swung forwardly to a position between the standards and to a position having one end upwardly of the upper ends of the standards. In this position the inner rod 16 is retracted within the tubular member 18 and the member 18 is swung to a position between and parallel with the standards, or the tubular member 18 may be entirely disconnected from the standards and transported separately.

While only a preferred embodiment of the present invention has been shown and described, other embodiments are contemplated and numerous changes and modifications may be made therein without departing from the spirit of the invention as set forth in the appended claims.

What is claimed is:

1. In a scaffold supporting structure, a horizontally disposed timber supporting member having one end adapted to bear against an upright wall, a pair of standards arranged in an upwardly converging direction positioned below said supporting member with the portion adjacent the other end of said supporting member received between the converging ends of said standards, means pivotally connecting said other end portion of said supporting member to the converging ends of said standards, cooperating opposed pairs of attaching elements arranged in spaced relation along said standards between the converging ends and the diverging ends of said standards, a rung detachably secured to each of said opposed pairs of attaching elements, and a brace bar arranged in an upwardly sloping direction positioned below said supporting member and having the upper end pivotally connected to a bifurcated lug carried by the midportion of said supporting member and having on the lower end a U-shaped saddle member adapted to loosely embrace and rest upon one of said rungs, said standards being movable from the upwardly converging direction position, upon removal of said rungs, to a position in which they are in a spaced upright direction, and said supporting member being shiftable from the horizontal position, when said standards are in the spaced upright direction position, to a position in which it is between said standards with said one end spaced below the upper ends of said standards, the pivotally connected end portion projecting upwardly between the upper ends of said standards, and the brace bar having the portion adjacent the other end projecting upwardly and above the upper end of said standards.

2. In a scaffold supporting structure, a horizontally disposed extensile and retractile timber supporting bar, an anchoring foot on one end of said bar adapted to bear against an upright wall, a pair of standards arranged in an upwardly converging direction positioned below said supporting member with the portion adjacent the other end of said supporting member received between the converging ends of said standards, means pivotally connecting the said other end portion of said supporting member to the converging ends of said standards, cooperating opposed pairs of attaching elements arranged in spaced relation along said standards between the converging ends and the diverging ends of said standards, a rung detachably secured to each of said opposed pairs of attaching elements, and a brace bar arranged in an upwardly sloping direction positioned below said supporting member and having the upper end pivotally connected to a bifurcated lug carried by the midportion of said supporting member and having on the lower end a U-shaped saddle member adapted to loosely embrace and rest upon one of said rungs, said standards being movable from the upwardly converging direction position, upon removal of said rungs, to a position in which they are in a spaced upright direction, and said supporting member

being shiftable from the horizontal position, when said standards are in the spaced upright direction position, to a position in which it is between said standards with said one end spaced below the upper ends of said standards, the pivotally connected end portion projecting upwardly between the upper ends of said standards, and the brace bar having the portion adjacent the other end projecting upwardly and above the upper end of said standards.

3. In a scaffold supporting structure, a horizontally disposed timber supporting member having one end adapted to bear against an upright wall, a pair of posts arranged in an upwardly converging direction positioned below said supporting member adjacent the other end of said supporting member, the lower end of each of said posts being adapted to engage a ground surface contiguous to said upright wall, a pair of standards arranged in an upwardly converging direction mounted upon said posts so that the portions adjacent the diverging ends are slidably received on the portions adjacent the converging ends of said posts with the portion adjacent the other end of said supporting member received between the converging ends of said standards, means carried by each of said standards and detachably engageable with the portions adjacent the converging ends of said posts for holding the standards in any selected position of movement of said posts, means pivotally connecting said other end portion of said supporting member to the converging ends of said standards, cooperating opposed pairs of attaching elements arranged in spaced relation along said standards between the converging ends and the diverging ends of said standards, a rung detachably secured to each of said opposed pairs of attaching elements, and a brace bar arranged in an upwardly sloping direction positioned below said supporting member and having the upper end pivotally connected to a bifurcated lug carried by the midportion of said supoprting member and having on the lower end a U-shaped saddle member adapted to loosely embrace and rest upon one of said rungs, said standards being movable from the upwardly converging direction position, upon removal of said rungs, to a position in which they are in a spaced upright direction, and said supporting member being shiftable from the horizontal position, when said standards are in the spaced upright direction position, to a position in which it is between said standards with said one end spaced below the upper ends of said standards, the pivotally connected end portion projecting upwardly between the upper ends of said standards, and the brace bar having the portion adjacent the other end projecting upwardly and above the upper end of said standards.

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