

Sept. 14, 1948.

H. H. CLARK

2,449,056

SAFETY SCAFFOLD POLE

Original Filed June 15, 1942

2 Sheets-Sheet 1

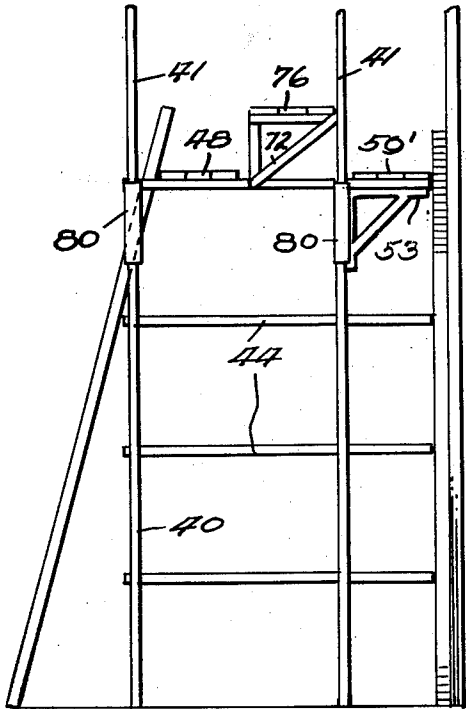


Fig. 1.

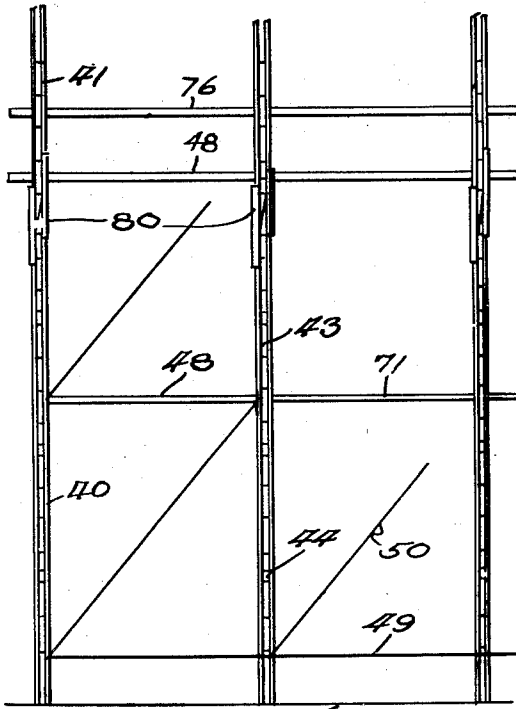


Fig. 2.

Fig. 3.

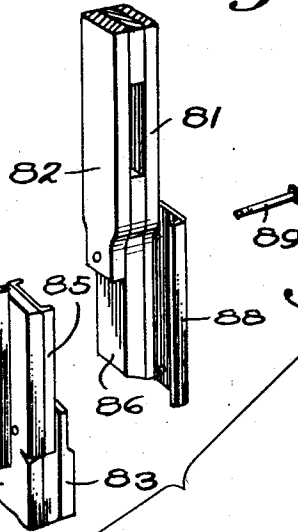
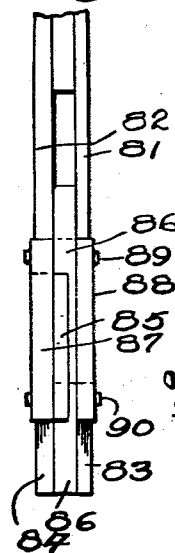


Fig. 4.

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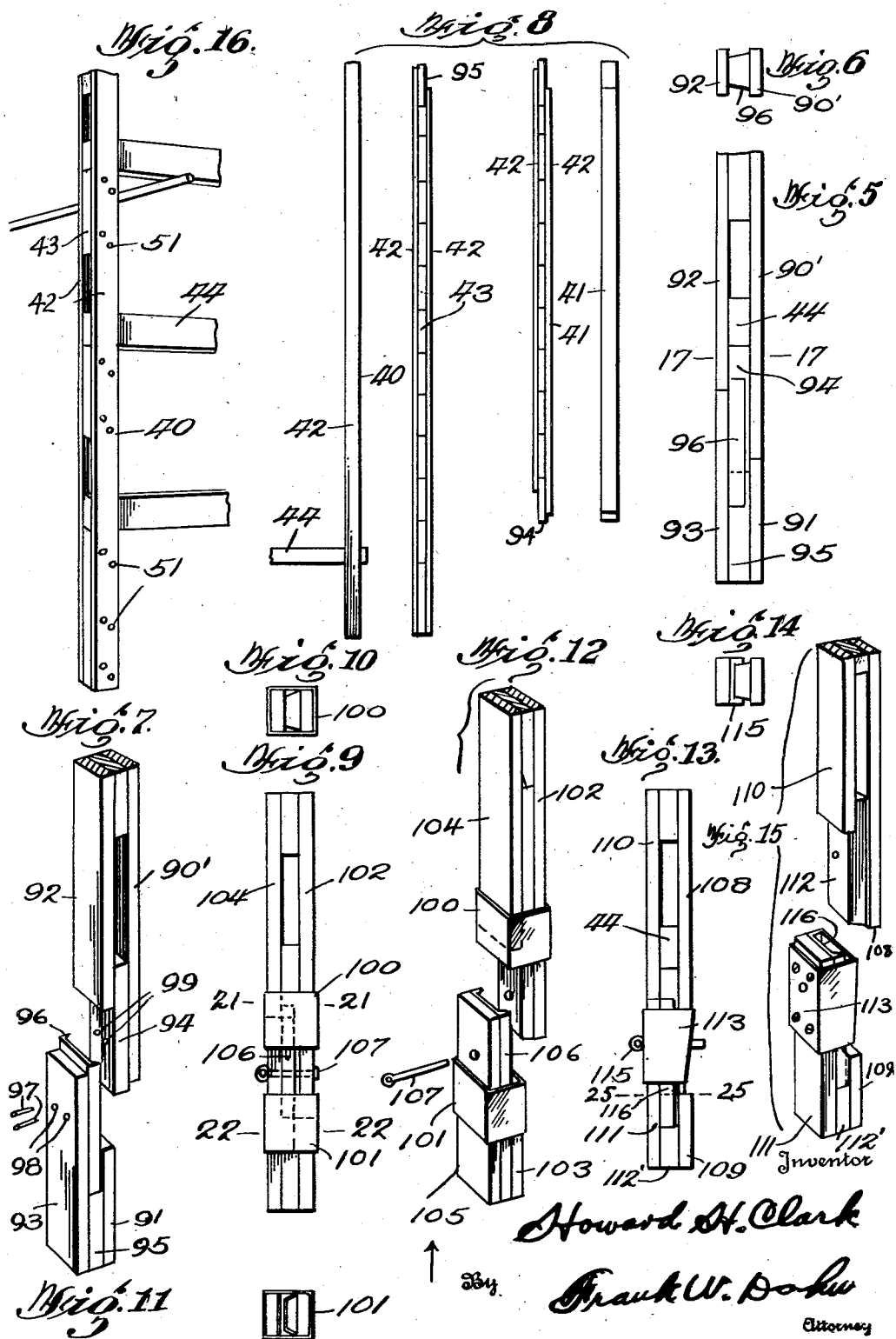
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2 Sheets-Sheet 2



UNITED STATES PATENT OFFICE

2,449,056

SAFETY SCAFFOLD POLE

Howard H. Clark, Kent, Ohio

Original application June 15, 1942, Serial No. 447,113. Divided and this application July 11, 1945, Serial No. 604,469

18 Claims. (Cl. 304—37)

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My invention relates to scaffold systems, and specifically to certain improvements in the safety scaffold poles disclosed in my Patent No. 2,267,638.

The principal object of the invention is to provide improved joints between superposed pole sections in a scaffold.

Referring to the drawings, which are made a part of this application, and in which similar reference characters indicate similar parts:

Fig. 1 is an end elevation of a scaffold, illustrating the use of certain features of novelty of my invention, in a scaffold set up for veneering with bricks,

Fig. 2, a rear elevation of the same,

Fig. 3, an elevation of a joint forming part of my invention,

Fig. 4, an unassembled view of the parts of said joint,

Fig. 5, an elevation of a modified form of joint,

Fig. 6, a cross-section on line 17—17 of Fig. 5,

Fig. 7, an unassembled perspective of the parts of Fig. 5,

Fig. 8, detail side and face elevations of a bottom pole member and the next higher pole member, as shown in Fig. 5,

Fig. 9, an elevation of another modification,

Fig. 10, a section on line 21—21 of Fig. 9,

Fig. 11, a section on line 22—22 of Fig. 9,

Fig. 12, an unassembled perspective of the parts shown in Fig. 9,

Fig. 13, an elevation of another modification,

Fig. 14, a section on line 25—25 of Fig. 13,

Fig. 15, an unassembled perspective of the parts of the joint in Fig. 13,

Fig. 16, a detail perspective of a preferred form of pole used in my scaffold system,

In the drawings, reference character 40 indicates generally a bottom pole section that stands on the ground or other supporting surface and supports one or more upper pole sections 41, according to the same general system as in my Patent No. 2,267,638. Each pole section includes side bars 42, 42 (Fig. 2) connected by spacers 43, which spacers hold said members in spaced relation so that putlogs 44 resting on said spacers may fit closely between the side bars so as to be readily removed or replaced. The putlogs, as usual, support planks or the like 48. The poles are braced by means of horizontal braces 49 and diagonal braces 50.

The side bars 42, 42 are secured to the spacers 43 by means of conventional nails 51 (Fig. 16) or by bolts or the like, though the spacers might obviously be integral, the posts being merely perforated like those used in making rail fences of a well-known type.

The workman's runway, with its planks 59 resting on brackets 53, and the material platform, with planks 76 carried by brackets 72, are

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described in my Patent No. 2,383,449, later referred to.

It will be seen in Fig. 8 that the lower pole member 40 is square at the bottom and preferably has a long spacer extending down to the lower end of the member, while the upper end of this member as well as both ends of the intermediate members such as 41 are formed as complementary stepped members adapted to fit together so as to form linear poles with aligned faces. Figs. 3 to 7 and 9 to 15 show four novel types of interfitting means for pole members whereby the separable parts are safely held in alignment when superposed in a scaffold.

The joints shown at 80, 80 in Figs. 1 and 2 may be as in my patent above referred to, but they may also be as in any of the forms now to be described. Thus, as in Figs. 3 and 4, the long side bar 81 abuts against the upper end of the short side bar 83 and the short side bar 82 abuts at its end against the long lower side bar 84. A channel iron 85 is permanently attached to the inner face of the upper end portion of bar 84 (which portion is reduced in thickness to receive said iron) so as to embrace the lower end portion of the two-piece spacer 86 when the joint is assembled with the side bars abutting as above stated, the middle portion of said spacer being reduced in width to fit said iron. An external channel iron 87 fits over the abutting ends of side bars 82 and 84, both of which are reduced in width at their abutting ends. Another external channel iron 88 fits at the opposite side of the pole over the abutting ends of bars 81 and 83, which are also reduced in width, and bolts 89 and 90 are passed through the several parts and hold them all rigidly in engagement with each other.

Figs. 5 to 7 show another form of joint, wherein the stepped relation is as in Figs. 3 and 4, the abutting ends of side bars 90' and 91 meeting at a level higher than that where the ends of the spacer sections 94 and 95 abut, but lower than the point at which the ends of side bars 92 and 93 meet. In this form there are no outer channel irons, but a single internal channel iron 96 is affixed to the bar 93 and fits over the spacer members 94 and 95, both of which are beveled off to fit in the channel iron (Fig. 6) the intermediate part of the spacers being also reduced in thickness sufficiently to accommodate said iron. Screws 97 are inserted in holes 98, 99 in the respective sections of the pole to complete the joint.

Another form of the joint is shown in Figs. 9 to 12, wherein the arrangement and construction may be as in Figs. 5 to 7 except that this form has added a pair of sleeves 100, 101 which are permanently secured to the respective pole sections in such manner that the one covers the

meeting point of bars 102 and 103 while the other covers the meeting point of bars 104 and 105, thus adding to the security of the connection, the ends of the channel iron extending into the respective sleeves. With this construction a single bolt 107 will usually be sufficient to insure the permanency of the joint for so long as desired.

The form of joint shown in Figs. 13 to 15 may also be as in Figs. 5 to 7, except that here a single sleeve 113 is located about the joint, this sleeve being above the meeting point of bars 108 and 109, but below the meeting points of the bars 110 and 111 and of the spacer sections 112 and 112'. The sleeve has an inclined wall at the right side in Figs. 13 and 15 and the lower end of the bar 108 is reduced in thickness to enable it to enter easily into the sleeve. A single bolt 115 passes through the sleeve 113, the channel iron 116, the spacer section 112, and the respective ends of the bars 108 and 111.

The parts referred to as channel bars or shapes may, of course, be of any suitable material, aluminum being preferred on account of its lightness and strength.

This application is a division of my application Ser. No. 447,113, filed June 15, 1942, now Pat. No. 2,383,449, granted August 28, 1945.

It will be obvious to those skilled in the art that many changes may be made in the system herein disclosed, all without departing from the spirit of the invention; therefore I do not limit myself to what is shown in the drawings and described in the specification, but only as indicated in the appended claims.

Having thus fully described my invention, what I claim is:

1. Scaffolding comprising superposable uprights each including a pair of spaced parallel side bars, spacers located at intervals between said side bars and secured thereto, and means for maintaining superposed uprights in alinement comprising complementary stepped ends on said uprights including a spacer at the joint between said uprights, a channel bar secured to the inner face of one of said side bars in position to embrace the spacer, and removable securing means extending transversely of the joint.

2. A scaffolding as in claim 1, said last named spacer being divided transversely between the ends of said channel bar.

3. Scaffolding as in claim 1, the division of the last named spacer being so located as to form an intermediate step between those of the side bars.

4. Scaffolding as in claim 1, including external reinforcing means for the joint.

5. Scaffolding as in claim 1, including external channel bars each extending vertically of said uprights and covering adjacent ends of a pair of alined side bars and held in place by said securing means.

6. Scaffolding as in claim 1 including a collar extending about said joint and fixed in place.

7. Scaffolding comprising superposable apertured pole sections having elongated side members, two-part spacers interposed between the side members at the joints between adjacent sections, each section carrying one part of a two-part spacer, a channel bar between a two-part spacer and an adjacent side member, said channel bar covering the joint between the two parts of the spacer, and means for securing the channel bar to the spacer.

8. A scaffold pole comprising superposable pole sections having elongated side members, two-

part spacers interposed between the side members at the points between superposed sections, each section carrying one part of the two-part spacer, a channel bar between a two-part spacer and an adjacent side member, said channel bar covering the joint between the two parts of the spacer in the assembled pole, and means for securing the channel bar to the spacer.

9. A scaffold pole comprising superposable apertured pole sections, means for maintaining a pair of superposed sections in alignment including complementary stepped ends on said pole sections, a spacer at the joint between sections and forming parts of the stepped ends, a channel bar embracing the spacer and secured to an adjacent inner face of a pole section, and means for securing the spacer and the channel bar in place.

10. Scaffolding comprising superposable apertured pole sections, means for maintaining superposed pole sections in alinement including complementary stepped ends on said pole sections, a spacer at the joint between sections and forming parts of the stepped ends, a channel bar embracing the spacer and secured to an adjacent inner face of the pole section, and means for fixing said spacer and channel bar in place.

11. Scaffolding as in claim 10, said spacer being divided transversely into sections that engage one another when the pole sections are in abutting superposed relation.

12. A device as in claim 8, wherein the spacer is divided transversely into sections that abut when the sections are in superposed position.

13. A scaffold pole comprising superposable members each including a pair of spaced parallel side bars, spacers located at intervals between said side bars and secured thereto, means for maintaining superposed uprights in alinement comprising complementary stepped ends on said uprights, said stepped ends including a spacer at the joint between said uprights, a channel bar secured to the inner face of one of said side bars in position to embrace the spacer, and removable securing means extending transversely of the joint.

14. A scaffold pole as in claim 13, wherein the spacer at said joint is divided transversely between the ends of said channel bar.

15. A scaffold pole as in claim 13, wherein the spacer at said joint is divided transversely between the ends of the channel bar so as to form an intermediate step between the steps of the side bars.

16. A scaffold pole as in claim 13, including external reinforcing means at the joint.

17. A scaffold pole as in claim 13, including external channel bars each extending parallel to the uprights and covering adjacent ends of a pair of alined side bars and held in place by said securing means.

18. A scaffold pole as in claim 13, including a collar extending about said joint and fixed in place.

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REFERENCES CITED

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

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2,267,638	Clark	Dec. 23, 1941