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Roggie

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[54] GUARD RAIL ASSEMBLY FOR A PLATFORM

[72] Inventor: **William Clark Roggie**, Indianapolis, Ind.

[73] Assignee: **Baker-Roos, Inc.**, Indianapolis, Ind.

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[51] **Int. Cl.** **E04g 1/26**

[58] **Field of Search** 182/119, 113, 179, 178

[56] **References Cited**

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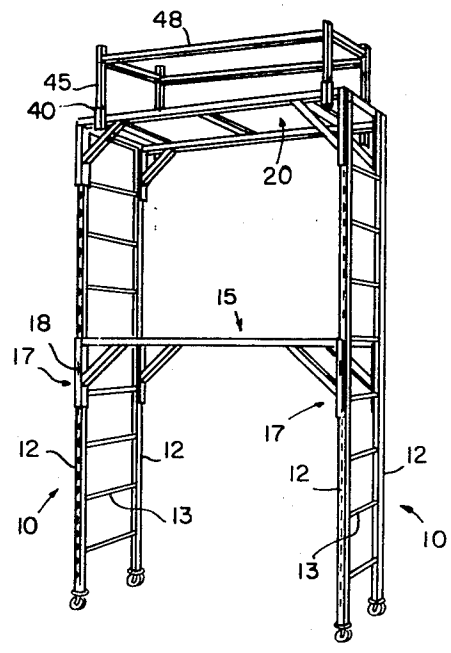
Primary Examiner—Reinaldo P. Machado

Attorney—Trask, Jenkins & Hanley

[57] **ABSTRACT**

A guard rail assembly for a platform in which said platform is supported on a pair of struts interconnecting a pair of leg frames. A plurality of plates are removably mounted on said struts and each is provided with an upwardly open socket. A plurality of posts are received in said sockets and project upwardly therefrom. Said posts are interconnected by a plurality of guard rails.

4 Claims, 4 Drawing Figures



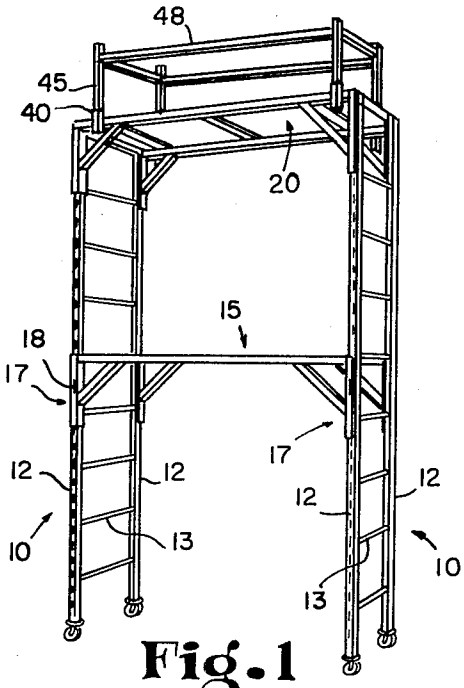


Fig.1

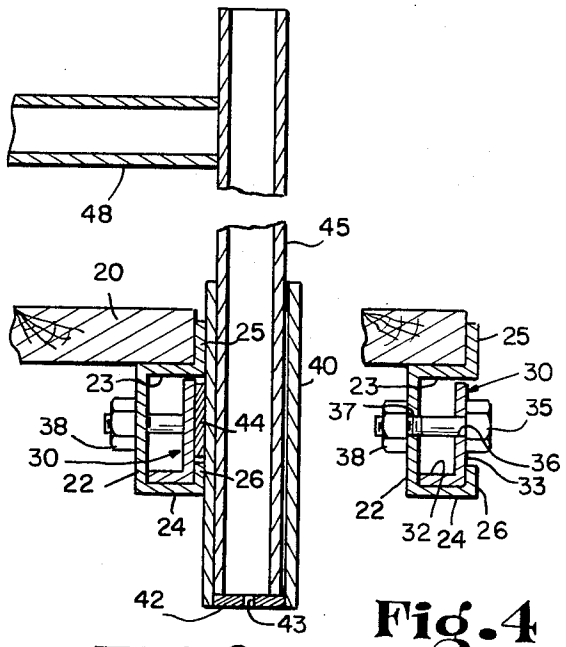


Fig.3

Fig.4

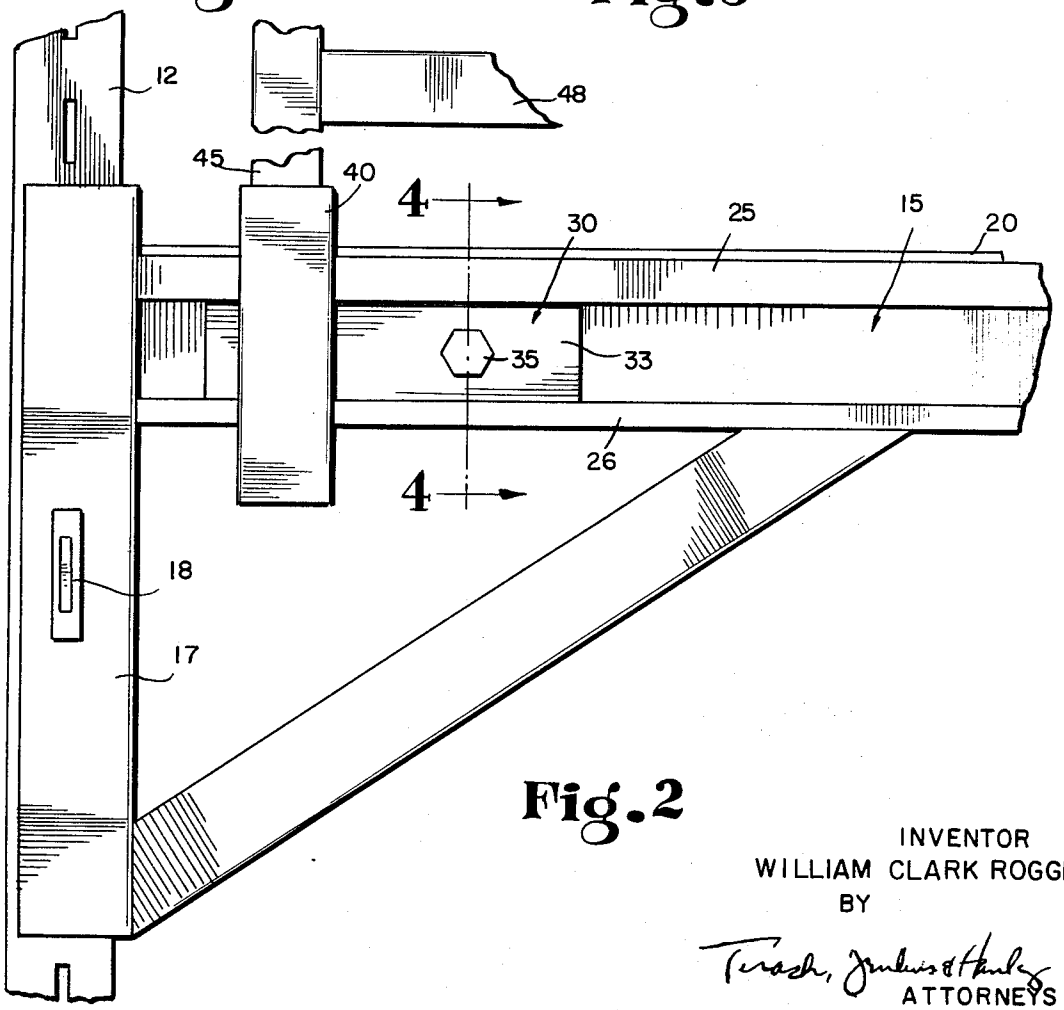


Fig.2

INVENTOR
WILLIAM CLARK ROGGIE
BY
Trask, Jenkins & Hanley
ATTORNEYS

GUARD RAIL ASSEMBLY FOR A PLATFORM

BACKGROUND OF THE INVENTION

Platform scaffolding is known in the art as evidenced by U. S. Pat. No. 2,593,122. Such scaffolding employs pluralities of vertically extruding ladder-type leg frames which are interconnected by horizontally oriented, vertically spaced, sets of longitudinally extending struts. In addition to interconnecting the leg frames, said struts are constructed to support a work platform.

In mounted guard rail assemblies on such scaffolding, it has heretofore been the convention practice to mount the guard rail supporting posts on the upper ends of the uppermost leg frames. However, since the platform may be disposed at different distances below the upper ends of the leg frames, this has frequently caused the guard rails to be disposed in horizontal planes either too close to or too far above the plane of the platform with the result that said guard rails have been rendered ineffective as safety devices.

It is therefore the object of this invention to provide a guard rails assembly which can be employed in combination with conventional platform scaffolding, which can be easily mounted thereon, and which always disposes the guard rails at an effective predetermined height above the platform.

SUMMARY OF THE INVENTION

In accordance with the invention, there is provided a guard rail assembly for use with a platform assembly. The platform assembly includes a plurality of struts mounted on a plurality of vertically extending legs. Each of said struts comprises a web interconnecting laterally projecting upper and lower arms each having an upwardly projecting finger at its outer end. A work platform is supported on the upper faces of said upper arms.

The guard assembly comprises a plurality of plates carried on the lower arms of said struts between their webs and the fingers on their lower arms. Fasteners removably interconnect the plates and webs. A socket is mounted on each of the plates and is engageable with the outer faces of said fingers. A plurality DESCRIPTION posts are received in said sockets and project upwardly therefrom. Said posts are interconnected above the plane of the platform by a plurality of guard rails.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings illustrate the invention. In such drawings:

FIG. 1 is a perspective view of a platform scaffold having a guard rail assembly embodying the invention;

FIG. 2 is an enlarged fragmentary side elevation of a corner of the scaffold shown in FIG. 1;

FIG. 3 is a vertical section taken on the line 3—3 of FIG. 2; and

FIG. 4 is a vertical section taken on the line 4—4 of FIG. 2.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

In the illustrated embodiment of the invention, the scaffold is formed from a pair of ladder-type leg frames **10** each comprising a pair of legs **12** interconnected by cross rungs **13**. The frames **10** are interconnected by pairs of longitudinally extending vertically spaced struts **15**. As shown, each of said struts is provided at its ends with vertically extending mounts **17** which embrace the legs **12** at one side of the scaffold. A lock **18** is mounted on each of the mounts **17** for selective reception in a plurality of vertically spaced holes **18** formed in the legs **12** for mounting the struts **15** in the desired vertical position of the frames **10**. In the embodiment illustrated, two pairs of vertically stacked pairs of the leg frames **10** are employed in association with two sets of struts **15**. As shown, a work platform **20** is supported on the uppermost pair of struts **15**; with the lower pair of struts **15** serving as cross braces for the lower pair of leg frames **10**.

The struts **15** are identical in construction. As best illustrated in FIGS. **2-3**, each of said struts comprises a vertically extending web **22** interconnecting upper and lower laterally projecting arms **23** and **24**. Vertically aligned fingers **25** and **26** project upwardly from the arms **23** and **24**, respectively, with the upper end of finger **26** terminating well below the arm **23**. As shown in FIG. **3**, the lateral edges of the platform **20** are supported on the upper face of the arms **23** with said platform being maintained in a longitudinally centered position between the struts **15** by the fingers **25**.

In order to support a guard rail assembly around the platform **20**, a plurality of end plates **30** are mounted on the pair of platform supporting struts adjacent the ends thereof. The plates **30** are identical in construction, and as shown in FIGS. **3** and **4**, each comprises a horizontally extending leg **32** which rests upon the upper face of the arm **24** with its inner end abutting the outer face of the web **22**. The leg **32** is integral with an upwardly projecting leg **33** whose lower portion abuts the finger **26** and whose upper end terminates below the arm **23**. As shown, the leg **33** has a height less than the distance between the arms **23** and **24** and greater than the distance between the fingers **25** and **26**. The plate **30** is held in a fixed position with respect to the strut **15** by a bolt **35** projecting through aligned openings **36** and **37** in the plate leg **33** and strut web **22** and received in a nut **38**.

A vertically extending, upwardly open socket **40** is mounted on each of the plates **30**. The lower end of the socket is closed by an end cap **42** conveniently provided with a drain hole **43**. The socket **40** is connected to its respective plate **30** by a weld **44** of sufficient thickness such that when the end plate is mounted on the strut **15**, the socket **40** will be disposed in abutting engagement with the outwardly presented faces of the adjacent fingers **25** and **26**.

Each of the sockets **40**, which projects above and below the horizontal extent of the strut to which it is connected, is adapted to receive a post **45** slidably received in said socket with its lower end resting on the end cap **42**. The posts **45** project well above the platform **20** and are interconnected adjacent their upper ends by longitudinally and transversely extending guard rails **48**. Thus, with the guard rail assembly being mounted on the pair of struts supporting the platform **20**, the guard rails **48** will always be disposed at an effective height above the plane of the platform **20** to achieve maximum safety irrespective of the vertical positioning of said struts and platform on the leg frames **10**.

As will be apparent from the foregoing description, the guard rail assembly can be easily removed from the scaffolding by first raising the guard rails **48** to slide the posts **45** upwardly out of the sockets **40**. The sockets **40** and end plates **30** can then be removed by removing the bolts **35** whereupon the end plates can be tilted outwardly and lifted out of their nested positions on the struts **15**. To remount the guard rail assembly, it is merely necessary to reverse the procedure.

I claim:

1. In combination with a platform supporting assembly in which a platform is supported on a pair of interconnected struts mounted on supporting means, each of said struts having a web interconnecting laterally projecting upper and lower arms, vertically aligned fingers projecting upwardly from the ends of said arms remote from said web; a guard rail assembly comprising a plurality of plates carried on said struts between said web and the finger on said lower arm, fastening means on each of said plates adapted to be connected to said web, a socket mounted on each of said plates for engagement with said fingers, a post received in each of said sockets, and a plurality of guard rails interconnecting said posts.

2. The invention as set forth in claim 1 in which each of said plates comprises a vertically extending leg engagable with the inner face of the finger on said lower arm, and a horizontally extending leg connected to said vertical leg and engagable with the upwardly and outwardly presented faces, respectively, of said lower arm and web.

3. The invention as set forth in claim 1 in which said plate has a vertical extent less than the distance between said upper and lower arms and said socket has a vertical extent greater than said distance.

4. The invention as set forth in claim 1 in which each of said plates comprises a vertically extending leg engagement with the inner face of the finger on said lower arm and a horizontally extending leg connected to said vertical leg and engagable with the upwardly and outwardly presented faces, respectively, of said lower arm and web, and said fastening means comprises a bolt extending through aligned openings in said vertical leg and web for reception in a nut.

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