The invention relates generally to movable and repositionable safety guard rails for use with scaffolding.
MOVABLE AND REPOSITIONABLE SAFETY GUARD RAILS FOR SCAFFOLDING

TECHNICAL FIELD

[0001] The invention relates generally to the art of scaffolding, and in particular, to movable and repositionable safety guard rails for scaffolding.

BACKGROUND OF THE INVENTION

[0002] In typical scaffold constructions, two spaced apart upright members are secured in proper upright position on base members and held in place by side cross braces. Safety guard rails are attached between the uprights on the outward side of the scaffolding, the side away from a building. Floor boards are extended between the uprights so that workmen can stand on and work on the stable, elevated temporary flooring. However, it has been found that workers can, for one reason or another, fall through unprotected spaces between the floor, cross braces, and uprights. For this reason the Occupational Safety and Health Administration or “OSHA,” a federal regulatory and safety agency has imposed many regulations on the industry to require suitable fall protection on the scaffolding. While it is fairly easy to hang guard rails on erected portions of scaffolding, it is practically impossible to provide guard rails on the next uppermost level to be erected with the structures and equipment currently available in the industry.

[0003] Building scaffolding has long been considered to be a hazardous occupation and many safety devices have been proposed to assure that workmen will not fall from the scaffolding. There is, however, an inherent problem in building scaffolding in how to provide fall prevention means at the top of scaffolding before the workmen get up on that level to complete the assembly thereof.

[0004] The most often proposed solution to this problem is to provide safety harnesses for the workmen. But this raises the problem of what to attach the safety harness to. Generally such harnesses are attached to something above the workmen so as to limit the distance they may fall. However, if there is no structure adjacent to the scaffolding, then this is not a viable solution. This leaves only the possibility of tying to the scaffolding. This, however, is not a good solution since a falling workman would build up significant velocity in falling, prior to being restrained, and this would cause problems in arresting the fall. Further, a workman would not be likely to fall straight down off the edge of the scaffolding but fall outward away from the scaffolding. This would create components of force perpendicular to the vertical surface of the scaffolding, tending to pull the scaffolding down, as well as causing the workman to swing into the scaffolding at the end of this fall, possibly causing further injury by contact with the scaffolding.

[0005] U.S. Pat. No. 3,752,262, issued Aug. 14, 1973, discloses a guard rail assembly which is mounted on a conventional scaffolding structure to be used primarily during the construction of a building. The guard rail assembly comprises a plurality of spaced tubular guard rail posts, having lower ends in mating engagement with receiving reduced upper end portions of outer legs of the scaffolding structure and being carried thereby. A plurality of guard rail brackets are affixed to each guard rail post in vertical spaced relation, a plurality of horizontal guard rails being supportively carried by said guard rail brackets and interconnecting the guard rail posts to provide a protective railing along the outer side edge of the platform.

[0006] U.S. Pat. No. 4,301,627, issued Nov. 24, 1981, discloses a protective barrier for removable installation at the end of a stage surface member supported on legs and having a framing flange, including a guard rail, a member for supporting the rail on the stage surface, apparatus for including a plurality of hook members for cooperating with the flange to prevent outward movement of the guard rail with respect to the surface member, and an arrangement including a locking member, pivotable into an operative position in which it cooperates with the legs to prevent outward tilting of the guard rail.

[0007] U.S. Pat. No. 4,782,914, issued Nov. 8, 1988, discloses a construction scaffolding which comprises sections formed of a pair of laterally spaced apart, vertically extending upright member secured in proper position by a cross brace assembly. An adjustable safety guard rail assembly includes a vertically spaced apart pair of bars pivotally and permanently attached to the cross brace members, the upper guard bar being pivotally connected intermediate its opposite terminal ends to a cross brace member and the lower guard bar being pivotally connected at one end of its terminal ends to a cross brace member, the opposite end of the lower bar being connected slidably to the other cross brace member, to slide freely on the latter for accommodating variations in the spacing between the uprights of the scaffolding. The upper guard bar pivotally mounts a sleeve channel member on each of its terminal ends, the sleeve members configured to engage the uprights at one of the steps on the upright to lock the upper bar in place extending horizontally between uprights to obstruct the open spaces between the cross brace assembly and the flooring of the scaffold.

[0008] U.S. Pat. No. 4,869,343, issued Sep. 26, 1990, discloses a safety railing assembly for a platform comprises a plurality of railing modules each having two upright post portions and at least one horizontal hand rail portion interconnected between the post portions. A plurality of mounting means are provided for supporting the modules along the periphery of the platform, the mounting means for each module comprising at least first and second clamps adapted to be slideably positioned along the fastened to the platform. The clamps have post receiving apertures shaped to receive and retain the posts in upright orientation. A substantially planar safety panel is coupled to the post and hand rail portions of each module for substantially enclosing a planar area defined by the post and hand rail portions and the platform. Fixed or rotatable end gate safety railing modules may also be provided.

[0009] U.S. Pat. No. 4,984,654, issued Jan. 15, 1991, discloses a coupling arrangement for coupling a guard post to a scaffold platform. The coupling includes a brace for attachment to the guard post. A plug member is carried by a portion of the brace and extends perpendicular to the post. The plug includes a resilient sleeve through which extends a bolt. The bolt passes externally of the brace for external manipulation thereof. The plug member is inserted into a hollow run of the scaffold. The bolt is tightened, whereby the sleeve becomes constructed and secures itself within the rung.
U.S. Pat. No. 5,829,550, issued Nov. 3, 1998, discloses a frame scaffolding system in which a guard rail is provided. The guard rail is intended to be positioned adjacent an upper layer of the frame scaffolding, but is initially positioned adjacent a lower layer of the frame scaffolding and can be maneuvered into position by personnel standing on the lower layer. Vertical members of the scaffolding system are provided with guiding and support assemblies, and the guard rail has elements which cooperate with the guiding and support assemblies. The guard rail is thus guided during movement between the initial lower position and the terminal upper position. Support elements are also provided to support the guard rail in at least one intermediate position between the initial position and the terminal position to facilitate the lifting procedure.

U.S. Pat. No. 5,878,838, issued Mar. 9, 1999, discloses a scaffold structure having a guard rail system for preventing falls from the scaffolding, and having adjustable stops for adjusting positioning plank members upon the scaffold structure. The guard rail system includes guard rail posts removably secured to a platform member of the scaffolding by inserting a peg into a fixed stop on the platform member, spacing bars for bracing the guard rail posts, and a guard rail supported by the posts. The platform member includes a center channel, and stop members disposed within the channel which are adjustable positioned along the channel. The stop members are disposed on both sides of the planks to maintain the planks in position.

U.S. Pat. No. 5,913,508, issued Jun. 22, 1999, discloses a group of posts, rails, right and left side L-shaped post to rail connectors, base plates, and toe board holding plates to allow temporary or permanent installation of a safety guard rail system with two or more guard rails that may be used as a guard rail on stairways or on flat surfaces. Installation may be by one man using only tools necessary to fasten base plates to a surface. The same group of parts can be used to form rectangular, square, or oval shaped scaffolds with or without toe board holders.

U.S. Pat. No. 6,006,862, issued Dec. 28, 1999, discloses a temporary guard rail assembly for scaffolding having a first clamping assembly engaging the horizontal member of scaffolding, a second clamping member engaging an adjacent vertical member of the scaffolding, an adjustable arm assembly connecting the first and second clamping assemblies, and a guard rail support extending vertically from the first clamping assembly. The first and second clamping assemblies are fastened to the respective members of the scaffolding to provide, vertically extending guard rail supports above the uppermost members of the scaffolding. Guard rails are positioned on the supports and provide fall protection for workers prior to their moving to the topmost level of the scaffolding.

U.S. Pat. No. 6,443,262, issued Sep. 3, 2002, discloses a tubular frame scaffolding system including base pads, vertical trusses, work platforms, access ladders, diagonal support braces, horizontal guard rails, intermediate guard rail panels, top guard rail panels, top guard rail posts, and toe boards. The guard rails and the toe boards act as safety devices to protect against accidental falls during the use of the tubular frame scaffolding system.

U.S. Pat. No. 6,554,102, issued Apr. 29, 2003, discloses a dismantlable, multi-story facade scaffold is formed of at least four vertical support elements and floor plates and railing elements which are mounted thereto. An additional scaffold story is erected by coupling an additional vertical support element to an already existing one and pivotally attaching one end of a railing element thereto at a location above where the floor plate for the next story will be placed. The other end of that railing element is pivotally attached to another vertical support element. This other vertical support element is then raised, thereby pivotally moving the rail element relative to the respective vertical support element until the rail element is in a horizontal position and the vertical support element is in the vertical position. The other vertical support element is now attached to the upper end of a corresponding vertical support of the lower scaffold story. Thereafter the floor plate for the additional scaffold story is installed so that a worker stepping on the floor plate of the higher story is protected from the very beginning against falling off. The connections between the ends of the railing and the respective vertical support elements are disengageable when they are in relatively inclined positions and become locked when the railing is perpendicular to the support elements. The scaffold is dismantled by reversing this procedure.

U.S. Pat. No. 6,679,482, issued Jan. 20, 2004 discloses a construction perimeter guard stanchion. A dual adjustment system performs both coarse and fine adjustments to tightly clamp a pair of jaws at the lower end of the stanchion upon the edge of a floor slab in an elevated, unfinished building structure. A coarse jaw adjustment sleeve formed from a short section of hollow steel tubing is coaxially disposed through an outboard support member in sliding engagement therewith. The coarse adjustment sleeve has one or more perforations therethrough so that a locking pin can be passed through it and through aligned openings in the outboard support member. A fine adjustment screw member is disposed coaxially within a vertical rail support tube and may be rotated by lever arms to move the upper jaw closer to or further from the lower jaw. Adjustment of the fine positioning mechanism is performed by manipulating handles at the top of the vertical rail support tube. A workman installing the stanchion thereby does not have to stoop over to operate a clamp located down near the concrete slab.

European Pat. No. 0 283 416 B1, published Jan. 22, 1992, discloses a safety guard rail panel for scaffolding, being generally in the shape of an inverted "U" having short limbs and an elongate body, the limbs being connected to each other by stiffening cross-members and each being provided with a lug for fixing to assembly pegs of the scaffold ladders, the fixing lugs being mounted on the ends of the limbs of the "U", characterized in that the lugs cooperate with assembly pegs provided on the inside of the uprights of the ladders below the level of the floor corresponding to the guard rail, the limbs of the "U" being additionally provided on the one hand, above the level of the floor, with attachment means for a plinth, and on the other hand, in the vicinity of the body, with lugs which are each provided with an upwardly-facing recess intended to cooperate with pegs of the ladders.

WO 2004/029382 A1, published Apr. 8, 2004, discloses a device for personal safety on scaffolds as consist of scaffold uprights and lying scaffold elements coupled between the uprights. The safety device consists of two
safety uprights and a guard rail extending between the safety uprights. The safety uprights have coupling devices for releasably coupling together with the scaffold. The coupling devices interact with an upwardly facing portion of the scaffold. By means of the device, the safety uprights and the accompanying guard rail can be moved successively between vertical positions according to safety requirements.

[0019] However, in all of the prior art patents, there is no mechanism which provides for facile guard rail panel movement coupled with sufficient panel stabilization to effectively prevent an accidental fall from a scaffold that is in the process of being constructed. The present invention proposes a solution to this problem by providing a temporary guard rail assembly which can be erected and easily repositioned through a series of movements which permits removal and repositioning of the panel from a first to a second location by a scaffold user.

**SUMMARY OF THE INVENTION**

[0020] In accordance with this invention, there is disclosed a movable and repositionable safety rail for use with scaffolding which includes a pair of spaced apart vertical posts in connected relationship with at least two horizontal cross-members defining a frame, a pair of downwardly extending legs from a bottom of said frame, at least one load-bearing and positioning means on each leg for contacting engagement with said scaffolding, and at least one stabilization means on each leg, said stabilization means in only non-permanent, physical contacting relationship with said scaffolding. In a preferred embodiment of the invention, the safety rail does not employ screws or other fastening devices for use with the load-bearing brackets or with the stabilization brackets. The invention is designed to minimize user intervention to promote its use and prevent debilitating injuries which may occur when proper safety measures are not taken. The at least one load-bearing and positioning means for each leg is designed for positioning on a horizontal cross-member of the scaffolding frame and the at least one stabilization means for each leg is designed for positioning on a vertical member of the scaffolding frame.

[0021] It is an object of this invention to illustrate a movable and repositionable safety rail for use with scaffolding in which the at least one stabilization bracket on each leg is positioned below the bracket for load-bearing and positioning support.

[0022] It is a further object of this invention to illustrate at least one angled stabilization bracket on each leg of the safety rail for use with modular scaffolding.

[0023] It is a still further object of this invention to illustrate a pair of downwardly extending legs from a bottom of a safety rail frame wherein at least one of the legs is positioned interiorly of the vertical posts.

[0024] It is yet another object of this invention to illustrate a safety rail in which the at least one load-bearing and positioning bracket on each leg has a semi-circular aperture at a bottom of the bracket for contacting engagement with the scaffolding and the at least one stabilization bracket on each leg has at least a partial circular segment portion for contacting engagement with a vertical truss of the frame.

[0025] These and other objects of the present invention will become more readily apparent from a reading of the following detailed description taken in conjunction with the accompanying drawings wherein like reference numerals indicate similar parts, and with further reference to the appended claims.

**BRIEF DESCRIPTION OF THE DRAWINGS**

[0026] The invention may take physical form in certain parts and arrangements of parts, a preferred embodiment of which will be described in detail in the specification and illustrated in the accompanying drawings which form a part hereof, and wherein:

[0027] FIG. 1 is a front elevational view of two scaffolding units in connected engagement illustrating a movable and repositionable safety rail positioned on top of each vertical unit;

[0028] FIG. 2 is a side elevational view of FIG. 1;

[0029] FIG. 3 is an enlarged front elevational view of the movable and repositionable safety rail of FIG. 1;

[0030] FIG. 4 is a top elevational view of one right side vertical column retention device as the safety rail is viewed from the rear as illustrated in FIG. 3;

[0031] FIG. 5 is a front elevational view of a right side weight bearing and positioning device of FIG. 4;

[0032] FIG. 6 is a top elevational view of FIG. 5;

[0033] FIG. 7 is a front elevational view of one left side weight bearing and positioning device as the safety rail is viewed from the rear as illustrated in FIG. 3;

[0034] FIG. 8 is a top elevational view of FIG. 7;

[0035] FIG. 9 is a top elevational view of a left side vertical column retention device as the safety rail is viewed from the rear as illustrated in FIG. 3;

[0036] FIG. 10 is a rear elevational view of the scaffolding of FIG. 3 in use focusing on the right side attachment means illustrated at the left side of the Figure;

[0037] FIG. 11 is a rear elevational view of the scaffolding of FIG. 3 in use illustrating the left and right side attachment means as well as stabilization means attached to a common vertical upright at the right side of the Figure; and

[0038] FIG. 12 is an enlarged rear perspective view of FIG. 11.

**DETAILED DESCRIPTION OF THE INVENTION**

[0039] Referring now to the drawings wherein the showings are for purposes of illustrating the preferred embodiment of the invention only and not for purposes of limiting the same, the figures show a movable and repositionable safety rail 40 for use with a tubular frame scaffolding system 10 which comprises a plurality of trusses, a plurality of cross-braces, a plurality of work platforms, and optionally a plurality of safety accessories. As used in this application, references to “vertical” will mean a “Z” direction which is essentially normal to a level ground plane, whereas references to “horizontal” will mean an “X-Y” direction which is essentially normal to a plane defined by a wall of a building to which a scaffolding system is affixed. References to “right” and “left” will use a reference point when viewing
the scaffolding positioned about a facility looking toward that facility. It will be understood that when viewing the scaffolding using a rear elevational view shown in FIGS. 10-12 these “right” and “left” designations will appear reversed.

[0040] In a preferred embodiment, as illustrated in FIGS. 1-2 the tubular frame scaffolding system 10 includes a plurality of base pads 22 upon which are positioned vertically threaded adjustable legs 18 using laterally-extending handles 20 rotatable about the threaded shaft of the legs using spiral-grooved collars, a plurality of vertical trusses 12, one or more work platforms 24, one or more access ladders 26, one or more diagonal support braces 14,16 and one or more moveable and repositionable safety guard rails 40. Each outside vertical truss 12a is horizontally connected to an inside vertical truss 12b by connecting horizontal support bars 28, 30 better illustrated in FIG. 2. At the ground level of the scaffolding structure in a preferred embodiment, each vertical truss 12 will have an access ladder 26 into which are positioned a plurality of cross-bars 34 to facilitate a user climbing between levels as well as to increase the strength of the structure. As the scaffolding levels increase to higher elevations, the horizontal cross-bars 34 may optionally extend across an entire gap between inner 12b and outer 12a vertical trusses or horizontal cross-bar 30 may be positioned between the vertical support bars of access ladder 26.

[0041] As shown in FIG. 1, moveable and repositionable guard rails 40 include a pair of spaced apart vertical posts 36, (right) 38 (left) in connected relationship by at least one, preferably two or more, horizontal cross-members, e.g., upper cross-member 42, lower cross-member 46, and middle cross-member 44, said horizontal cross-members often supported by at least one, preferably two or more, vertical inner cross-members 48, illustrated between middle cross-member 44 and lower 46 cross-member respectively in FIG. 1. Each spaced apart vertical post is supported by a downwardly extending leg, illustrated as left leg 52 and right leg 50 in the figure. The safety rails are configured in a manner as described below, so as to permit removable adjacent positioning of panels 40 for each vertical stack of scaffolding members. As shown in FIG. 2, the safety rails are designed to be removably positioned on the “exterior” side of the scaffolding system, namely the side opposite the wall or other component of the structure to which the scaffolding system is adjacent, which is the “interior” side of the scaffolding system.

[0042] As better illustrated in FIG. 3, each removable and repositionable panel is designed to have vertically spaced-apart posts, namely left post 38 and right post 36 as viewed from the exterior side, each post having a vertically and downwardly extending leg, namely left leg 52 and right leg 50. As illustrated in the Figure, at least one leg, right leg 50 as shown, is positioned inward of a longitudinal axis drawn vertically through right post 36. In one aspect of this invention, the inward spacing minimizes any potential gap between safety panels 40 and it is easily recognized that similar inward spacing could be present in left leg 52 with respect to a longitudinal axis drawn through left post 38, although not essential to the working of this invention. Right leg 50 is directly connected to lower cross-member 46 (preferably by soldering) and to right post 36 by connecting bar 70 (also preferably by soldering). Extending laterally inwardly in the “y-direction” with subsequent extension in the “x-direction” from an upper portion of right leg 50 is weight-bearing and positioning support member 66. Additionally extending and projecting normal to the vertical longitudinal axis of leg 50 is bottom right stabilization member 60. Optionally, extending in a similar manner is middle stabilization member 64.

[0043] As better illustrated in FIG. 4, a top elevational view of bottom stabilization member 60, it is seen that this member extends laterally outward and is offset from a vertical plane parallel with guard rails 40 by an angle, this angle varying as necessary depending in large degree upon the length of member 80, but typically ranging from 5 to 80°, more preferably from 10 to 75°, most preferably from 15 to 30°, to permit stabilizing contact with vertical truss 12 through contacting engagement with generally semi-circular terminal end 72 affixed to generally rectangularly-shaped member 62 of stabilization member 60. An inner periphery 74 of semi-circular terminal end 72 will contact approximately 95°-180°, more preferably 110°-180°, most preferably 120° to 180°, of an exterior circumferential periphery of vertical truss 12. FIGS. 5-6 better illustrate weight-bearing and positioning “L-shaped” support member 66. As seen in the top elevational view of FIG. 6, this member extends peripherally and outwardly normal to the central axis of leg 50 for base rectangular member 80 with subsequent lateral extension via rectangular member 78 in an “L-shaped” arrangement. As seen in FIG. 5, member 78 extends horizontally with a generally semi-circular cut-out aperture 68 on the bottom side of member 78 at the end of the member, a diameter of which closely approximates a diameter of horizontal cross-bars 34 or of that of horizontal support bars 28, 30. When positioned on one of the horizontal bars, approximately 180° of an interior periphery 76 of member 78 will be in load-bearing relationship with the horizontal support bars. Through a combination of stabilization member 62 and load-bearing support 66, secure engagement of the right side of guard rail 40 is achieved.

[0044] FIGS. 7-8 illustrate the geometry of weight-bearing and positioning support member 56 as illustrated in FIG. 3. As seen in the top elevational view of FIG. 8 this support extends laterally and tangentially from left leg 52 via rectangular member 82, laterally and inwardly perpendicularly to rectangular member 82 by rectangular member 84 and terminating in a manner analogous to that discussed with respect to right support member 66, terminating member 86 of left support member 56 extends horizontally with a generally semi-circular cut-out aperture 58 on the bottom side of member 86 at the end of the member, a diameter of which closely approximates the diameter of the horizontal cross-bars or support bars. When positioned on one of the horizontal bars, approximately 95°-180°, more preferably 110°-180°, most preferably 120°-180°, of an interior periphery 76 will be in load-bearing relationship with the horizontal support bars. FIG. 9 illustrates a top elevational view of the left bottom stabilization member 54, serving an analogous function to that discussed previously with respect to right bottom stabilization member 62. The left stabilization member extends tangentially and in a plane normal to the longitudinal axis of left leg 52 followed by inwardly curved section 90 defining an angle β, this angle ranging from about 90-180°, more preferably 90-150°, most preferably 90 to 120°. Through a combination
of stabilization member 54 and load-bearing support 56, secure engagement of the left side of guard rail 40 is achieved.

[0045] Operative use of the safety guard rail 40 is illustrated in FIGS. 10-11. FIG. 10 is a rear elevational view of the safety rail and therefore, the descriptions of right and left are inverted in this figure when compared to the previous discussion which involved front views. At the left side of the figure is illustrated the attachment of the right side of the safety rail. In particular, weight-bearing and positioning support rail 66 is illustrated in removable engagement with cross-bar 34. It is seen that the length of rectangular member 80 (see FIG. 6) must be of sufficient length to permit rectangular member 78 (see FIG. 6) to slide past the inner side of vertical front member 12 and engage cross-bar 34 by insertion of the cross-bar into opening 68 with contacting engagement with the interior periphery 76 of the member. Similarly, stabilization member 60 must be sufficiently angled (see angle a of FIG. 4) to permit contacting engagement with vertical front member 12 with the opening 74 with contacting engagement with semi-circular terminal end 72.

[0046] FIG. 11 illustrates the use of two safety guard rails and how the various weight-bearing and positioning supports interface with each other as well as the stabilizing supports. To the right of the figure is illustrated the left side attachment and stabilization means discussed previously with regard to FIG. 10. Adjacent to this left side attachment is a corresponding right side attachment. As seen in the figure, J-shaped attachment bracket 56 is dimensioned such that the combination of members 82 and 84 are of sufficient length to permit member 86 to wrap around a vertical front member 12 and have contacting engagement with the interior periphery 88. J-shaped attachment bracket 56 is thusly adjacent vertical support member 12 with attachment bracket 66 positioned adjacent to and interior of attachment bracket 56 as best illustrated in FIG. 12.

[0047] In operation and use of the safety guard rail, a series of manipulative steps are undertaken by the installer of the scaffolding with respect to each movable and repositionable safety rail 40. First, weight-bearing engagement of members 56 and 66 are removed by upward movement of the entire rail assembly, often effected by the user gripping vertical cross-members 48 prior to vertical upward movement. As viewed from the rear, the user then disengages stabilizing supports 54 and 60 by horizontal movement (to the right as shown in the figures) a distance sufficient to permit the ends of weight bearing supports 56, 66 as well as stabilizing members 54, 60 to be capable of sliding past vertical trusses 12 by a combination of both vertical and outward movement of the safety rail assembly 40 for repositioning at either a different location or at a different height.

[0048] This invention has been described in detail with reference to specific embodiments thereof, including the respective best modes for carrying out each embodiment. It shall be understood that these illustrations are by way of example and not by way of limitation. Accordingly, the scope and content of the present invention are to be defined only by the terms of the appended claims.

What is claimed is:

1. A movable and repositionable safety rail for use with a scaffolding frame which comprises:

   (a) a pair of spaced apart vertical post members in connected relationship with at least two horizontal rail cross-members defining a safety rail frame;

   (b) a pair of downwardly extending legs from a bottom of said frame;

   (c) at least one load-bearing and positioning means on each leg for positioning and supporting engagement with said scaffolding; and

   (d) at least one stabilization means on each leg, said stabilization means in non-permanent, physical contacting relationship with said scaffolding.

2. The safety rail of claim 1 wherein said at least one load-bearing and positioning means for each leg is for positioning on a horizontal cross-member of said scaffolding frame.

3. The safety rail of claim 2 wherein said at least one stabilization means for each leg is positioning on a vertical member of said scaffolding frame.

4. The safety rail of claim 3 wherein at least one downwardly extending leg is positioned inward of a longitudinal axis of one of said spaced apart vertical member.

5. The safety rail of claim 2 wherein said at least one load-bearing and positioning means is a generally semi-circular aperture for contacting engagement with approximately 180° of said horizontal cross-member of said scaffolding frame.

6. The safety rail of claim 3 wherein at least one of said at least one stabilization means for each leg is angled.

7. The safety rail of claim 6 wherein at least one of said stabilization means is angled at between 5° and 80° inclusive.

8. The safety rail of claim 7 wherein at least one of said stabilization means is angled at between 10° and 75° inclusive.

9. The safety rail of claim 8 wherein one stabilization means on one leg of said safety frame is angled at between 15° and 30° inclusive.

10. A movable and repositionable safety rail for use with scaffolding which comprises:

    (a) a pair of spaced apart vertical post members in connected relationship with at least two horizontal cross-members defining a frame;

    (b) a pair of downwardly extending legs from a bottom of said frame;

    (c) at least one means for load-bearing and positioning support on each leg of said rail for contacting engagement with said scaffolding; and

    (d) at least one means for stabilization on each leg, said stabilization means positioned below said means for load-bearing and positioning support.

11. The safety rail of claim 10 wherein said at least one load-bearing and positioning means for each leg is for positioning on a horizontal cross-member of said scaffolding frame.

12. The safety rail of claim 11 wherein said at least one stabilization means for each leg is positioning on a vertical member of said scaffolding frame.
13. The safety rail of claim 12 wherein at least one downwardly extending leg is positioned inward of a longitudinal axis of one of said spaced apart vertical member.

14. The safety rail of claim 11 wherein said at least one load-bearing and positioning means is a generally semi-circular aperture for contacting engagement with approximately 180° of said horizontal cross-member of said scaffolding frame.

15. The safety rail of claim 12 wherein at least one of said at least one stabilization means for each leg is angled.

16. The safety rail of claim 15 wherein at least one of said stabilization means is angled at between 5 and 80° inclusive.

17. The safety rail of claim 16 wherein at least one of said stabilization means is angled at between 10 and 75° inclusive.

18. The safety rail of claim 17 wherein one stabilization means on one leg of said safety frame is angled at between 15 and 30° inclusive.

19. A movable and repositionable safety rail for use with scaffolding which comprises:

(a) a pair of spaced apart vertical posts in connected relationship with at least two horizontal cross-members defining a frame;

(b) a pair of downwardly extending legs from a bottom of said frame;

(c) at least one load-bearing and positioning means on each leg for contacting engagement with said scaffolding; and

(d) at least one stabilization means on each leg, said stabilization means comprising a circular segment.

20. The safety rail of claim 19 wherein said at least one load-bearing and positioning means for each leg is for positioning on a horizontal cross-member of said scaffolding frame.

21. The safety rail of claim 20 wherein said at least one stabilization means for each leg is positioning on a vertical member of said scaffolding frame.

22. The safety rail of claim 21 wherein at least one downwardly extending leg is positioned inward of a longitudinal axis of one of said spaced apart vertical member.

23. The safety rail of claim 20 wherein said at least one load-bearing and positioning means is a generally semi-circular aperture for contacting engagement with approximately 180° of said horizontal cross-member of said scaffolding frame.

24. The safety rail of claim 19 wherein at least one of said stabilization means is angled at between 5 and 80° inclusive.

25. The safety rail of claim 24 wherein at least one of said stabilization means is angled at between 10 and 75° inclusive.

26. The safety rail of claim 25 wherein one stabilization means on one leg of said safety frame is angled at between 15 and 30° inclusive.

27. A movable and repositionable safety rail for use with scaffolding which comprises:

(a) a pair of spaced apart vertical posts in connected relationship with at least two horizontal cross-members defining a frame;

(b) a pair of downwardly extending legs from a bottom of said frame, at least one of said legs positioned interiorly of said vertical posts;

(c) at least one load-bearing and positioning means on each leg for contacting engagement with said scaffolding; and

(d) at least one stabilization means on each leg.

28. The safety rail of claim 27 wherein said at least one load-bearing and positioning means for each leg is for positioning on a horizontal cross-member of said scaffolding frame.

29. The safety rail of claim 28 wherein said at least one stabilization means for each leg is positioning on a vertical member of said scaffolding frame.

30. The safety rail of claim 29 wherein said at least one load-bearing and positioning means is a generally semi-circular aperture for contacting engagement with approximately 180° of said horizontal cross-member of said scaffolding frame.

31. The safety rail of claim 27 wherein at least one of said at least one stabilization means for each leg is angled.

32. The safety rail of claim 31 wherein at least one of said stabilization means is angled at between 5 and 80° inclusive.

33. The safety rail of claim 32 wherein at least one of said stabilization means is angled at between 10 and 75° inclusive.

34. The safety rail of claim 33 wherein one stabilization means on one leg of said safety frame is angled at between 15 and 30° inclusive.

35. A movable and repositionable safety rail for use with scaffolding which comprises:

(a) a pair of spaced apart vertical posts in connected relationship with at least two horizontal cross-members defining a frame;

(b) a pair of downwardly extending legs from a bottom of said frame;

(c) at least one load-bearing and positioning bracket on each leg having a semi-circular aperture at a bottom of said bracket for contacting engagement with said scaffolding; and

(d) at least one stabilization bracket on each leg having at least a partial circular segment portion for contacting engagement with a vertical truss of said frame.

36. The safety rail of claim 35 wherein said at least one load-bearing and positioning means for each leg is for positioning on a horizontal cross-member of said scaffolding frame.

37. The safety rail of claim 36 wherein at least one downwardly extending leg is positioned inward of a longitudinal axis of one of said spaced apart vertical member.

38. The safety rail of claim 36 wherein said at least one load-bearing and positioning means is a generally semi-circular aperture for contacting engagement with approximately 180° of said horizontal cross-member of said scaffolding frame.

39. The safety rail of claim 35 wherein at least one of said at least one stabilization means for each leg is angled.

40. The safety rail of claim 39 wherein at least one of said stabilization means is angled at between 5 and 80° inclusive.

41. The safety rail of claim 40 wherein at least one of said stabilization means is angled at between 10 and 75° inclusive.

42. The safety rail of claim 41 wherein one stabilization means on one leg of said safety frame is angled at between 15 and 30° inclusive.
43. A movable and repositionable safety rail for use with a scaffolding frame which comprises:

(a) a pair of spaced apart vertical post members in connected relationship with at least two horizontal rail cross-members defining a safety rail frame;

(b) a pair of downwardly extending legs from a bottom of said frame;

(c) at least one load-bearing and positioning J-shaped bracket on a first leg and at least one load-bearing and positioning L-shaped bracket on a second leg for positioning and supporting engagement with said scaffolding; and

(d) at least one stabilization bracket having at least a portion of which is circular on each leg for non-permanent, physical contacting relationship with a generally circular vertical truss of said scaffolding.

44. The safety rail of claim 43 wherein said at least one load-bearing and positioning means for each leg is for positioning on a horizontal cross-member of said scaffolding frame.

45. The safety rail of claim 44 wherein said at least one stabilization means for each leg is positioning on a vertical member of said scaffolding frame.

46. The safety rail of claim 45 wherein at least one downwardly extending leg is positioned inward of a longitudinal axis of one of said spaced apart vertical member.

47. The safety rail of claim 44 wherein said at least one load-bearing and positioning means is a generally semi-circular aperture for contacting engagement with approximately 180° of said horizontal cross-member of said scaffolding frame.

48. The safety rail of claim 45 wherein at least one of said at least one stabilization means for each leg is angled.

49. The safety rail of claim 48 wherein at least one of said stabilization means is angled at between 5 and 80° inclusive.

50. The safety rail of claim 49 wherein at least one of said stabilization means is angled at between 10 and 75° inclusive.

51. The safety rail of claim 50 wherein one stabilization means on one leg of said safety frame is angled at between 15 and 30° inclusive.

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