Aug. 16, 1938. R. A. UECKER ET AL 2,126,844

PUTLOG

Filed Feb. 25, 1938 3 Sheets-Sheet 1

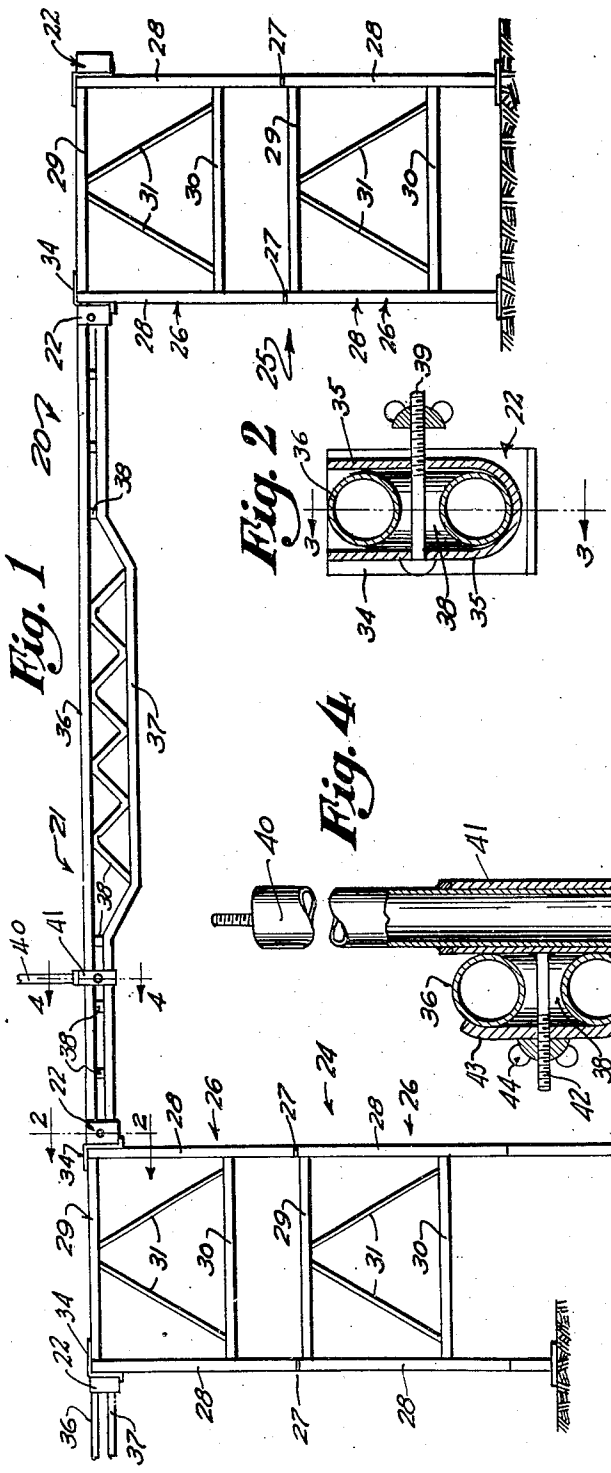

Fig. 1

Fig. 2

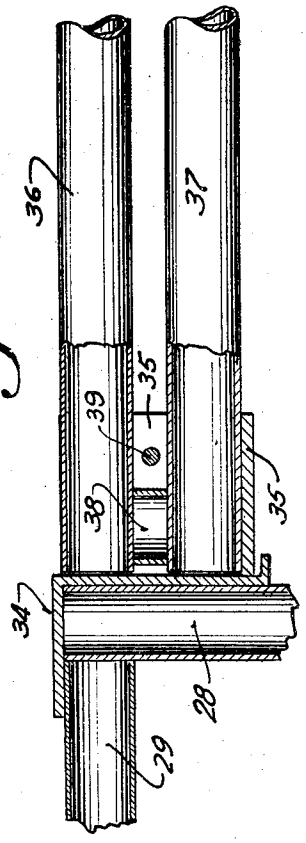

Fig. 3

Fig. 4

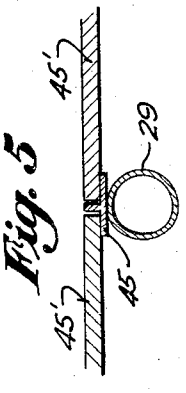

Fig. 5

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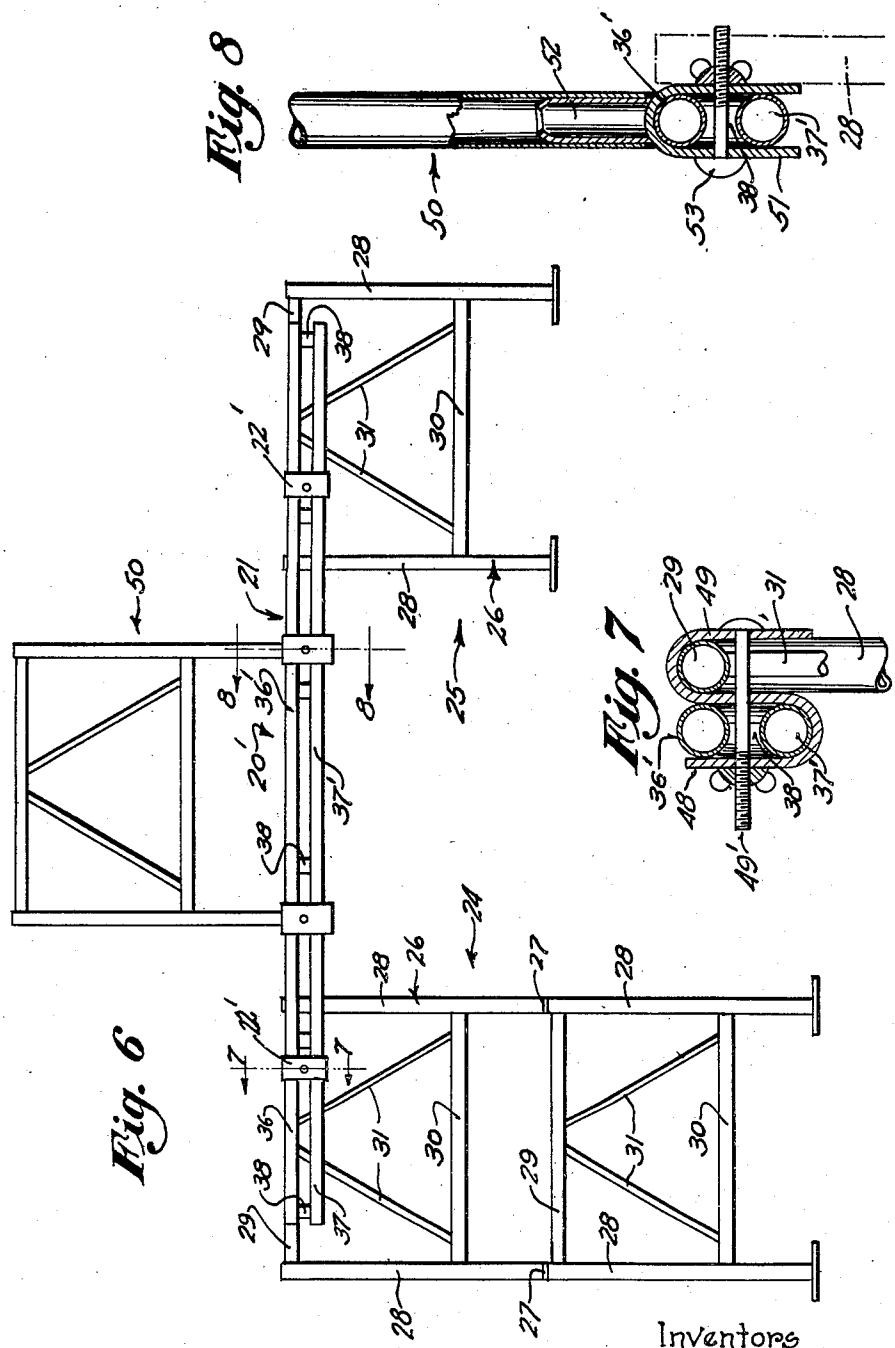

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Filed Feb. 25, 1938 3 Sheets-Sheet 3

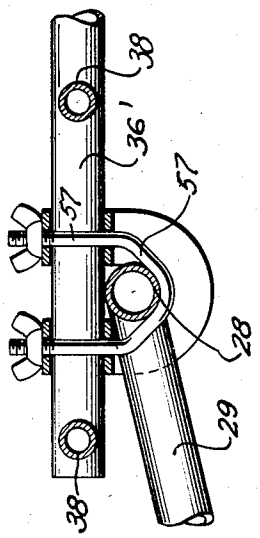

Fig. 10

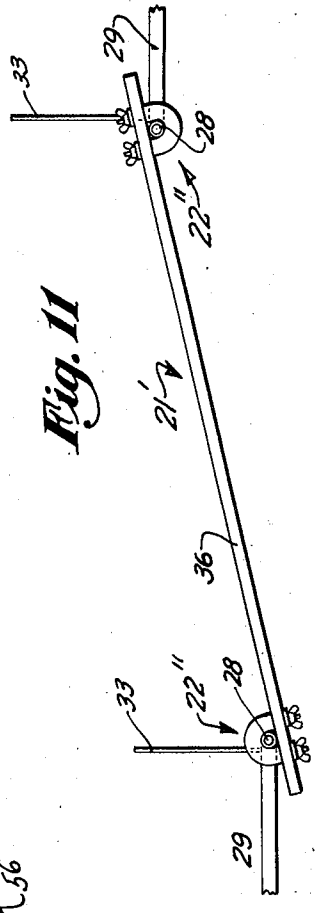

Fig. 11

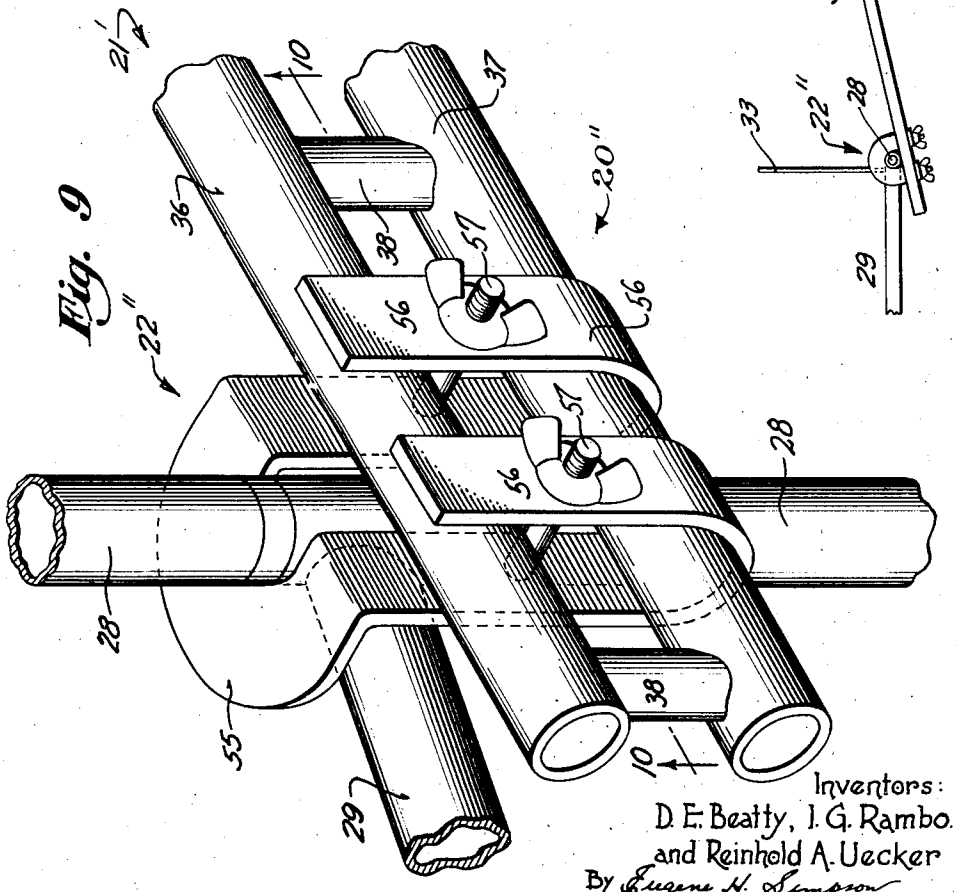

Fig. 9

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UNITED STATES PATENT OFFICE

2,126,844

PUTLOG

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Application February 25, 1938, Serial No. 192,496

11 Claims. (Cl. 304—39)

This invention relates to scaffolds and more particularly to a putlog for use on scaffolds.

In using scaffolds, particularly where work is being done on ceilings of buildings, it is desirable to connect parallel scaffold sections with a putlog so that planking may be laid over a comparatively wide area with a minimum amount of scaffolding.

One object of the present invention is to devise a putlog which may be conveniently connected to a scaffold to enable a platform to be built between adjacent rows of scaffold sections.

A further object is to devise a putlog which will enable a platform to be built between scaffold sections at the same level as the top of the scaffold.

Another object is to produce a putlog which will extend in a line with the plank supporting member of the scaffold.

Another object is to produce a putlog which may extend at any angle to the scaffold section.

Another object is to produce a putlog which is adapted to support a scaffold section intermediate the ends thereof.

Another object is to produce a putlog which will be secure against accidental disengagement from the scaffold section.

Another object is to produce a putlog in which the danger of disengagement from the scaffold is reduced to a minimum.

Other objects will become apparent as the description of the invention, as illustrated on the accompanying drawings, progresses.

In the drawings:

Fig. 1 is an end elevational view of two scaffold towers with a putlog connecting the same;

Fig. 2 is a cross-section on the line 2—2 of Fig. 1, looking in the direction of the arrows;

Fig. 3 is a cross-section on the line 3—3 of Fig. 2, looking in the direction of the arrows;

Fig. 4 is a cross-section on the line 4—4 of Fig. 1, looking in the direction of the arrows;

Fig. 5 is a detail of a floor bracket for use where it is desirable to have a floor without the projections which occur when planks are laid on top of each other;

Fig. 6 is a view similar to Fig. 1 in that it is an end elevation of the assembly showing a second form of putlog applicable to varying center line distances between scaffold towers;

Figs. 7 and 8 are cross-sections on the line 7—7 and 8—8 respectively, of Fig. 6, looking in the direction of the arrows;

Fig. 9 is a perspective view showing a portion of a third form of putlog;

Fig. 10 is a cross-section on the line 10—10 of Fig. 9, looking in the direction of the arrows; and

Fig. 11 is a plan view of a scaffolding employing a putlog of the type shown in Figs. 9 and 10.

Referring to the drawings, in which like numerals indicate like parts throughout the several views, the putlog 20 as herein defined comprises a truss 21 and a pair of brackets 22, 22, one connected to each of two scaffold towers 24 and 25 to form a support for the truss, connecting the truss to and between the towers.

The scaffold towers shown are fully described in the U. S. patent to Reinhold A. Uecker, No. 2,043,498, patented June 9, 1936, and comprise one or more end frames 26 superimposed on each other and joined by coupling pins 27. Each frame comprises a pair of end posts 28, 28 joined by an upper horizontal brace 29 and a lower horizontal brace 30. Suitable shear braces 31 complete the end frame and form it into a rigid member. Suitable cross braces 33, shown only in Fig. 11 join the corresponding end frames constituting the towers 24 and 25 and hold the end frames vertical.

Figs. 1, 2 and 3 show the scaffold towers 24 and 25 supporting a putlog 20 which is alined with and between the upper horizontal braces 29. As best seen in Figs. 2 and 3 the bracket 22 for this form of putlog comprises an angle 34 welded onto the post 28 with the horizontal leg resting on the upper brace 29 and welded thereto, and a U-shaped retaining member 35 formed on the vertical leg of the angle to receive the end of the truss 21. The lower end of the angle 34 may be bent outward to form an additional support for the retaining member.

The truss in the form of the putlog shown in Figs. 1, 2 and 3 may be conveniently formed from seamless steel tubing, and comprises an upper chord 36, a lower chord 37 and a plurality of shear absorbing braces 38. The shear absorbing braces or members 38 may be merely vertical tubes welded between the upper and lower chords where the spacing between the chords is slight, as in Fig. 6. However, where the truss is long, it is desirable to deepen the truss adjacent the center section, where the bending moment is a maximum, so as to more economically utilize the steel. As seen in Fig. 1, it is desirable to provide such a deepened section with diagonal bracing which is more effective in absorbing the stress.

In either type of truss, a vertical shear absorbing brace 38 is fixed between the chords 36 and 37 adjacent each end, and the truss held in the U-shaped retaining member 35 by a bolt and

wing nut 39, which passes through both of the legs of the retaining member 35, and between the chords 36 and 37, the end shear braces 38 preventing the accidental disengagement of the truss from the bracket.

In the type of putlog shown in Fig. 1 it is sometimes desirable to employ a guard rail 40 intermediate the towers 24. Such a guard rail may be attached by means of a clamp socket 41 best shown in Fig. 4. The socket 41 is formed of a tubular member, receiving the lower end of the guard rail, with a bolt 42 connected to the tubular member and passing between the chords 36 and 37. A retaining plate 43 fits over the bolt 42 and a wing nut 44 draws the socket 41 and the plate 43 into engagement with the chords and supports the guard rail 40.

If a smooth floor is desired (i. e. one in which no boards overlap) T sections 45 may be welded to the top of the upper horizontal braces 29 and to the top chord 36 of the truss 21 in the manner shown in Fig. 5. Planking 45' may then be laid between the T sections which will support the ends of the planks.

The putlog 20' shown in Figs. 6 and 7 may be used where it is desired to space the towers 24 and 25 at various distances. In this form of the invention the truss may comprise the two parallel chords 36' and 37' connected by shear braces 38 as described above.

The bracket, shown in Figs. 6 and 7, which is generally designated 22', to correspond with the bracket 22 of Figs. 1, 2 and 3, comprises a U-shaped retaining portion 48 which is adapted to receive the truss 20, with one end of the U extended and bent back as shown at 49 to receive the horizontal brace 29. A bolt 49' passes through the legs of the U-shaped retaining portion 48 and the backwardly extending leg 49 to simultaneously retain the truss 20 in the bracket and the bracket on the brace 29. The extended leg 49 is bent at such a position that the top of the chord 36 is at the same elevation as the top of the brace 29.

The putlog 20' shown in Figs. 6 and 7 is used most extensively in positions where it is desirable to erect a third tower 50 on the putlog intermediate the towers 24 and 25. The bracket used for this purpose is best shown in Fig. 8, and comprises an inverted U-shaped bracket 51 fitting over the top of the truss, with a tubular extension 52 fixed to extend vertically upward from the closed end of the U. A bolt 53 having a wing nut passes through both legs of the U and between the chords 36 and 37 of the truss to prevent disengagement. The end frame of the tower 50 engages over the tube 52, which holds it in position on the truss.

Figs. 9, 10 and 11 show a third type of putlog designated 20'' adapted to be applied between scaffold towers at any angle to the end frames.

The truss 21' shown in Figs. 9, 10 and 11 is similar to that described previously and consists of an upper chord 36', a lower chord 37' and a plurality of shear absorbing members 38 joining the upper and lower chords.

The bracket 22 shown in Figs. 9, 10 and 11 comprises a horizontal semicircle collar 55 with both ends extended and bent downward in a U-shaped retaining member 56, the truss 21' being engageable and retained in the member 56. The center of the collar fits around the upper end of the post 28, while the collar 55 rests, for all positions of the putlog, on the brace 29. A U-bolt 57 passes around the post 28, through both retaining members 56 and between the chords 36 and 37 of the truss 21' to hold the putlog assembled with the scaffold section.

This last described construction permits the putlog to be applied to scaffold towers and to lie at any angle with respect to the end frames.

Having thus described the invention it is hereby claimed as follows:

1. In a putlog for use with a scaffold tower including a pair of vertical posts and a horizontal brace connecting said posts, a bracket, including a U-shaped retaining member engageable with an element of said scaffold tower, a truss comprising an upper chord, a lower chord and a plurality of shear absorbing members joining said chords, and means engageable with said bracket and passing between the shear members to prevent accidental disengagement of the truss from the bracket.

2. In a putlog for use with a scaffold tower including a pair of vertical posts and a horizontal brace joining said posts, a truss including an upper chord, a lower chord, and a plurality of shear absorbing members, a U-shaped retaining member adapted to receive said truss, a reverse bend at one end of said U-shaped retaining member adapted to fit over said horizontal brace and be supported thereby, and means passing between said shear absorbing member to secure said bracket to said horizontal brace and said truss in said bracket.

3. In a putlog for use with a scaffold tower including a pair of vertical posts and a horizontal brace connecting said posts, a truss having an upper chord, a lower chord and a plurality of shear braces, a bracket including a U-shaped retaining member, adapted to receive said truss and enclose one of said shear members, with one end of said bracket member extended and bent back to be received over and fixed to said horizontal brace whereby said truss is supported from said brace, and securing means passing through said bracket and enclosing the shear member therein to lock said truss in said bracket.

4. In a putlog for use with a scaffold tower including a pair of vertical posts and a horizontal brace connecting said posts, a truss having an upper and lower chord, a bracket including a U-shaped retaining member, adapted to receive said truss, with one leg of said retaining member extended and bent back to be received over said horizontal brace whereby said truss is supported from said brace, and a bolt passing through said bent back end below said horizontal brace and through both legs of said U-shaped member between the chords of the truss to secure the bracket on the horizontal brace and the truss in the bracket.

5. In a putlog for use with a scaffold tower including a pair of vertical members, and a horizontal member connecting said vertical members, a truss including an upper chord, a lower chord and a plurality of shear absorbing members joining said chords, a bracket having, a U-shaped retaining member adapted to receive said truss, means on said bracket engageable with one of said scaffold members to support the putlog therefrom, and means passing between the chords and the shear absorbing members to secure the bracket on the scaffold and the truss in the U-shaped retaining member.

6. In a putlog for use with a scaffold tower including a pair of vertical posts and a horizontal brace, a truss, a bracket including a collar surrounding one of said posts and adapted to rest

on said horizontal brace, and a U-shaped retaining member carried by said collar and adapted to receive and support said truss, and means to secure the truss in the retaining member.

7. In a putlog for use with a scaffold tower including a pair of vertical posts and a horizontal brace, a truss, a bracket including a collar surrounding one of said posts and adapted to rest on said horizontal brace, and a U-shaped retaining member carried by said collar and adapted to receive and support said truss, and means to secure said bracket to said scaffold and said truss in said bracket.

8. In a putlog for use with a scaffold tower including a pair of vertical posts and a horizontal brace connecting said posts, a truss, a bracket including a collar adapted to embrace said post above said brace and to be supported on said brace, and projecting ends on said collar bent downwardly to form alined U-shaped retaining members adapted to receive and support said truss, and means to retain the truss assembled with the bracket and the bracket assembled with the scaffold tower.

9. In a putlog for use with a scaffold tower including a pair of vertical posts and a horizontal brace connecting said posts, a truss, a bracket including a collar adapted to embrace said post above said brace and to be supported on said brace, and projecting ends on said collar bent downwardly to form alined U-shaped retaining members adapted to receive and support said truss, and a U-bolt passing around said post and passing through said U-shaped retaining members between the chords of said truss to clamp the bracket to the scaffold tower and the truss in the bracket.

10. A putlog for use with a scaffold having a horizontal member and a post, comprising a truss, a first bracket embracing the truss, means on said bracket embracing the post of the scaffold and resting on the horizontal member thereof, a second bracket secured to said truss, said second bracket including a portion embracing said truss, means to secure said truss within said portion, and means to secure said second bracket on a scaffold.

11. A putlog bracket to secure a putlog truss to a scaffold having a horizontal brace and a vertical post connected with said brace, comprising a horizontal collar adapted to embrace the scaffold post and rest on the horizontal brace, vertical U-shaped members formed on the ends of said horizontal collar adapted to enclose the putlog truss, and means to secure said bracket to said scaffold post and said truss within said bracket.

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