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SCAFFOLD BRACKET

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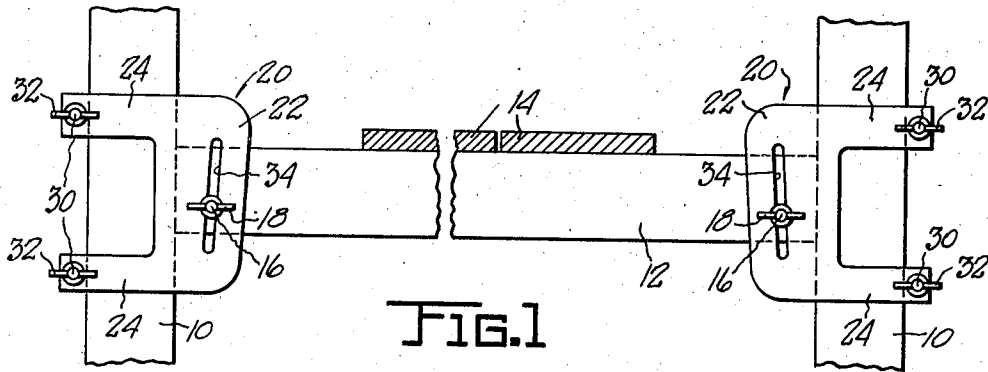


FIG. 1

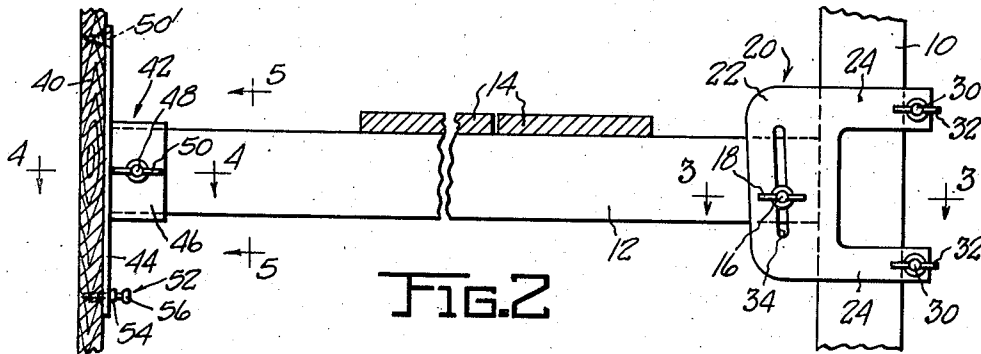


FIG. 2

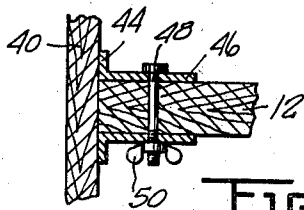


FIG. 4

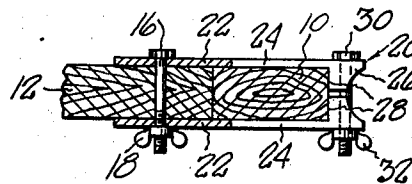


FIG. 3

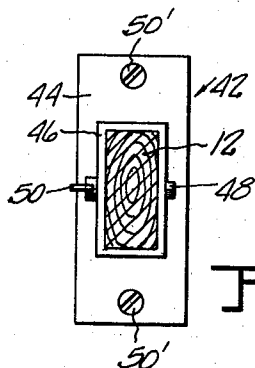


FIG. 5

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SCAFFOLD BRACKET

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11 Claims. (Cl. 304—32)

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This invention relates to improvements in scaffold brackets.

The primary object of the invention is to provide a scaffold bracket which can be used to support a horizontal platform-supporting member of a scaffold at any selected elevation upon a post of a scaffold of either the single pole or double pole type.

A further object is to provide a simple, light weight and inexpensive bracket which serves to releasably connect supported and supporting scaffold members together by a firm frictional clamping action.

A further object is to provide a scaffold bracket with a guide for controlling movement of the end of a horizontal scaffold member with respect to a vertical member which it abuts, in such manner that the fractional binding engagement between the parts increases as the load upon the horizontal member increases.

A further object is to provide a scaffold bracket adapted to embrace a vertical supporting scaffold part and having an inclined guide engaged by a horizontal supported scaffold part abutting said supporting part, whereby said supported part is wedged by the cooperating factors of abutting engagement of the supported and supporting parts and the guided engagement of said supported part and said bracket.

Other objects will be apparent from the description, drawing and appended claims.

In the drawing:

Fig. 1 is a fragmentary side view of a double pole scaffold, illustrating the use of my new scaffold bracket.

Fig. 2 is a fragmentary side view of a single pole scaffold, illustrating the use of my new bracket therein.

Fig. 3 is a horizontal sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is a horizontal sectional view taken on line 4—4 of Fig. 2.

Fig. 5 is a vertical sectional view taken on line 5—5 of Fig. 2.

Referring to the drawing, which illustrates the preferred embodiment of the invention, and particularly to Figs. 1 and 3 thereof, the numeral 10 designates the vertical posts or uprights of a conventional double pole scaffold. As referred to herein, a double pole scaffold is one in which two rows of posts are spaced at different distances from a building wall (not shown) and are suitably braced so that they constitute substantially the sole support for the horizontal scaffold members 12 upon which a working platform 14 is sup-

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ported. It will be understood that such double pole scaffolds may be connected to and braced from the building wall, but such connections are not relied upon to support the loads which the scaffold bears. In the instant construction, the horizontal platform-supporting members 12 are of a length equal to the spacing of the posts in different rows. A horizontal bolt 16 passes through each end portion of each member 12 in spaced relation to the end edge thereof, and a wing nut 18 is threaded on said bolt.

A bracket 20 serves to connect each end portion of member 12 to the adjacent post 10. Each bracket comprises a pair of flat C-shaped plates each having a wide vertical central web portion 22 and parallel horizontal arms 24. The terminal portions 26 of the arms 24 are of increased thickness to provide inwardly facing vertical shoulders 28 adapted to bear against the outer vertical surface of post 10 at vertically spaced points. The thickened terminal arm portions 26 are apertured to receive a bolt 30 passing there-through and mounting a thumb nut 32. The shoulders 28 formed by the thickened terminal portions 26 are of a width slightly less than one-half the width or thickness of post 10 so that the thickened portions are spaced apart as best shown in Fig. 3. Nut 32 is preferably adjusted to permit the clamp parts to lie flat against opposite sides of post 10 without play but with a sliding engagement. The web portion 22 of each bracket plate has an elongated slot 34 therein which is inclined slightly from the vertical, as illustrated.

In use, the brackets 20 are fitted upon the posts 10, and the nuts 32 are adjusted to permit a snug sliding fit of the bracket plates upon the posts. The bolts 16 at the opposite ends of horizontal scaffold members 12 are passed through the slots 34 of the bracket webs and through member 12. Nuts 16 are then adjusted for a snug but sliding fit. The horizontal scaffold member 12 may then be adjusted at any selected elevation, care being taken to so position it with respect to the bracket that its end edges are in firm abutment with the posts 10 as shown in Fig. 3. This binds the parts together firmly in frictional clamping engagement. As weight is applied to member 12 thereafter, any downward sliding of member 12 relative to the posts 10 and bracket 20 serves merely to increase or tighten the frictional clamping engagement of clamp 20 and member 12 upon the post 10, by reason of the inclination of slot 34 which acts to bind the parts more firmly. When the level of member 12 is to be changed, the parts are disengaged by

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simply striking the ends of member 12 at the bottom with an upward blow to loosen their frictional engagement with the posts. The member 12 is then raised relative to the brackets until the slots 34 hold the ends thereof clear of the posts. The member 12 is then adjusted to its new level, by keeping the bolts 16 in the upper portions of bracket slots 34 during such adjustment. Setting of the member 12 in its new position is accomplished by simply adjusting the member 12 relative to the bracket so that bolts 16 are located at the lower parts of the slots to again effect a clamping action between the ends of member 12 and the shoulders 28 of the bracket with respect to the post.

The two-part construction of the brackets 20 is desirable but not essential. Thus, if the posts should not be of uniform dimensions throughout their length, or if they should swell due to weather conditions so that the brackets do not slide freely thereon, a slight loosening of the nuts 32 is all that is required to remedy the difficulty. In other words, adjustment is provided to meet different conditions so that sliding clearance is provided without necessitating excess play or oversize dimensions. Another advantage of the two-piece clamp construction shown is that the clamp can be used with posts of different thicknesses simply by adjusting the connecting bolt and nut properly. It will be understood, however, that I contemplate the integral one-piece construction of the clamps 20 as being within the purview of the invention.

The invention is also applicable to conventional single pole scaffolds, as illustrated in Figs. 2, 4 and 5, where the horizontal members 12 constitute putlogs supported at their inner ends by a building wall 40 and at their outer ends by posts 10. In this type of scaffold, a bracket 20 is utilized in the manner described above to support only the outer end of putlog 20. The opposite end of the putlog is secured to a fitting 42. The fitting 42 preferably comprises a flat base plate 44 of substantial area and a central socket 46 projecting from one face of said plate to snugly receive the end of member 12. A bolt 48 passes through openings in the opposite walls of socket 46 and through the member 12, and mounts a thumb nut 50. A plurality of openings are formed in plate 44 to receive securing members 50 which lodge in the wall 40 to support the fitting. Members 50 have been illustrated herein as screws, but nails 52, as shown in Fig. 2, may also be used. Double-headed nails 52 well known in the art, wherein the inner head 54 limits the extent to which the nail may be driven and the outer head 56, is spaced from the inner head sufficiently to afford a convenient portion which can be engaged by hammer claws to pull the same, are particularly well suited for use in securing fitting 42 to wall 40.

In the single pole scaffold, the fitting 42 may be secured to the wall at the proper elevation, either as an individual unit or while member 12 is secured thereto; and the bracket 20 is utilized to support the opposite outer end of member 12. It will be observed in this connection that the bracket 20 is capable of supporting the member 12 if said member is not loaded, during the time the fitting 42 is being secured in place or during the time it is being released preparatory to shifting the member 12. In other words, the releasable bracket 20 can be set as desired and will support the horizontal elements alone until the supplemental supports are anchored or se-

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cured in position. This obviously facilitates and simplifies handling, inasmuch as bracket 20 does not require the use of securing means but only relative manipulation of parts to take advantage of its self-binding or wedged gripping action.

I claim:

1. A scaffold bracket for securing a horizontal scaffold member to a post, comprising a pair of flat C-shaped plates adapted to bear against opposite side faces of a post, said plates having thickened terminal portions providing vertically aligned shoulders engaging the outer face of said post and a vertical central web slotted in spaced relation to the inner face of said post and inclined downwardly and outwardly relative to the plane of said shoulders, means securing said terminal portions together, and securing means carried by said horizontal member and slidable in said inclined slots to guide said horizontal member into firm end abutment with said post upon downward movement of said member relative to said post and bracket.

2. A scaffold bracket for securing a horizontal scaffold member to a post, comprising a pair of plates adapted to bear slidably against opposite side faces of said post and having a projection at one side edge providing a vertical shoulder adapted to bear against the outer face of said post, means for connecting said plates adjacent said shoulders, each plate having an elongated slot therein inclined slightly relative to said shoulders and spaced from the inner face of said post, and a member carried by and projecting from said horizontal member and slidably received in said slots.

3. A scaffold bracket for securing a horizontal scaffold member to a post, comprising a two-part body adapted to embrace and slidably engage three faces of said post, means securing said body parts together adjacent one of said engaged faces, said horizontal member being arranged in end abutment with the fourth side of said post, parallel opposed portions of said body engaging opposite sides of said horizontal member and each having an elongated slot therein inclined downwardly toward said post at a small angle, and a bolt extending through said horizontal member and seated slidably in said slots.

4. A scaffold bracket for securing a horizontal scaffold member to a post, comprising a two-part body of generally U-shaped cross section, adapted to slidably embrace a post with its opposite ends projecting laterally from one side of said post to engage opposite sides of said horizontal member, said projecting ends each having an elongated inclined slot, means projecting outwardly from said horizontal member and slidable in said slots, and means connecting said bracket parts together.

5. A scaffold bracket for securing a horizontal scaffold member to a post, comprising a member U-shaped in horizontal cross section and adapted to slidably embrace a post, the opposite sides of said member being wider than said post and each having an elongated inclined slot therein spaced from said post, and means carried by said horizontal member and received in said slots to draw said horizontal member into firm end abutment with said post upon downward movement thereof relative to said post and bracket.

6. In a scaffold, a vertical post, a horizontal scaffold member, a U-shaped scaffold bracket slidably embracing said post and having substantially parallel vertical parts projecting at opposite

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sides of said horizontal scaffold member, said projecting parts each having an elongated slot spaced from and inclined downwardly toward said post, and means connecting said horizontal member to said bracket and slidable in said slots to urge the end of said horizontal member into firm frictional engagement with said post upon movement thereof downwardly relative to said post and bracket.

7. In a scaffold, a vertical post, a horizontal scaffold member, a bracket slidably embracing said post and having substantially parallel vertical portions engaging opposite sides of and projecting laterally from said horizontal member, each of said projecting portions having an inclined slot, and a bolt extending through said horizontal member and slidable in said slots, said bolt and slots serving to draw the horizontal member and bracket into clamping engagement with said post with a force proportional to the load on said horizontal member.

8. In a scaffold, a vertical post, a horizontal scaffold member, a bracket slidably embracing said post and having substantially parallel vertical portions engaging opposite sides of and projecting laterally from said horizontal member, each of said projecting portions having an inclined slot, and a bolt extending through said horizontal member and slidable in said slots, said bolt and slots serving to draw the horizontal member and bracket into clamping engagement with said post with a force proportional to the load on said horizontal member, said bracket being formed of two complementary parts of substantially L-shape in horizontal section and connected together at their outer ends.

9. In a scaffold adapted to be erected adjacent to a building wall, a vertical post spaced from said wall, a horizontal platform support in end engagement with said post, a fitting carried by the

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opposite end of said platform support and adapted to be secured to said wall, and a bracket slidably embracing said post and projecting at opposite sides of said platform support, said bracket having complementary elongated slightly inclined slots spaced from said post, and a bolt carried by said platform support and slidable in said slots to urge said platform support and bracket into binding frictional clamping engagement with said post.

10. In a scaffold adapted to be erected adjacent to a building wall, a vertical post spaced from said wall, a horizontal platform support in end engagement with said post, a fitting carried by the opposite end of said platform support and adapted to be secured to said wall, and a bracket slidably embracing said post and projecting at opposite sides of said platform support, said bracket having complementary elongated slightly inclined slots spaced from said post, and a bolt carried by said platform support and slidable in said slots to urge said platform support and bracket into binding frictional clamping engagement with said post, said fitting including a plate bearing against said wall and a socket receiving said platform support.

11. A scaffold bracket for releasably mounting a horizontal member slidably upon a post, comprising a rigid substantially U-shaped member embracing said post with its ends projecting laterally from said post and provided with complementary elongated slightly inclined guides spaced from said post, and a slide member fixedly carried by said horizontal member and extending transversely between and slidably engaging said guides to urge said horizontal member and bracket into frictional clamping engagement with said post.

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