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Peters et al.

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[54] **STABILIZABLE SCAFFOLDING SUPPORT BRACKET**

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[51] **Int. Cl.** **F16m 13/02**

[58] **Field of Search** 248/221, 231, 242, 248/291; 182/82, 187, 188

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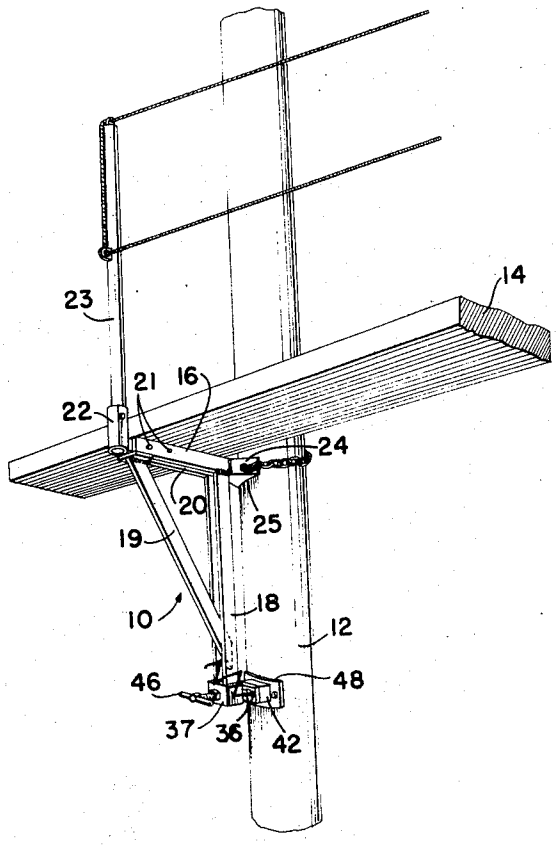
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[57] **ABSTRACT**

A bracket for supporting scaffolding or the like to a structure, such as pier piling, having a means for releasibly clamping the bracket to the structure, and a means for adjusting and stabilizing the bracket in a horizontal position to compensate for the non-verticality of the structure.

1 Claim, 3 Drawing Figures



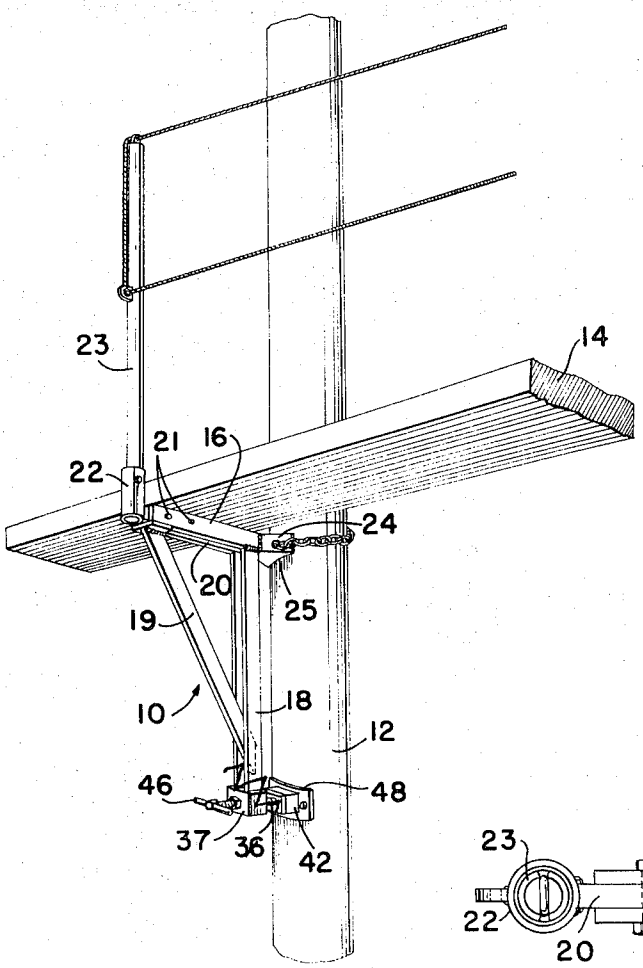


FIG. 1

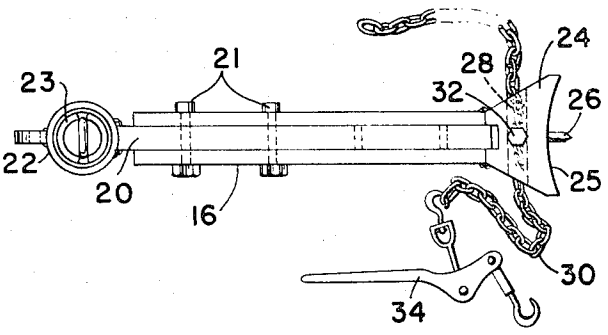


FIG. 2

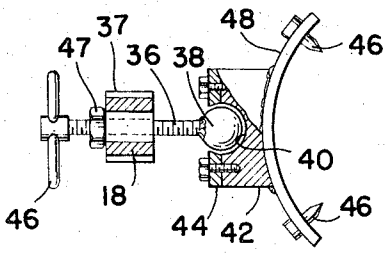


FIG. 3

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STABILIZABLE SCAFFOLDING SUPPORT BRACKET

Statement of Government Interest

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

BACKGROUND OF THE INVENTION

This invention relates to scaffolding equipment, and more particularly to a support bracket for such equipment having adjusting means for compensating for the non-verticality of a supporting structure.

Maintenance of supporting structures by means of temporary scaffolding is a long established practice. This practice is complicated by the need to support men and equipment along and beneath piers that are for the most part not easily accessible and mostly suspended over water.

A common method of accomplishing repairs on piers and the supporting pilings is by a float which is maneuvered around the pilings and maintained in a selected position by manpower. Such a method is haphazard to the men and material because of the vulnerability to tidal and wave action, and because the varying vertical distance from the float to the underside of the piers requiring ladders and the like. On some occasions, a temporary or permanent wooden cross-walk is constructed where a float is not practical, which arrangement is awkward, time-consuming and costly to construct, and is constantly vulnerable to the elements.

While brackets have been designed for supporting a seated workman on telephone poles and the like, the non-verticality of the pole for the most part is not a problem to the workman. Use of brackets of this type, even if they were adapted to support scaffolding, presents a problem of stability to standing workmen enhancing the likelihood of accidents, because of the non-horizontal disposition of the scaffolding due to the non-verticality of the pilings to which the brackets are attached.

SUMMARY OF THE INVENTION

The invention bracket enables the scaffolding to be supported in a stabilized condition, which reduces the likelihood of loss of equipment and accidents to personnel working on the scaffolding, and contributes to the expeditious completion of the maintenance job. A load cincher and chain enables the bracket to be quickly attached to and detached from the piling or the like at any selected position allowing for a variety of scaffolding layouts. When the bracket is installed on each piling, the bracket can be levelled by the horizontal adjusting means to account for the non-verticality of the piling, thus assuring that the planking for supporting the maintenance personnel will be horizontal to facilitate walking thereon and especially when working with heavy power equipment.

OBJECTS OF THE INVENTION

A principal object of this invention is to provide an adjustable stable work platform for personnel that can be installed in a level condition when attached to a non-vertical support.

Another important object is to provide a bracket for such a platform that can be quickly installed and removed, and in relatively inaccessible areas.

Still another important object is to provide such a bracket that can be clamped to the piling at the top of the bracket and be adjusted at the bottom end of the bracket to provide the desired stability and a level supporting surface.

Other objects and many of the attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings wherein:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is an underside perspective view of a bracket supporting one end of scaffolding to a pile;

FIG. **2** is a top plan view of the bracket; and

FIG. **3** is a top plan view of the saddle member, shown partially in section.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings where like reference numerals refer to similar parts throughout the figures, there is shown in FIG. **1** a novel scaffold bracket **10** shown clamped to a piling **12** or the like, such as used in wharves and piers for supporting a conventional painter plank **14.**

Bracket **10** comprises essentially an inverted L-shaped assembly comprising a horizontal bracket arm **16** and a vertical bracket arm **18,** each formed preferably of a pair of spaced bars to which is welded therebetween a diagonal arm **19** to form a rigid triangular-shaped bracket. A horizontal extension arm **20** is slidably mounted in arm **16** and adjustably secured by bolts **21** to accommodate planks of varying widths. A socket **22** is welded to the end of extension arm **20** to detachably receive a stanchion **23** from which may be extended the conventional life lines.

A triangular shaped saddle block **24** is welded to the upper corner of the bracket and is provided with a curved face portion **25** adapted to engage a portion of the cylindrical surface of pile **12.** Face portion **25** has a protruding spike **26** for piercing the pile to prevent lateral displacement of the bracket relative thereto when mounted. It is understood that saddle block **24** can be configured and adapted to conform to any other type of structure to which the bracket is to be mounted.

Saddle block **24** has a drilled horizontal opening **28** in which is threaded a chain **30** of one-fourth inch stock or the like which is used to encircle the piling, the chain being intermediately anchored in block **24** by a bolt **32.** A conventional load cincher **34** having a 5,000 lb. test load is used to apply a tension to the chain during installation around the pile.

One of the important features of the invention is to provide a means for maintaining the horizontal bracket arm **16** level regardless of the inclination in the piling or imperfections that may otherwise affect the level of the bracket. It is well known that fender piling and the like either when installed or during use invariably becomes inclined with respect to the vertical in the settling process. When rigid right-angle brackets are attached to such an inclined surface, the upper supporting surface will also assume a corresponding inclination with respect to the horizontal plane. Planking sup-

ported on such a surface makes it awkward if not dangerous for walking on not to mention working thereon with power tools, etc. If the two brackets in a pair have an opposite inclination the planking would have a tendency to rock when the workmen walk from one end to the other.

To accommodate for the non-verticality of a supporting structure for any reason, the lower end of the bracket is made horizontally adjustable by means of a screw **36** passing through a threaded hole in a block **37** welded to the lower end of vertical bracket arm **18.** Screw **36** terminates at its inner end with a ball **38** which is adapted to be seated in a socket **40** formed in a lower saddle member **42** and retained therein by a plate **44.** A handle **46** is used to turn screw **36,** which is secured in position by a lock nut **47.** Lower saddle member **42** is also provided with spikes **46** mounted to curved portion **48** for penetrating the pile and prevent lateral displacement of the bracket after installation.

The operation of the novel bracket is quite simple. The bracket is first secured in a selected spot on the piling or the like at a point dictated by the requirements of the particular job without regard to imperfections in the piling or disposition thereof that may cause the bracket to assume a canted position. The chain is placed around the piling or other supporting structure and the load cincher actuated to clamp the upper end of the bracket to the structure. With the upper end of the bracket thus secured, adjusting screw **36** is manipulated until horizontal arm **16** is level. The lower end of the bracket need not be provided with a clamping means such as chain **30** and load cincher **34** as the weight of the bracket and its load will anchor lower saddle member **42** to the structure by means of spikes **46.** The bracket can be simply removed from the structure by releasing load cincher **34.**

The novel bracket provides a means for supporting scaffolding to various types of structures in a simple and expeditious manner, and which is reusable. The bracket will permit a variety of different combinations enabling the scaffolding to go around corners, etc. By providing a simple levelling means the scaffolding can be made secure and safe thereby ensuring expeditious completion of the tasks involved.

Obviously many modifications and variations of the present invention are possible in the light of the above teachings. It is therefore to be understood that within the scope of the appended claims the invention may be practiced otherwise than as specifically described.

What is claimed is:

1. A scaffolding support assembly for temporary attachment to spaced-apart upright structures;

said assembly including at least two brackets for engaging their respective structures and supporting a scaffolding plank therebetween, each bracket comprising:

a horizontal arm for supporting the scaffolding plank, said horizontal arm being adjustable in length;

a vertical arm welded at its upper end to the horizontal arm and adapted to extend downwardly along the upright structure;

a diagonal arm welded at its ends to the horizontal and vertical arms to form a rigid triangularly shaped bracket;

means on the horizontal arm for supporting life lines;

top and bottom ends of the bracket being each provided with a saddle member conforming generally to and adapted to engage said structure;

spike means on the face of said saddle members for penetration into said structure;

clamping means for securing the upper saddle member to the structure including a chain capable of encircling the structure and a load cincher for applying tension to said chain;

adjusting screw means mounted on the lower saddle member for varying the vertical orientation of the bracket with respect to the structure;

said screw means having a ball and engaging a corresponding socket in the lower saddle means;

whereby the adjusting means on the brackets can be varied independently to account for the non-verticality of their respective structures to sustain the plank in a stable, horizontal disposition to insure safe use.

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