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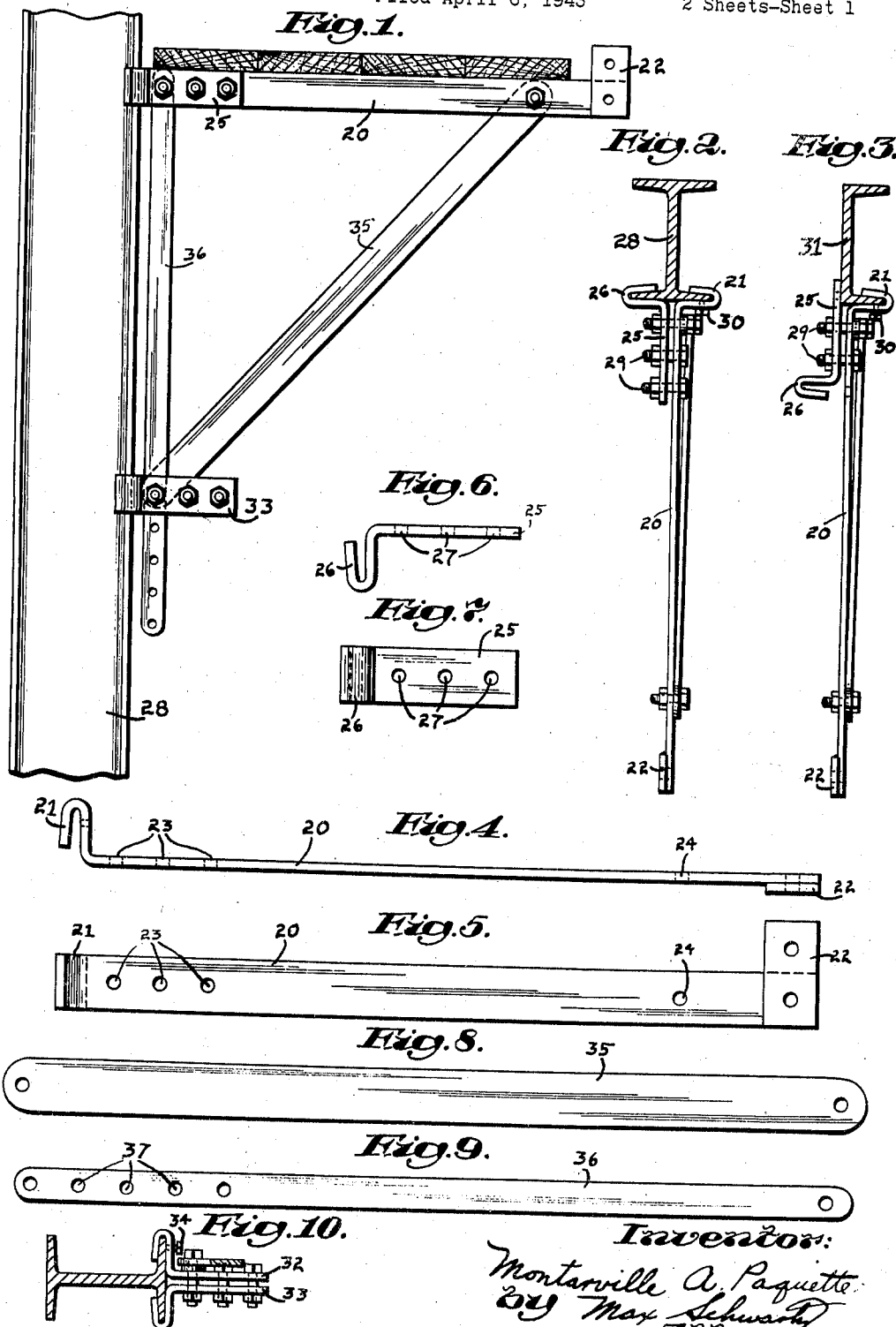
M. A. PAQUETTE

2,340,487

SCAFFOLDING

Filed April 6, 1943

2 Sheets-Sheet 1



Inventor:
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2 Sheets-Sheet 2

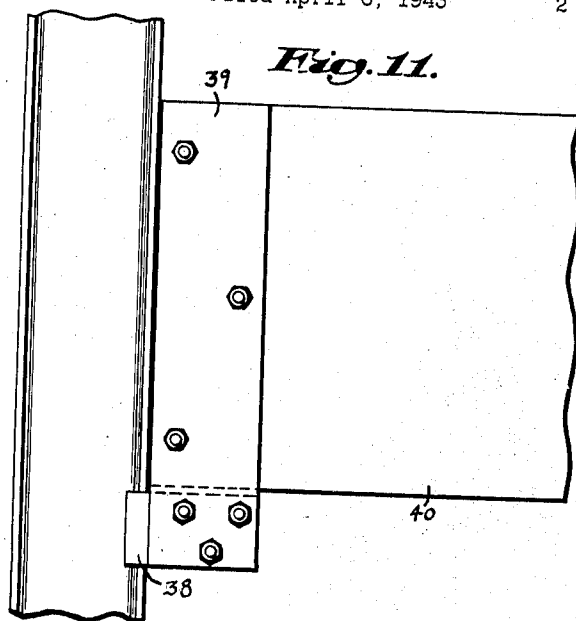


Fig. 12.

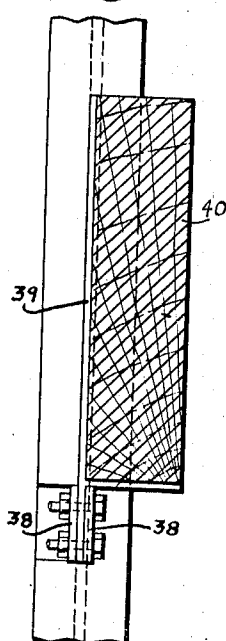


Fig. 13.

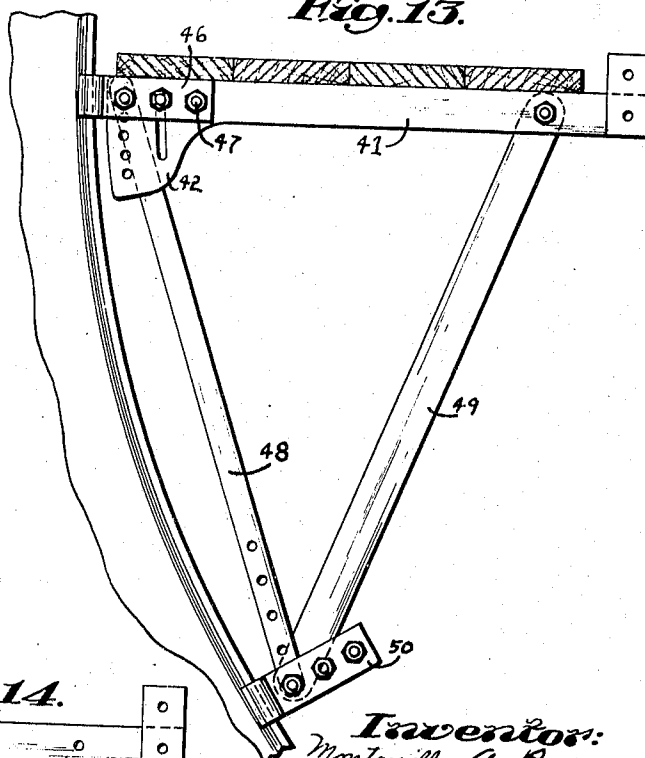
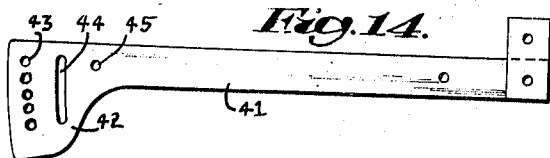


Fig. 14.



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UNITED STATES PATENT OFFICE

2,340,487

SCAFFOLDING

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6 Claims. (Cl. 304—32)

My present invention relates to the building and construction art and more particularly to a novel adjustable scaffolding.

The principal object of the present invention is to provide a scaffolding, of particular use in the construction of ships, which will eliminate the use of supporting timbers and thus save a considerable amount of space.

Another object of the present invention is to provide a scaffolding in which the scaffolding supports are prefabricated and quickly and easily applied.

A further object of the present invention is to provide a scaffolding which will effect a considerable saving in labor, materials, and time of construction.

An additional object of the present invention is to provide a scaffolding which can be readily adjusted to different levels and which can be adjusted to the curvature of a ship.

With the above and other objects and advantageous features in view, my invention consists of a novel arrangement of parts more fully disclosed in the detail description following, in conjunction with the accompanying drawings, and more specifically defined in the claims appended thereto.

In the drawings:

Fig. 1 is a side elevation of a scaffolding bracket embodying my invention attached to an I-beam;

Fig. 2 is a top view of the same;

Fig. 3 is a similar view showing the attachment to a channel beam;

Fig. 4 is an edge view of the supporting member;

Fig. 5 is an elevation of the same;

Fig. 6 is an edge view of the clamping member;

Fig. 7 is a plan view of the same;

Fig. 8 is a plan view of the supporting bar;

Fig. 9 is a plan view of the adjusting bar;

Fig. 10 is a top plan view of the supporting clamp arrangement;

Fig. 11 is a side elevation of a hanging bracket embodying my invention;

Fig. 12 is an edge view of the same;

Fig. 13 is a side elevation of another form of my invention supported on the curved side of a ship; and

Fig. 14 is a side elevation of the supporting bracket of the same.

In the construction of ships it is necessary, for rapid assembly, that different types of work be done simultaneously throughout the interior of the ship. It has been found necessary to con-

struct stagings or scaffoldings with different levels to permit ready access to the work. These constructions take a considerable amount of labor and materials to construct and consume precious time. Furthermore, the space inside of the hold is filled with the various supporting beams of the scaffolding which makes it difficult for the men to move around and lay the air, gas, and electric lines for the various operations.

The present invention is designed to provide a scaffolding, particularly suited to ship construction, which will save a considerable amount of labor and material in its construction, which can be put up rapidly thus saving time, and which will leave the hold of the ship free of any supporting beams or other obstructions.

My present invention accomplishes the above results by providing a plurality of prefabricated supporting brackets of simple construction which can be readily clamped and adjusted to the I-beams and channels of the ship or building and which will support the scaffolding floor at any desired level. My novel bracket consists of a horizontal supporting member 20 which may be readily cut from scrap steel bars of sufficient thickness and width to support the load. The bracket 20 is bent at right angles at its inner end in the form of a U-shaped clamp 21, Fig. 4. The outer end may be provided with a rectangular plate 22 for supporting a guard rail if desired. The bracket 20 is provided with three spaced openings 23 adjacent the inner end and a single opening 24 adjacent the outer end. A clamping member 25, Figs. 6 and 7, much shorter than the supporting bracket is similarly provided at its inner end with a U-shaped clamping portion 26 bent at right angles and with spaced openings 27 adapted to register with the openings 23 of the bracket 20.

To attach the bracket to an I-beam, such as 28, see Figs. 1 and 2, the U-shaped portion of the bracket is fitted around one edge of the I-beam and the U-shaped portion of the clamping member is fitted around the opposite edge of the I-beam. Three bolts 29 are then passed through the openings 23 and 27 and the tightening of these bolts will effectively clamp the bracket to the I-beam. As a safety measure to prevent sliding of the bracket when a load is placed thereon, the clamping portion 21 may be provided with a set screw 30 which digs into the front face of the I-beam.

When it is desired to clamp the bracket to a channel member, such as 31, see Fig. 3, the clamping portion 21 is fitted over the edge of the

channel member and the clamping member 25 is turned so that its free end will extend along the straight side edge of the channel member. Two bolts can now only be passed through the openings 23 and 27 to clamp the bracket to the channel member.

I have found that the above construction will support a standard scaffolding and the men working thereon. However, it is sometimes necessary for many men to be on the scaffolding at the same time together with heavy equipment. I have thus provided for additional support of the outer edge of the bracket. This support consists of supporting clamps 32 and 33 identical to the clamping member 25 which can be clamped to the I-beam or channel member in the same manner as the bracket 20. The clamp 32 may also be provided with a set screw 34 for the same purpose. A supporting bar 35, Fig. 8, is provided with a suitable opening at each end, one end being bolted to the opening 24 on the bracket and the opposite end being bolted to one of the clamping bolts on the supporting clamps 32 and 33, see Fig. 1. In addition an adjusting bar 36, Fig. 9, is provided at one end with a single opening and on its opposite end with space openings 37. The single opening is clamped to one of the bolts 29 of the bracket and the bar extends vertically, the lower end being clamped to one of the openings 37 to the supporting clamp as shown in Fig. 1.

With the above construction all supporting beams are eliminated. The bracket and the entire scaffolding can be readily applied by merely tightening or loosening a few bolts and the scaffolding can similarly be adjusted to any desired level. A great deal of material is saved in the elimination of scaffolding supports and the necessity for building scaffolding at different levels for the same group of workers.

While the above bracket is particularly adaptable to ship building it can readily be applied to any construction where a skeleton steel structure is used. In using the scaffolding on the external portion of a ship it may be necessary to weld clamping supports at spaced intervals.

In certain stages of construction, particularly directly beneath the deck plates it is sometimes advisable to provide a hanging staging across the width of the ship. For this purpose I provide the form shown in Figs. 11 and 12 which utilizes two small clamping brackets 38 similar to the brackets 32 and 33 except that they may be of greater width. Supported between the brackets is an L-shaped plate 39. A wooden beam 40 has one end supported in the plate 39 which is bolted thereto as shown in Fig. 11. The wooden beam may be of any desired length and its free end (not shown) may be supported by a hanging strap or any other conventional or hanging support.

Where the scaffolding is used along the curved portion of the ship, the supporting bracket illustrated in Figs. 13 and 14 may be substituted for the bracket 20. In this form the bracket 41 is constructed at its outer end similarly to the bracket 20. However, at its inner end it flares to form a plate 42 having a plurality of spaced openings 43, an intermediate slot 44 and the single opening 45. The bracket is positioned between the clamping members 46 which are identical with the members 32 and 33 as shown in Fig. 10. The supporting bolts 47 are positioned in alignment as shown in Fig. 13 so that the bracket 41 may be positioned at a horizontal level

no matter what the angle of the clamps 46 on the curvature of the ship. The bracket 41 may be supported by the bars 48 and 49 and clamping members 50 in a manner similar to the bracket 20.

By providing a plurality of brackets 20 and 41 and clamping members and bars, the various parts of the scaffold can be interchanged rapidly and the scaffolding moved about with a minimum of time and labor.

While I have described certain specific constructional embodiments of my invention, it is obvious that changes may readily be made without departing from the spirit and the scope of the invention as defined in the appended claims.

I claim:

1. A scaffolding support comprising a bar having a U-shaped portion at one end at right angles thereto adapted to engage one edge of a steel beam, said bar having spaced openings adjacent the U-shaped end, a second bar having a U-shaped portion at one end at right angles thereto and a straight other end, said second bar being reversible whereby the U-shaped end is adapted to engage the edge of an I-beam and the straight end is adapted to engage the surface of a channel beam, said second bar having spaced openings aligning with the first bar openings, and tightening bolts with nuts passing through said openings whereby tightening of said nuts will clamp said bars to the steel beam.
2. A scaffolding support comprising a supporting bar having a U-shaped portion at one end at right angles thereto adapted to engage one edge of a steel beam, the other end of said bar having means for supporting a guard rail, said bar having spaced openings adjacent the U-shaped end, a clamping bar having a short straight portion and a U-shaped portion at one end at right angles thereto adapted to engage the other edge of the steel beam, said clamping bar having spaced openings aligning with the supporting bar openings, tightening bolts with nuts passing through said openings whereby tightening of said nuts will clamp said bars to the steel beam, and a set screw passing through the U-shaped portion of said supporting bar and bearing against the steel beam.
3. A scaffolding support comprising a bar having a U-shaped portion at one end at right angles thereto adapted to engage one edge of a steel beam, said bar having spaced openings adjacent the U-shaped end, a second bar having a U-shaped portion at one end at right angles thereto adapted to engage the other edge of the steel beam, said second bar having spaced openings aligning with the first bar openings, tightening bolts with nuts passing through said openings whereby tightening of said nuts will clamp said bars to the steel beam, and means for adjustably supporting said first bar at its outer and inner ends.
4. A scaffolding support comprising a bar having a U-shaped portion at one end at right angles thereto adapted to engage one edge of a steel beam, said bar having spaced openings adjacent the U-shaped end, a second bar having a U-shaped portion at one end at right angles thereto adapted to engage the other edge of the steel beam, said second bar having spaced openings aligning with the first bar openings, tightening bolts with nuts passing through said openings whereby tightening of said nuts will clamp said bars to the steel beam, an adjustable support adapted to be clamped to the steel beam below

said bars, a vertical adjustable bar having one end bolted to said bars and the other end bolted to said support, and a supporting bar having one end bolted adjacent the outer end of said first bar and the other end bolted to said support.

5. A scaffolding support comprising a bar having a U-shaped portion at one end at right angles thereto adapted to engage one edge of a steel beam, said bar having spaced openings adjacent the U-shaped end, a second bar having a U-shaped portion at one end at right angles thereto and a straight other end, said second bar being reversible whereby the U-shaped end is adapted to engage the edge of an I-beam and the straight end is adapted to engage the surface of a channel beam, said second bar having spaced openings aligning with the first bar openings, tightening bolts with nuts passing through said openings whereby tightening of said nuts will clamp said bars to the steel beam, an adjustable support adapted to be clamped to the steel beam below said bars, a vertical adjustable bar having one end bolted to said bars and the other end bolted to said support, and a supporting bar having one end bolted adjacent the outer end of said first bar and the other end bolted to said support.

6. A scaffolding support comprising a supporting bar having a U-shaped portion at one end at right angles thereto adapted to engage one edge of a steel beam, the other end of said bar having means for supporting a guard rail, said bar having spaced openings adjacent the U-shaped end, a clamping bar having a short straight portion and a U-shaped portion at one end at right angles thereto adapted to engage the other edge of the steel beam, said clamping bar having spaced openings aligning with the supporting bar openings, tightening bolts with nuts passing through said openings whereby tightening of said nuts will clamp said bars to the steel beam, a set screw passing through the U-shaped portion of said supporting bar and bearing against the steel beam, an adjustable support adapted to be clamped to the steel beam below said bars, a vertical adjustable bar having one end bolted to said bars and the other end bolted to said support, and a second bar having one end bolted adjacent the outer end of said supporting bar and the other end bolted to said support.

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