W. B. FURMAN.
SCAFFOLD CONSTRUCTION.
APPLICATION FILED FEB. 17, 1919.

1,324,246.

Patented Dec. 9, 1919.
3 SHEETS—SHEET 1.

Fig. 2

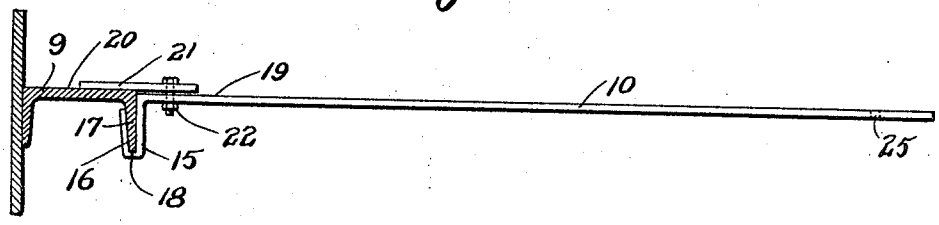


Fig. 1.

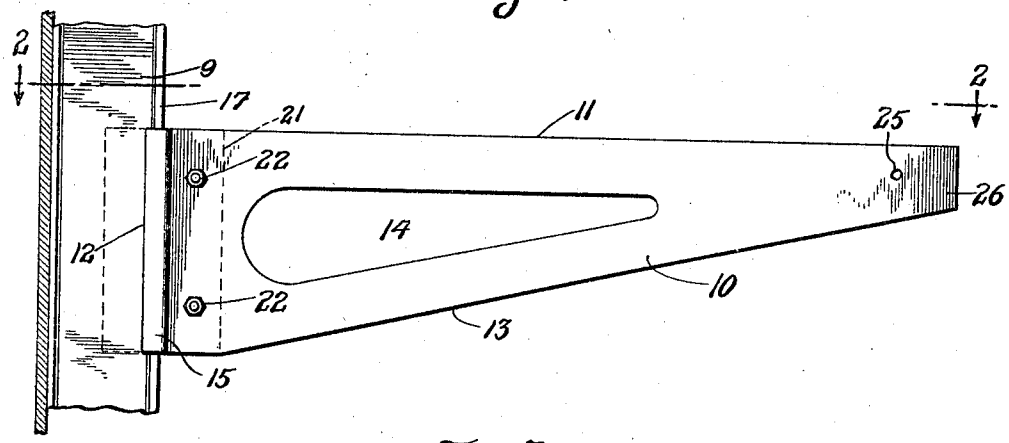


Fig. 3.

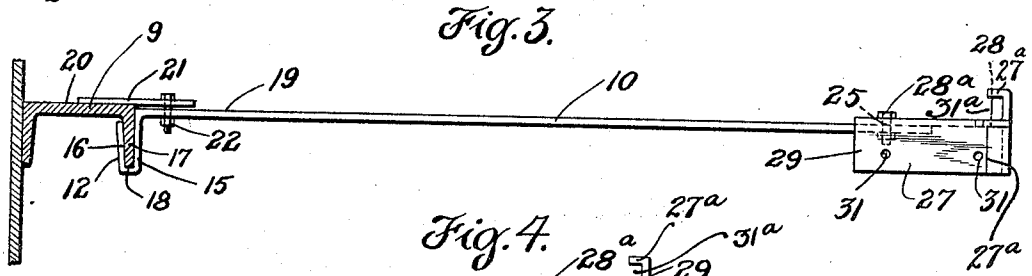
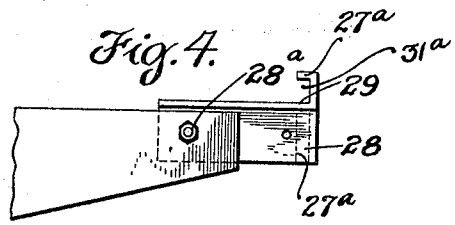


Fig. 4.



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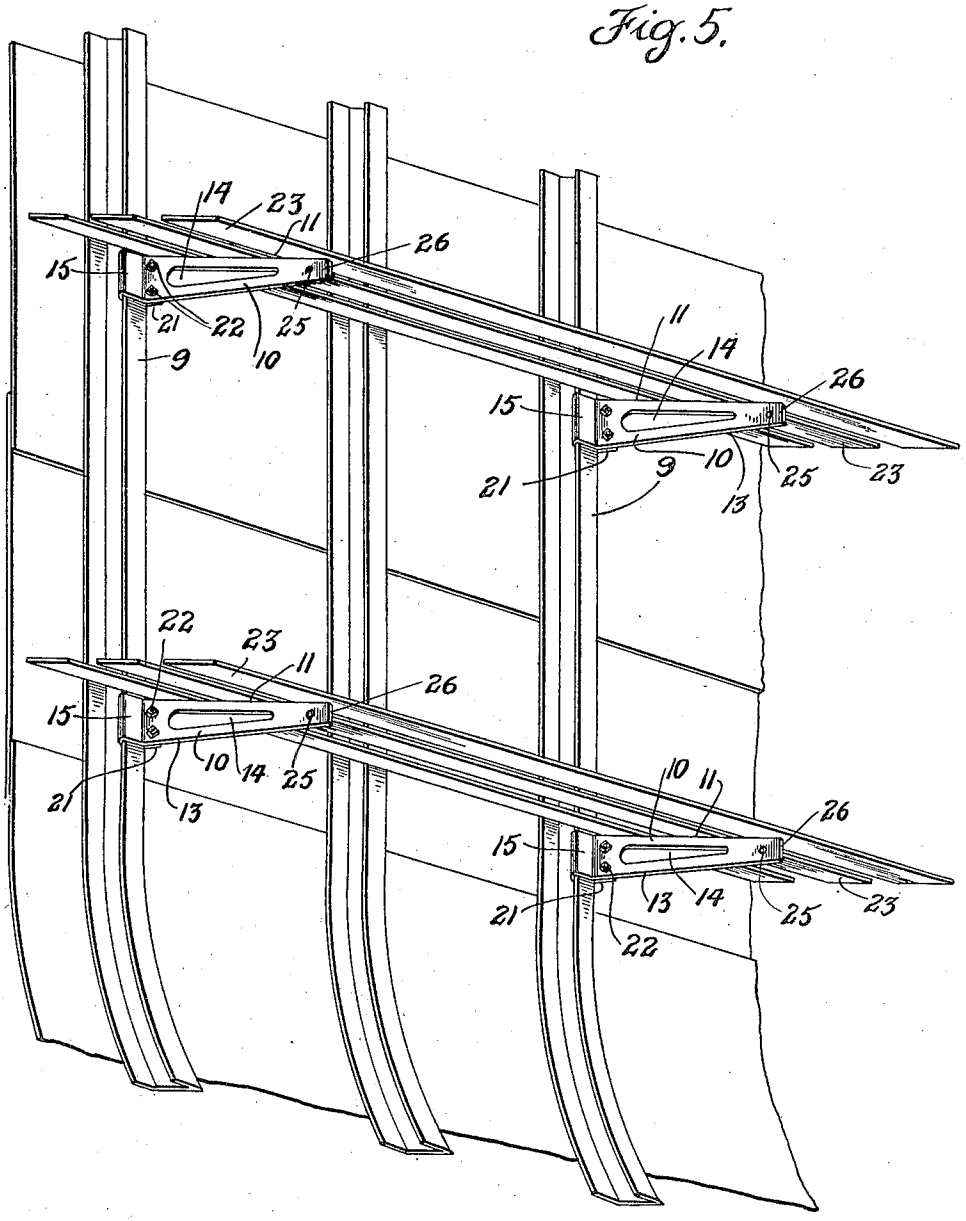
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3 SHEETS—SHEET 2.

Fig. 5.



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3 SHEETS—SHEET 3.

Fig. 6.

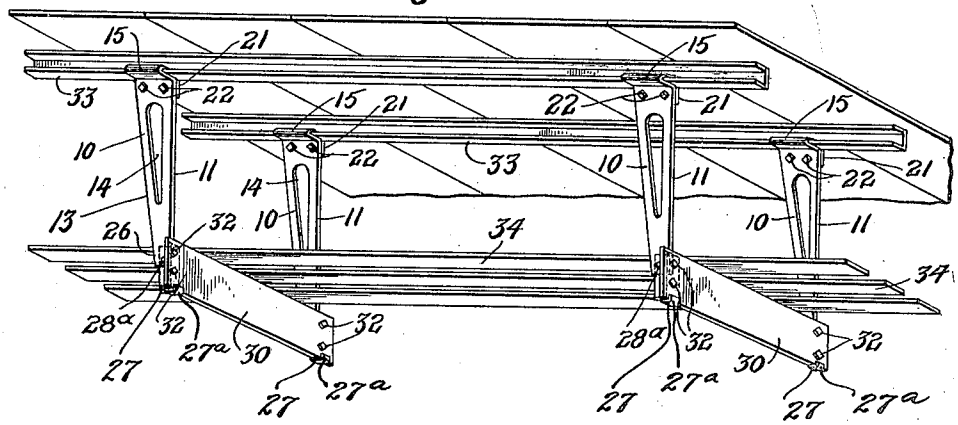
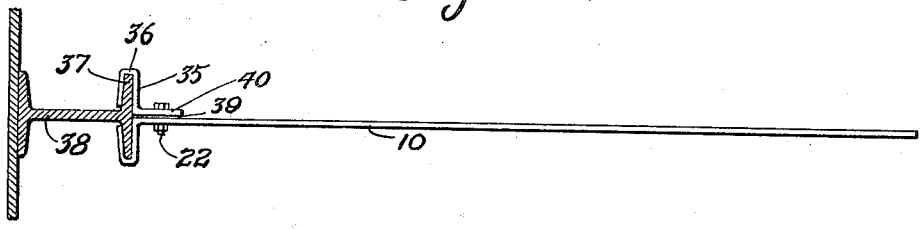


Fig. 8.



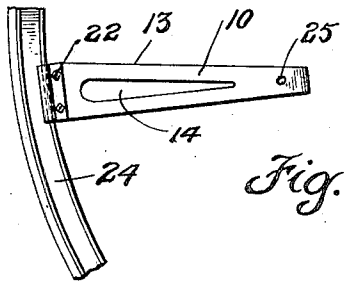


Fig. 7.

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UNITED STATES PATENT OFFICE.

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SCAFFOLD CONSTRUCTION.

1,324,246. Specification of Letters Patent. Patented Dec. 9, 1919.

Application filed February 17, 1919. Serial No. 277,607.

To all whom it may concern:

Be it known that I, WILLIAM B. FURMAN, a citizen of the United States, residing at Chester, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Scaffold Constructions, of which the following is a specification.

One object of my invention is to provide a scaffold or staging support of durable and simple construction so that it can be quickly and easily set up in various places where men are required to work.

Another object is to make my invention of such character that it will provide sufficient support for workmen and can be manufactured at a low cost.

A still further object is to make my invention of such nature that it can be attached to channels or I-beams which form a part of the building structure and, as such, is particularly useful for use in the construction of ships, since it can be quickly and easily connected to and disconnected from the framework construction of the hulls of ships.

Another object is to make my invention of such design that it can be used for direct connection either to upright supporting members or can be suspended from overhead supporting means.

These objects, and other advantageous ends which will be described hereinafter, I attain in the following manner, reference being had to the accompanying drawings in which—

Figure 1 is a side elevation of my improved scaffold support showing the same connected to an upright channel,

Fig. 2 is a sectional plan view taken on the line 2—2 of Fig. 1,

Fig. 3 is a view of similar nature to Fig. 2 showing an auxiliary plate connected thereto which is employed when the device is to be used in a suspended position from an overhead beam or the like,

Fig. 4 is a fragmentary elevation of Fig. 3 showing a side view of the auxiliary plate and the portion of the main supporting bracket or arm to which it is attached,

Fig. 5 is a perspective view showing my invention as it appears in supporting a scaffold when attached to upright supporting channels, such for example, as shown in Figs. 1 and 2,

Fig. 6 is a perspective view showing my invention as it appears when suspended from overhead channels and including the auxiliary plate for directly supporting the scaffold-supporting boards,

Fig. 7 is a fragmentary elevation showing how my improved invention, by being inverted, can be attached to a curved supporting member, such for example, as in the bow of a ship, and still present a substantially horizontal edge surface for the support of scaffold boards, and

Fig. 8 is a view of the same general nature as Fig. 2 showing a slight modification of certain of the parts for attachment to an I-beam.

Referring to Figs. 1 to 5, inclusive, 9 represents upright channels which, for purposes of description, can be considered to be channels forming a part of the hull of a ship. Brackets or arms 10 are preferably made of sheet metal. Each of these brackets has an edge surface 11 which, in the position shown in Fig. 1, is substantially horizontal, or in other words, extends at right angles to the end edge surface 12. The bottom edge surface 13 extends at an incline to the edge surface 11, and the entire bracket is preferably lightened by cutting an elongated slot 14 therein within its width and length. The end 15 of each of the brackets is bent in the shape shown in Fig. 2 so as to provide a recess 16 into which extends the outer leg portion 17 of one of the channels 9. The distance from the inner end 18 of the recess 16 to the side surface 19 of each of the brackets 10 is made less than the distance from said end 18 to the surface 20 of said channel 9 when the leg portion 17 is within the recess. Thus planes including the surfaces 19 and 20 are spaced apart. A flat clamping plate 21 is secured to each of the brackets 10 by means of bolts 22; the length of said clamping plate being such as to engage the surface 20 of the respective channel 9. By tightening the bolts 22, the clamping plate will be drawn toward the bracket and thereby clamp the latter to the channel. The upper edge surfaces 11 of two or more of the brackets 10 can be used to support scaffold boards 23, such for example, as shown in Fig. 5. It will be noted that by the arrangement of the parts above described, the clamping plates 21 will be slightly spaced from their respective brackets 10 so that a clamping action can be secured by tightening said bolts.

When it is desired to clamp the brackets to curved or angular members, such for example, as the curved channels 24 in Fig. 7, the brackets can be inverted so that the edge surfaces 13 become the upper surfaces and since the brackets are tapered, the edge surfaces 13, when the brackets are thus attached to the channels 24, will be substantially horizontal.

I preferably provide each of the brackets 10 with a hole 25 adjacent its end 26 so that an auxiliary plate 27 can be secured thereto by a bolt 28^a. This auxiliary plate is made angular in cross section so that one leg 28 thereof forms the means of attachment by the bolt 28^a to the bracket 10, while the other leg 29 provides means of attachment to a transversely extending board 30. In order to facilitate the attachment of the boards 30 between two of the brackets 10, the legs 29 of the auxiliary plates are provided with holes 31 through which bolts 32 can be inserted, said bolts also passing through the boards 30, (see Figs. 3, 4 and 6). The outer ends of the legs 28 and 29 of each of the auxiliary plates 27 are bent in the form of angular hooks 27^a. These hooks 27^a provide sockets 31^a within which the bottom edge portions of the boards 30 extend, as shown in Fig. 6. By providing the hooks 27^a the boards 30 can be held by said hooks and thereby relieve a workman of the burden of holding the boards 30 while being attached to the plates 27 by the bolts 32. Thus the brackets 10 can be suspended from overhead members, such for example, as the overhead channels 33 shown in Fig. 6 and two of the boards 30 serve as supporting means for the scaffold boards 34.

In the form of my invention shown in Fig. 8, the structure is substantially the same as that described in Figs. 1 to 7 inclusive, with the exception that in view of the requirement of the device to be attached to an I-beam instead of a channel, a different form of clamping plate is employed. This plate, as shown at 35 in Fig. 8, instead of being flat is bent at 36 to embrace the leg extension 37 of the I-beam 38. The bracket, however, is similar to the bracket 10 above described and I have, therefore, given this bracket the same reference numeral 10. In this form of my invention there is also a space 39 provided between the bracket 10 and the portion 40 of the clamping plate 35 so that when tightened by the nuts 22 the bracket will be securely held to the I-beam 38.

By the use of my invention, time and labor is saved, since the parts can be quickly attached to provide a scaffold structure and no lumber is required except the scaffold boards and the scaffold-supporting boards, such as the boards 30. The device of my invention can be cheaply made, since the brackets, clamping plate and auxiliary plate can be cut from scrap material.

While I have described my invention as taking a particular form, it will be understood that the various parts of my invention may be changed without departing from the spirit thereof, and hence I do not limit myself to the precise construction set forth, but consider that I am at liberty to make such changes and alterations as fairly come within the scope of the appended claim.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

A scaffold support of the character described, including a bracket; means for securing the bracket to a supporting structure; and an auxiliary plate secured to said bracket and adapted to provide an attachment for a scaffold-supporting board, said auxiliary plate being angular in cross section whereby one leg portion provides means of attachment to the bracket and the other leg portion provides means of attachment to the scaffold-supporting board, said legs of the auxiliary plate having portions bent to provide hooks for supporting the weight of the scaffold board prior to securing the latter to the auxiliary plate; substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM BARNARD FURMAN.

Witnesses:
JOHN SHOSTER,
J. A. VICKERS.