

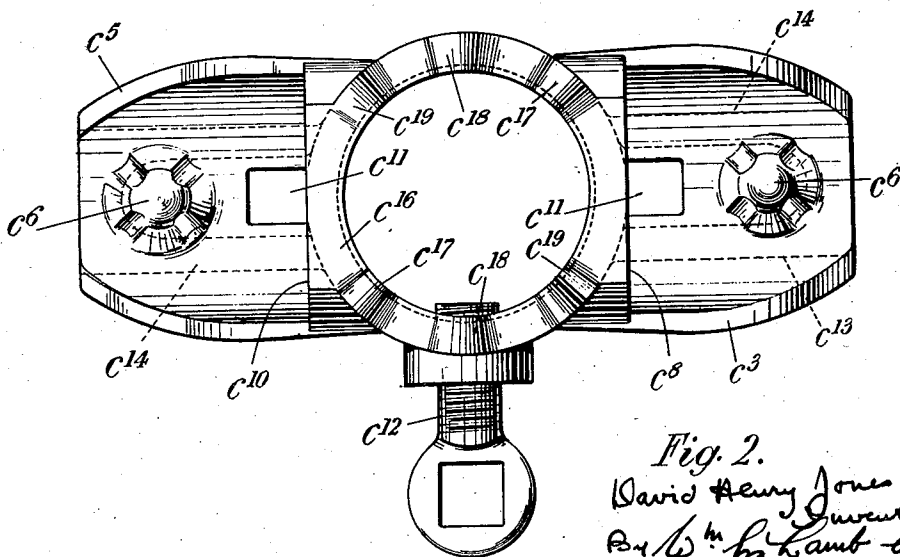
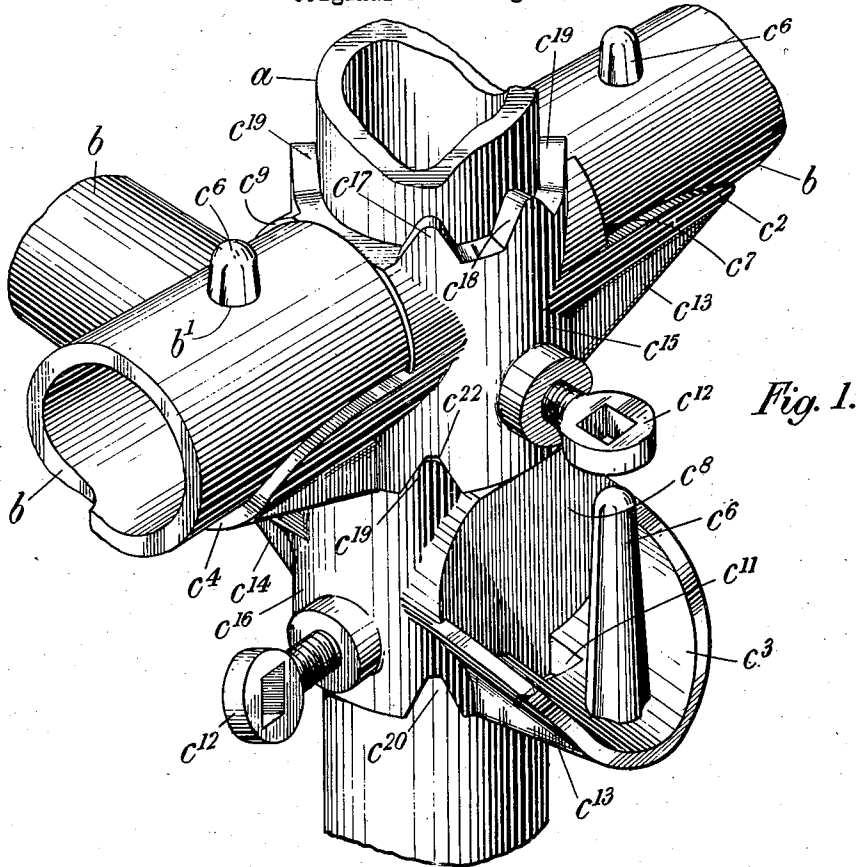
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2,118,467

SCAFFOLDING STRUCTURE

Original Filed Aug. 9, 1937 2 Sheets-Sheet 1



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Fig. 3.

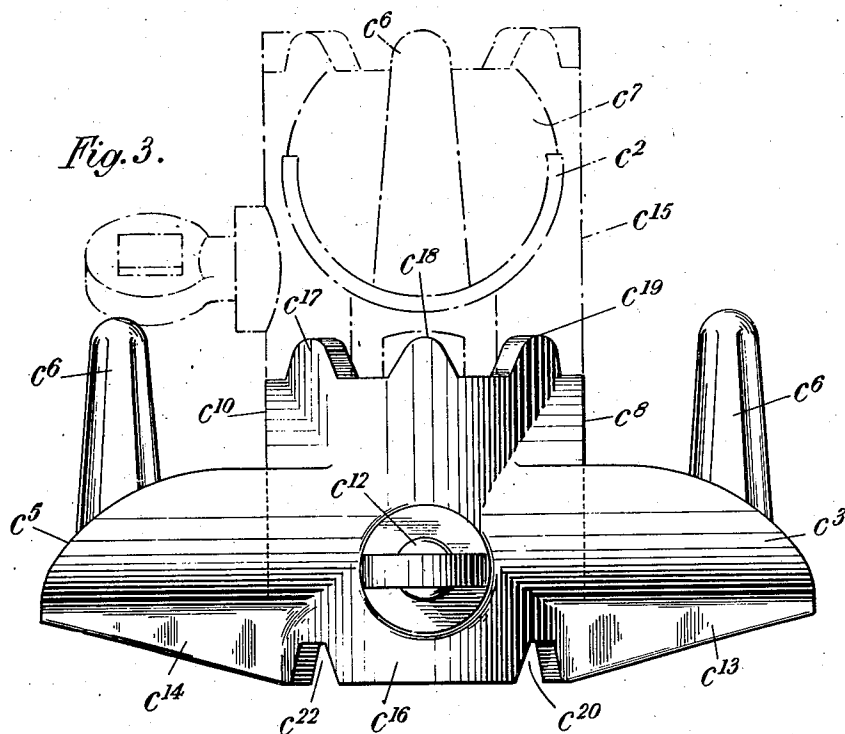
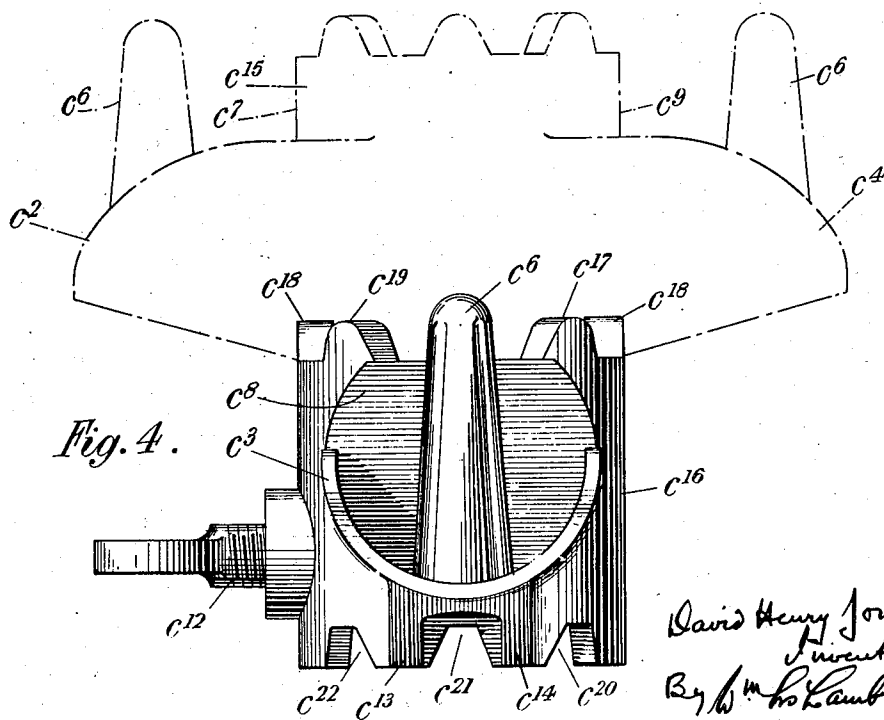


Fig. 4.



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UNITED STATES PATENT OFFICE

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SCAFFOLDING STRUCTURE

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Original application August 9, 1937, Serial No. 158,233. Divided and this application December 30, 1937, Serial No. 182,617. In Great Britain October 12, 1936

4 Claims. (Cl. 304—40)

This application is a division of United States patent application Serial No. 158,233 filed 9th August 1937, which describes a scaffolding structure comprising a series of vertical members interconnected by horizontal or inclined members, the vertical member having a supporting member affixed to it, which supporting member is provided with means such as an abutment face and a pin spaced apart from said abutment face on the supporting member engaging holes in the horizontal or inclined scaffolding member for receiving and holding said horizontal or inclined member wedged in position and thus receive and hold the horizontal or inclined members.

The object of the present invention is to provide an improved construction of supporting member for said structure which can be used separately or with another and when combined can only be set at a predetermined angle to each other.

According to this invention, the supporting member is made in two or more parts each carrying means for receiving and holding the horizontal or inclined tubes, said supporting parts having projections on one side and recesses on the opposite side so that when the supporting parts are brought together they are located at a fixed angular relationship to each other. Thus the said parts can be used separately or together and are interchangeable and when combined can only be set at a predetermined angle to each other.

A scaffolding structure formed in accordance with this invention is shown by way of example in the accompanying drawings, in which:

Fig. 1 is a perspective view of part of the scaffolding structure.

Fig. 2 is a plan view illustrating one of the parts of the supporting member.

Fig. 3 is a side elevation of one of the parts of the supporting member showing in dotted lines the second part arranged on the first.

Fig. 4 is a similar view to Fig. 3 but shows an end elevation of the supporting member instead of a side elevation.

As shown in Fig. 1, the scaffolding is built up of a series of vertical tubes *a* and horizontal tubes *b*, the horizontal tubes being applied in standard lengths which extend transversely and longitudinally between the vertical members, the horizontal tubes being connected to the vertical tubes by supporting members. The supporting member is formed in two parts, comprising separate collar portions *c*¹⁵, *c*¹⁶, the upper collar part *c*¹⁵ carrying the flanges *c*², *c*⁴, while the lower collar

part *c*¹⁶ carries the flanges *c*³, *c*⁵. Each of these flanges is dished or turned up to a curvature which corresponds with the external diameter of the horizontal tubes *b* to be supported thereon and each flange carries an upstanding stud or projection *c*⁶ which tapers upwardly. Each collar part *c*¹⁵ or *c*¹⁶ is also formed with two vertical side faces marked *c*⁷, *c*⁹ on the part *c*¹⁵ and *c*⁸, *c*¹⁰ on the part *c*¹⁶, one of these side faces being located at the root of each flange and being adapted to act as an abutment face for the end of the tube *b*. Each horizontal tube *b* is formed near its end with upper and lower holes, the upper one only of which is shown and marked *b*¹, these holes being bored through the diametrically opposite walls at right angles to their axes, the bore of the hole *b*¹ being smaller than that of the hole at the opposite side so that the holes are in effect tapered.

The collar parts *c*¹⁵, *c*¹⁶ are adapted to be threaded endwise on to the vertical tube *a* and the upper edge of each collar part is formed with two series of projections *c*¹⁷, *c*¹⁸, *c*¹⁹ while the lower edge is formed with two series of recesses *c*²⁰, *c*²¹, *c*²². The recesses *c*²⁰, *c*²¹, *c*²² are shaped to correspond with and to receive the projections *c*¹⁷, *c*¹⁸, *c*¹⁹ but the recesses are arranged in positions which are generally at right angles to the projections. The arrangement is such that if the two collar parts *c*¹⁵, *c*¹⁶ are mounted on one tube one immediately above the other, the projections on the one part can only engage with the recesses in the other part in a position in which the two parts are situated at right angles to each other. When the two parts are so positioned, they can be attached to the vertical tube by the set-screws *c*¹², of which one is provided on each part. Now when the horizontal tubes are applied to the upstanding projections, the tubes *b* will be received on the flanges *c*², *c*³, *c*⁴, *c*⁵ and will also be moved endwise into engagement with the side faces *c*⁷, *c*⁹, *c*⁸, *c*¹⁰ and thus the horizontal tubes will be held securely in the required position relatively to the vertical tubes.

The horizontal tubes can, however, be readily dismantled by giving the horizontal tube a slight tap with the hammer or other equipment tool. Each dished flange may be formed with a small hole *c*¹¹ in the centre of its root through which any material which would otherwise collect in the dished flange may fall to avoid the said material preventing the movement of the horizontal tube firmly into contact with the abutment face and the stud or projection. This hole *c*¹¹ would also serve for the passage of a tool to engage with

the end of the horizontal tube to enable the said end to be tapped when necessary to facilitate its removal.

Each flange c^2 , c^3 , c^4 , c^5 may be formed on its underside with two spaced ribs c^{13} , c^{14} tapering outwards from the root to the tip of the flange to increase its strength, the said ribs being located one on each side of the hole c^{11} in each flange.

Although the invention has been described with reference to tubes, it will be understood that it may also be applied to rods or metal members of various cross-sectional shapes. Moreover, the construction according to this invention may be applied to structures other than scaffolding which are built up of horizontal or inclined members interconnected together.

What I claim as my invention and desire to secure by Letters Patent is:—

1. Scaffolding structures comprising at least two sets of scaffolding members with the members in one set arranged at a predetermined angular relationship to those in the other set, a supporting member made in two parts, means on each part for affixing it to each of the scaffolding members in one set, each part having a flat abutment face thereon, and a stud carried on each part approximately parallel with but spaced apart from its corresponding abutment face, the said parts having interengaging projections and recesses for setting them at a predetermined angular relationship to each other, the scaffolding members in the other set each having a socket adapted to receive the one of the studs and an end part adapted to contact with one of the said abutment faces whereby the scaffolding members in said other set are jammed between the studs and the abutment faces.

2. Scaffolding structures comprising scaffolding members, a supporting member made in two parts, means on each part for affixing it to one of said scaffolding members, each of said parts having at least one flange for supporting another scaffolding member in angular relationship to that on which the supporting member is fixed and having a corresponding number of abutment faces to flanges for contacting with the scaffolding member supported on each flange, a stud on

each flange extending approximately parallel to but spaced apart from said face, and interengaging projections and recesses on said two parts for setting the parts with their flanges at predetermined angular relationships to each other, said scaffolding member on said flange having a socket engaging said stud and having an end contacting with said abutment face and jammed between said face and the stud.

3. A supporting member for supporting scaffolding members at a predetermined angular relationship, comprising a plurality of body parts each having means for fixing it to a supporting scaffolding member, and supporting means on each body part for receiving and holding a supported scaffolding member at a predetermined angular relationship to the said supporting scaffolding member to which the said body part is affixed, said supporting means including a flat abutment face and a stud approximately parallel with but spaced apart from the said abutment face, one of said body parts having projections on one side and the other body part having recesses on the opposite side, said projections and recesses being arranged so that when the parts are brought together the said supporting means on one part is located at a fixed angular relationship to that on the other part.

4. A supporting member for supporting scaffolding members at a predetermined angular relationship, comprising a plurality of body parts each having means for fixing it to a supporting scaffolding member, and at least one flange on each body part for receiving and holding a supported scaffolding member at a predetermined angular relationship to the supporting scaffolding member to which the said body part is affixed, said flange having an abutment face at its root and a stud spaced apart from said flange, one of said body parts having projections on one side and the other body part having recesses on the opposite side, said projections and recesses being arranged so that when the parts are brought together the said supporting means on one part is located at a fixed angular relationship to that on the other part.

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