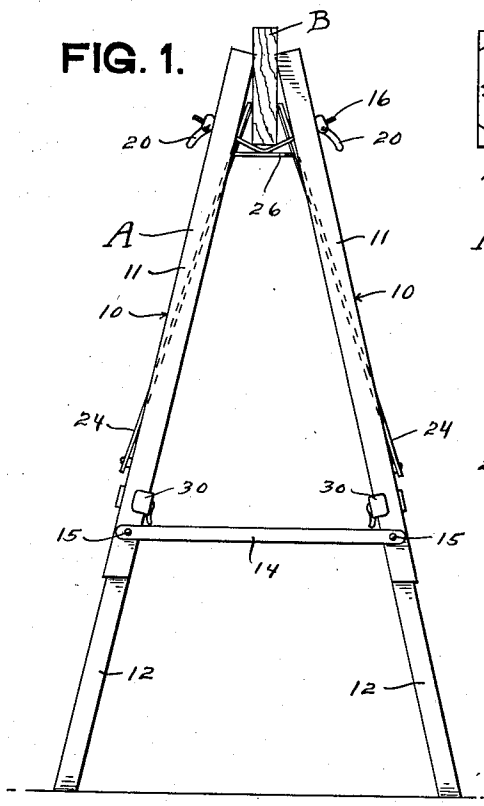
June 6, 1939. P. THOMSON 2,161,239

SUPPORT FOR SCAFFOLDS

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FIG. 1.



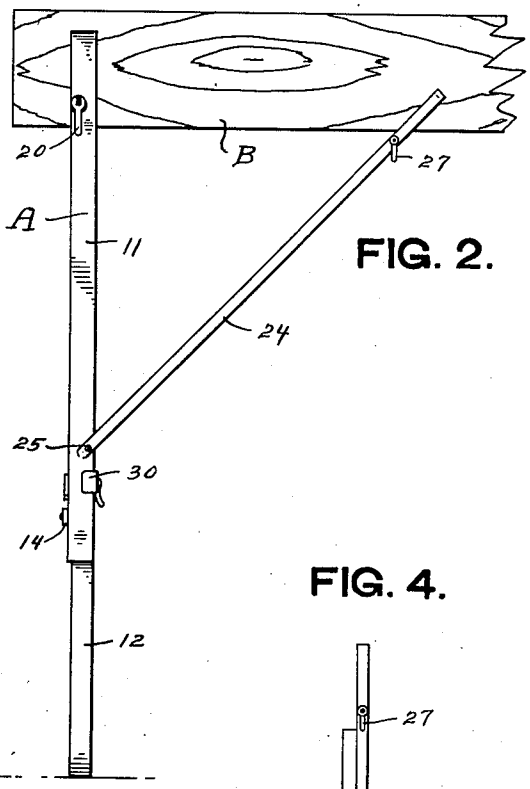


FIG. 2.

FIG. 4.

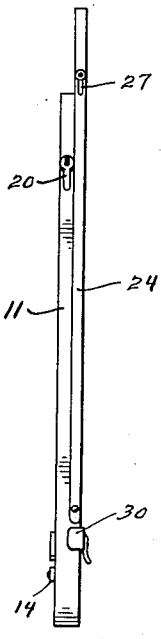


FIG. 3.

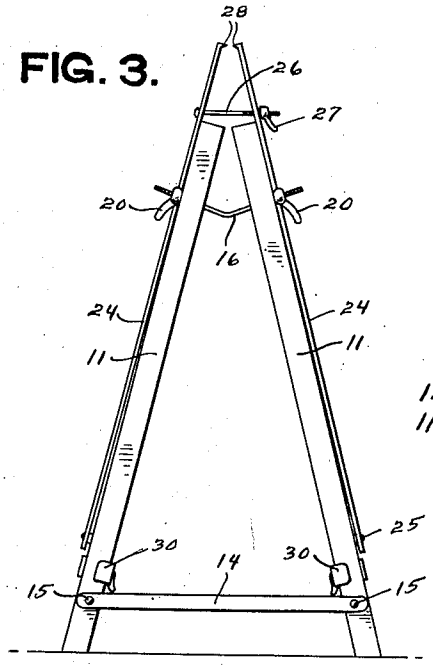
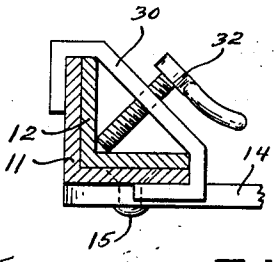


FIG. 8.



INVENTOR.

Peter Thomson.

BY Lancaster, Allwine & Rommel

ATTORNEYS.

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FIG. 5.

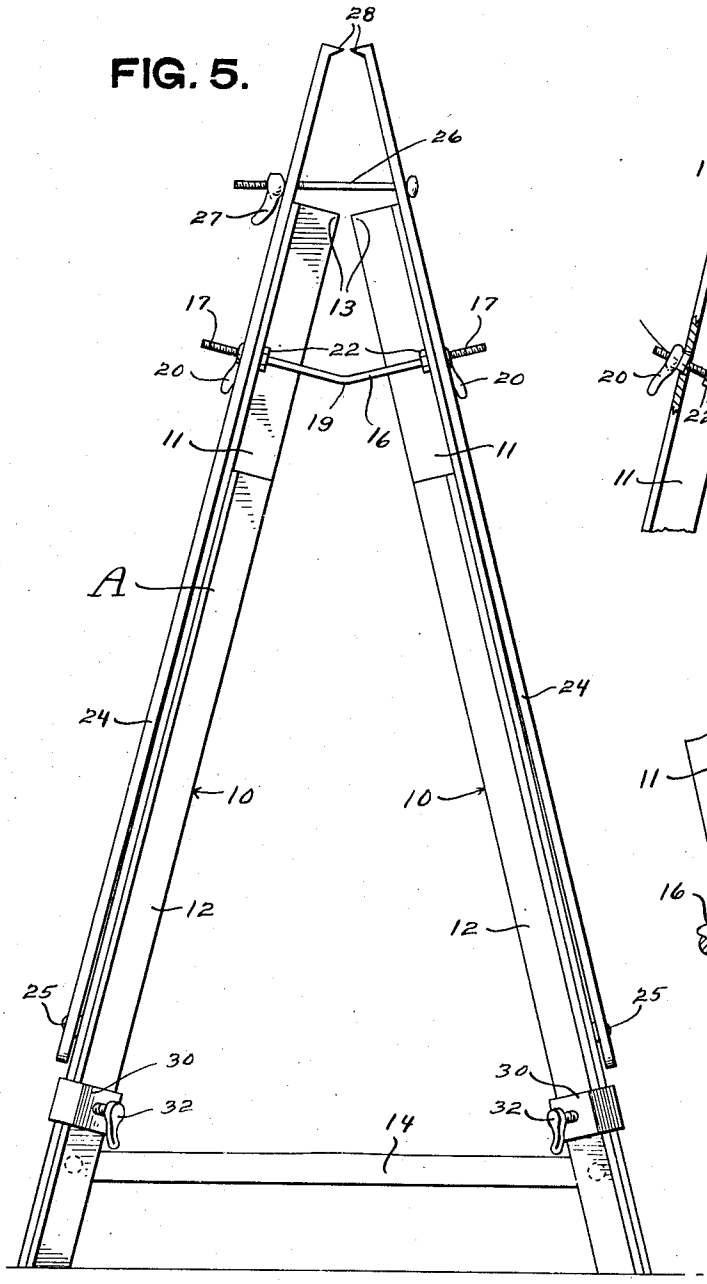


FIG. 6.

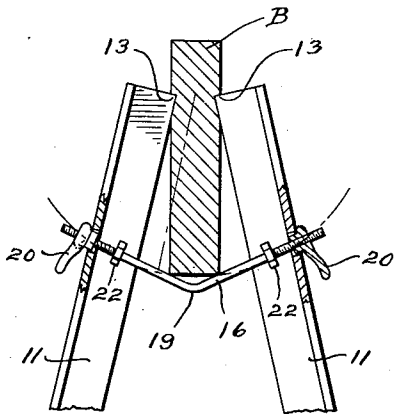
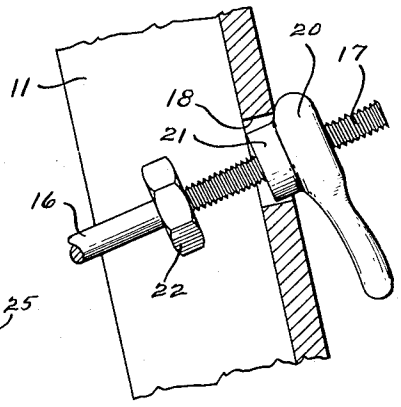


FIG. 7.



INVENTOR.

Peter Thomson.

BY Lancaster, Allwine & Rommel

ATTORNEYS.

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UNITED STATES PATENT OFFICE

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SUPPORT FOR SCAFFOLDS

Peter Thomson, Wilmington, Del.

Application January 4, 1938, Serial No. 183,373

9 Claims. (Cl. 304—5)

The present invention relates to trestles or supports for use in scaffolding and the primary object of the invention is to provide a simplified knockdown or folding trestle embodying a minimum number of parts and which may be collapsed into extremely compact form for storage or shipment.

A further object of the invention is to provide an extensible and adjustable scaffold support wherein scaffold beams or boards of various thicknesses may be gripped and held in the desired position.

A further object resides in the novel means for supporting and clamping the scaffold beam against lateral tipping and permitting adjustment of the beam to a vertical position.

A further object resides in the novel construction whereby the clamping means for securing the trestle to the scaffold beam when the trestle is set up, also serve to retain the trestle in a compact folded condition for easy handling.

A still further object is to provide a trestle of this character which will be light in weight and which may be economically formed from stock metal materials.

Other objects and advantages of the invention will be apparent from the following detailed description, taken in connection with the accompanying drawings, forming a part of this specification and in which drawings:

Figure 1 is an elevation of the trestle or support set up for use.

Figure 2 is a side view of the showing in Figure 1.

Figure 3 is a front view of the trestle folded.

Figure 4 is an edge view of the trestle folded.

Figure 5 is an enlarged rear view of the trestle in its folded position.

Figure 6 is a fragmentary detail view of the upper end portion of the trestle showing the supporting and clamping means for the trestle beam.

Figure 7 is an enlarged fragmentary section showing the manner in which the ends of the beam supporting and clamping member are loosely extended thru the leg members of the trestle.

Figure 8 is an enlarged sectional view showing the clamping means for the extensible legs.

Referring to the drawings in detail and wherein like reference characters designate corresponding parts thruout the several views, the letter A designates the improved trestle and B a scaffold beam or board supported thereby.

The trestle A comprises a metal frame embodying a pair of extensible, upwardly converging supports **10**, each including a main section or leg **11** and an extension section or leg **12** whereby the height of the trestle may be varied. These leg sections **11** and **12** are preferably made from angle iron, with the extension section being slightly smaller and slidably fitting in the main section as clearly shown in Figure 8. As shown in Figures 5 and 6, the angle iron legs are arranged with a flange of one leg directed toward a flange of the companion leg whereby the upper ends of these flanges on the legs **11** form biting edges **13**, which are adapted to bite into opposite faces of the beam B.

Connecting the lower end portions of the legs **11** is a solid or one piece cross bar **14** having its ends pivotally connected to the legs as by rivets or bolts **15** whereby the upper ends of the legs are freely movable toward and from one another. This cross bar **14** serves to space the legs **11** at their lower ends and as will be observed, is spaced slightly above the lower extremities of the legs.

Connecting the upper end portions of the legs **11** is a combined support and clamping means embodying a tie rod **16** having each end threaded as at **17** and extended thru openings **18** provided in one flange of the legs. This tie rod **16** is provided midway of its ends with a bend **19** whereby the portions of the rod at opposite sides of the bend extend upwardly at an angle thru the openings **18**. Threaded upon each end of the tie rod **16** is a hand nut **20** which have sleeve portions **21** extending into the openings **18** for protecting the threaded rod ends **17**. As shown in Figure 7, the openings **18** are made larger than the sleeve portion **21** of the hand nuts, so as to prevent any binding of the sleeves in the openings when the angular relation of the legs is changed during setting up or folding the trestle. Turning up upon the hand nuts **20** will cause the upper ends of the legs **11** to be drawn toward each other so as to grip the beam B between the biting edges **13**. Threaded upon each end of the tie rod **16** and disposed inwardly of the legs, is a nut **22** and these nuts act as stops against which the legs **11** abut when the trestle is folded as in Figure 5. The nuts **22** are so spaced that when the hand nuts **20** are turned up tight against the flange of the legs as in Figure 5, the upper ends of the legs will be slightly spaced apart to prevent the biting edges **13** from contacting one another and becoming dulled.

Referring particularly to Figure 6, showing a scaffold beam or board B secured in place between the upper ends of the legs **11**, it will be seen that the lower edge of the beam rests in the

bend 19 of the tie rod 16 with the biting edges 13 engaging opposite faces of the beam adjacent the upper edge of the beam. As shown by the dot and dash lines in Figure 6, it will be seen that the angle of the bend 19 is more acute than an arc, the radius of which is the distance from the top of the legs to the bottom of the beam. With this arrangement, the lower edge of the beam cannot slip sidewise and allow the beam to tilt to one side or the other. The arrangement also allows for the beam being adjusted to a true vertical or on-edge position by means of the two hand nuts 20, one at each end of the tie rod. Since the lower edge of the beam rests in the crotch formed by the bend 19, it will be seen that by proper adjustment of the hand nuts 20, the bend may be shifted toward one or the other of the legs 11 thus bringing the beam into a vertical position.

Pivotally connected at one end, one to each of the legs 11, is a straight diagonal brace rod 24 having free ends adapted for engagement with the beam B at a point spaced from the supports 10. The brace rods 24 are connected by a loose pivotal connection 25 to their respective legs 11 at a location spaced slightly above the pivotal connection 15 of the cross bar 14 with the legs. This loose pivotal connection of the brace rods, together with the placing of spacers between the braces and the legs, permits the braces to change their angular relation when moved without creating any binding action at their pivot points.

Extended thru suitable openings adjacent to the free ends of the brace rods 24 is a clamping bolt 26 provided with a hand nut 27 for drawing the free ends of the brace rods together into clamping engagement with the beam B. The free ends of the brace rods 24 are provided with inwardly directed prongs or spurs 28 adapted to bite into the scaffold beam and securely attach the braces to the beam when the clamping bolt is tightened.

The extension legs 12 are held in adjusted positions by means of clamping devices in the form of C-shaped clamp members 30 provided with clamping screws 32 as shown in Figure 8. These C-shaped clamp members 30 are slipped over an end of the legs 11 and are held in position on the legs between the cross bar 14 and the braces 24. As shown in Figure 8, the clamp members 30 extend across the open side of the angle iron legs with the hook ends of the clamp engaging over the edges of the flanges of the legs. The clamping screw 32 is threaded thru the center of the clamp member with the shank of the screw engaging in the corner of the extension leg 12 whereby upon tightening of the screw, the legs 11 and 12 will be firmly clamped together.

In setting up the trestle, the scaffold beam is placed between the upper ends of the supports 10 so as to rest in the bend 19. The hand nuts 20 are then tightened and adjusted so as to clamp the beam in a vertical position between the upper ends of the supports with the beam resting on the tie rod 16. The braces 24 are then swung so as to straddle the beam at their free ends and after which the clamping bolt 26 is tightened for clamping the free ends of the braces upon the beam. If required, the supports 10 may be lengthened for providing a higher scaffold.

When collapsing or folding the trestle for storage or shipment, the leg sections 12 are first slid into the leg sections 11 and retained by the clamps 30. The hand nuts 20 are then turned up until the upper ends of the supports 10 are drawn tight against the nuts 22 on the tie rod 16. The convergent brace rods 24 are then swung so as to overlie the flanges of the legs 11 as shown in Figure 4 and after which the clamping bolt 26 is tightened so as to clamp the brace rods upon the supports 10. When so folded, the trestle members will be retained in a flat compact condition as shown in Figure 4 ready for easy handling and storing. As shown in Figures 3 and 5, the clamping bolt 26 is so spaced from the pivots 25 of the brace rods 24 as to be disposed slightly beyond the clamping ends of the supports 10 when the trestle is folded, thereby allowing the brace rods to overlie the supports as in Figure 4.

From the foregoing it will be seen that a novel and improved form of collapsible trestle has been provided which may be very economically manufactured, one embodying a minimum number of parts, and which may be folded into a flat compact form and retained in this folded condition thru the specific relation of parts and by the same beam clamping means employed when the trestle is set up for use.

Changes in detail may be made to the shape, size and arrangement of parts herein shown and described, without departing from the spirit of the invention or the scope of the following claims.

I claim:

1. A foldable trestle including a pair of upwardly converging supports providing beam engaging edges at their upper ends, a solid cross bar pivoted at its ends to the lower portions of the supports, a tie rod connecting the supports adjacent their upper ends and having a beam rest portion preventing canting of the beam, and adjusting means at each end of the tie rod for adjusting the rod longitudinally and vertically positioning the beam in a true on-edge position between the upper ends of the support.

2. A foldable trestle including a pair of upwardly converging supports providing beam engaging edges at their upper ends, a cross bar connecting the supports at their lower portions, a tie rod connecting the upper portions of the supports and having a bend providing a beam rest, and a hand nut on each end of the tie rod permitting clamping of a scaffold beam in a vertical position between the upper ends of the supports.

3. A foldable trestle including a pair of upwardly converging supports providing beam engaging edges at their upper ends, a solid cross bar connecting the supports at their lower portions, a tie rod having threaded ends extending thru openings in the upper portions of the supports and a bend midway of its ends forming a seat for the lower edge of a scaffold beam, and a hand nut threaded on each end of the tie rod, the angle of said bend being more acute than an arc having its radius equal to the distance between the bottom of the beam and said beam engaging upper ends of the supports.

4. In a foldable trestle including a pair of upwardly converging supports, a tie rod extended thru the upper portions of the supports having a bend midway of its ends providing a V-shaped seat for the lower edge of a scaffold beam, and a hand nut threaded on each end of the tie rod for engagement with the supports whereby said seat may be adjusted for vertically positioning the beam between the upper ends of the supports.

5. In a scaffold beam support, a pair of upwardly converging legs, a pivotally connected

spacer bar for the lower ends of the legs, a tie rod adjacent the upper ends of the legs having angularly disposed portions provided with threaded end sections extending thru the legs, a nut threaded upon each end section of the tie rod and limiting movement of the legs toward one another, and a hand nut threaded upon each end section of the tie rod for drawing the upper ends of the legs into clamping engagement with the beam.

6. A foldable trestle including a pair of upwardly converging supports, a solid cross bar pivoted at its ends to the lower portion of the supports, a tie rod having threaded ends extending thru the upper portions of the supports, a stop adjacent each end of the tie rod for limiting inward movement of the supports, a hand nut on each threaded end of the tie rod for drawing the supports together at their upper ends, a straight brace rod pivoted at one end to each support adjacent the lower end of the support, and a clamping bolt extending thru the free end portions of the brace rods.

7. A foldable trestle including a pair of upwardly converging supports, a spacer bar connecting the supports at their lower portions, a combined beam support and clamping means for the upper ends of the supports embodying stop means limiting inward movement of the supports at their upper ends when the trestle is folded, a brace pivoted at one end to the lower portion of each support and adapted to overlie the opposed inclined faces of the supports when the trestle is folded, and a clamping bolt adjacent the free ends of the braces, said bolt when the trestle is folded serving to clamp the braces upon the supports and retain the trestle in its folded position.

8. A foldable trestle comprising a frame including a pair of extensible supports each embodying an upper and a lower leg section, a one piece cross bar connecting the lower portions of the upper leg sections, a combined beam support and clamping means connecting the upper portions of the upper leg sections, a brace pivoted at one end to each upper leg section in slightly spaced relation above the cross bar, a clamping bolt connecting the free ends of the braces, and a clamp member retained against displacement on each upper leg section by and between the cross bar and the pivoted end of the brace for the respective legs, said clamp members serving to retain the leg sections in relatively adjusted positions.

9. A foldable trestle comprising a flat, substantially triangular frame providing upwardly converging legs, an adjustable tie rod at the upper portions of the legs for supporting and clamping a scaffold beam in the upper end of the frame, a straight brace rod pivoted at one end to each leg and adapted to overlie their respective legs when the trestle is folded, and a clamping bolt extended thru the free ends of the brace rods and spaced beyond the upper ends of the legs when the trestle is folded whereby the brace rods may be clamped upon the legs.

PETER THOMSON.