No. 755,182. PATENTED MAR. 22, 1904.

G. H. SMYTH.

TRESTLE FRAME.

APPLICATION FILED JULY 25, 1903.

NO MODEL.

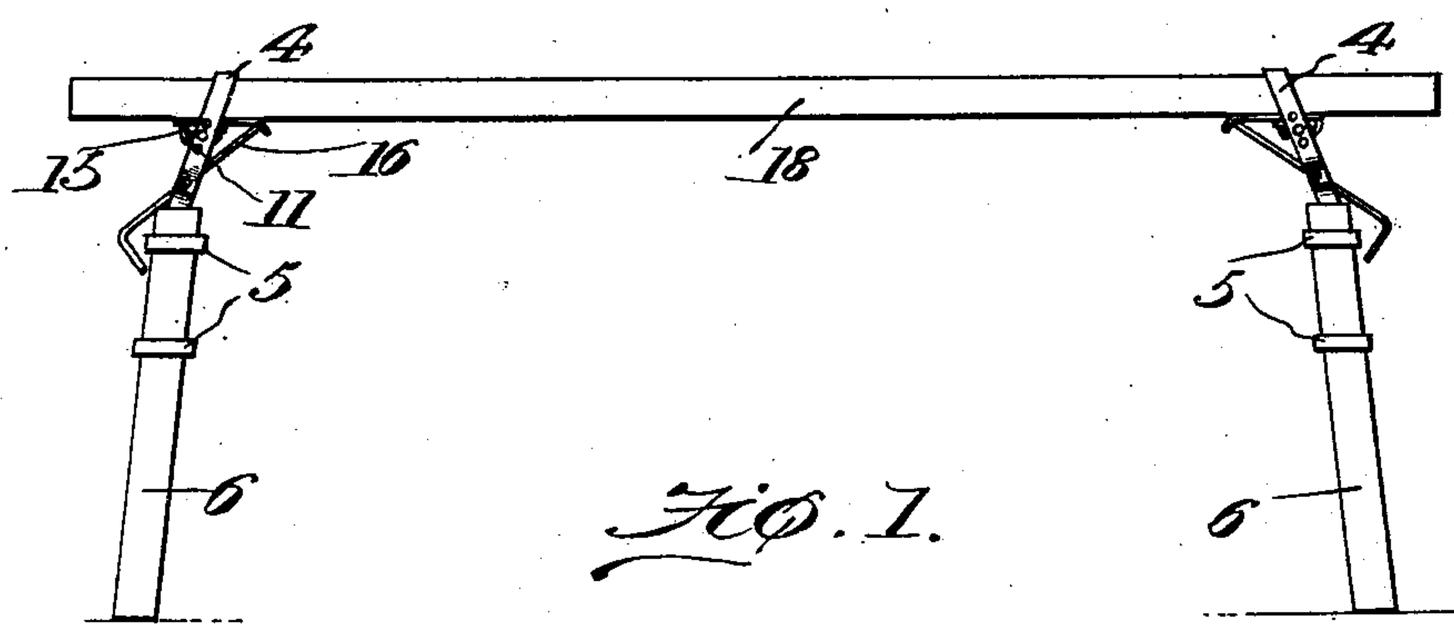

FIG. 1.

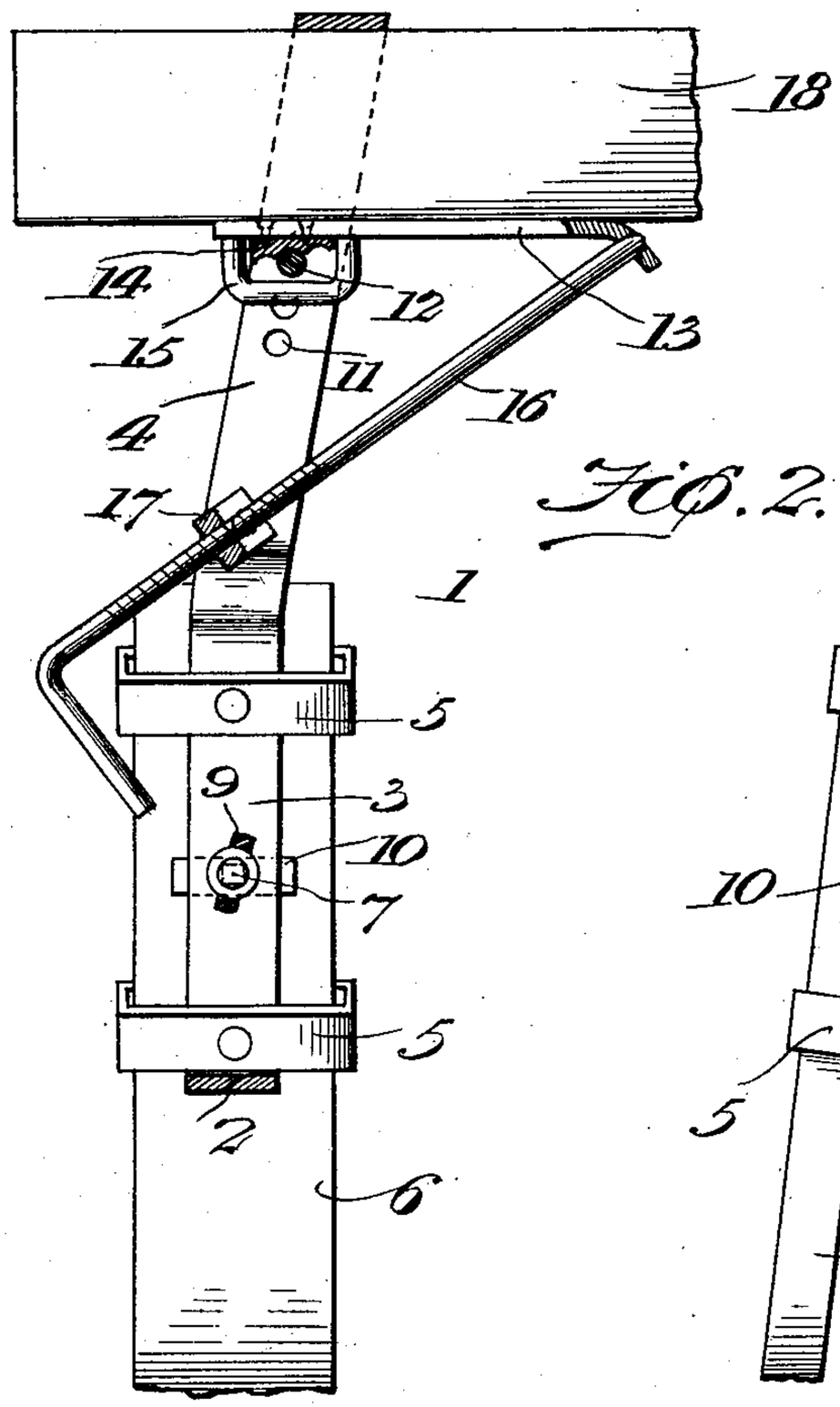

FIG. 2.

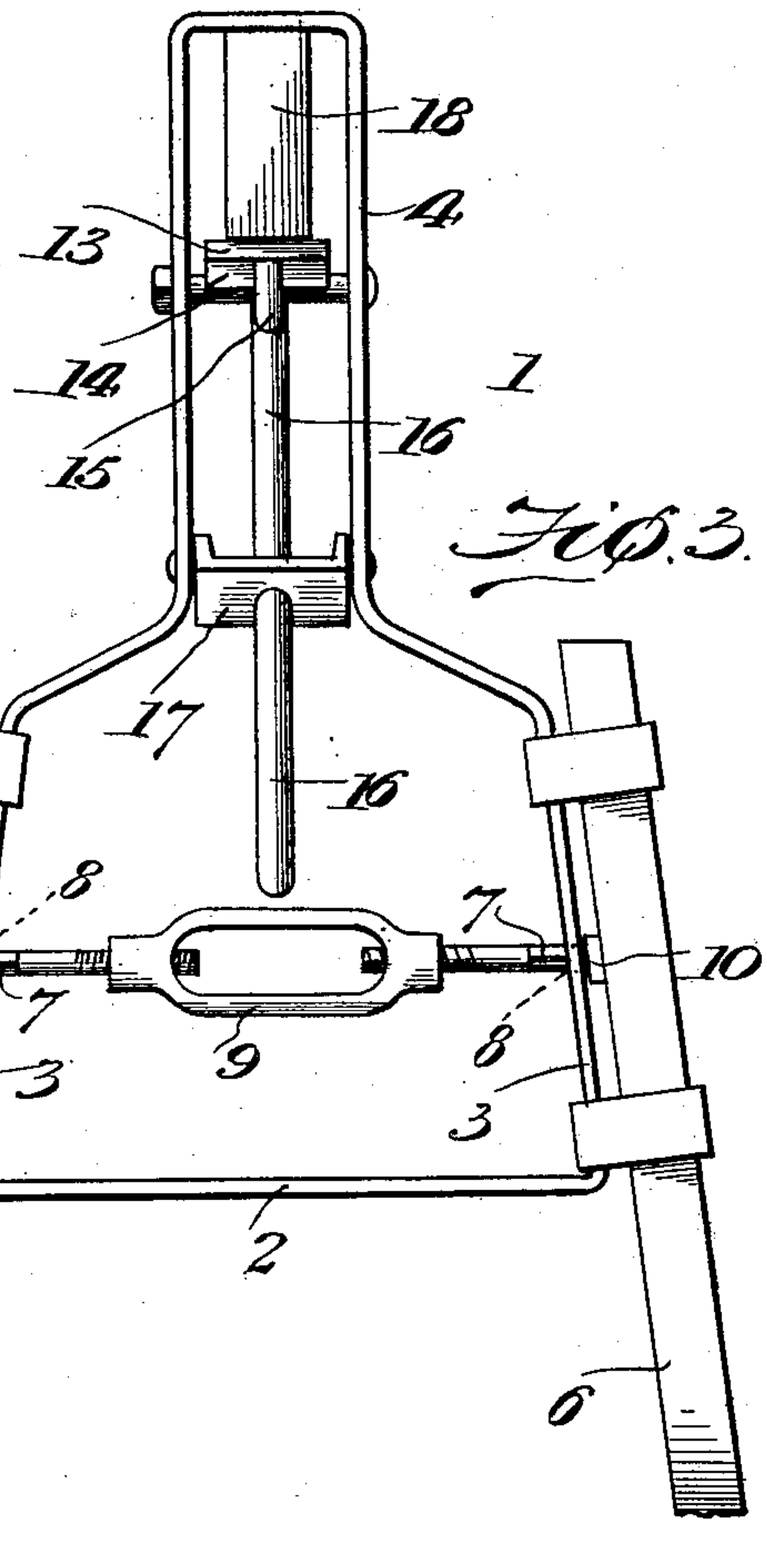

FIG. 3.

Witnesses
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No. 755,182. Patented March 22, 1904.

UNITED STATES PATENT OFFICE.

GEORGE H. SMYTH, OF COLORADO SPRINGS, COLORADO.

TRESTLE-FRAME.

SPECIFICATION forming part of Letters Patent No. 755,182, dated March 22, 1904.

Application filed July 25, 1903. Serial No. 167,026. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. SMYTH, a citizen of the United States, residing at Colorado Springs, in the county of El Paso and State of Colorado, have invented a new and useful Trestle-Frame, of which the following is a specification.

This invention relates to trestle-frames; and it consists in the construction and combination of parts hereinafter described.

Plasterers, painters, paper-hangers, carpenters, and other artisans engaged in the construction of buildings frequently find it desirable to employ trestles or scaffolds to support platforms upon which they stand in doing their work, and owing to the varying heights at which the work must be done it is very desirable that the scaffolds or trestles employed by them may be adjustable in height to enable them to work under the most favorable conditions and in positions that require a minimum amount of muscular effort. It is also desirable that the trestles or scaffolds used by artisans shall be of such structure that they may be easily "knocked down," so as to facilitate the transportation of the trestles from place to place.

The object of this invention is to provide a frame of simple and staunch construction by means of which the supporting-legs and transverse bar of a trestle may be securely held in any desired relation and from which the legs and bar may be readily removed when the trestle is to be knocked down.

A further object of the invention is to provide a trestle-frame which is susceptible of use with legs and transverse bars of varying dimensions.

In describing the invention reference will be had to the accompanying drawings, forming part of this specification, in which there is illustrated a preferred form of embodiment of the invention capable of carrying the same into practical operation, it being understood that various changes in the form, proportions, and exact manner of assemblage of the elements exhibited may be made without departing from the spirit of the invention or sacrificing any of its advantages.

In the drawings, Figure 1 is a view in side elevation of a trestle having the parts united by means of trestle-frames constructed in accord with this invention. Fig. 2 is a vertical section through one of the trestle-frames, showing the ends of the transverse bar and trestle-legs secured in position therein. Fig. 3 is an end view of the members shown in Fig. 2.

Referring now to the drawings, in which corresponding parts are designated by the same characters of reference in the several views in which they appear, 1 designates generally the main frame, which is formed by preference of strap-iron of suitable weight and comprises the base portion 2, the inclined side portions 3 arising from the base and bent sharply inward at their tops to unite with the sides of the loop 4, which forms the upper portion of the frame.

The frame 1 is preferably formed of a single piece of strap-iron, and the loop is disposed in a plane at a slight angle with the plane of the inclined side portions 3. On each of the side portions 3 there are secured by rivets or other suitable fastening means a pair of eyes 5, which project outward from the sides 3 3 and form guides for the legs 6 at one end of a trestle, which will be formed of wood, as usual, and be of dimensions suited to the eyes through which they pass.

Disposed transversely in the lower portion of the frame 1, between the upper and lower eyes on the side members, is an extensible clamping device comprising two squared shanks 7 7, slidably mounted in openings 8 8 in the side portions 3 3 of the frame and oppositely threaded at their inner ends, a turnbuckle 9 in engagement with the threaded inner ends of the shanks, and heads 10, rigidly attached to the outer ends of the shanks and disposed substantially at right angles to the side portions 3 3 of the frame. As both of the squared shanks are slidable in their respective openings in the side portions of the frame, the rotation of the turnbuckle will cause the protrusion of both of the shanks through the openings in the side portions of the frame or their retraction, according to the direction of rotation imparted to the turnbuckle. The protrusion of the shanks through the openings in

the side portions of the frame will bring the heads on the outer ends thereof into engagement with the legs of the treastle when in position in the eyes 5 5 and will hold the legs securely in position.

In the sides of the loop 4 are provided a plurality of openings 11 for the passage of a bolt 12, which may be adjusted in height by introducing it into openings near the upper or lower end of the loop, as desired. The bolt 12 forms a support for a plate 13, which is preferably provided on its under surface at the end which rests upon the bolt 12 with a block 14, the under side of which is formed with a plurality of concave steps for engagement with the upper surface of the bolt, as will presently be explained. To prevent accidental loss of the plate 13, a loop 15 is provided on the under surface thereof, encircling the block 14 and the bolt 12, as shown, At the end remote from the bolt 12 the plate 13 is bent downward at an oblique angle to the major portion of the plate and is provided with an opening for the engagement of the tapered end of a rod 16, threaded intermediate of its ends and supported in a threaded opening in a plate 17, pivotally supported between the sides of the loop 4, at the bottom thereof. The rod 16 has the lower end thereof preferably bent at right angles to the major portion of the rod to form a crank or lever for rotating the rod in the threaded opening in the plate 17 in order to force the upper end of the rod into firm engagement with the opening in the end of the plate 13.

In using the trestle-frame the legs will be introduced into the eyes 5 and set at the desired position. The turnbuckle will then be rotated to protrude the shanks through the openings in the sides of the frame 1 and bring the heads thereon into clamping engagement with the legs to hold them securely in the eyes. The cross-bar of the trestle (designated 18) will then be placed in position in the upper end of the loop 4, resting upon the plate 13, which will be adjusted in position on the bolt 12 by resting the plate directly on the bolt or by bringing that one of the concave steps on the under surface of the block 14 into engagement with the bolt which is best adapted to the size of the transverse bar 18. The rod 16 will then have the tapered upper end thereof brought into engagement with the opening in the downwardly-bent end portion of the plate 13, and the rod will be rotated in the threaded opening in the pivoted plate 17 until the plate 13 is forced hard against the transverse bar 18, so as to hold the bar with perfect security.

While the description of the use of the trestle-frame has been limited to the application of a single frame to a pair of legs and one end of the transverse bar of a trestle, it will be understood that two of the frames are required for each trestle and that the legs at one end of the transverse bar having been secured in proper relation thereto, in the manner described in the preceding paragraph, another trestle-frame will be applied at the other end of the transverse bar in precisely the same manner and that the trestle will then be ready for use.

It will have been noted that with a trestle-frame constructed in the manner above described it is possible to use transverse bars of very different sizes in the same trestle-frame by adjusting the position of the bolt 12 in the openings 11 provided in the sides of the loop 4 of the main frame and by bringing the plate 13 into proper relation with the bolt 12. It will also have been noted that legs of different sizes may be readily secured in position in the eyes at the sides of the frame by means of the extensible clamping device described.

A special advantage in the trestle-frame as described is found in the fact that the same clamping means is used to secure both of the legs in position, thus shortening the time necessary to assemble the frame and the other parts of the trestle structure and facilitating the disassemblage of the parts.

Another feature of the construction which will be found valuable in service is the mode of securing the transverse bar of the trestle in the frame, the rod 16 being an efficient brace for the trestle structure as well as means for holding the plate 13 in clamping engagement with the under surface of the bar 18.

Having thus described the construction and use of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination in a device of the class described, of a frame, guide members for a pair of trestle-legs at the sides of said frame, and single means for securing both legs in the guide members.

2. The combination in a device of the class described, of a frame, guide members at the sides of said frame for a pair of trestle-legs, and means for simultaneously clamping both legs in said guide members.

3. The combination in a device of the class described, of a frame, guide members for a pair of trestle-legs at the side of said frame, and an extensible clamping member adapted to engage both legs simultaneously.

4. The combination in a device of the class described, of a frame, guide members at the sides of the frame for a pair of trestle-legs, and an extensible clamping member slidably mounted in openings in the sides of said frame and adapted to force both legs outward simultaneously.

5. The combination in a device of the class described, of a frame, guide members at the sides of the frame for a pair of trestle-legs, two squared shanks slidably mounted in the sides of said frame and provided with oppositely-disposed threads at their inner ends, and a turnbuckle in engagement with said threaded ends.

6. The combination in a device of the class described, of a frame, a pair of eyes at each side of said frame, and an extensible clamping member arranged transversely in the frame between the eyes of each pair, and adapted to engage simultaneously the members inserted in said eyes.

7. The combination in a device of the class described, of a frame having a closed upper end, a pivoted supporting-plate mounted in said frame, a pivotally-supported brace member mounted in said frame and adapted to engage the outer end of said supporting-plate, and means for forcing said brace member against said plate.

8. The combination in a device of the class described, of a frame having a closed upper end, a pivoted supporting-plate in the upper portion of said frame, a pivoted plate having a threaded opening mounted in said frame below said supporting-plate, and a threaded brace member mounted in the lower plate and adapted to engage with the free end of the supporting-plate.

9. The combination in a device of the class described, of a frame having a closed upper end, an adjustable bar in the upper portion of said frame, a plate pivotally supported on said bar, a brace member pivotally supported beneath said bar, and means for bringing said brace member into engagement with the free end of said plate.

10. The combination in a device of the class described, of a frame closed at its upper end, a transverse bar in said frame near the upper end, a supporting-plate provided on the under surface with a step-block for engagement with bar, a brace member pivotally mounted in said frame below said bar, and means for bringing said brace member into engagement with one end of said plate.

11. The combination in a device of the class described, of a frame closed at its upper end, a transverse bar secured in said frame, a supporting-plate having on its under surface a step-block for engagement with said bar, a loop attached to the under surface of said plate and encircling said bar and said block, and a brace member adjustably supported in said frame and adapted for engagement with said plate.

12. The combination in a device of the class described, of a frame closed at its upper end, a pivotally-mounted supporting-plate having the free end thereof bent downwardly and provided with an opening, a plate pivotally mounted in said frame below the supporting-plate and provided with a threaded opening, a brace-rod mounted in the threaded opening in the lower plate and having a tapered end adapted for engagement with the opening in the supporting-plate.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE H. SMYTH.

Witnesses:
JAMES H. GAMBLE,
BURT HULL.