(No Model.)

G. W. ZEIGLER.

TRESTLE.

No. 409,544. Patented Aug. 20, 1889.

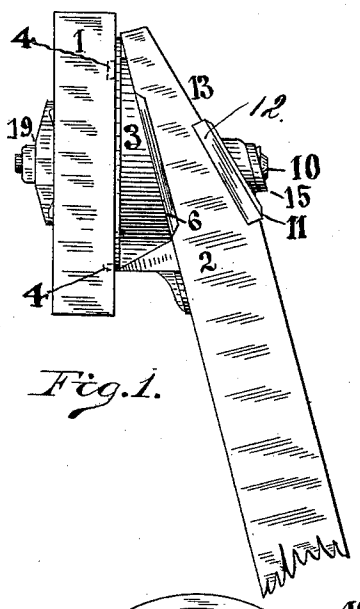


Fig. 1.

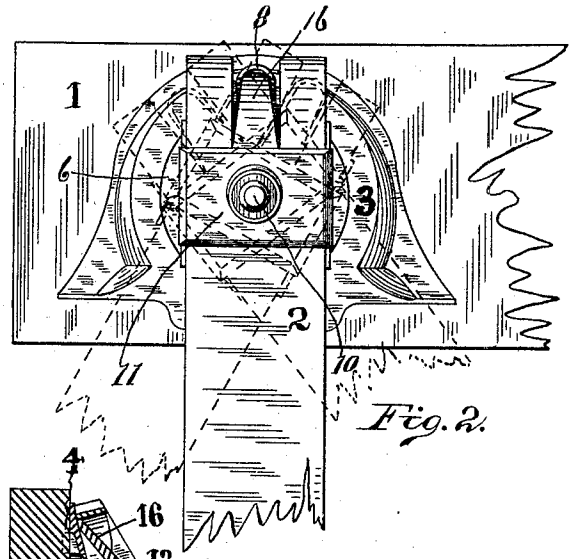


Fig. 2.

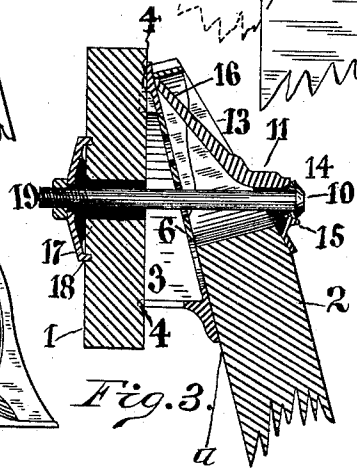


Fig. 3.

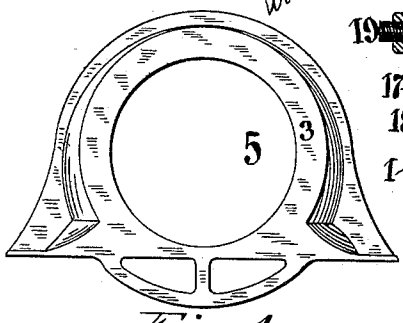


Fig. 4.

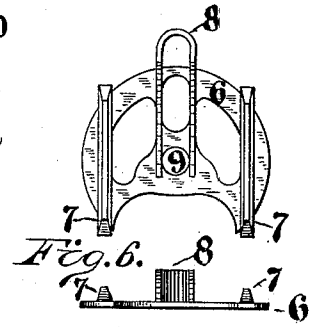


Fig. 6. Fig. 7.

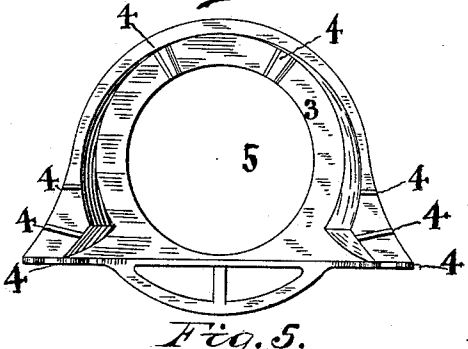


Fig. 5.

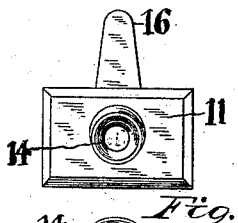


Fig. 8.

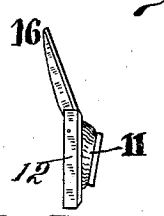


Fig. 9. Fig. 10.



Fig. 11.



Fig. 12.

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UNITED STATES PATENT OFFICE.

GEORGE W. ZEIGLER, OF WASHINGTON, DISTRICT OF COLUMBIA.

TRESTLE.

SPECIFICATION forming part of Letters Patent No. 409,544, dated August 20, 1889.

Application filed September 8, 1888. Serial No. 284,951. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. ZEIGLER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Clamps for Uniting the Parts of Trestles; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof as to enable others skilled in the art to make and use the said invention.

This invention relates to trestling for purposes of scaffolding and other weight-supporting structures required for temporary use, and has for its object the making of such structures with the best economy of material and susceptible of being folded compactly for purposes of storage and transportation without separation of the parts.

To effect these results, this invention consists of a form of clamping device or joint for attaching the legs of scaffolds to the beams thereof, constructed with opposite bearing-faces inclined to each other, as hereinafter fully described, and shown in the accompanying drawings.

Referring to the drawings, Figure 1 shows an end view of the beam and the upper portion of the leg of a trestle united by this invention; Fig. 2, a side view thereof; Fig. 3, a vertical section thereof; and Fig. 4 is a plan view of one side of my washer. Fig. 5 is a plan view of the opposite side of the said washer. Fig. 6 is a plan view of my circular plate, showing a loop formed thereon. Fig. 7 is an edge view thereof. Fig. 8 is a plan view of a washer having flanges formed thereon. Fig. 9 is an end view of the same. Fig. 10 is a side view of the said washer. Fig. 11 is a plan view of the countersunk washer. Fig. 12 is a sectional view of the same.

The same parts have the same ordinal designations in the several figures.

1 represents the horizontal beam of a trestle; 2, the leg, and 3 a washer or plate (shown separately in front and back views in Figs. 4 and 5) placed between them, the opposite sides of which are vertically inclined, but horizontally parallel to each other. This washer is preferably made as a shell of uniform thickness. Upon the perpendicular side of the washer 3, resting against the beam 1, are projections 4, which enter the wood of the beam 1 and prevent it from slipping. In the opposite or inclined side of the washer 3 is a circular aperture 5.

Into the circular aperture 5 is fitted, so as to turn freely therein, a circular plate 6, (shown in front and edge views in Figs. 6 and 7,) upon the outer side of which plate 6 are formed two flanges 7, between which one of the flat sides *a* of the leg 2 fits. Upon the same side of the plate 6 as the flanges 7 is formed an upwardly-projecting loop 8. A central opening 9 is made in the plate 6, through which a bolt 10 fits loosely. A washer 11, (shown in Figs. 8, 9, and 10,) provided with flanges 12, fits upon the inclined surface 13 of the leg 2, the flanges 12 embracing the edges. A central spherically-countersunk hole 14 is formed in the washer 11, into which fits a corresponding spherical washer 15, through which the bolt 10 passes easily. A projection 16 is formed on the upper edge of the washer 11 and fits loosely into the loop 8, a cleft being cut in center of the upper part of the leg 2 to admit it. The bolt 10 passes through the washers 15 and 11, leg 2, plate 6, washer 3, beam 1, and a washer 17, provided with projecting spurs 18, which enter the wood of the beam, and is tightened by a nut 19, bearing only on the washer 17, causing the head of the bolt 10 to have its bearing against the washer 15, and therefore subject only to tensile strain in the direction of its axis. When the nut 19 is loosened, the leg 2 may be turned in parallel position to the beam 1 for purposes of storage. The loop 8 is formed on the plate 6, extends out over the edge thereof, and is adapted to receive the projection 16 of the washer 11, from which the said washer is suspended, as clearly shown in Figs. 1 and 3. When erected, the nut 19 is tightened, and any load placed on the beam 1 is transmitted by the washer 3 to the plate 16, suspended by the loop 8 on the projection 16 on the washer 11 upon the inclined face 13 of the leg, where the vertical strain is converted into a horizontal strain on the bolt 10 and transmitted by the nut 19 to the washer 17 to the beam 1, so that increased loads on the beam 1 tightens the pressure of the leg 2 toward the beam 1.

What I claim is—

1. The combination, in a clamping device for uniting the parts of trestles, the washer 3,

provided on its inner surface with the projections 4 and having an opposite outer surface inclined to the said inner surface with a plate having oppositely-situated flanges, the washer 11, provided with the projection 16, washers 15 and 19, and bolt 10, substantially as shown and described.

2. In a clamping device for uniting the parts of trestles, the combination of a washer having its outer surface inclined to its inner surface with a plate having oppositely-situated flanges, and a loop located between the said flanges adapted to engage a projection of the washer 11, washers 15 and 17, nut 19, and bolt 10, substantially as shown, and for the purpose set forth.

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