No. 762,632. PATENTED JUNE 14, 1904.

J. W. HEADLEY.

TRUSS BRIDGE.

APPLICATION FILED FEB. 18, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

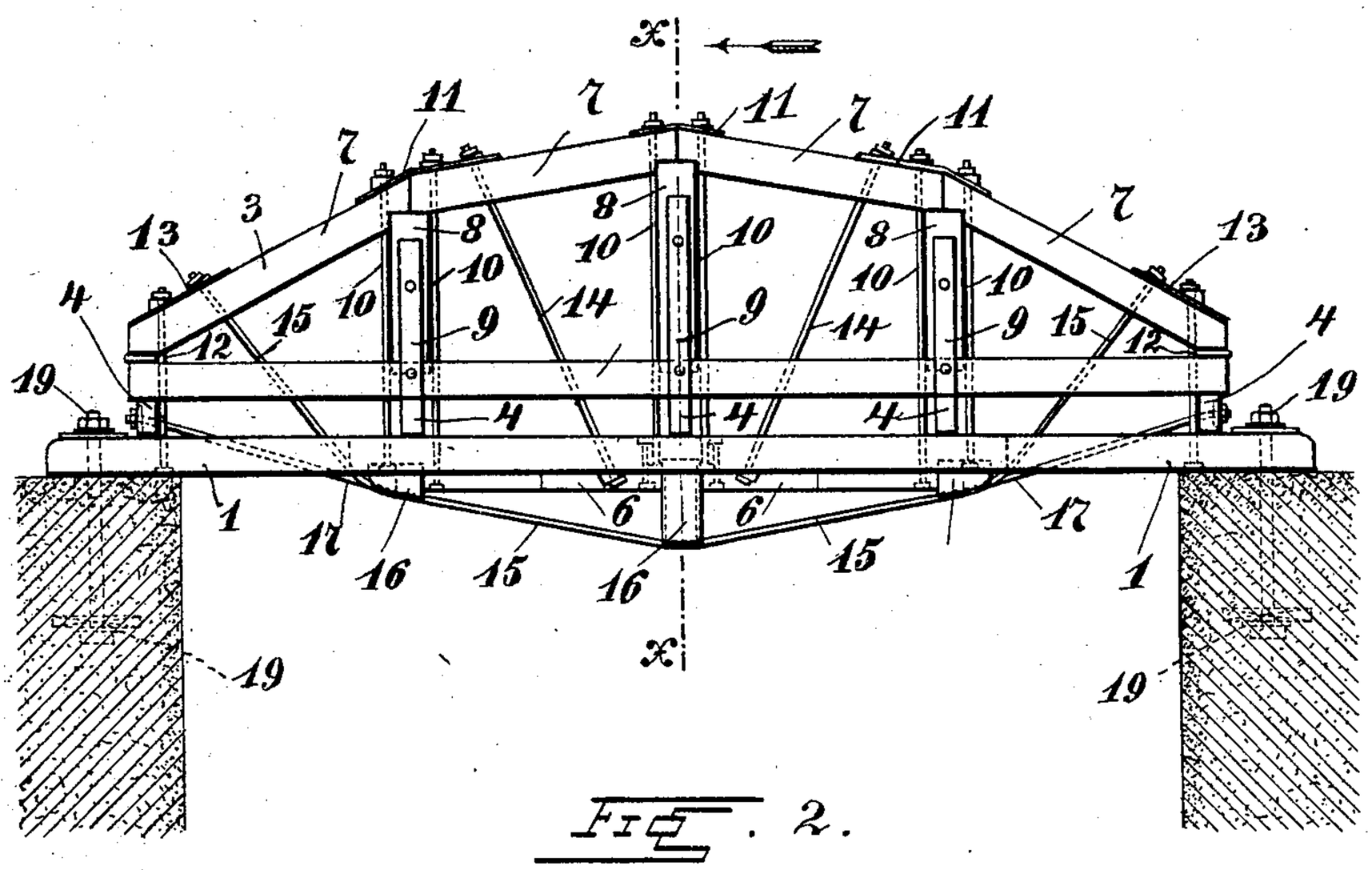
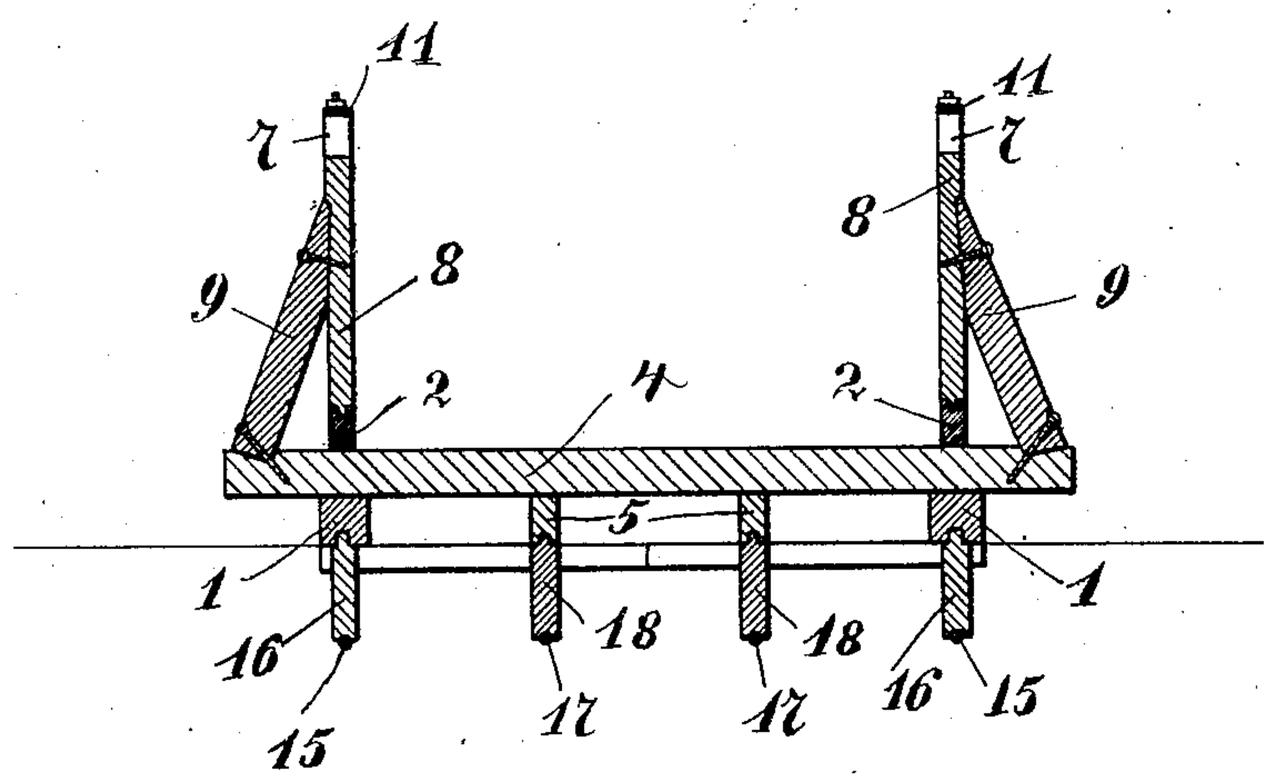


Fig. 2.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

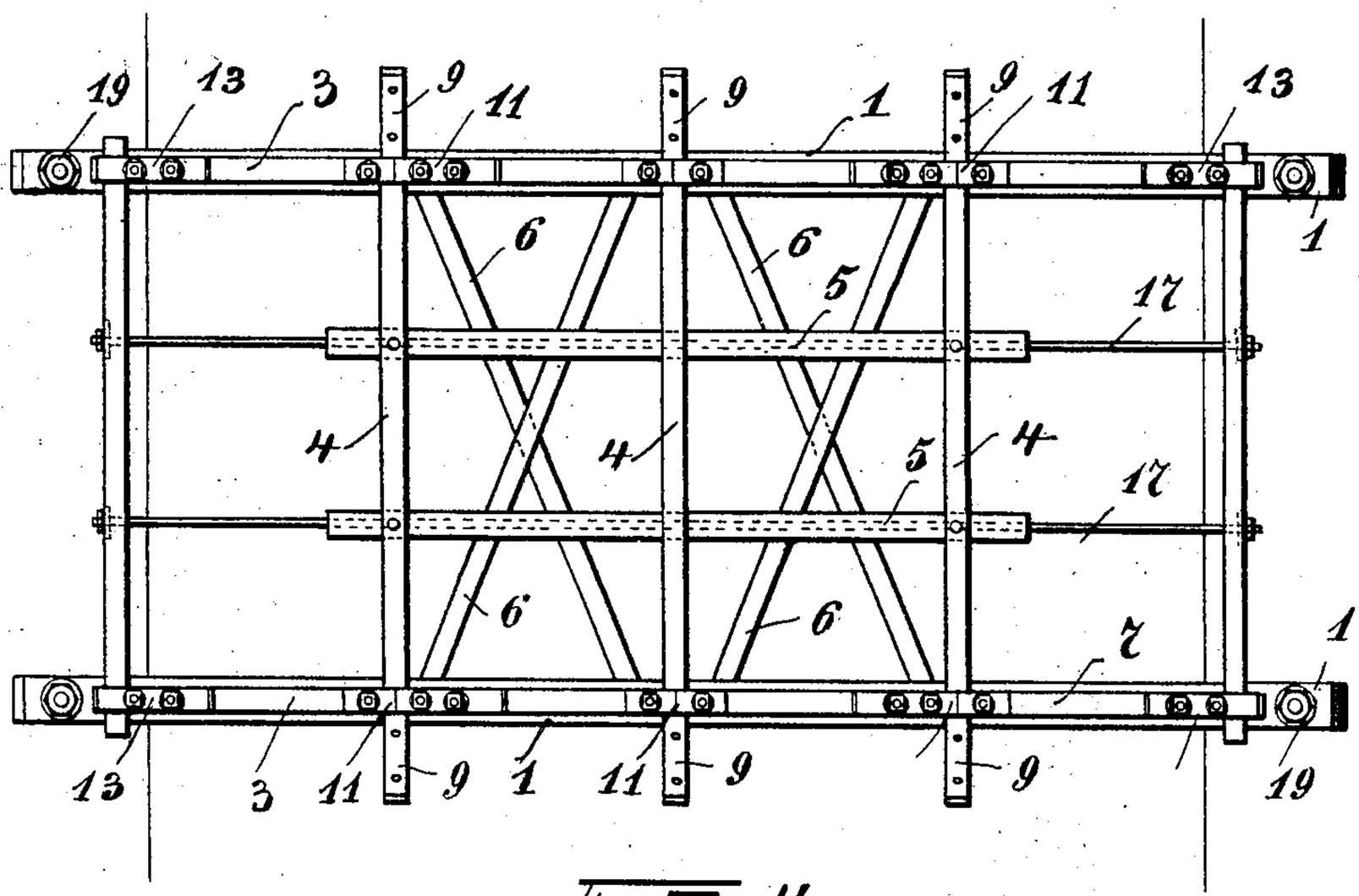
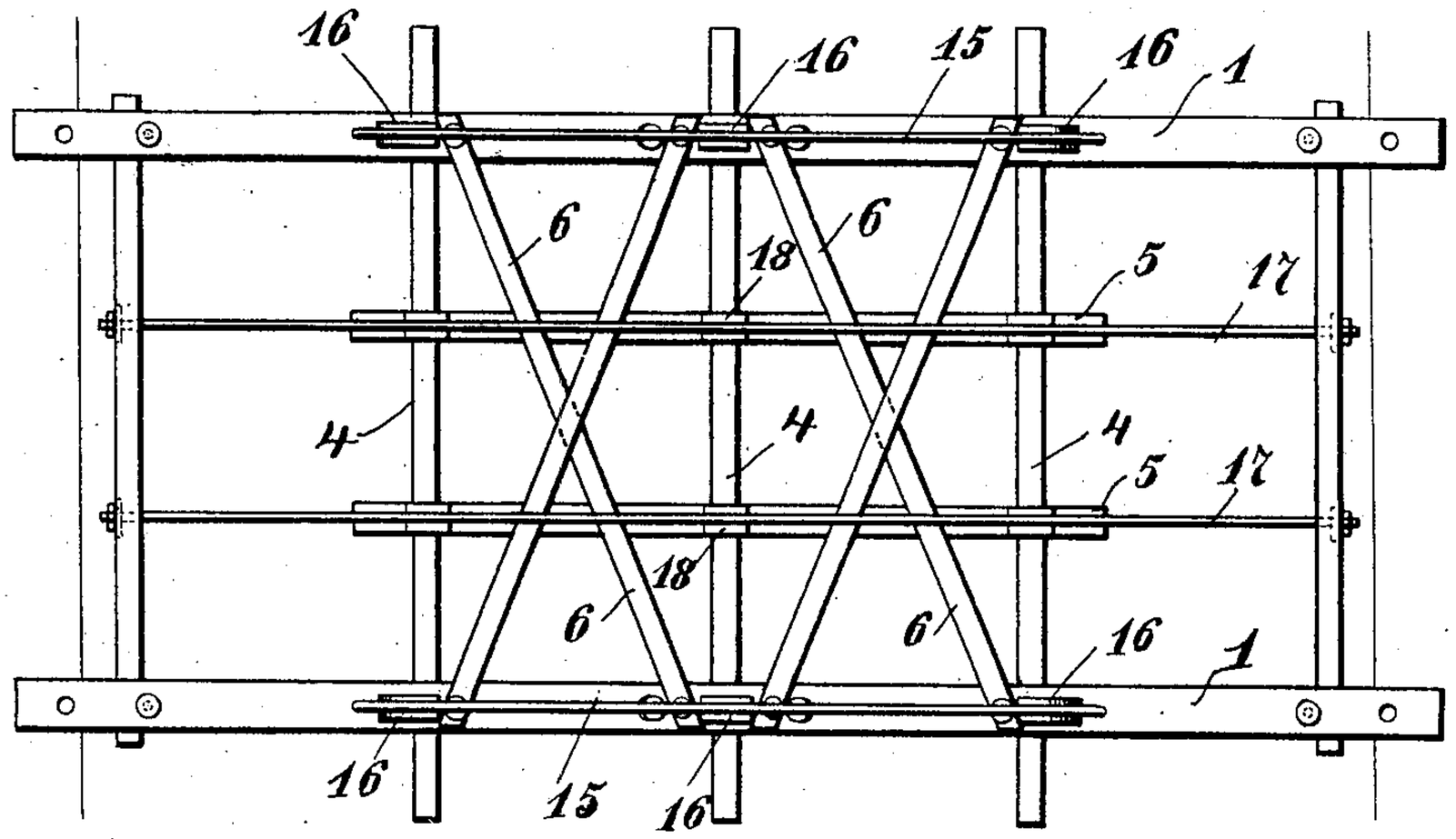


Fig. 4.



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No. 762,632. Patented June 14, 1904.

UNITED STATES PATENT OFFICE.

JOSEPH W. HEADLEY, OF COOPERS, ALABAMA.

TRUSS-BRIDGE.

SPECIFICATION forming part of Letters Patent No. 762,632, dated June 14, 1904.

Application filed February 18, 1904. Serial No. 194,242. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. HEADLEY, a citizen of the United States, residing at Coopers, in the county of Chilton and State of Alabama, have invented certain new and useful Improvements in Truss-Bridges; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in truss-bridges.

The object of my invention is to provide a bridge of this character which will be simple in construction, strong and durable in use, and comparatively inexpensive to produce.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved bridge. Fig. 2 is a vertical transverse section taken on the line *x x* of Fig. 1. Fig. 3 is a top plan view of the bridge. Fig. 4 is a bottom plan view of the same.

In the embodiment of my invention, as illustrated in the drawings, the numerals 1, 2, and 3 denote, respectively, lower, intermediate, and upper chords or stringers of a truss-bridge. The bottom stringers 1, which have their ends supported by the opposite banks of the stream, chasm, or the like spanned by the bridge, are connected at intervals by transverse beams 4, upon which the bridge-floor (not shown) is secured. The intermediate stringers 2 connect these transverse or cross beams and are disposed directly above the bottom stringers 1. These cross-beams are further connected by short longitudinal stringers 5, which are disposed between the stringers 1 in the same horizontal plane, and said stringers 1 and 5 are braced and strengthened by crossed diagonal braces 6, as clearly shown in Figs. 3 and 4. The top stringers 3 are composed of a number of short beams 7, suitably jointed together to form a bow or arch, the ends of which bear upon the ends of the intermediate stringers 2. The curved stringers 3 are supported at each of their joints by uprights 8, which are mounted upon the upper sides of the stringers 2, and the uprights 8 are strengthened by inclined side braces 9, mounted upon the outer projecting ends of the transverse or cross beams 4. Upon each side of the uprights 8 are vertical tie-rods 10, which project through openings in the stringers 1, 2, and 3 and also through plates 11, secured upon the upper sides of the stringers 3 at each of their joints. Vertical tie-rods 12 also unite said stringers 1, 2, and 3 adjacent to their ends and have their upper ends projecting through plates 13, secured upon the upper sides of the stringers 3 at the ends of the latter. The three stringers 1, 2, and 3 are further united by inclined or diagonal tie-rods 14, which have their upper ends passing through the plates 11, as shown. The stringers 1, 2, and 3 are strengthened by truss-rods 15, which extend longitudinally and are curved or bowed reversely to the stringers 3. The ends of these truss-rods or braces 15 project upwardly through the stringers 1, 2, and 3 and through the plates 13, as shown, and their central portions are engaged by brace-blocks 16, secured to the under sides of the stringers 1. Curved or bowed truss-rods 17 are further provided and have their ends passing through the end cross-beams 4, as seen in Figs. 1 and 4. These truss-rods 17 are disposed directly below the short stringers 5, and their central portions are engaged with blocks 18, secured upon the under sides of said stringers 5. The ends of the bridge may be mounted upon any suitable foundations, and are preferably secured firmly in position by suitable anchor devices 19, as shown in Fig. 1.

The construction and advantages of my invention will be readily understood from the foregoing description, taken in connection with the accompanying drawings. It will be seen that I have provided a strong durable bridge which is of simple and comparatively inexpensive construction and well adapted for spanning small streams, rivers, creeks, branches, ravines, chasms, &c. When the bridge is not of great length, no pillars or supports of any kind are needed between its ends, and when its ends are securely fastened

or anchored it will be almost impossible for a flood to damage or wash the bridge away. It will be further seen that small bridges may be constructed at one point and then shipped to the desired place to be mounted.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. A truss-bridge comprising upper, lower and intermediate chords or stringers, transverse beams spacing and connecting said lower and intermediate stringers, tie-rods uniting said stringers, and truss-rods for strengthening the same, substantially as described.

2. A truss-bridge comprising upper, lower and intermediate chords or stringers, transverse beams spacing and connecting said lower and intermediate stringers, uprights between said intermediate and said upper beams, side braces for said uprights, tie-rods uniting said upper, lower and intermediate stringers, longitudinal truss-rods uniting said upper, lower and intermediate stringers, and longitudinal truss-rods connecting said transverse beams, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH W. HEADLEY.

Witnesses:
D. A. DERAMUS,
A. N. OLDERSON.