

(No Model.)

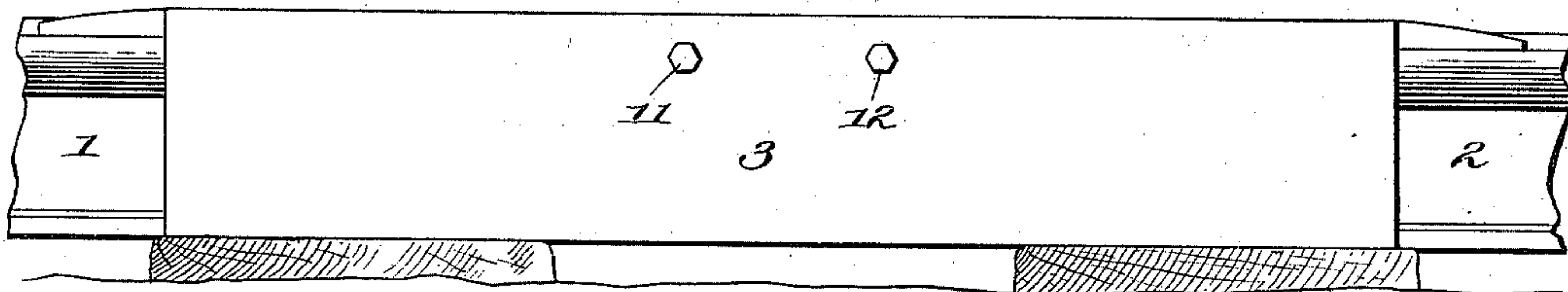
C. DICKENSON.

TRUSS BRIDGE FOR RAIL JOINTS OF RAILWAYS.

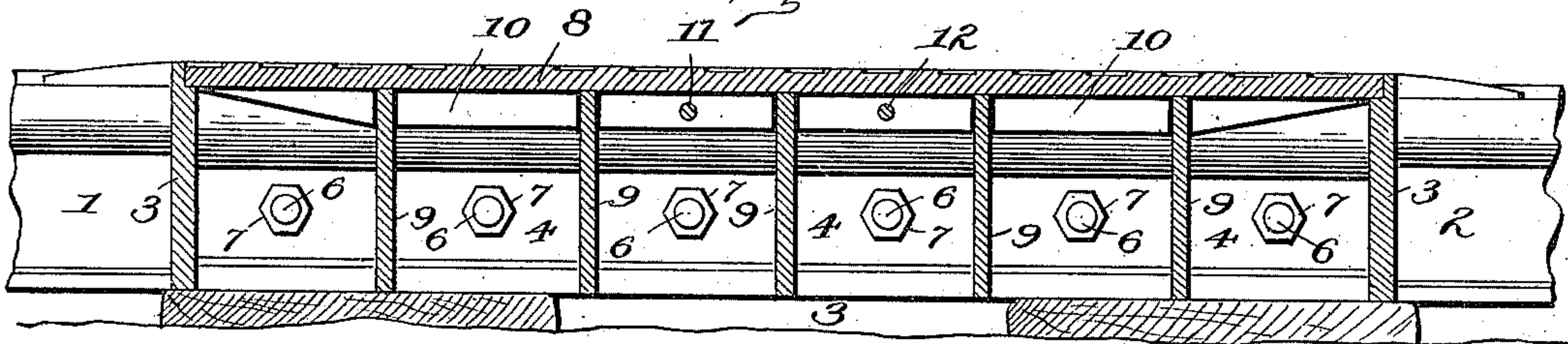
No. 600,907.

Patented Mar. 22, 1898.

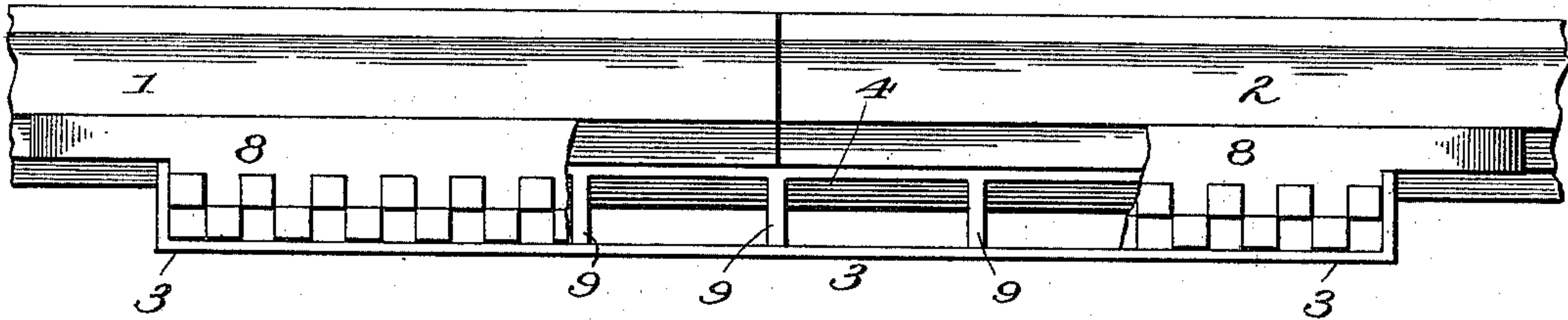
*Fig. 1.*



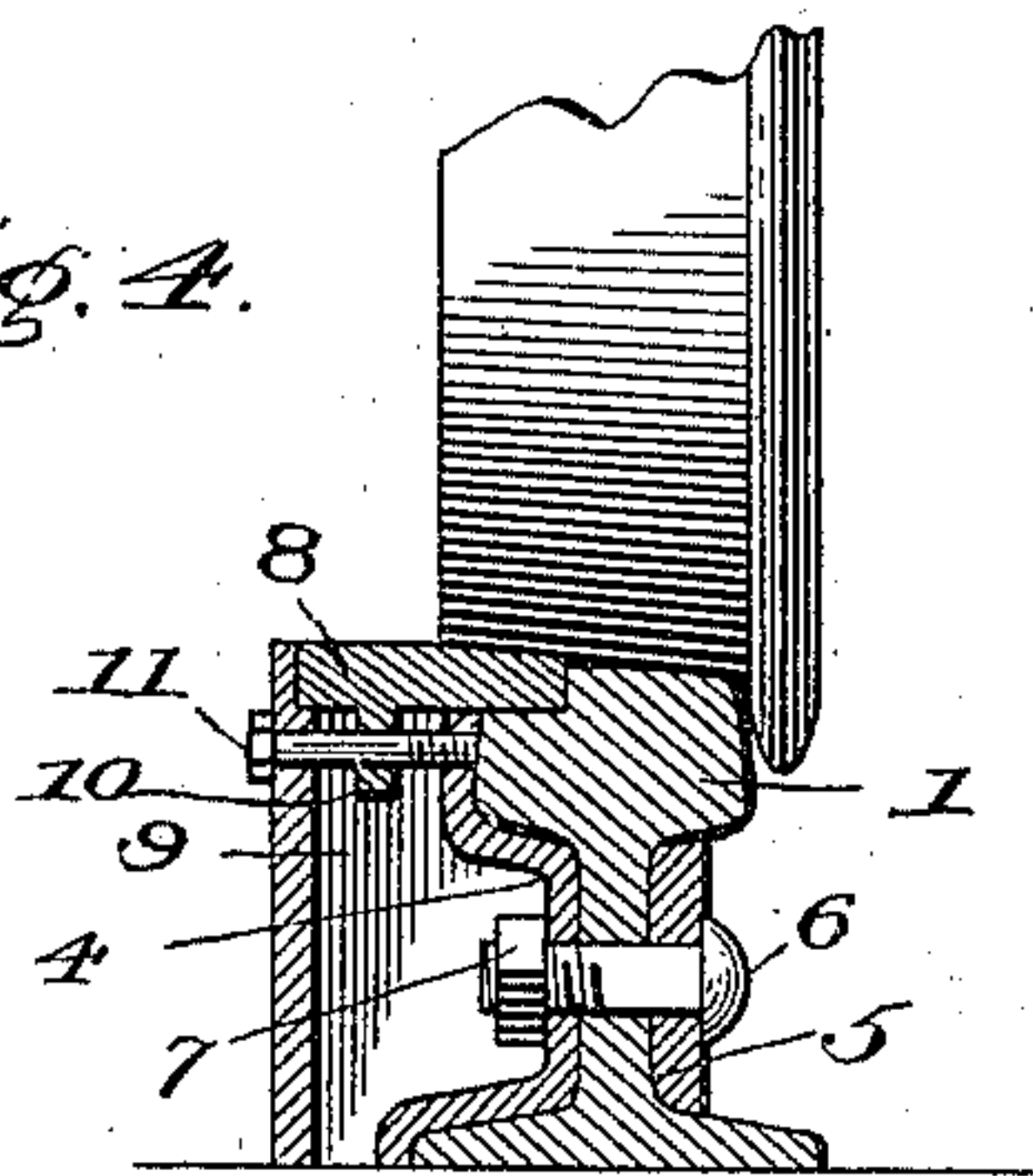
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHARLES DICKENSON, OF WASHINGTON, DISTRICT OF COLUMBIA.

## TRUSS-BRIDGE FOR RAIL-JOINTS OF RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 600,907, dated March 22, 1898.

Application filed September 1, 1897. Serial No. 650,255. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES DICKENSON, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Truss-Bridges for the Rail-Joints of Street and Urban Railways; 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to truss-bridges for the rail-joints of street and urban railways; and it consists in the construction and operative disposition of the parts of the truss-bridge, as hereinafter fully described and claimed.

In the drawings, Figure 1 is a side elevation of a railroad-rail joint provided with my improved truss-bridge. Fig. 2 is a vertical longitudinal sectional view of the truss-bridge, the ends of the same being shown resting on two adjacent ties. Fig. 3 is a plan view of the rail-joint and the truss-bridge, a portion of the latter being broken away to show the transversely-disposed strengthening portions formed integrally with the fish-plate; and Fig. 4 is a vertical transverse sectional view of a railroad-rail, the truss-bridge at the rail-joint, a car-wheel riding on the rail and truss-bridge, one of the two bolts used to secure the truss-bridge removably in place, and one of the bolts employed to secure the fish-plates to the rail-joint, showing also the rabbet in the rail for the reception of the inner edge of the truss-bridge, the inner edge of the truss-bridge being shown resting in the rabbets at the meeting ends of the rails.

Among the objects of the invention is to provide a practically continuous railroad-rail by using a truss-bridge the ends of which rest upon two adjacent ties, which serve as supports or piers. To be practicable, the bevel of the truss-bridge must correspond with the bevels of the treads of the car-wheels that pass over it while running over a straight line of track; but when a car-wheel arrives at a curve in the track the bevel of the truss-

bridge must be changed to correspond, because the outside of the outer rail of the track is the higher of the two; hence the requirement for the change in the bevel of the truss-bridge. Further, owing to the improved construction, hereinafter fully described, the joints of the rails will not be injured by the weight of the passing car-wheels and what is termed "pounding" of the car-wheels will be obviated. The truss-bridge can be applied to any track without alteration of the rails, as the inside wall of truss-bridge forms a fish-plate, which can be substituted for the old one removed where an equal number of bolt-holes and bolts occur; but of course where they do not correspond new ones may be provided. In this connection it should be observed that the truss-bridge may be used in connection with rail-joints wherein the rails are not rabbeted in the outer portions of their treads, as the inner edge of the truss-bridge may abut against the outer edge of the tread of the rail and perform practically the same service.

Referring by numeral to the accompanying drawings, 1 and 2 designate two contiguous rails of a railroad-track. In the preferred construction the railroad-rails are rabbeted in the outer upper portions of their treads. A joint-box 3 is provided in connection with the rail-joint. The joint-box is shown bottomless, and its inner wall 4 conforms to the contour of the outside of the rail and serves as the outer fish-plate of the rail-joint. The fish-plate 5 is an ordinary plate. 6 designates the bolts, and 7 the nuts for securing the joint-box and fish-plate to place. The end walls and outer wall of the joint-box are rabbeted along the upper edges, on the inside, to form shoulders for the truss-bridge 8, which rests thereon and upon transverse integral partitions or supports 9.

The truss-bridge 8 is provided on its lower face with a longitudinal rib 10, having upwardly-beveled ends, said rib being recessed or notched at intervals to receive the upper edges of the strengthening portions or supports 9. Transversely-disposed threaded bolts 11 12 are passed through holes in the outer wall of the joint-box and through holes in the rib 10, which prevents the accidental



displacement or removal of the bridge from the joint-box. The upper face of the truss-bridge is roughened along its outer portion to afford footing for animals when crossing the same. The inner portion of said upper face is made plain, except that its ends are inclined outwardly to prevent jarring as the car-wheels ascend the bridge, traveling in either direction.

10 The upper plain surface of the truss-bridge 8 is beveled or inclined inwardly toward the vertical portion on the inner side of the rabbet to correspond to the beveled or outwardly-inclined portion of the tread of the car-wheel, which comes in contact with said beveled portion of the truss-bridge as the wheel rides over the truss-bridge and rail-joint.

The bridge may be readily removed when necessary to afford access to the joint-box for the purpose of tightening the nuts upon the bolts of the rail-joint or for other purposes.

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

25 1. The combination with a rail-joint, of a truss-bridge beveled on the upper face of its plain portion toward the tread of the rail, and supported in substantially the same plane with the tread of the rail-joint, as set forth.

30 2. The combination with a rail-joint of the truss-bridge beveled along the upper face of its plain portion, and supported in contact with and substantially in the same plane with

the treads of the rails of the rail-joint, as set forth.

3. The combination with a rail-joint, the rails of which rest upon contiguous ties, of the truss-bridge beveled on the upper face of its inner plain portion toward the tread of the rail, the bevel corresponding to the bevel on the tread of the car-wheel and supported by a joint-box, the inner wall of which forms one of the fish-plates of the rail-joint, as set forth.

4. The combination with a rail-joint and a joint-box, of a removable truss-bridge provided with a beveled upper face along its inner edge and having a depending rib through which securing-bolts are passed into the walls of the joint-box, as set forth.

5. The combination with the railroad-rails rabbeted along the outer sides of their treads, of the joint-box having the removable truss-bridge fitted to the rabbets of the rails and secured to the joint-box, as set forth.

6. The combination with the railroad-rails having continuous rabbets in the outer portions of their treads, of the joint-box and the removable truss-bridge supported by the rails and joint-box, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES DICKENSON.

Witnesses:

THEO. MUNGEN,

EDWIN L. BRADFORD.