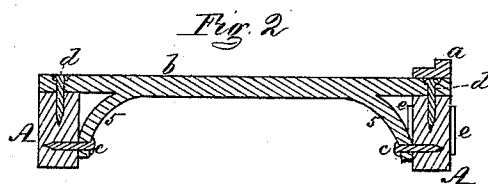
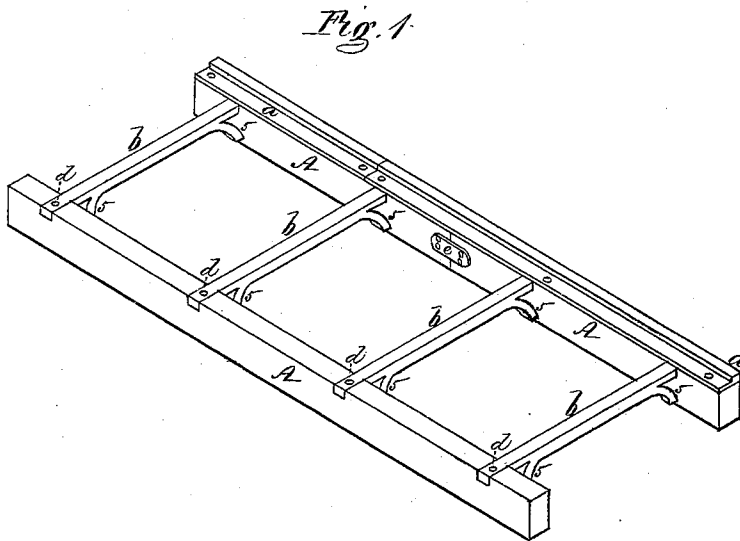


J. R. BECKETT.
Street Railways.

No. 142,668.

Patented September 9, 1873.



Witnesses

P. C. Washburn
W. J. Cambridge

Inventor

John R. Beckett

UNITED STATES PATENT OFFICE.

JOHN R. BECKETT, OF CUSHING, MAINE, ASSIGNOR TO HIMSELF AND
CALVIN B. PAYSON, OF SAME PLACE.

IMPROVEMENT IN STREET-RAILWAYS.

Specification forming part of Letters Patent No. **142,668**, dated September 9, 1873; application filed
August 20, 1873.

To all whom it may concern:

Be it known that I, JOHN R. BECKETT, of Cushing, in the county of Knox and State of Maine, have invented an Improvement in the Construction of Road-Beds for Horse-Railroads, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a perspective view of a portion of the road-bed of a horse-railroad constructed in accordance with my invention. Fig. 2 is a transverse section through the same.

Road-beds for horse-railroads as now constructed consist of longitudinal wooden stringers resting upon transverse wooden sleepers or ties, to which they are secured by angle-braces bolted to the sleepers and stringers on each side of the latter, the whole being so placed that the upper surface of the rails which are bolted onto the stringers will be on a level with the top of the surrounding pavement. The stringers, being merely confined near the bottom by the braces, which extend up a short distance only, are, however, liable to be rocked outward or spread apart by the passage over them of the cars or heavy wagons; and this spreading of the track is a serious objection, as it often causes the cars to be thrown from the rails, and necessitates the digging up of the street in order to replace the stringers and secure them in position.

My invention has for its object to prevent the spreading of the stringers, and, at the same time, to enable me to dispense with the transverse wooden sleepers and greatly reduce the number of spikes required to secure the stringers in place, whereby a great saving in the cost of constructing the road-bed is effected; and my invention consists in a road-bed for horse-railroads composed of longitudinal stringers united together by metal braces of peculiar construction extending transversely between them, whereby they are held firmly together both at the top and bottom, so that there is no possibility of their spreading, the stringers resting directly on the earth, instead of on transverse sleepers, which are thus dispensed with, enabling me to save their cost, as well as that of setting them in the ground.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A A represent the longitudinal wooden stringers on which the rails *a* are laid. These stringers rest directly on the earth, which is excavated to receive them to such a depth that the rails, when secured thereon, will lie flush with, or slightly below, the top of the pavement. *b b* are wrought-iron braces, which extend between the stringers A A, and are secured thereto at suitable distances apart, say from five to seven feet. Each of these braces *b* is bifurcated at each end, the lower branch, *5*, being curved downward, and extending to or nearly to the bottom of the stringer, where it is securely fastened by a spike or bolt, *c*, driven into the inner side of the stringer, while the upper or horizontal end of the brace is let in flush with or a little below the upper surface of the stringer, where it is held by a spike or bolt, *d*, the head of which is countersunk flush with the upper surface of the brace, which is intended to lie about one inch and a half below the upper surface of the pavement, and to be covered with gravel. The stringers A A are thus held rigidly by the bifurcated ends of the braces both at the top and bottom, any strain which may tend to spread the stringers apart being brought upon the bolts *d* in a direction at right angles to their length, and consequently there is no liability of their being drawn or loosened, as is the case with the bolts used to fasten the angle-braces heretofore employed; furthermore, but four spikes are required to fasten each of the braces *b*, while twelve spikes are required to secure the four angle-braces heretofore employed to fasten the stringers to each transverse wooden sleeper, and these sleepers being dispensed with, as well as the angle-braces, I am also enabled to save their cost, together with the labor of setting the sleepers in the ground, thus effecting a great saving in the cost of constructing the road-bed, which, by my improvement, is rendered much stronger and more durable than heretofore, and all liability of the tracks spreading and causing the cars to run off the rails is

thus entirely avoided. The contiguous ends of the stringers A A are held together by iron plates *c* bolted on each side, care being taken not to make the joint formed by the union of two stringers on one side of the track opposite to a similar joint on the other side of the track.

What I claim as my invention, and desire to secure by Letters Patent, is--

The within-described road-bed for horse-railroads, consisting of the longitudinal string-

ers A A, united by bifurcated metallic braces *b* extending transversely between them, substantially in the manner and for the purpose described.

Witness my hand this 13th day of August, A. D. 1873.

JOHN R. BECKETT.

In presence of--

P. E. TESCHEMACHER,
W. J. CAMBRIDGE.