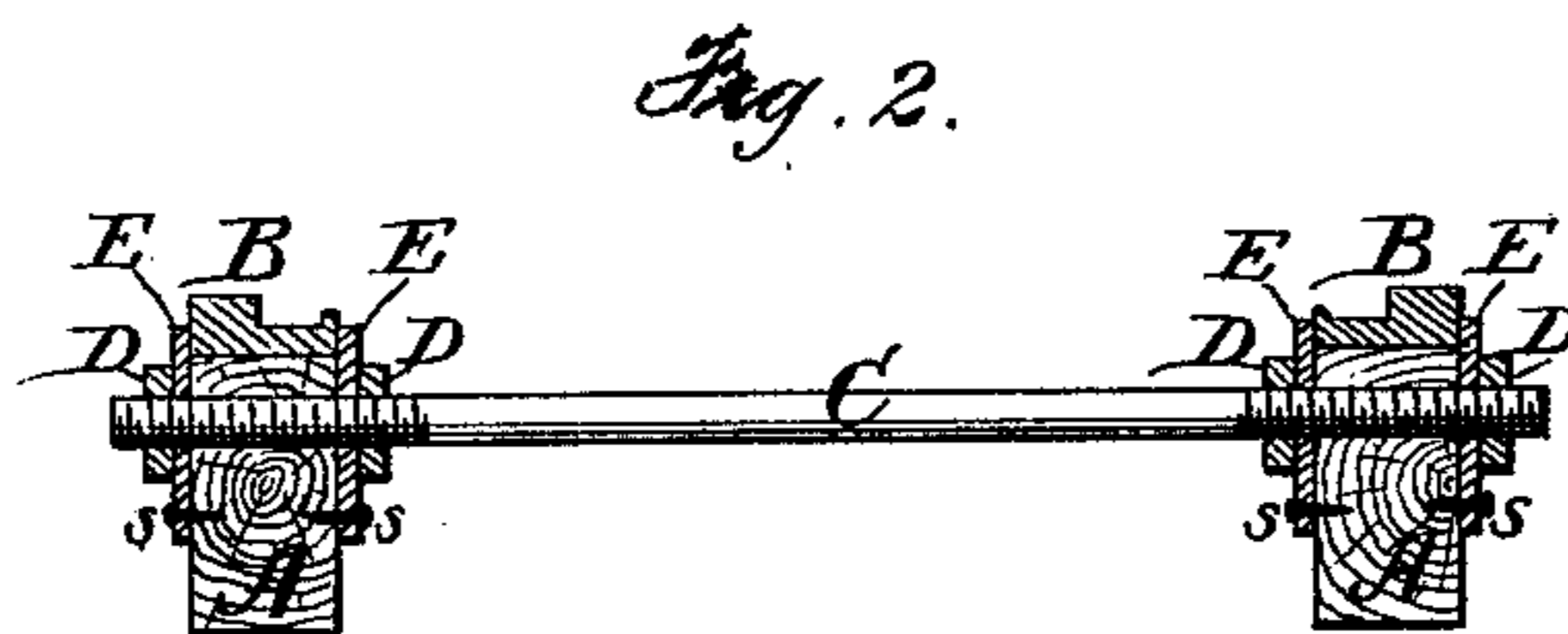
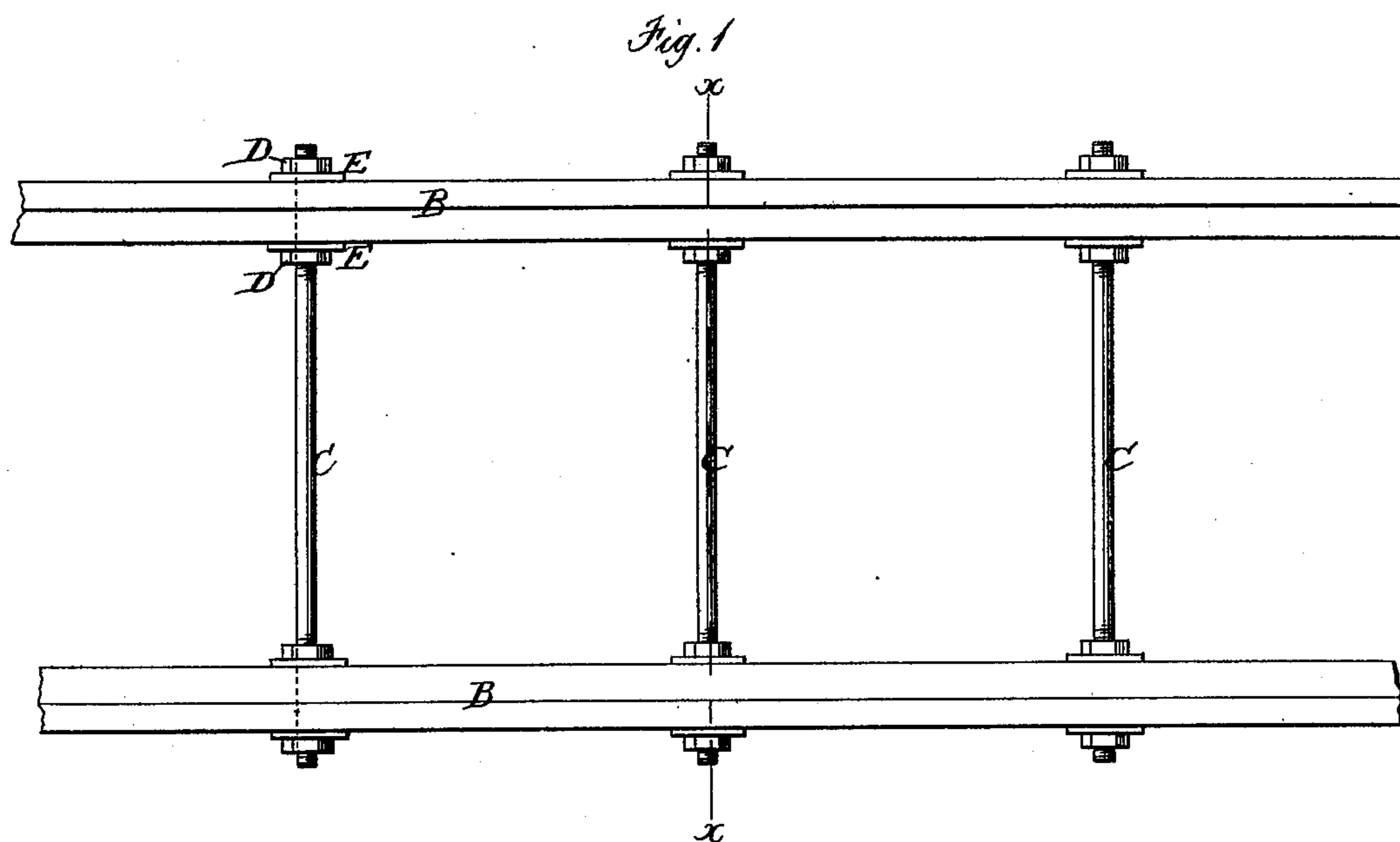


J. TURNER.
Tie for Street Railway Tracks.

No. 197,300.

Patented Nov. 20, 1877.



Witnesses.
J. M. Skinner
A. E. Denison.

Inventor.
John Turner
by Wright & Brown
His attys.

UNITED STATES PATENT OFFICE.

JOHN TURNER, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN TIES FOR STREET-RAILWAY TRACKS.

Specification forming part of Letters Patent No. **197,300**, dated November 20, 1877; application filed September 11, 1877.

To all whom it may concern:

Be it known that I, JOHN TURNER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Ties for Street-Railroad Tracks, of which the following is a specification:

In the accompanying drawings, forming a part of this specification, Figure 1 represents a top view of a street-railroad track embodying my invention; and Fig. 2 represents a section on line *x x*, Fig. 1.

Similar letters of reference in the different figures refer to like parts.

This invention relates to street-railroad tracks in which the longitudinal wooden stringers which support the rails are connected by transverse metallic ties instead of by wooden sleepers.

The object of the invention is to enable the stringers and the rails thereon to be rigidly held against lateral displacement in both directions by the metallic ties, and to be fixed at a greater or less distance apart.

To these ends my invention consists in the construction and combination of parts, which I will now proceed to describe.

In the drawings, A A represent the stringers, B B the rails, and C C the metallic ties, of a street-railroad track. The ties are provided with screw-threads on their opposite ends, and are of such length that they will extend across the track through both stringers, and project beyond the outer sides of the latter, as shown in Fig. 2, transverse holes being made through the stringers for the reception of the ties.

D D represent jam-nuts, which are applied to the threaded ends of the ties C, on each side

of each of the stringers A; and E represents washer-plates, which are interposed between the nuts and the proximate surfaces of the stringers. The plates E are of such length that they project upwardly above the sleepers, on each side of the rails B, as shown in Fig. 2, and these plates are secured to the sides of the stringers by spikes *s*, so that they will not revolve.

It will be seen that by turning the nuts D snugly against the plates E, the stringers will be securely held, at a fixed distance apart, against lateral displacement in either direction. The plates E, projecting upwardly, and bearing against the sides of the rails, prevent lateral displacement of the latter independently of the stringers, thereby preventing the spreading of the track when a rail becomes loosened or partially detached from its support. By adjusting the nuts on the ties C the stringers can be fixed at any desired distance apart. I am thus enabled to vary the gage of the track where it is connected to a switch and on curves, as is often necessary, without employing different ties.

I claim as my invention—

The combination, with the sleeper-rails, ties, and nuts, of washers E, extending at each side above the tops of the sleepers, for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN TURNER.

Witnesses:

E. B. FAIRCHILD,
C. F. BROWN.