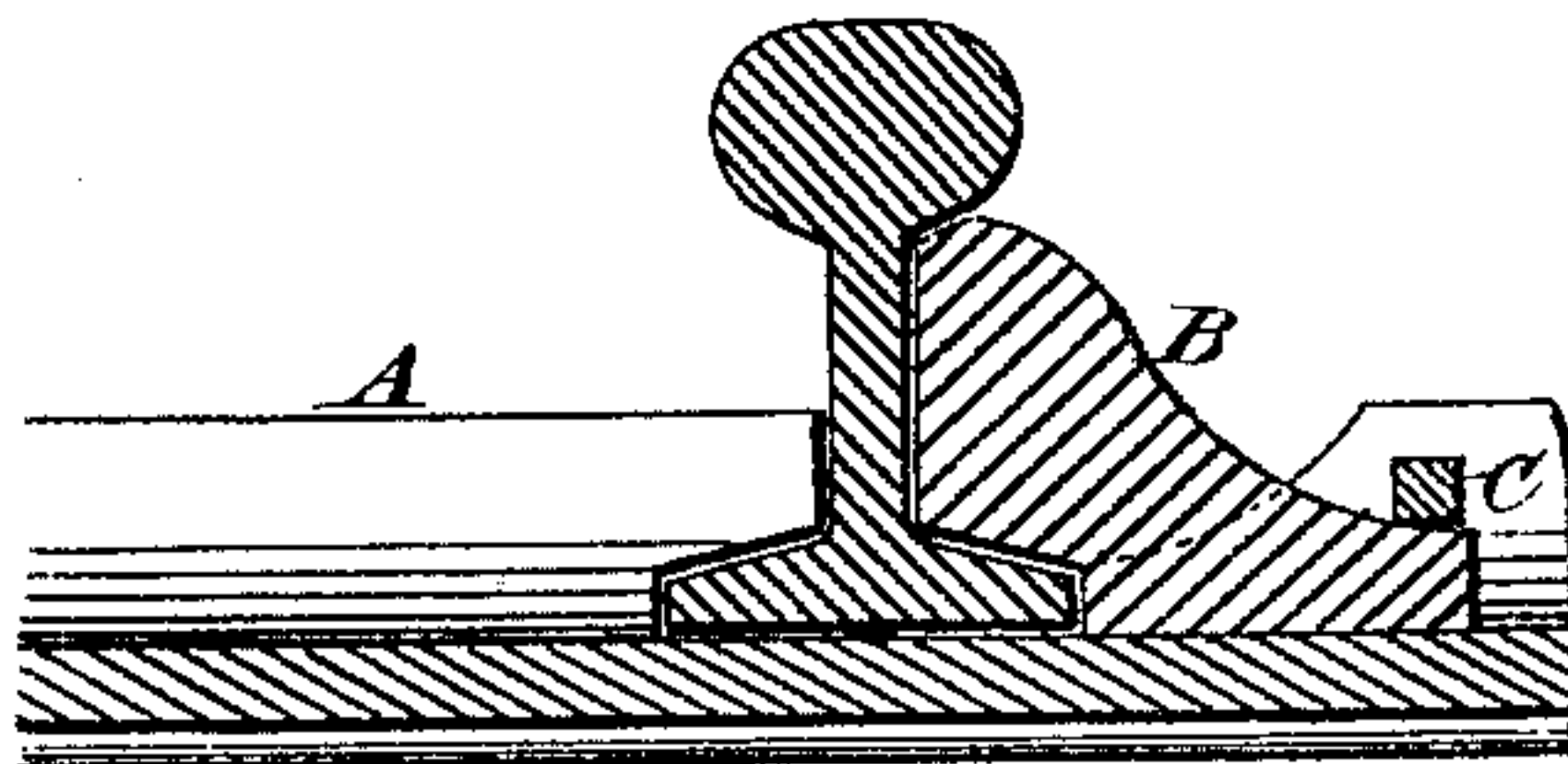


E. E. LEWIS.  
RAILROAD TIES.

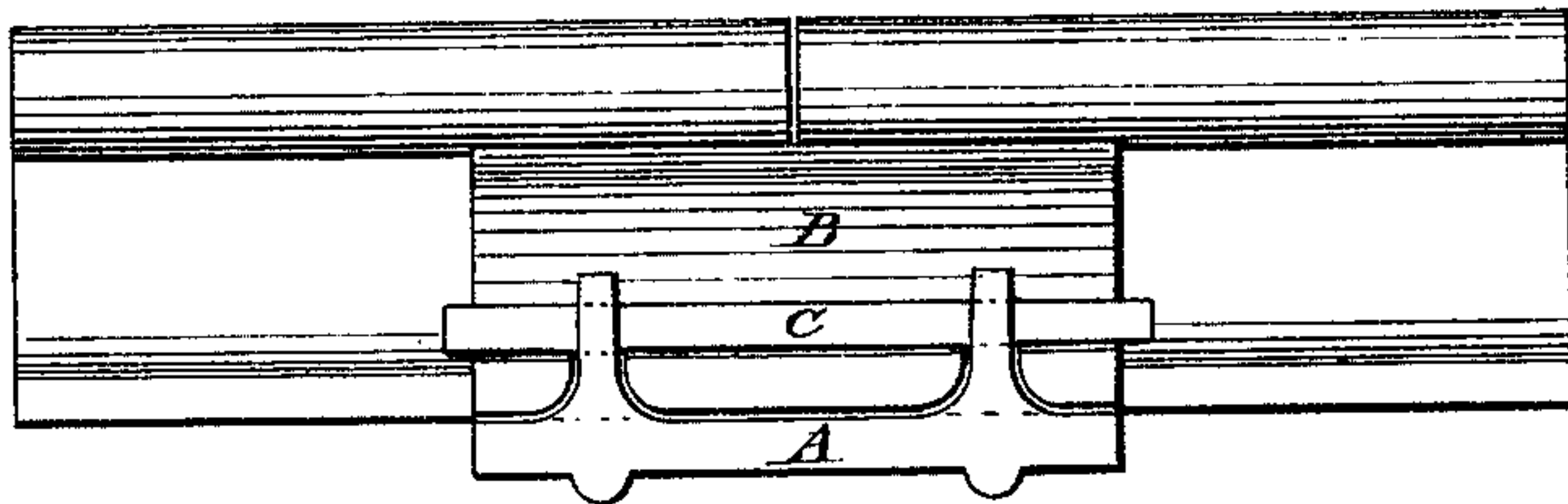
No. 183,768.

Patented Oct. 31, 1876.

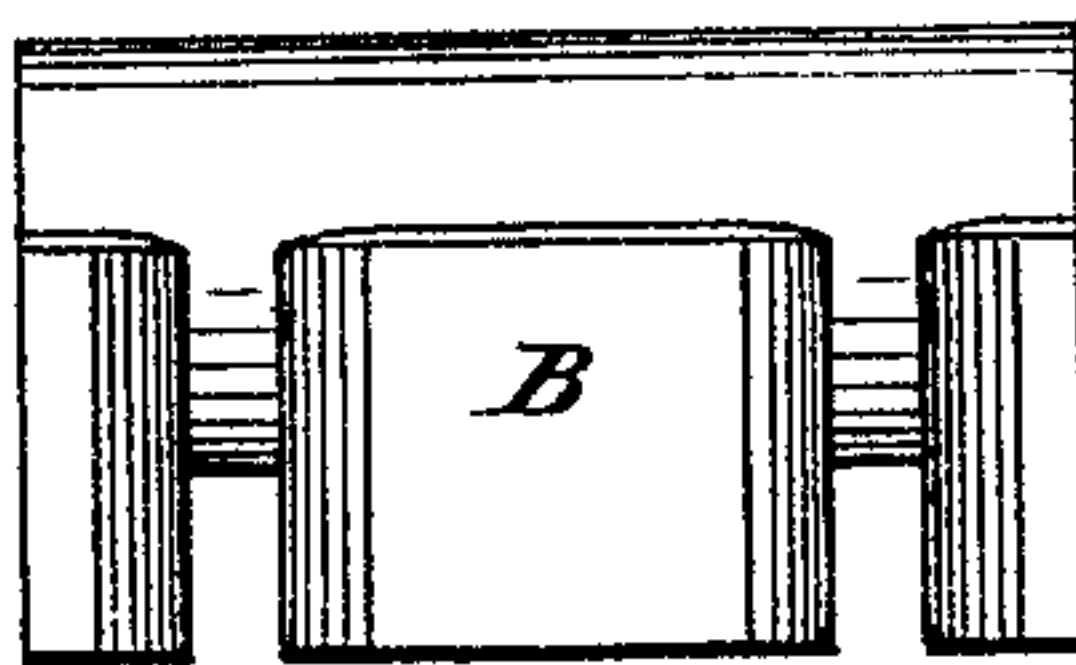
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*

*John E. Lewis.*  
*Charles Hetchum.*

*Inventor:*

*Ebenzer E. Lewis*

# UNITED STATES PATENT OFFICE.

EBENEZER E. LEWIS, OF GENEVA, ASSIGNOR OF ONE-FOURTH OF HIS  
RIGHT TO DAVID P. DEY, OF WATKINS, NEW YORK.

## IMPROVEMENT IN RAILROAD-TIES.

Specification forming part of Letters Patent No. **183,768**, dated October 31, 1876; application filed  
May 20, 1876.

*To all whom it may concern:*

Be it known that I, EBENEZER E. LEWIS, of Geneva, in the county of Ontario and State of New York, have invented a new and useful Improvement in Railroad-Ties, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to construct a railroad-tie that will hold the ordinary railroad-rails at their union, and may be used to support any other portion of the rail, by making two projections on the upper surface of the tie, and in each projection rail-seats for the railroad-rails of any kind preferred, making the outside of the seats open to receive the rail, and making a part to be placed within the opening, that may be held in place by a key, which, when in place, will hold the rail and tie firmly together, as shown in the accompanying drawings, in which—

Figure 1 is a vertical section; Fig. 2, an end view of the tie and side of a rail; and Fig. 3, an under-side view of the brace.

A is the railroad-tie, which is made long enough to have rail-seats in each end, to give the proper width of track and have the required length outside of the rails. It is composed of a broad plate, on which the rail-seats and projections are made, and on the under side of this plate are ribs, to give it vertical strength and prevent it from being drawn in the direction of the line of the road. On the top of the plate are two projections, which strengthen the tie. In each projection are places for receiving the rails. At the inside of the rails the projections fit the shape of the rails from the flange upward as far as the projection extends. The upper surface of the broad plate is made straight and level, so that the bottom of the rail will fit closely upon its entire width, and at each side of the bottom flange of the rail the projections form notches, that will hold the rail from moving

sidewise. At the outside of the place for the base of the rails the projections are cut away from near the lower edge in a circular form, as shown in Fig. 1, so that the rail may be readily put into its place and the brace applied and fastened. Near the end and near the upper edge of each projection is a hole for a key, which holds the brace firmly in its place.

B is the brace. It is applied to the outside of the rail to prevent its being moved outward, and to hold it in place. The under side of the brace is shaped to fit the top of the broad plate, the top of the flange of the rail, and the circular spaces in the upper projections, by having notches corresponding with the circle in the projections, and the inner end is made to fit the outside of the rail as far as it extends up the side of the rail. The upper surface is curved from the rail downward, and extends outward under the key that holds it in place. This brace holds the rail in every direction of contact. The weight of the brace will hold it in place; but, to keep it more secure, a pin or key is put through the holes in the projections over the outer end.

C is the pin or key that is put through the holes in the upper projections, as shown in Figs. 1 and 2. This key holds the outer end of the brace downward only, and when the end of the brace is held down the force against the brace by the rails is resisted by the upper projections, so that but little strength of key is required to hold the brace.

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

The railroad-tie A, with its brace B and key C, made and applied to railroad-rails, substantially as and for the purpose set forth.

EBENEZER E. LEWIS.

Witnesses:

JOHN L. LEWIS,  
CHARLES KETCHUM.