

E. E. LEWIS.
RAILROAD TRACK.

No. 183,767.

Patented Oct. 31, 1876.

Fig. 1.

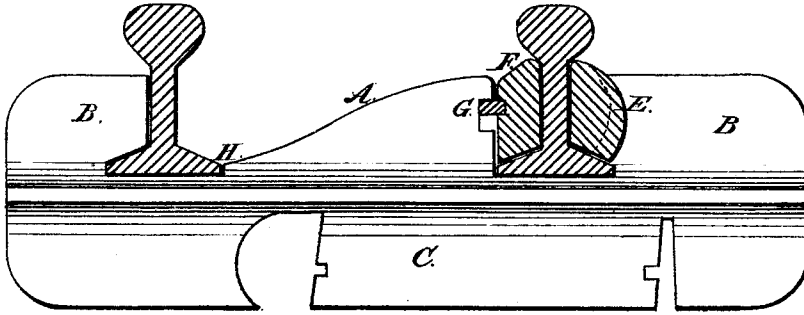


Fig. 2.

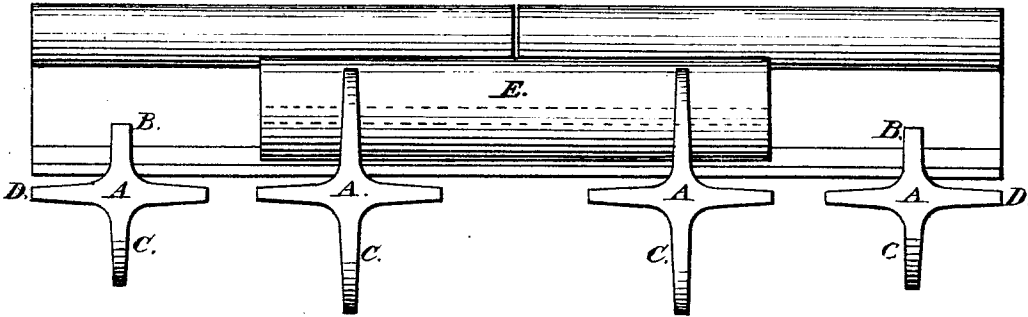
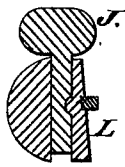


Fig. 3.



Witnesses:

D. A. Ogden
Charles Ketchum

Inventor:

Ernest 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-TRACKS.

Specification forming part of Letters Patent No. **183,767**, dated October 31, 1876; application filed
February 28, 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 Railroads, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to make a railroad-tie that will support the ordinary railroad-rails, with side plates at the union of the rails, and with keys between the inside side plate and the side of the rail-seat, with the rail-seat made in the tie, so that the rail may be dropped down into the seat and the outside plate applied, or, when repairing the road, the tie may be passed under the rail and raised up so that the bottom of the rail-seat will come up to the bottom of the rail. The rail-seats in the ties may be made alike in each end of the upper projection of the tie, or a seat may be made to fit the outside of the rail, and the projection left off down to the flange of the rail. Thus made, it may be applied to the rail by passing it under the rail, and putting the seat on the bottom of the rail, when both kinds of rail-seats are made in the same projection. Of all the ties, except in the ties at the union of the rails, they should be changed ends alternately. The ties are made with the opposite projections nearly alike, and in the opposite projection is made any kind of rail-seats that will suit the new kind of rails that may be used in the place of the old rails, as represented in the accompanying drawings, in which—

Figure 1 is a side view of the tie and rails applied. Fig. 2 is an end view of the ties and side of the rails. Fig. 3 is an end view of the outside side plate and rails with which it is used.

A is the railroad-tie. It may be made of iron or steel. It is composed of an upper projection, B, united with the base-plate D, and another projection, C, opposite, and similar to the upper one. It is connected with the same base-plate D, the upper projection having a rail-seat made large enough to let the bottom of the rail be dropped down into it, and when the rail is fast, as in old roads, the tie may be

passed under the rail, and be raised up to the rail and fastened. The rail-seat has a key-seat made in the side toward the middle of the tie, and about midway from the bottom to the top, for the key G to be driven into to fasten the rail within the seat with the side plates E and F by the side of the rail, as represented in Fig. 1, where, by driving the key G into its place, all are fastened firmly together. These rail-seats, side plates, and keys are to be used at the junction of the rails; and when repairing old roads, where the ends of the rails are not even in each line of rails, this kind of rail-seat is only required in one end of the tie; but when laying new rails of equal length both ends of the tie should have the same seat, and side plates, and key-seat; and when the junctions of the rails are not even or are varied the rail-seats should be made as represented at H in Fig. 1, where the seat is made so that the upper projection fits to the outside of the rail, and the inside portion of the projection is left off down to the flange of the rail, as shown. The rail-seats in the upper projection are nearer one end of the tie than the other, as shown in Fig. 1, so that when rail-seats are made in both projections of the tie it will not be weakened by the seats, and when the ties are placed alternately they will extend wider on the ground.

C is the projection opposite the projection B, and is made similar to it. It may have any kind of rail-seats made in it that will receive any kind of new rails and side plates and keys that are to be used when the old rails are worn out, so that this tie may be used for old rails as long as they last, and when new rails are to be used the tie may be turned over, and it is then ready to receive them.

E is the outside side plate. It is made oval on the outside, and made to fit the rail on the inside, and has notches in the outside fitted to the rail-seats of the two ties that support it, the outside being made oval to give it greater strength.

F is a side plate fitted to the inside of the rail, which extends from the flange up to the rounded top of the rail, and along the side of the rail through two ties, and it has a channel for a key, corresponding with the notch in the

rail-seat for the key G to be driven into. When the keys are withdrawn the side plate may be removed, and thus the tie may be loosened, so that it may be taken off the rail and out of the road, and another put in its place. The channels for the ribs and keys are made in the inside of the rails or plates, and in the inner side of the rail-seats, so that the outside of the rail-seats may be uniform, and the outside of the rail will always bear against the outside of the rail-seat, thus inflexibly gaging the rails so that they cannot be spread by loosening the keys, as they would do if the keys were at the outside of the rails.

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

1. The railroad-tie A, composed of the pro-

jections B and C, connected to the base-plate D, opposite each other, both projections having in them rail-seats—in one for the old rails, and in the other rail seats for any other kind of rails, substantially as described.

2. In combination with the rail-seats in the projection B, the tie A, that will allow the rail to drop down into it, the side plates E and F, and the key G, to unitedly hold the rail, as herein set forth.

3. The side plate L for the inside of a railroad-rail, without flanges at the base, made with ribs and channels for the keys, substantially as specified.

EBENEZER E. LEWIS.

Witnesses:

D. A. OGDEN,
CHARLES KETCHUM.