(No Model.)

R. L. HARRIS.

RAILWAY RAIL.

No. 357,316. Patented Feb. 8, 1887.

Fig. 2.

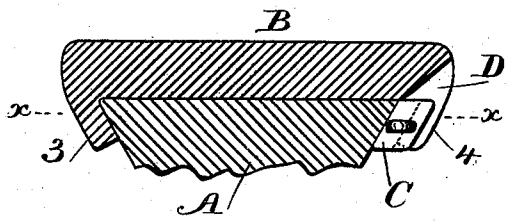


Fig. 1.

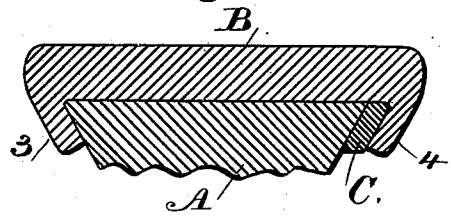


Fig. 3.

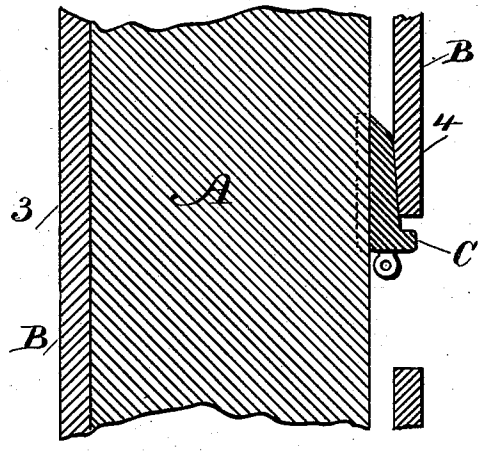


Fig. 4.

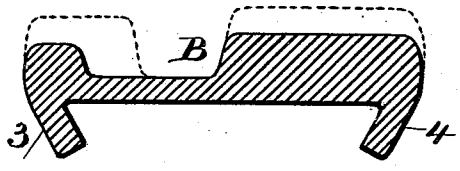


Fig. 5.

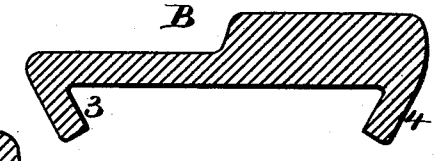
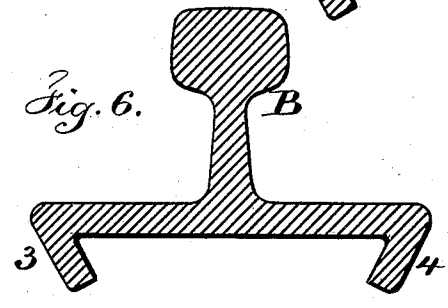


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT L. HARRIS, OF BROOKLYN, NEW YORK.

RAILWAY-RAIL.

SPECIFICATION forming part of Letters Patent No. 357,316, dated February 8, 1887.

Application filed November 23, 1886. Serial No. 219,559. (No model.)

To all whom it may concern:

Be it known that I, ROBERT L. HARRIS, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Railway-Rails, of which the following is a specification.

Rails have been made in which the top bars have downward-curved flanges upon their lower edges, and these are received upon two-part base-rails partially rotated as the parts are interlocked, so that the top bar is held by the curved dovetailed upper parts of the lower bars.

In my improvements the dovetailed base is single and sufficiently narrow for the inwardly-inclined bottom flanges of the top rail to be placed over the base, and then the intervening space at intervals is occupied by keys placed between the flange and base to hold the rail firmly upon such base.

In the drawings, Figure 1 is a cross-section of the rail and base through one of the keys. Fig. 2 is a cross-section at the opening for one of the keys, and Fig. 3 is a sectional plan at the line *x x* of Fig. 2. Figs. 4, 5, and 6 are sections of grooved, raised, and T rails, respectively.

The base A is of any desired character. It may be of cast or wrought iron or other material, and either continuous or in sections, and with cable or electric railways the base may be part of the subway.

The top of the rail B is of any desired shape. I have shown in Fig. 4 a channeled rail, in Fig. 6 a T or I rail, in Figs. 1 and 2 a flat rail, and in Fig. 5 a raised rail.

In all instances there are flanges 3 4 along the under edges of the rail, and these incline toward each other, so that the space is dovetailed. The top of the base A is also dovetailed and of a width sufficiently less than the dovetailed space in the bottom of the rail to allow the latter to be set over the former. The space that is left is to be filled at intervals with keys C, driven in tightly to wedge the rail firmly to the base.

I prefer, in ordinary city railways, to form mortises D at intervals through the side flanges of the rails, so as to give opportunity for introducing the keys C or removing the same. These keys are each preferably formed with a side lip or head and an eye or loop at the largest end, so as to receive a hook for withdrawing the wedge, and the tapering end of the key should be beveled on the under side to facilitate the insertion of the wedge through the slot and into the space between the flange 4 and base A.

Any suitable lever or claw-bar may be made use of in driving up the wedge or in removing the same.

I claim as my invention—

1. The combination, with the rail having dovetailed flanges on both of its bottom edges, of a base having a dovetailed upper part sufficiently narrow for the rail to be placed over the same, and a wedge introduced between the rail and base, substantially as set forth.

2. The combination, with a base having a dovetailed upper portion, of a rail having dovetail flanges on its bottom edges adapted to be placed over the base, and openings or mortises through the side flanges of the rail, and wedges introduced through the mortises, substantially as set forth.

Signed by me this 17th day of November, 1886.

ROBERT L. HARRIS.

Witnesses:
GEO. T. PINCKNEY,
WILLIAM G. MOTT.