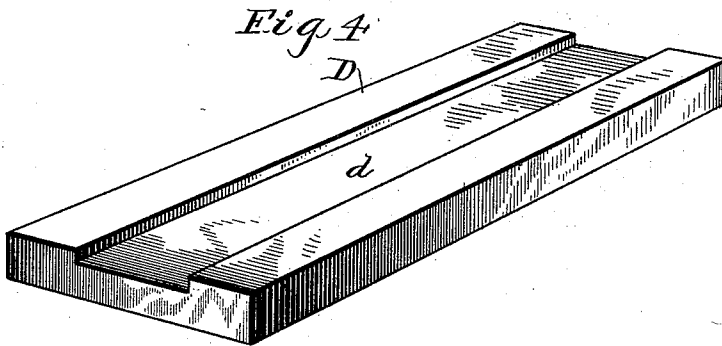
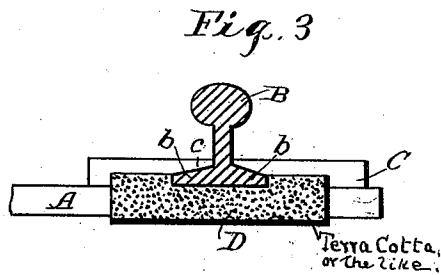
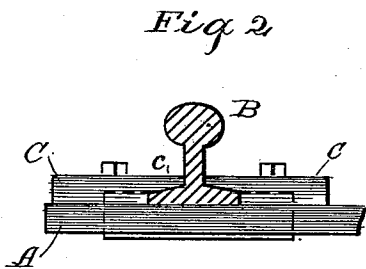
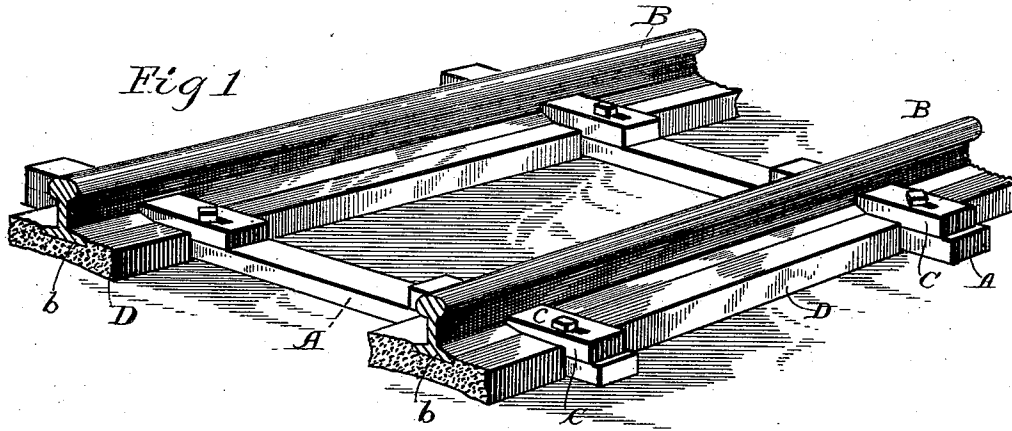


(No Model.)

E. R. EDWARDS.
BED SUPPORT FOR RAILWAY TRACKS.

No. 464,173.

Patented Dec. 1, 1891.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD R. EDWARDS, OF MINERAL RIDGE, OHIO, ASSIGNOR OF ONE-HALF
TO THOMAS A. MITCHELL, OF WASHINGTON, DISTRICT OF COLUMBIA.

BED-SUPPORT FOR RAILWAY-TRACKS.

SPECIFICATION forming part of Letters Patent No. 464,173, dated December 1, 1891.

Application filed June 6, 1890. Serial No. 354,527. (No model.)

To all whom it may concern:

Be it known that I, EDWARD R. EDWARDS, a citizen of the United States, residing at Mineral Ridge, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Bed-Supports for Railway-Tracks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to bed-supports for railway-tracks, and has for its object to provide a broad continuous bearing and support for the rail, and thereby lessen the liability of breaking the rails between the ties; and the invention consists in the construction and arrangement hereinafter fully described, and more particularly pointed out in the claims.

Referring to the drawings, in which like letters refer to corresponding parts in each figure, Figure 1 is a perspective view of a section of railway-track constructed and laid according to my invention. Fig. 2 is a side elevation of a section of a tie with the securing-plates for holding the rail, with the intermediate support shown in broken lines. Fig. 3 is a transverse section through the rail and intermediate support, showing a part of the tie and the holding-plates in elevation. Fig. 4 is a perspective view of the support for the rail between the ties.

In carrying out my invention I propose to use iron or steel ties instead of the wooden ties now generally used.

A designates the ties, which are laid upon the prepared roadway as usual, except that I propose to lay them somewhat farther apart than ties are commonly laid.

The rails B are laid upon the ties as usual, and are secured by holding-plates C, bolted upon the ties on both sides of the rails, with their ends projecting upon the base-flanges b. These holding-plates are recessed on their under sides at the holding end to form lips c, of a length to project against the web of the rail, the under sides of said lips c being so shaped as to lie flat upon the base-flange of

the rail, while the body of the plate lies flat upon the tie. The bolt-holes through the plates C are elongated to permit an adjustment of the plate toward and from the rail for slightly moving the track without changing the position of the ties.

D designates a bed-support for the rail between the ties. These supports I propose to make of terra-cotta or similar material in suitable and convenient sections or lengths for the spaces between the ties and of sufficient breadth and thickness to give them the necessary strength. In their upper faces are formed central longitudinal grooves or channels d, of a width and depth corresponding with the width and thickness of the base-flange of the rail. The road-bed being properly prepared, the bed-supports D are laid between the ties A with the bottom of the channel d in the same plane of the upper surfaces of the ties A, so that when the rails are laid they shall set in the channel and be firmly held by the supports. The bed-supports D are made in such lengths as to adapt them to the spaces between the ties, and there are preferably two of these supports to each space. It is found that for durability and in serving as a substantial support to the rail the supports should be made about eighteen inches long, fourteen inches wide, and four inches thick. I propose ordinarily to lay the ties three feet apart, and therefore by making the supports D one and a half feet long two bed-supports will fill the space between the adjacent ties. When, however, the ties are to be laid different distances apart, the length of the supports is correspondingly changed.

While I prefer to make the supports of such length that two of them will fill the space between adjacent ties, they may be made shorter, if preferred, or of such length that a single one will fill an entire space, these being variations which fall within the scope of my invention.

By forming the grooves d in the bed-support D and setting the rails therein the supports will be held in place and prevented from working out from under the rails in case they settle and become loose, whether the supports between the ties are made in one or several pieces. The spaces between the ties

are to be entirely filled, so as to provide a continuous support for the rails, and thereby to avoid the liability of the rails bending down or breaking between the ties.

5 It will thus be seen by this construction of a broad-bearing continuous bed-piece under the rail, resting on the earth or other bed foundation, the rail is supported continuously and is not weakened at any particular point
10 by the moving of the earth or stone beneath the track, and thereby subjecting it to breakage when filled with frost or from other cause.

I am aware that bed-supports of various forms and constructions and usually made of
15 metal have heretofore been proposed; but I have no knowledge of a support made, as herein specified, in lengths to fit the spaces between the ties and to form continuous supports for the rails between the same.

20 The materials herein specified are available and obtainable in all sections of the country, and by making the supports of such material they may be manufactured at or near the places where they are to be used, whereby
25 the expense of transporting the heavier iron supports heretofore proposed is avoided, the material for such iron supports being in most cases obtainable only at remote places.

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

1. The combination, with the rails and ties

of a railway-track, of bed-supports formed of sections arranged on the road-bed under the rails between and on the same plane with the
35 ties, forming with the ends of the ties continuous supports for the rails, as set forth.

2. The combination, with the rails and ties of a railway-track, of bed-supports formed of sections arranged upon the road-bed under
40 the rails between and on the same plane with the ties, said supports having in their upper faces longitudinal grooves or channels, into which the rails are set, and forming continuous supports with the ends of the ties for the
45 rails, as set forth.

3. In a railway-track, the combination, with the rails and cross-ties, of the holding-plates C, recessed on their under sides to form lips
50 c and bolted upon the ties, with the said lips projecting upon the base-flanges of the rail to hold the latter, the bolt-holes in said plates being elongated to permit adjustment toward and from the rails, and the longitudinally
55 grooved or channeled terra-cotta bed-supports D, made in lengths to fit the spaces between the ties and forming continuous rail-supports between the same, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD R. EDWARDS.

Witnesses:

CHAS. R. TRUESDALE,
JOHN BROWN.