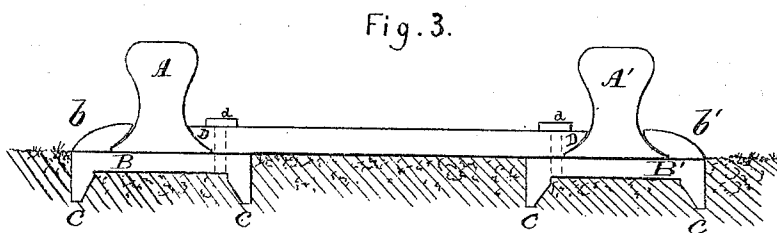
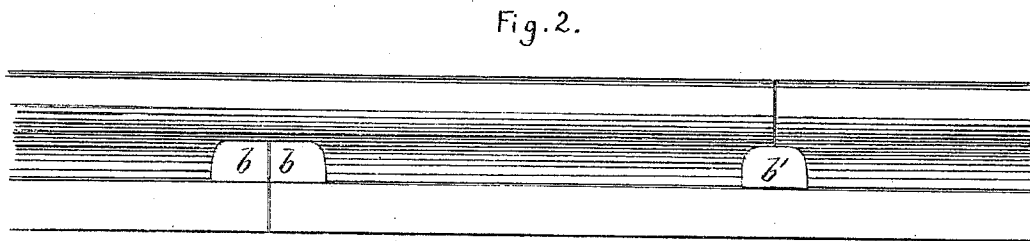
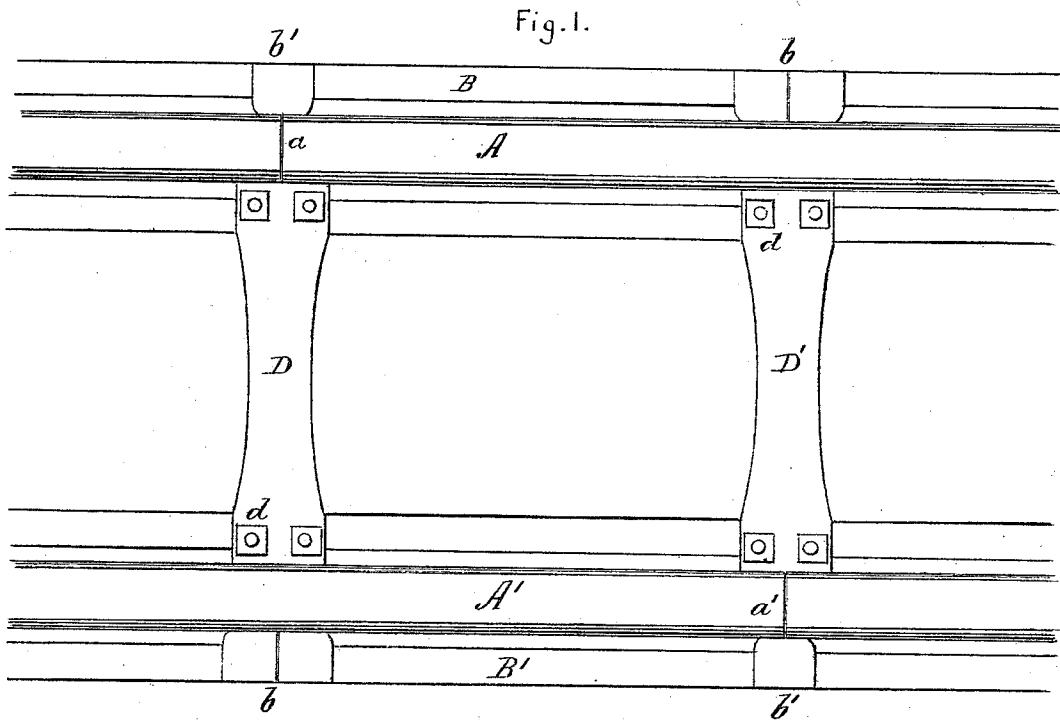


J. CALKINS.
Railway Tracks.

No. 134,418.

Patented Dec. 31, 1872.



Witnesses:

A. B. Brown
A. T. Britton

Inventor:

James Calkins
By Chas. H. H. Smith, Secretary

UNITED STATES PATENT OFFICE.

JAMES CALKINS, OF LONG BRANCH, NEW JERSEY.

IMPROVEMENT IN RAILWAY TRACKS.

Specification forming part of Letters Patent No. 134,418, dated December 31, 1872.

To all whom it may concern:

Be it known that I, JAMES CALKINS, of Long Branch, in the county of Monmouth, in the State of New Jersey, have made certain Improvements in Railways, of which the following is a specification, which, taken in connection with the accompanying drawing, forms a full description of my improvements in railways, by which the same may be distinguished from others.

My invention relates to the construction of railroads; and consists in certain modifications in the details of the rails and track, as herein-after more fully shown and described.

In the accompanying drawing which illustrates my invention and forms a part of the specification herein, corresponding parts being designated by similar letters of reference—

Figure 1 is a plan view of rails and track; Fig. 2 is a side elevation; and Fig. 3 is an end view.

In the drawing referred to, A and A' designate the rails, each placed upon the metallic base indicated by letter B and B', which is provided with the flanges *c*, and the shoulders or projections *b b'*, cast or wrought solid with the said base. D and D' indicate the braces or stretchers extending from one rail to the other, the ends being shaped to fit against the rails, as shown in Fig. 3. The said stretchers are also fastened to the bases B by means of the bolts *d*. The rails being placed upon a metallic base and locked on the outer side by the shoulders *b b'*, are thus held firmly in position by the stretchers D. The base B rests upon the ground with flanges *c* projecting therein, as shown in Fig. 3. The rails are arranged and set upon their base, as appears in Fig. 1, so that in the two rails the sections thereof, being of equal length, are not joined at points directly opposite each other. Thus,

in the rail A there is a joint at *a*, but no joint in the rail A' at the point directly opposite, the latter rail being joined at *a'*, so that each joint is on a line crossing the center of the opposite rail or section. The base B B' is also divided at points alternating from one side to the other, the order of these joints, however, being reversed. Thus, beneath the rail-joint *a'* there is no division or joint in the metallic base, it being joined at *b*. The metallic braces or stretchers D D' are placed at proper distances apart and bolted to the base, so that one end bears against the rail where it is jointed, and the other end bears against the solid rail, but rests upon the base where it is jointed. The shoulders or projections *b* occur at each joint in the base, and the shoulders *b'* at each joint in the rail where the base is solid.

By this construction a firm metallic railway is formed which is less liable to become displaced from the decay of wooden ties or other causes than other structures of this class.

As a modification, the structure or device can be made by combining the metallic stretchers with a metallic plate or disk having the flanges and shoulders at each extremity of the stretchers, the said disk to take the place of the continuous base B.

Having thus described my invention, I claim and desire to secure by Letters Patent—

The metallic base B B', provided with flanges and shoulders *c b* and *b'*, in combination with the stretchers D and D' and rails, all being constructed and operating together, substantially as shown and described.

JAMES CALKINS.

Witnesses:

H. B. SHERMAN,
A. M. DILENTASH.