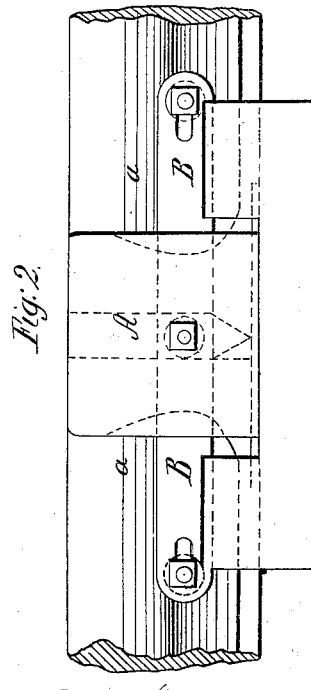
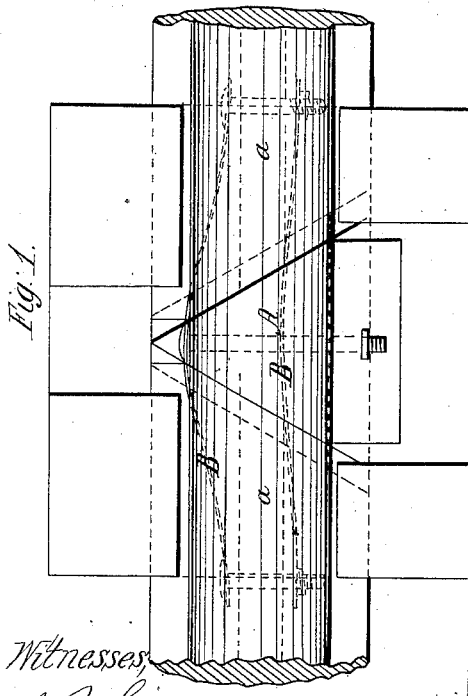
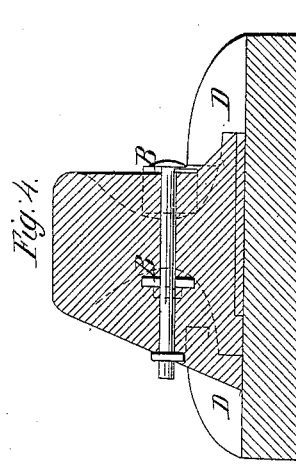
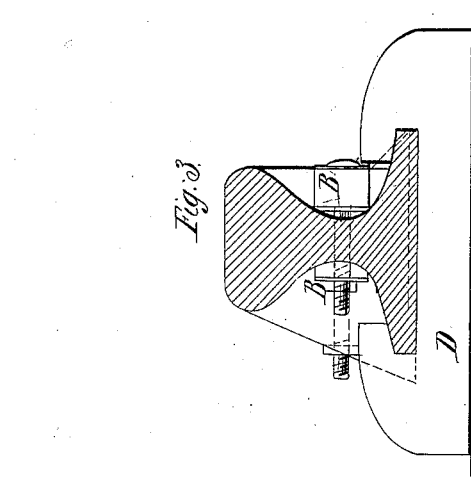


B. F. Farrar,
Railroad Rail Joint,
N^o 49,742. *Patented Sep. 5, 1865.*



Witnesses,
J. B. Gardiner
N. D. Stevens,

Inventor;
Benjamin F. Farrar

UNITED STATES PATENT OFFICE.

BENJAMIN F. FARRAR, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVED RAILROAD-RAIL.

Specification forming part of Letters Patent No. **49,742**, dated September 5, 1865.

To all whom it may concern:

Be it known that I, BENJAMIN F. FARRAR, of Springfield, Hampden county, Commonwealth of Massachusetts, have invented an Improved Railroad-Rail; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to letters of reference marked thereon.

In the drawings, Figure 1 is a plan view; Fig. 2, a side elevation. Fig. 3 is an end view, and Fig. 4 a cross-section.

In laying railroad-rails it is customary to leave a small space between their ends, and this is necessary, for if laid close together, without any allowance for expansion and contraction, they would become jammed together and probably thrown out of place, or else spread apart, and leave spaces, as mentioned. From this leaving a space between the rails arises several disadvantages, some of which I will now mention. First, the rails become worn and battered on the ends, while they may be in a sound condition elsewhere, and it is a well-known fact that the taking up, rewelding, and relaying such rails constitutes one of the heaviest items of expense in running railroads; and aside from the rails the injury to the engine and cars, caused by the jolt and jar occasioned by the wheels striking these ends, is very great, often resulting in the breakage of the working parts, as well as great strain on bolts, rods, &c.

It is evident that any invention which overcomes these disadvantages must be of great

use. I have accomplished this in a simple and economical manner, as I will now describe.

My invention consists in interposing between the ends of the rails a wedge-shaped piece of metal, A, and in cutting off the end of the rail *a a'* at the same angle as the side of the wedge, this angle being such that the force of expansion, causing the ends to press together, may force out the wedge in the direction indicated by the arrow, and when the rail contracts, the springs B B may press it in the other direction, so that the space between the rails is kept continually filled.

It will be seen that in this simple manner I accomplish all that I first mentioned—namely, filling up the space between the rails in such a manner that they are allowed to expand and contract, while at the same time the space is always filled, so that the ends cannot become battered.

I do not wish to limit my invention to the exact arrangement herein described, for the springs B B may be attached either to the piece A and the ends *a a'* of the rails, as here shown, or to this piece and the chair D, or in any other desired manner; but

What I do claim as new, and desire to secure by Letters Patent, is—

The combination of the rails *a a'*, piece A, spring or springs B, and chair D, substantially in the manner and for the purpose described.

BENJAMIN F. FARRAR.

Witnesses:

J. B. GARDINER,
W. D. STEVENS.