(No Model.)

A. W. THOMPSON.

RAILWAY RAIL JOINT.

No. 588,807. Patented Aug. 24, 1897.

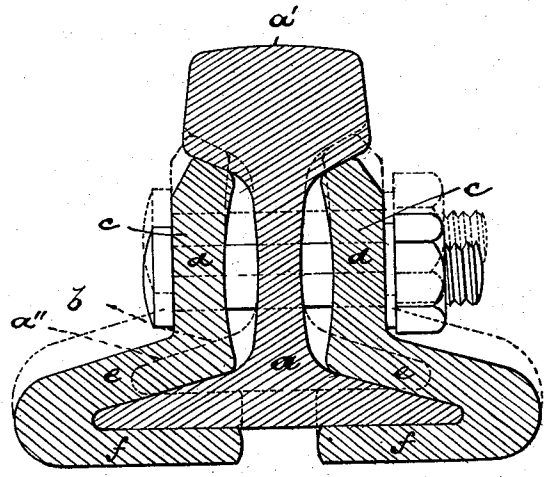


Fig. 1.

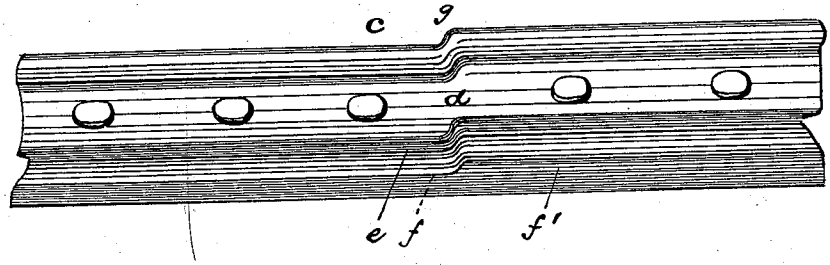


Fig. 2.

WITNESSES:
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UNITED STATES PATENT OFFICE.

ABRAHAM W. THOMPSON, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE CONTINUOUS RAIL JOINT COMPANY OF AMERICA, OF NEW JERSEY.

RAILWAY-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 588,807, dated August 24, 1897.

Application filed April 30, 1897. Serial No. 634,539. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM W. THOMPSON, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Railway-Rail Joints; and I do hereby 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 letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a fish-plate or rail connection adapted to unite with greater rigidity and strength rails varying in size or height, to secure a more continuous and even tread-surface than has been heretofore provided in connection with such varying rails, and to secure other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved fish-plate or rail connection and in the arrangements and combinations of parts thereof, all substantially as will be hereinafter set forth, and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 is a sectional view of a rail having my improvements; and Fig. 2 is a detail view of my improved fish-plates, showing the inside face thereof.

In said drawings, *a* indicates a rail of a given height, and *b* another rail of different height, the two rails having their tread-surfaces *a'* in alinement, but having their flanges *a''* one raised higher than the other.

c c indicate fish-plates arranged on opposite sides of the said rails and securely joined to the same.

The general construction of the improved fish-plates is similar in some respects to the fish-plate shown in United States Patent No. 427,017, dated April 29, 1890, in which a vertical portion *d* is adapted to fit closely between the head or tread of the rail and the flange *a''* thereof, and a double foot piece or portion *f* extends laterally therefrom and turns beneath the flange. The said doubled portion closely hugs the said flange both at the top and the bottom to secure a firm and rigid support or union of the rails.

By the prior construction of the fish-plate above referred to it was impossible or very inconvenient to use said fish-plate in connection with rails of different heights. To adapt it for this purpose, I have constructed the fish-plate *c*, as shown particularly in Fig. 2, where the said fish-plate is provided with a bottom flange varying in thickness, and the vertical portion is provided with an offset *g* to accommodate the plate to the differences in height and shape of the rails. The under side of the bottom flange *f* is made straight, so as to form a seat to engage the ties lying level with one another, and the said flange is made thicker at one end, as at *f'*, than at the other, the differences in thickness compensating for the differences in height of the rail, enabling a different and new rail to be seated upon the road-bed in connection with an old rail without disturbing said road-bed or changing the said old rail.

After the differently-formed rails are united the older section of rails and their sleepers may be tamped up to their proper elevation at points back from the joint, but in practice I prefer not to disturb the sleeper at the joint or joint-ties, as thus a more perfect foundation is secured.

Having thus described the invention, what I claim as new is—

1. The improved rail connection herein described comprising a fish-plate having a vertical portion adapted to fit between the rail-tread and rail-flange and having a doubled lateral extension adapted to fit the upper and lower sides of the rail-flange, the said fish-plate having the bottom portion of the doubled extension of varying thicknesses, providing seats of varying heights for the differently-sized rails, substantially as set forth.

2. The combination with the rails of varying heights, of fish-plates having vertical portions with offsets *g*, adapted to fit between

the different rail-heads and flanges and having doubled lateral extensions adapted to lie on the upper and lower sides of the rail-flanges, the lower portions of the doubled extensions being made of varying thicknesses to suit the differences in the heights of the rails, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of March, 1897.

ABRAHAM W. THOMPSON.

Witnesses:
CHARLES H. PELL,
C. B. PITNEY.