

UNITED STATES PATENT OFFICE.

NEWTON BENJAMIN, OF ELMIRA, NEW YORK.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 778,839, dated January 3, 1905.

Application filed June 22, 1904. Serial No. 213,665.

To all whom it may concern:

Be it known that I, NEWTON BENJAMIN, a resident of Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in 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.

My invention relates to an improved rail-joint, the object of the invention being to provide a joint especially designed as an improvement on the construction disclosed in Patent No. 685,737, granted to me November 5, 1901; and it consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view illustrating my improvements. Fig. 2 is a side elevation. Fig. 3 is a detailed view of the plate 3. Fig. 4 is a view of plate 4. Fig. 5 is a view in cross-section through the center of Fig. 2.

1 represents the adjacent ends of two rails supported on ties, or on yokes if employed on an underground electric or cable road.

3 and 4 are connecting-plates, the base portion 5 of the former being much wider than the base portion 5^a of the latter, and both are adapted to rest flush upon the ties and are notched to receive securing-spikes. The central portion of the base 5 of plate 3 extends downward, forming a lower chord or truss 6, located in a vertical plane below the center of the rails and directly under the joint and effectually stiffens the joint against vertical deflection at this point. Both of said plates 3 and 4 are provided with integral inwardly and upwardly projecting plates 7, which inclose the base-flanges of the rails at the joint and extend up beside the central web thereof, and said web of the rail and the plates 7 are made with alined openings to receive bolts 8, on which nuts 9 are screwed to firmly clamp the

parts together. It will thus be observed that by providing the two plates 3 and 4, constructed to inclose the base-flanges of the rails and practically meet below the same, the strength of the joint is equalized at both sides and deflection in any direction will be prevented, resulting in a joint far superior to anything of the kind heretofore known.

Slight changes might be made in the general form and arrangement of the parts described without departing from my invention, and hence I do not restrict myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A rail-joint, comprising two connecting-plates, each adapted to embrace one of the base-flanges of the meeting ends of rails and a depending truss on one plate.

2. A rail-joint, comprising two plates, each having a base projecting beneath the rail-base and side plates integral with the base and extending beside the central web of the rails, and the base of one plate having a depending truss located in vertical alinement with the rail center.

3. In a rail-joint, the combination with the adjacent ends of rails, of connecting-plates at opposite sides of the rails and each having a base projecting beneath the rails and a side plate integral therewith and located against the central webs of the rails, a depending truss on one plate-base below the center of the rails, and bolts passed through alined openings in the rail-webs and side plates, and nuts screwed onto said bolts.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

NEWTON BENJAMIN.

Witnesses:

JAMES SPRAGUE,
A. H. MARKS.