

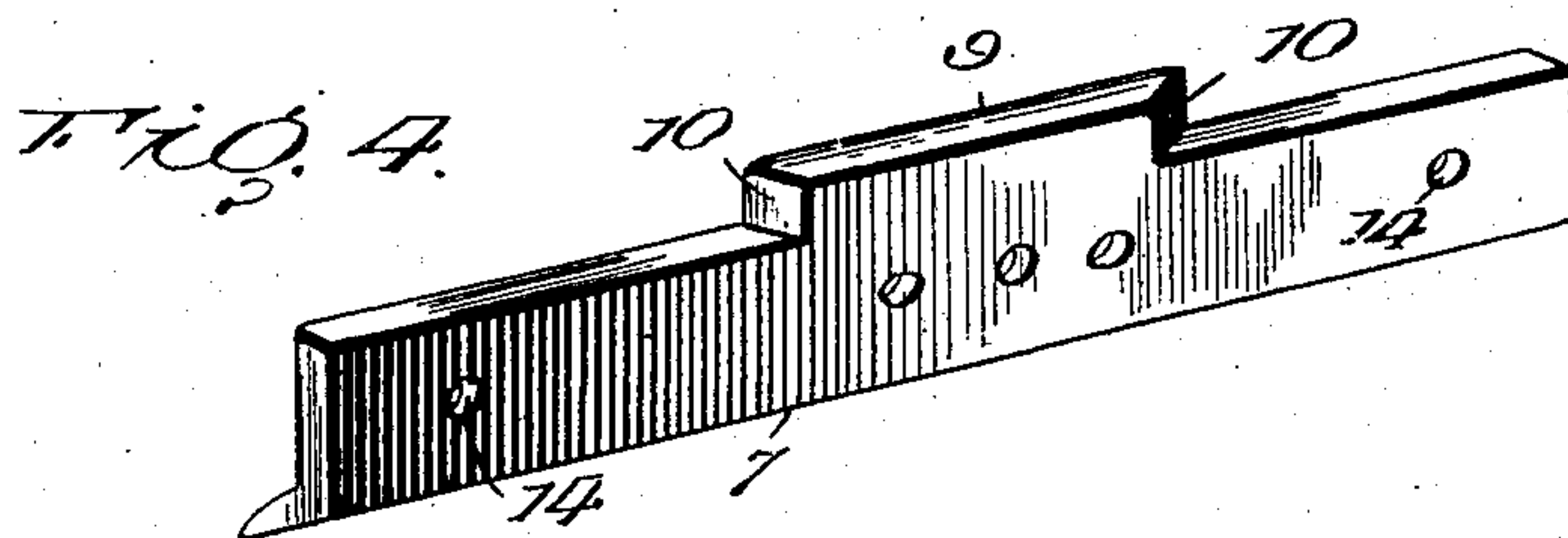
No. 751,451.

PATENTED FEB. 9, 1904.

T. M. BELKNAP.
RAIL JOINT.

APPLICATION FILED JUNE 10, 1903.

NO MODEL.



WITNESSES

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THOMAS M. BELKNAP, OF ANAMOSA, IOWA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 751,451, dated February 9, 1904.

Application filed June 10, 1903. Serial No. 160,915. (No model.)

To all whom it may concern:

Be it known that I, THOMAS M. BELKNAP, a citizen of the United States, residing at Anamosa, in the county of Jones and State of Iowa, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention provides a new and novel construction of joint or coupling means for uniting the meeting ends of rails and the like.

The essential aim of the invention is to obtain a structure as strong and unyielding at the joint as at any other portion of the rail; also, it is objective to obviate the rounding of the rail ends, so as to make the joint practically noiseless and secure a continuous bearing across the joint.

The improvement involves a special formation of the rail ends in combination with specially-constructed splice-bars.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the joint parts assembled. Fig. 2 is a perspective view of the splice means applied to the end of one of the rails. Fig. 3 is a perspective view of one of the rail end portions. Fig. 4 is a detail perspective view of the specially-constructed splice-bar.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

As shown very clearly in Fig. 3 of the drawings, the respective ends of the rails 1 have the web portions 2 between the heads 3 and the bases 4 cut away for a short distance. The bases 4 of the rail ends are scarfed, as are also the heads 3, this being essential to the rigidity of the structure after the parts are arranged in position, assisting in preventing lateral play

of the rail ends. The heads or balls 3 of the rails are also cut away, as shown at 5, said cut-away portions 5 extending vertically a distance along the heads of the rails and inclining at the ends toward the sides of said heads, as will be readily comprehended. Splice-bars 6 and 7 are provided, said bars being arranged upon sides of the rails in the usual manner and provided with longitudinal flanges 8. The splice-bar 7 is of peculiar structure, being provided with an extension 9, projected upwardly from the upper edge thereof and at a point about intermediate the ends of the bar. The extension 9 is received by the cut-away portions 5 of the heads of the rail fitting against the sides of these heads, constituting a continuous bearing across the joining-point of the rail ends. The extension 9 has its end portions cut away on the incline, as shown at 10, to correspond and rest in contact with the cut-away portions 5 of the heads 3 of the rails. Between the splice-bars 6 and 7 is interposed a web-block 11, which is secured to the splice-bars by means of fastenings 12, which may be bolts, rivets, or means analogous in character. The web-block is disposed intermediate the end portions of the splice-bars, and when the parts are arranged in proper position the said web-block 11 is disposed within the cut-away portions of the webs, virtually forming a continuation of the same and serving to insure perfect rigidity of the joint with reference to any vertical play which might possibly be otherwise a detriment to the practical service of the joint. Elongated openings 13 are disposed upon the web portions of the rail ends, which openings correspond with openings 14 upon the opposite end portions of the splice-bars 6 and 7. The aforesaid openings 13 and 14 receive fastenings 15, preferably removable, which secure the rail ends to the splice-bars. The provision of the elongated openings 13 is necessary in order to permit expansion and contraction of the rails.

Should it be desirable, the heads 3 of the rails may be cut away in like manner, as shown at 5, upon opposite sides thereof, and the splice-bar 6 provided with an upward extension similar to that upon the bar 7, though the above is not the preferred construction.

The joint involves extreme simplicity of construction and the parts may be readily assembled and separated when necessary. To remove one of the rails from the joint, it is only necessary that one of the fastenings be removed.

Having thus described the invention, what is claimed as new is—

1. In a joint for the meeting ends of rails, the combination with rail ends having the web portions thereof cut away for a short distance and the head portions also cut away adjacent the sides thereof, splice-bars disposed upon opposite sides of the rails, a web-block rigidly secured between the splice-bars and about intermediate the ends thereof, an extension projected upwardly from one of the splice-bars and adapted to rest in the cut-away portions of the heads of the rails, said extensions constituting a portion of the tread-surface of the rails, the adjacent ends of the bases and heads of the rails being scarfed.

2. In a joint for the meeting ends of rails, the combination with rail ends having the web portions thereof cut away for a short distance and the heads or balls also cut away longitudinally adjacent the edges of the rails, the end portions of said cut-away portions being inclined,

splice-bars disposed upon opposite sides of the rails, a web-block disposed between the splice-bars and about intermediate the end portions thereof, said web-block forming a continuation of the webs of the rails being received by the cut-away portions of the web, fastenings passing through the splice-bars and web-block securing the same rigidly together, an extension projected upwardly from one of the splice-bars and resting within the cut-away portions of the heads of the rails, the end portions of the said extension being inclined to correspond with the inclined portions of said cut-away portions of the heads of the rails, the adjacent ends of the bases and heads of the rails being scarfed, and the webs of the rails provided with elongated openings adjacent said scarfed ends, and fastenings passing through the said elongated openings and openings provided upon the corresponding ends of the splice-bars and securing the rails thereto.

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

THOMAS M. BELKNAP. [L. s.]

Witnesses:

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T. E. WATTERS.