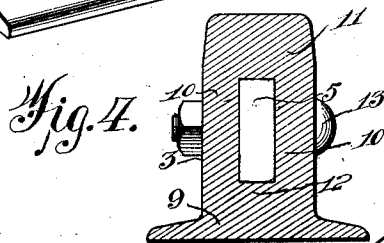
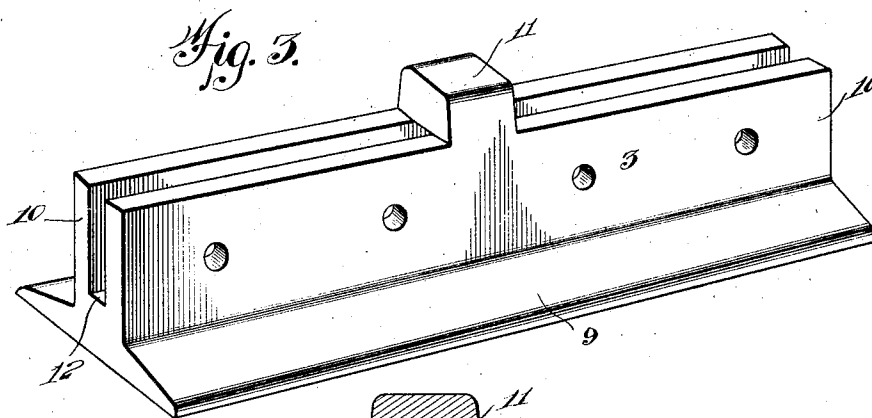
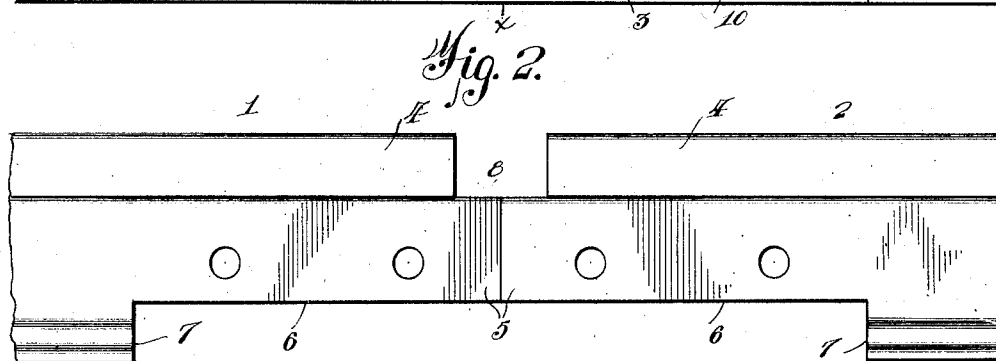
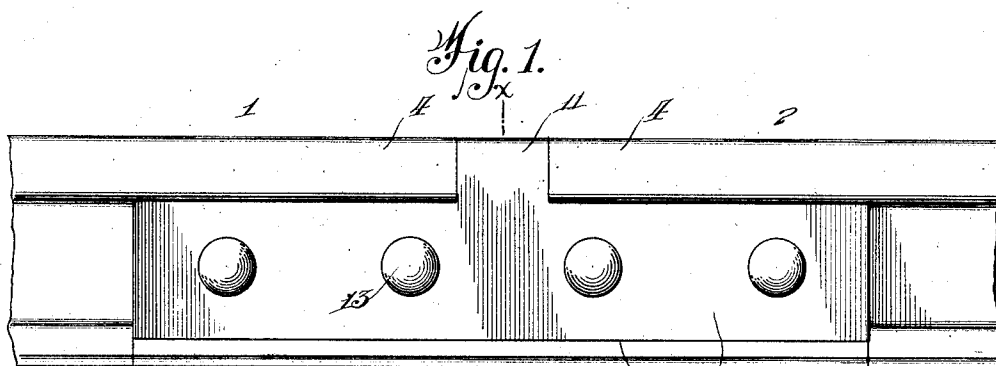


J. T. TODD.
RAIL JOINT.
APPLICATION FILED FEB. 7, 1912.

1,043,645.

Patented Nov. 5, 1912.



Witnesses
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JAMES T. TODD, OF JACKSONVILLE, FLORIDA.

RAIL-JOINT.

1,043,645.

Specification of Letters Patent.

Patented Nov. 5, 1912.

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To all whom it may concern:

Be it known that I, JAMES T. TODD, a citizen of the United States, residing at Jacksonville, in the county of Duval and State of Florida, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

The ordinary joint between the adjacent ends of railroad rails is such as to admit of a relative play which is a prolific source of annoyance to the traveling public as well injurious to the rolling stock because of the resultant pound as the wheels of the cars pass over the joint from one rail to the other.

The present invention provides a joint of the type which confines the adjacent ends of contiguous rails so as to guard against vertical or lateral play, thereby wholly overcoming the pounding action common to the ordinary rail joint.

In accordance with the present invention the ends of adjacent rails are similarly formed, the web of each rail end projecting slightly beyond the extremity of the ball or tread and having its lower portion and the base of the rail cut away for a short distance. A chair, joint piece, or connector is interposed between the adjacent ends of contiguous rails and comprises a base, side bars and a tread section, the several parts being of integral formation, and the base having a thickened portion intermediate of its edges extending upwardly between the side bars to compensate for the part removed from the lower portion of the webs of the rail ends, and the tread piece filling the space formed between the treads of the rail ends when the latter are properly assembled.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawing, and pointed out in the appended claim.

Referring to the drawing, forming a part of the specification, Figure 1 is a side view of a rail joint embodying the invention. Fig. 2 is a side view of the rail ends in position, the chair or joint piece being omitted. Fig. 3 is a perspective view of the joint piece. Fig. 4 is a cross section on the line $x-x$ of Fig. 1.

Corresponding and like parts are referred to in the following description, and indi-

cated in all the views of the drawing, by the same reference characters.

The rail ends are designated by the numerals 1 and 2 and are of similar formation.

The numeral 3 indicates the chair, joint piece or connector which is of a length to rest upon two ties at least to provide a substantial support for the joint.

Each rail end has its web projecting slightly beyond the extremity of the ball or tread 4, as indicated at 5, the lower portion of the web being cut away for a short distance, as indicated at 6. The base of the rail end is cut away for a distance equal to the length of the cut away portion 6 of the web, as indicated at 7. When the rail ends are placed together in the position which they will occupy in the completed railroad the ends of the web extensions 5 will come together, as indicated most clearly in Fig. 2, leaving a space 8 between the heads or tread portions 4.

The chair, joint piece, or connector comprises a base 9, side bars 10 and a tread piece 11, the several parts being of integral formation. The base is thickened intermediate its longitudinal edges, as shown at 12, and this thickened portion extends upwardly into the space formed between the side bars 10 and fills the space formed by cutting away the parts 6 of the webs of the rail ends. The base 9 is of a length to come between the extremities formed by the cut away portions 7 of the base portions of the rail ends. The thickened part 12 strengthens the base 9 and at the same time receives the lower edges of the end portions of the webs of the rail ends. The side bars 10 are equal in length to the base 9 and their upper edges come beneath the side portions of the head or tread portions of the rail ends. The tread piece 11 serves to connect the upper edges of the side bars 10 and to fill the space 8 and rests upon the extensions 5 of the web portions of the rail ends.

When the parts comprising the rail joint are assembled the side bars 10 embrace the sides of the web portions of the rail ends and are secured thereto by means of the bolts or like fastenings 13. Relative vertical play between the rail ends is prevented by having the extensions 5 of the web portions coming beneath the tread piece 11, the latter in turn being supported by means of

the side bars 10 and the said extensions 5, with the result that a smooth and continuous upbearing surface is maintained at the joint, thereby preventing any pounding action or any lateral play.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claim appended hereto.

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

A rail joint comprising rail ends of similar formation each having its web portion projecting a short distance beyond the ex-

tremity of the ball or tread and having the lower portion of the web and the base cut away for a short distance from the extremity, the rail ends when properly assembled having a space between the extremities of their tread portions, and a chair or joint piece comprising a base, side bars and a tread piece of integral formation, the base being of a length to fill the space formed by cutting away the base portions of the rail ends and the side bars embracing opposite sides of the webs of the rail ends and fitting close against the lower side of the projecting portions of the head of the rail ends and said tread piece filling the space formed between the extremities of the tread portions of the rail ends.

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

JAMES T. TODD.

Witnesses:

C. H. CHESNUT,
F. N. STORMONT.