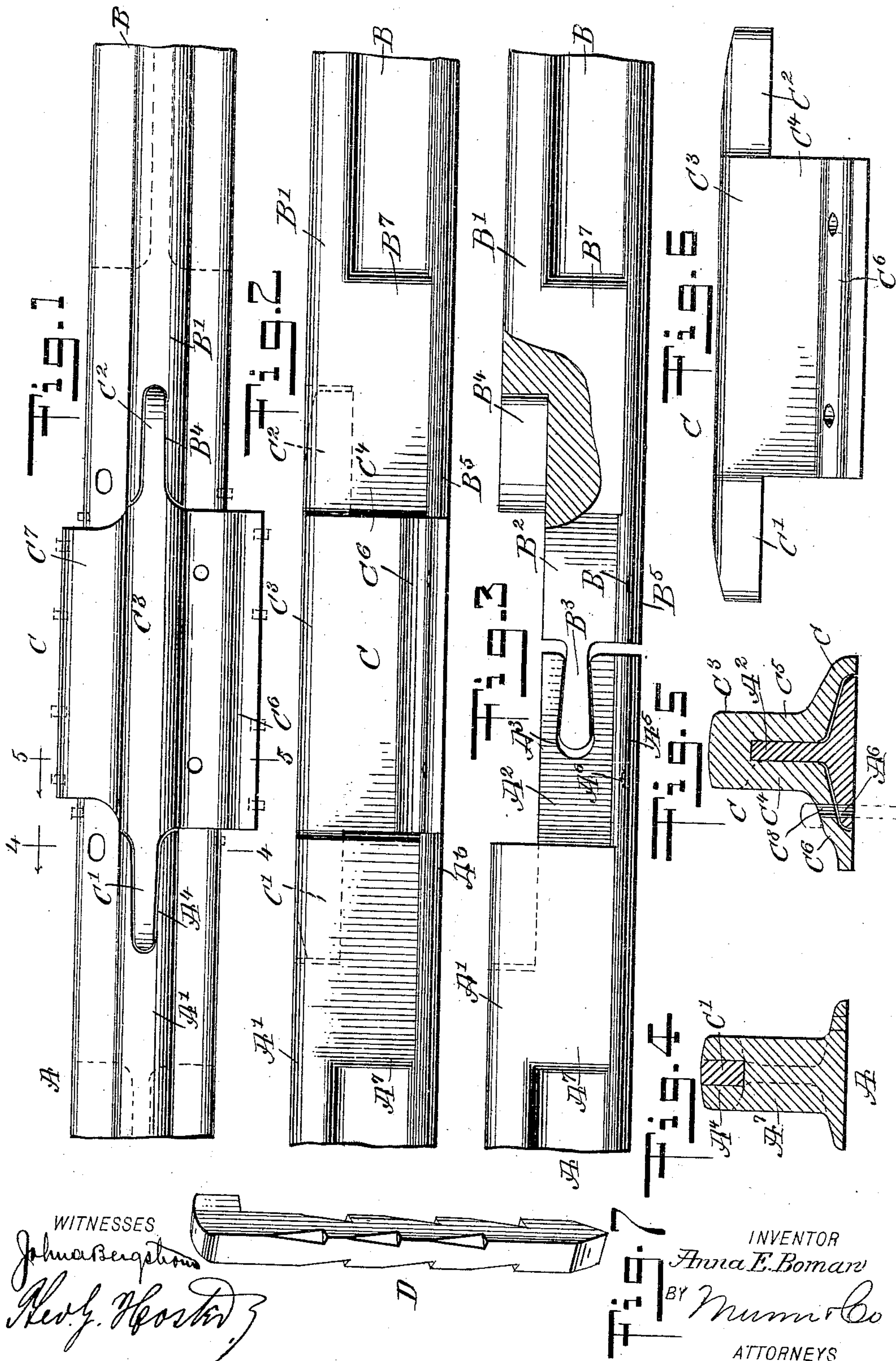


No. 841,482.

PATENTED JAN. 15, 1907.

A. E. BOMAN.
RAIL JOINT.

APPLICATION FILED JULY 25, 1906.



WITNESSES

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ANNA ELISABETH BOMAN, OF FARGO, NORTH DAKOTA.

RAIL-JOINT.

No. 841,482.

Specification of Letters Patent.

Patented Jan. 15, 1907.

Application filed July 25, 1906. Serial No. 327,662.

To all whom it may concern:

Be it known that I, ANNA ELISABETH BOMAN, a citizen of the United States, and a resident of Fargo, in the county of Cass and State of North Dakota, have invented a new and Improved Rail-Joint, of which the following is a full, clear, and exact description.

The invention relates to railways; and its object is to provide a new and improved rail-joint arranged to allow ready expansion and contraction of the adjacent rails and to prevent the undesirable clicking when the car-wheels pass over the joint.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improvement. Fig. 2 is a side elevation of the same. Fig. 3 is a similar view of the same, showing the connecting-piece removed and part broken out. Fig. 4 is a transverse section of the improvement on the line 4 4 of Fig. 1. Fig. 5 is a similar view of the same on the line 5 5 of Fig. 1. Fig. 6 is a side elevation of the connecting-piece for the ends of adjacent rails, and Fig. 7 is a perspective view of one of the spikes for fastening the joint and rails to the railroad-ties.

The rails A and B, to be connected with each other by the connecting-piece C, have the ends of their heads A' and B' cut out, and the ends of the webs A² B² of the said rails are interlocked with each other, and for this purpose the web A² is provided at its end with a longitudinally-extending recess A³, (see Fig. 3,) into which fits a tongue B³, projecting from the terminal of the web B². The tongue B³ increases in height from the inner end to the outer end, as plainly indicated in Fig. 3, and the recess A³ is correspondingly shifted so that the rails A and B when placed in position are moved transversely one toward the other, so that the tongue B³ engages the recess A³ in a transverse direction. Now when the tongue B³ engages the recess A³, then the rails A and B are prevented from drawing apart; but the tongue B³ fits sufficiently loose in the recess A³ to allow the usual expansion and contraction of the rails.

The tops of the head A' B' of the rails A and B are provided at their ends with recesses A⁴ and B⁴, engaged by tongues C' C², projecting from the ends of the head C³ of the connecting-piece C, which latter is provided with downwardly-extending sides C⁴ C⁵, straddling the ends of the webs A² B², as will be readily understood by reference to Fig. 5. The lower ends of the sides C⁴ C⁵ terminate in outwardly and downwardly extending flanges C⁶ C⁷, fitting over the bases A⁵ and B⁵ of the rails A and B, and the flange C⁶ is provided with apertures C⁸, registering with corresponding apertures A⁶ B⁶, formed in the bases A⁵ and B⁵, and the said registering apertures C⁸ and A⁶ and C⁸ B⁶ are adapted to be engaged by spikes D of any approved construction and driven down into the ties supporting the rails at the joint.

By the arrangement described the connecting-piece C has its head C³ forming a continuation of the head A' B' of the rails A and B, and as the tongues C' C² project into the recesses A⁴ B⁴ in the tops of the heads A' B' it is evident that a continuous surface is provided for the car-wheels to travel on, and consequently the undesirable clicking or hammering now experienced in rails jointed in the ordinary way is completely obviated.

In order to give the desired strength to the rails, the heads A' B' are reinforced at the ends by thickening the end portions of the webs A² B², as indicated at A⁷ and B⁷, it being understood that the ends of the connecting-piece C abut against the inner edges of the thickened portions A⁷ and B⁷.

The rail-joint shown and described is very simple and durable in construction, and no bolts or similar fastening devices are required for connecting the piece C with the ends of the rails A and B, and at the same time the rails, as well as the connecting-piece, are securely held in place by the spikes D, driven into the ties supporting the rail at the joint.

From the foregoing it will be seen that the joint is practically sufficiently flexible to accommodate the usual movement of the rails.

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

1. A rail-joint, comprising adjacent rails having a portion of the tread thereof cut away, and having the tread recessed longitudinally adjacent to the cut-away portion, the web of one rail having a transverse dovetail

opening and the other a dovetail tongue fitting loosely in the opening, and a connecting-piece having a tread fitting the cut-away portion of the rails, and provided at each end
5 with tongues engaging the recesses, and downwardly-extending sides fitting on each side of the web of the rails, said sides having a flange fitting over the edge of the rail and provided with spike-receiving openings.
10 2. A rail-joint, comprising adjacent rails having portions of the tread thereof removed and having the tread adjacent to the cut-away portion recessed longitudinally, the
15 opening at the end, and the web of the other rail having a tongue projecting from its end and loosely fitting the said recess, and a connecting-piece having a tread fitting in the cut-away portions, and sides depending upon
20 each side of the webs of the rails and tongues extending from the ends of the tread and fit-

ting the longitudinal recesses whereby to render the adjacent rails continuous.

3. A rail-joint, comprising adjacent rails having a portion of the tread thereof re- 25 moved, the web of one rail having a dovetail transverse opening, and the web of the other rail having a transverse dovetail tongue fitting loosely in the opening whereby to prevent a longitudinal separation of the ends of 30 the rails, and a connecting-piece having a tread fitting the cut-away portion of the rails and sides depending upon each side of the webs of the rails.

In testimony whereof I have signed my 35 name to this specification in the presence of two subscribing witnesses.

ANNA ELISABETH BOMAN.

Witnesses:

G. E. NICHOLS,
J. A. JOHNSON.