No. 622,033. Patented Mar. 28, 1899.

J. BAKER.

RAIL JOINT.

(Application filed Dec. 24, 1898.)

(No Model.)

Fig. 1.

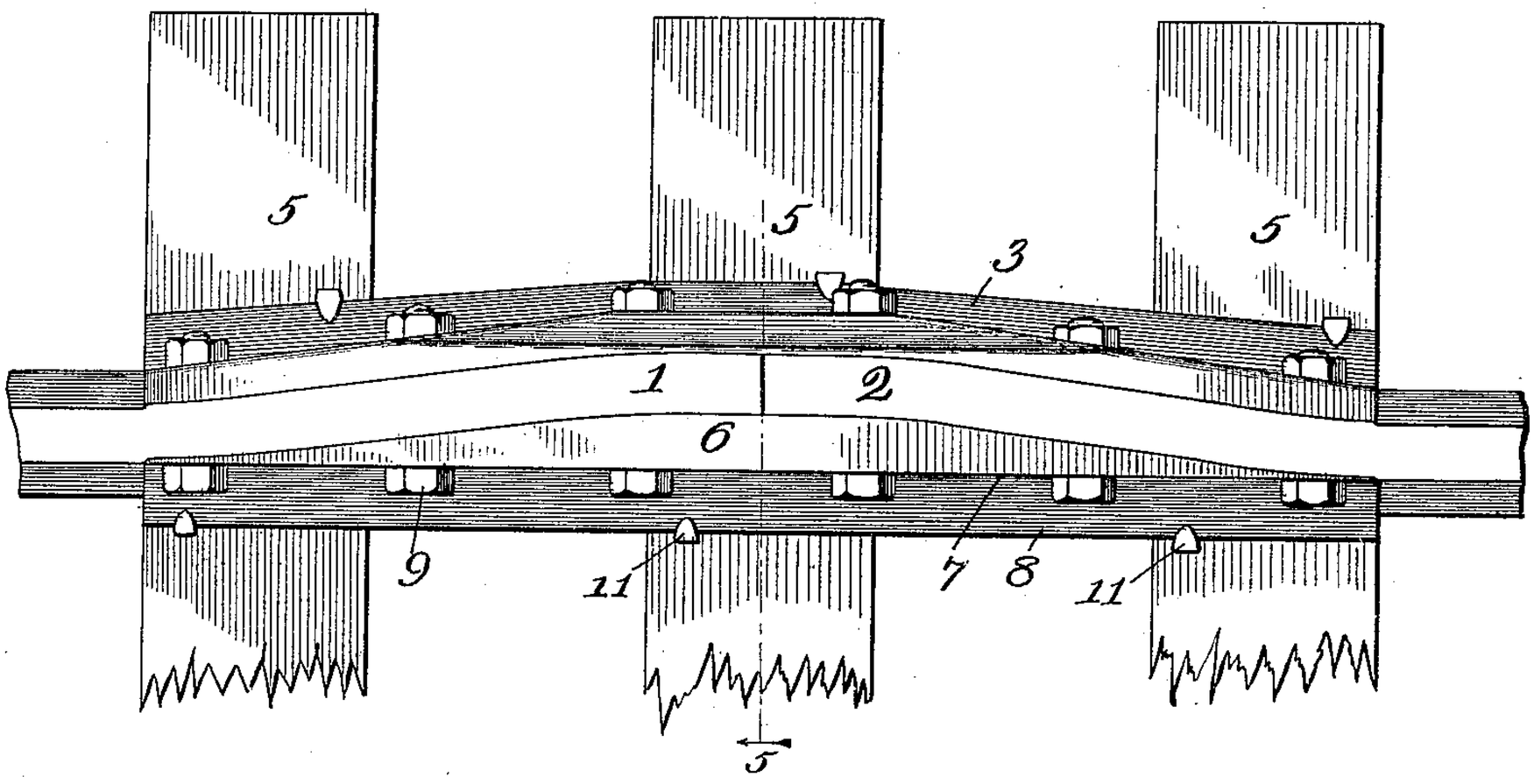


Fig. 2.

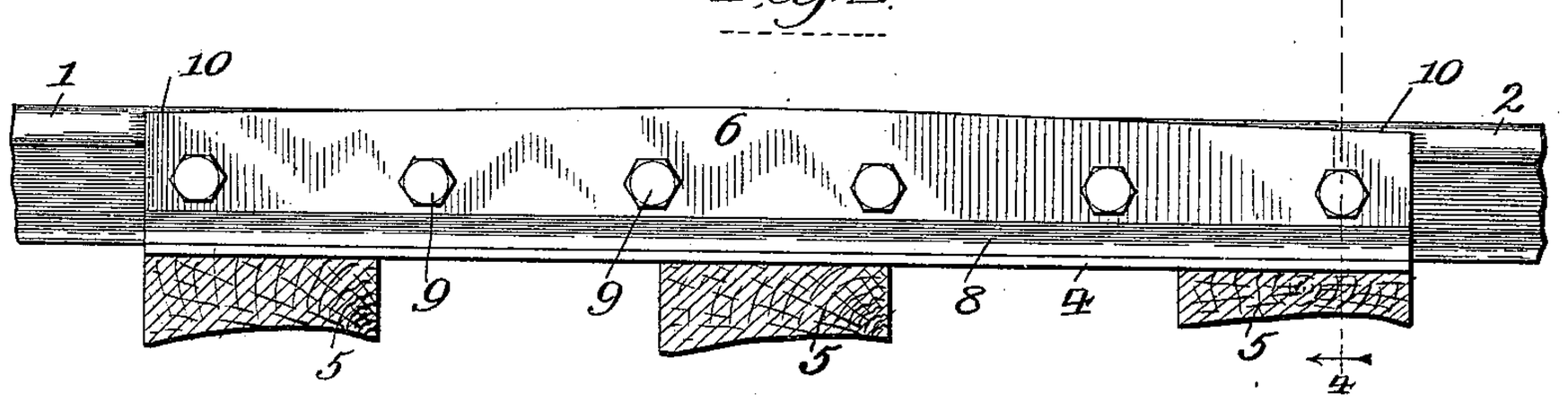


Fig. 3.

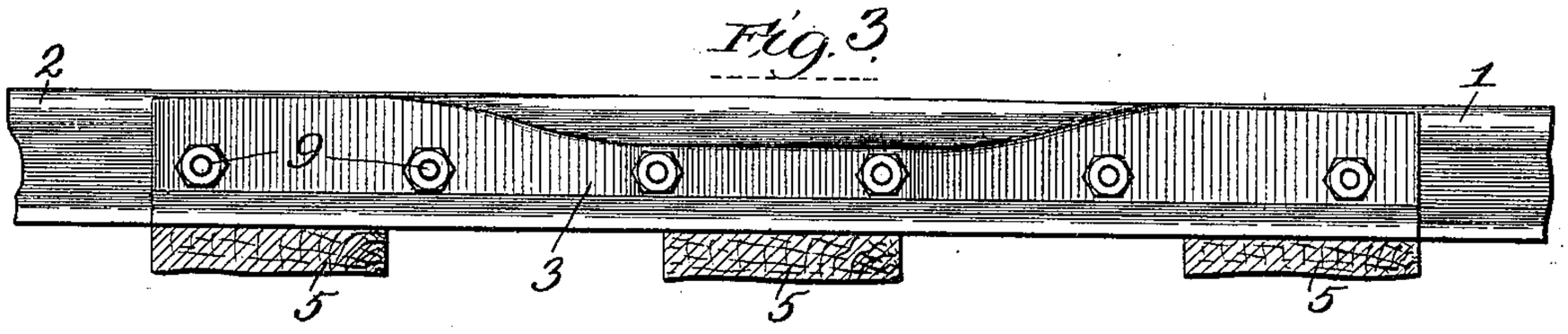


Fig. 4.

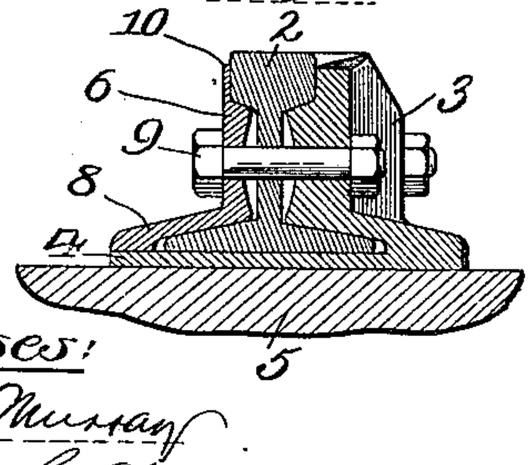
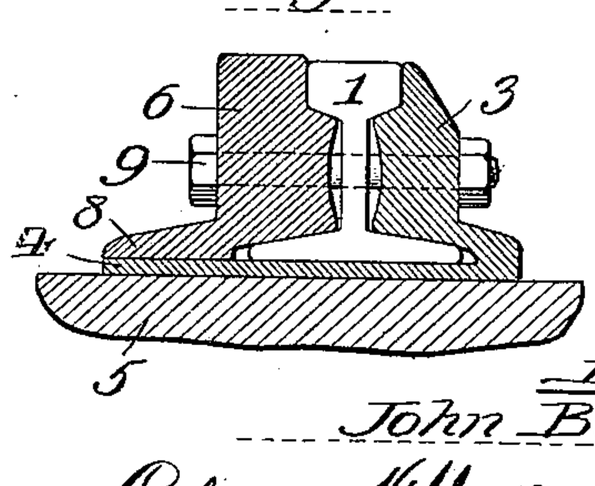


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN BAKER, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO THOMAS ROBERTSON, OF BLUE ISLAND, ILLINOIS.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 622,033, dated March 28, 1899.

Application filed December 24, 1898. Serial No. 700,229. (No model.)

To all whom it may concern:

Be it known that I, JOHN BAKER, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

My invention pertains to rail-joints; and its object is to provide a novel and efficient joint in order to overcome the objections to the ordinary joint, in which the car-wheels bear upon and are carried by the rails at the joint proper at the meeting ends of the rails, which joint receives the entire pressure or weight.

My object is to produce a joint device in which the car-wheels are designed to bear upon a block or connecting-piece at the ends of the rails, so that a smooth and continuous surface is always provided for the wheels, as if the track were made of one continuous rail.

The novelty and advantage of my construction of joint will be understood from the description hereinafter given.

In the drawings, Figure 1 is a plan of my joint; Fig. 2, a side elevation of the inner face of the joint; Fig. 3, a side elevation of the outer face of the joint; and Figs. 4 and 5, sections taken on the lines 4 and 5, respectively, of Figs. 1 and 2, respectively.

Instead of the usual straight-ended rails I employ rails 1 and 2, which have been preliminarily curved outwardly or offset, as shown clearly in Fig. 1. Upon the outer face of the rails is arranged an angle-bar 3, corresponding in shape to the curvature of the rails at their meeting ends and having tapered ends to accommodate the wheels in case they are double-flanged. This bar may be provided with a base portion or plate 4 to rest upon the ties 5, as seen in Figs. 4 and 5, and to form a seat or chair for the rails. It is obvious, however, that such base portion may be omitted and the rails allowed to rest directly upon the ties.

The outward curvature of the rails, as described, forms a space or concavity which is filled by an inner or second angle bar or block 6, which tapers in thickness from the center to the ends and whose edge 7 forms a continuation of the straight or main portion of the rails on the inner or wheel-flange side thereof. As seen in Fig. 4, the bar or block 6 is provided with a lower angular portion 8, which may rest at its lower end upon the base-plate 4, if such a plate is used. This block also rests along its entire length upon the base of the rails, so that the block will not only carry the wheels, but will prevent the dropping of the joint, so that a wide-tread wheel will run smoothly over the block and also the joint. In order to secure the parts together, I employ any suitable number of bolts 9, passing transversely through the rails and the angle-bars.

The ends of the rails lie in the same plane or line and may therefore be considered as meeting or abutting each other, although, of course, the usual space may be left between such ends. The term "meet" is therefore used in the claims with such understanding.

As is shown in Figs. 2, 4, and 5, the bar 6 is inclined gently from its center toward the ends 10, which are slightly below the top plane or tread-face of the rail, the central portion being slightly thereabove, as seen in Fig. 5. The object of this construction is to avoid any joint between the rail and inner bar and allow the wheels to "take" the bar easily when they run from the rail proper upon the bar.

Immediately beyond the point of the first curvature of the rail the wheels will bear upon the block 6 and will be carried by such block to the next rail. My device thus forms practically a continuous rail, and there is not the usual joint on which the wheels bear, inasmuch as the wheels are carried by the block at the meeting ends of the rails. These rails may be curved or offset to any extent and the block may be proportioned accordingly, so as to form a continuous lineal edge with the main parts of the rails. It is obvious that my joint may be used on a curve as well as upon a straight track, and in both instances the general construction and principle will be the same. In both instances the bar or block 6 will form a continuation of the main portions of the rails whether the same are curved or straight; but in the former instance it is obvious that it will be necessary to slightly curve the wheel-flange side 7 of the block 6, so as to complete the curvature of the track.

It will be understood that when the base-

plate 4 is used the entire joint may be spiked to the ties by means of the ordinary spikes 11, whose heads are driven against the bar 3, and that when such plate is not used the heads of the spikes will be driven against the base of the rails in the usual and well-known manner. My joint has a considerable extent of bearing upon the ties or support, which is a construction of advantage to prevent spreading or displacement, either on a straight or curved track, caused by the pressure of the wheel-flange on the rail.

Although I have described more or less precise forms and details of construction, I do not intend to be understood as limiting myself thereto, as I contemplate changes in form, the proportion of parts, and the substitution of equivalents as circumstances may suggest or render expedient and without departing from the spirit of my invention.

I claim—

1. A rail-joint comprising two rails whose ends meet and are outwardly curved and a bar or block filling the recess or concavity formed by said curvature.

2. A rail-joint comprising two rails whose ends meet and are similarly outwardly curved and a bar or block filling the recess or concavity formed by said curvature and having its face on the inner side of the track corresponding in direction with the portions of the rails beyond their outward curvature to form a continuous rail and having its other side corresponding to the curvature of the two rails and means for securing said block in place.

3. A rail-joint comprising two rails whose meeting ends are outwardly curved, a bar or block filling the recess or concavity formed by said curvature, and a second bar arranged upon the outside of the meeting ends of said rails and curved to correspond with said curvature of the rails and means for holding said parts together.

4. A rail-joint comprising two rails whose meeting ends are outwardly curved and a bar or block filling the recess or concavity formed by said curvature, said block being at its center slightly above the top plane of the rails and inclining gently toward each end which is slightly below said plane.

5. The combination of two rails having meeting or abutting ends similarly curved and a bar or block arranged adjacent to said meeting ends and forming a continuation of the main part of the rails on the wheel-flange side thereof.

6. A rail-joint comprising two rails whose ends meet and are outwardly curved, a bar or block filling the concavity formed by said curvature and forming a continuous rail in connection with the portions of said rails beyond their said ends, and a second bar or block arranged on the outside of the said curved ends of the rails and having a base-plate on which said rails rest.

7. A rail-joint comprising two rails 1 and 2 whose meeting ends are outwardly curved, a block 6 filling the concavity formed by said curvature and having its central portion slightly above the top plane of the rails and sloping gently to the ends 10 which are slightly below said plane and a bar 3 arranged outside said curved ends.

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