

No. 667,500.

Patented Feb. 5, 1901.

R. B. CHARLTON.
RAILWAY RAIL JOINT.

(Application filed Aug. 13, 1900.)

(No Model.)

Fig. 1.

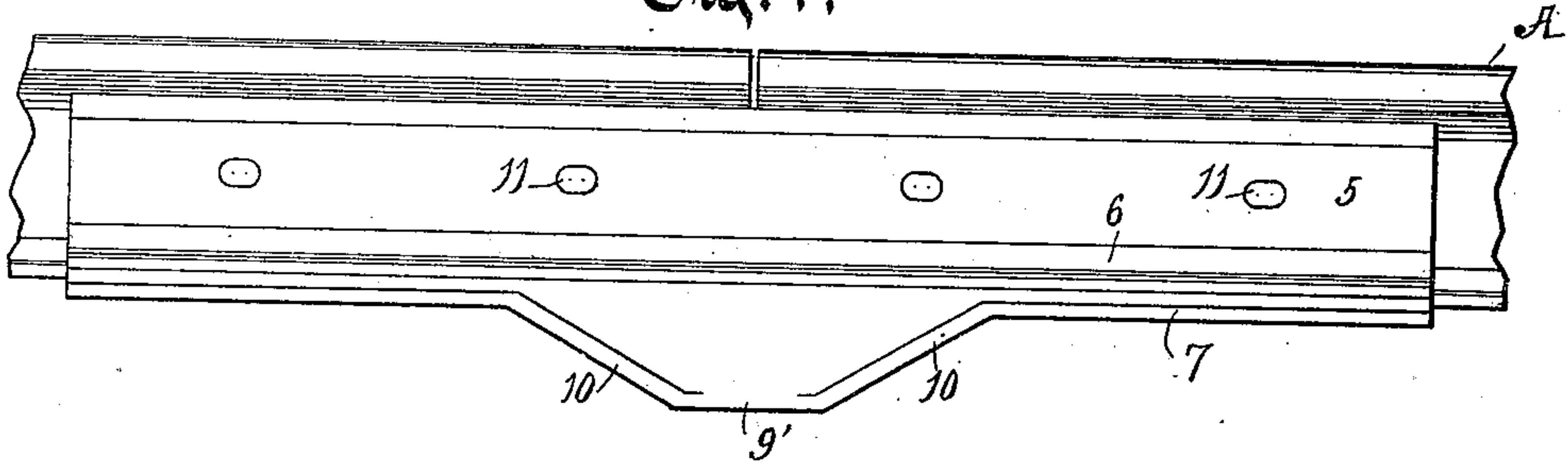


Fig. 2.

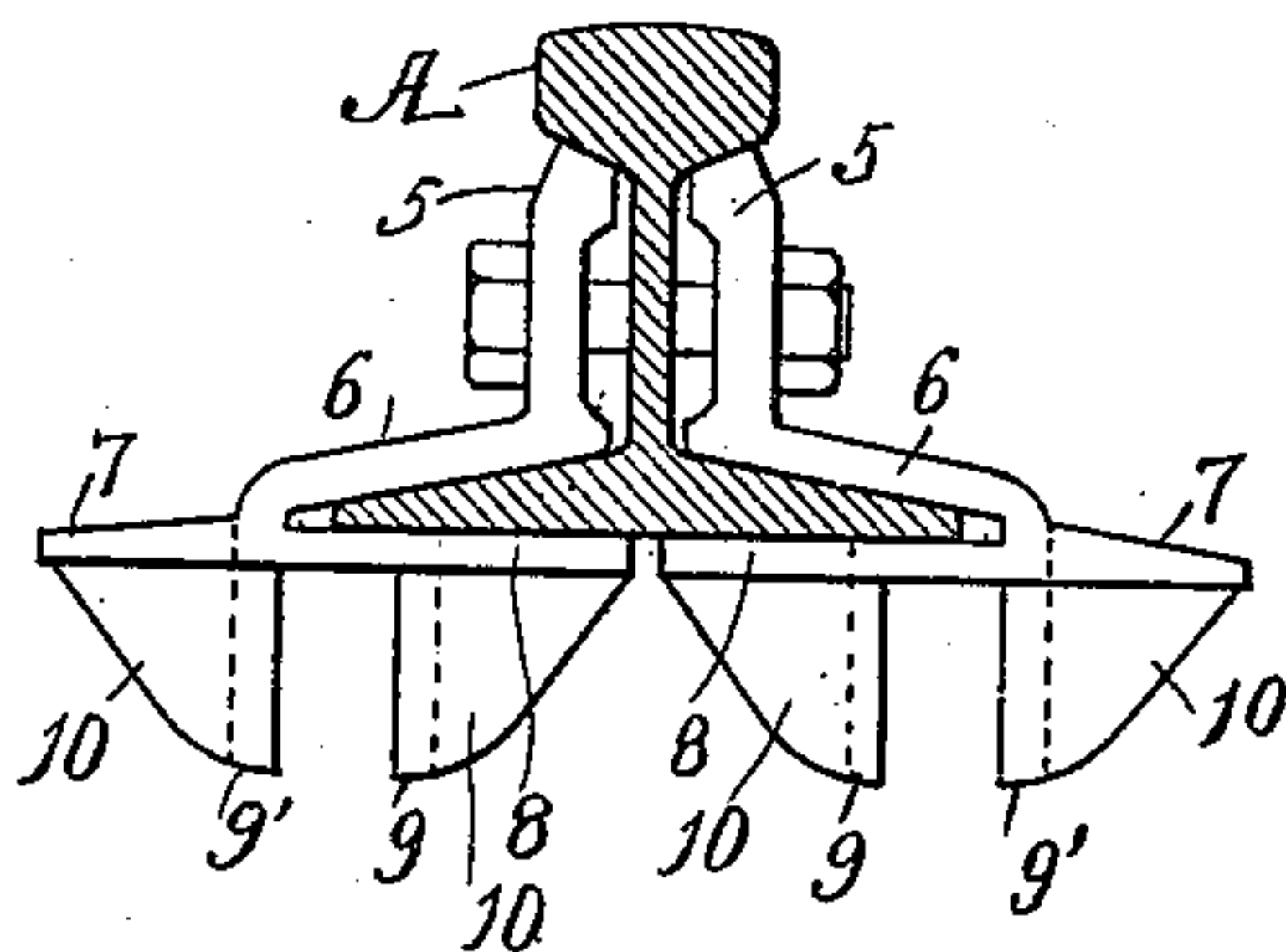


Fig. 3.

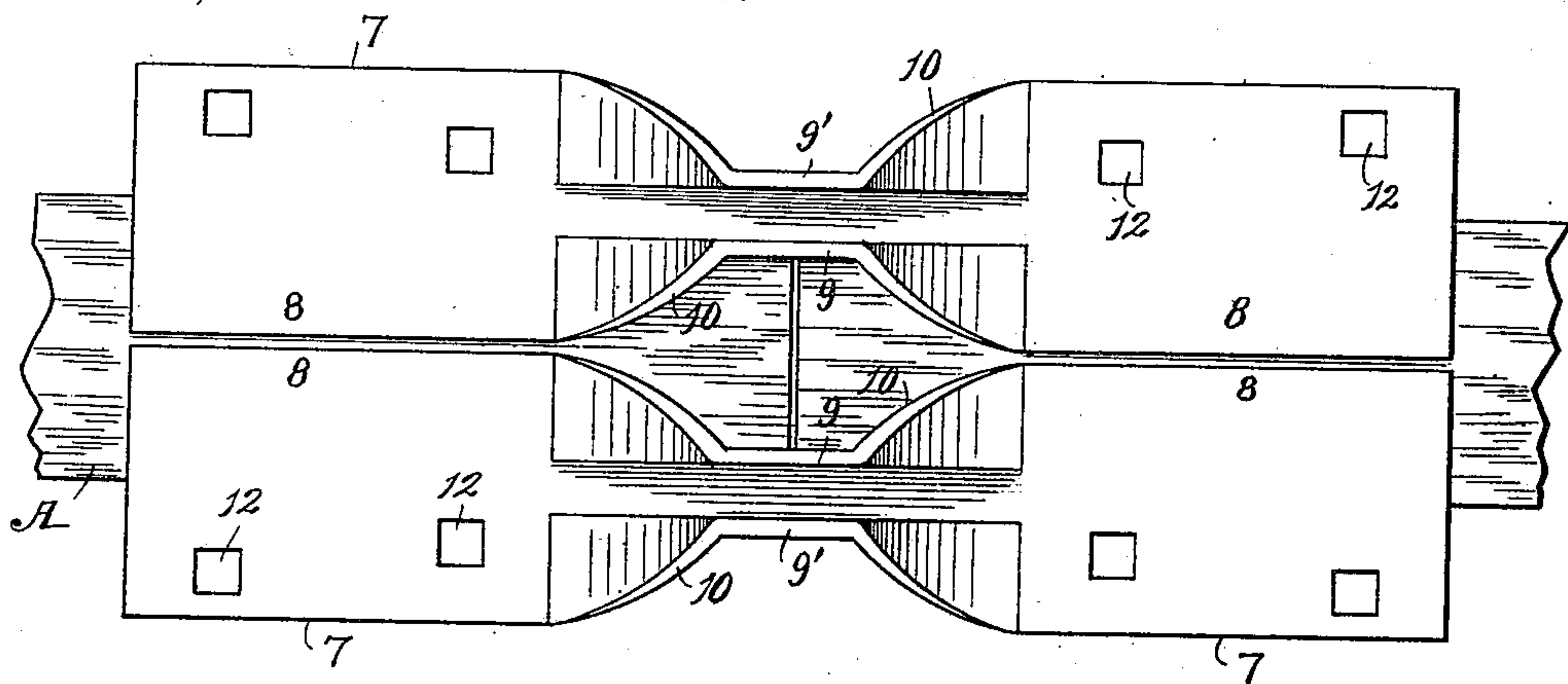
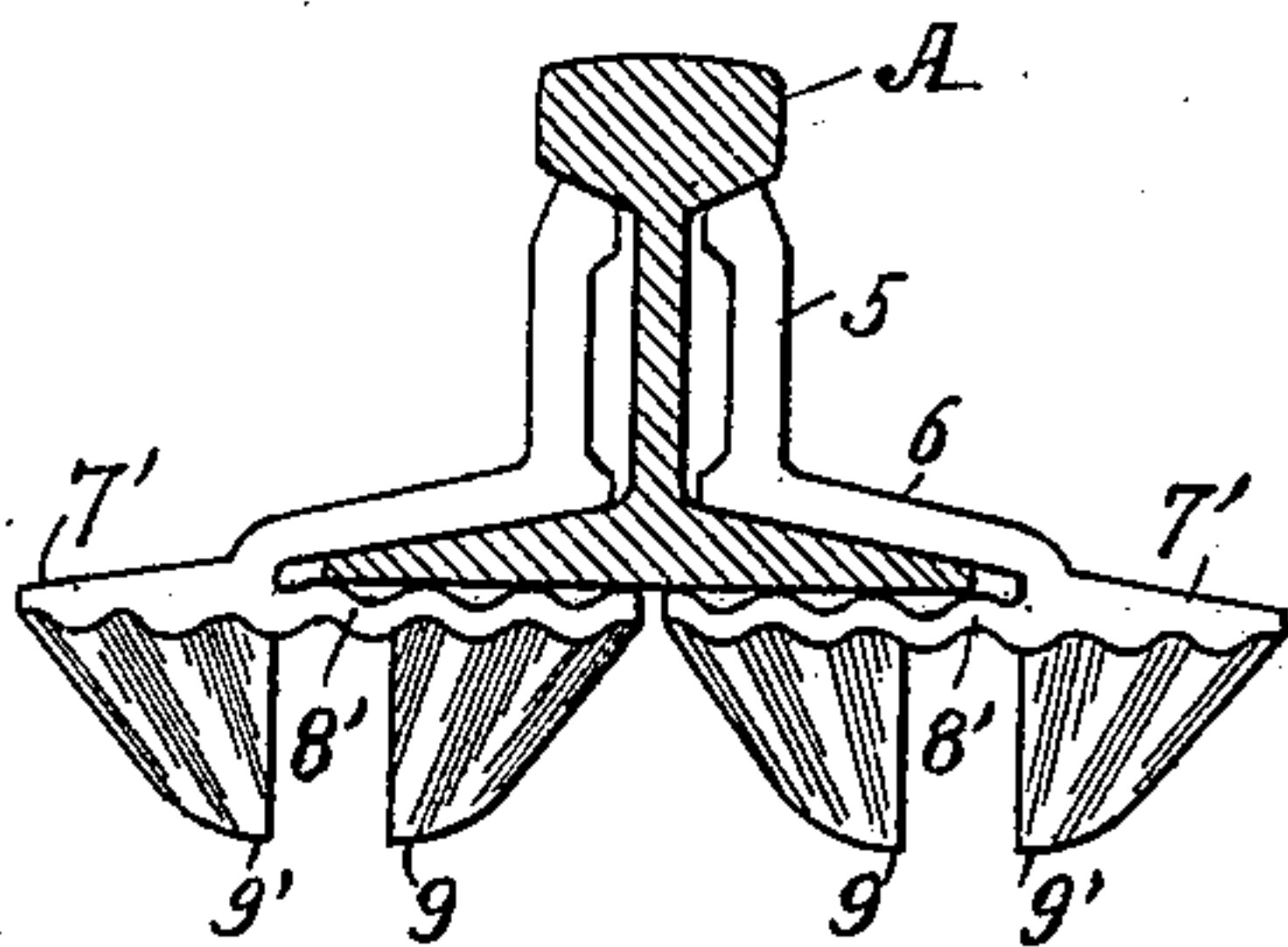


Fig. 4.



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UNITED STATES PATENT OFFICE.

RICHARD B. CHARLTON, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO THE
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RAILWAY-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 667,500, dated February 5, 1901.

Application filed August 13, 1900. Serial No. 26,671. (No model.)

To all whom it may concern:

Be it known that I, RICHARD B. CHARLTON, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Railway-Rail Joints, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

The object of my invention is to provide improved means for joining railway-rails.

The invention consists of the devices constructed and combined, as herein described and claimed, or the equivalents thereof.

In the drawings, Figure 1 is a side elevation of the abutting ends of fragments of two railway-rails with one of my improved joint-plates against one side of the ends of the rails in the manner and in the position in which such plate is adapted to be used in connection with a duplicate thereof at the other side of the rails. Fig. 2 is a transverse section of a railway-rail, showing two of my improved plates in connection therewith in the positions in which they are employed. Fig. 3 is a view of the under side of the abutting ends of two fragments of railway-rails with two of my joint-plates in place thereon in the positions in which such plates are placed and used on the rails. Fig. 4 is a transverse section of a railway-rail, showing also the ends of two of my joint-plates of modified form in the positions and relations to the rail in which they are used.

In making a connecting-joint at and with the abutting ends of two railway-rails two joint-plates are employed which are duplicate in form, one plate being placed against the sides of the rails at the abutting ends and the other plate being placed against the rails on the opposite side, and these plates are secured to each other and to the intermediate web of the rail by means of transverse bolts through apertures provided therefor.

My improved railway-joint plate is constructed integrally advisably of rolled metal, preferably steel, and is in elongated form adapted to fit onto the sides of the abutting ends of rails.

Each plate consists of an upright member 5, a foot member 6, a laterally-projecting toe member 7, an inwardly-extending base mem-

ber 8, and girders 9 9', with parts incidental thereto. The foot member 6 is adapted to rest on the upper surface of the base of a railway-rail A, and the upright member 5 is preferably extended upwardly to such extent and in such form as adapts it to fit against the under surface of the head of the rail. The toe member 7 is continuous laterally outwardly from the foot member 6 and from the base member 8, the base member 8 being extended inwardly under the base of the rail and preferably to such distance as brings its inner edge nearly or quite to the middle longitudinal line of the base of the rail, when the plate is placed in position on the rail in the manner shown in Figs. 2 and 3.

For strengthening the plate medially each plate is constructed with two girders 9 9', the girder 9 being formed by bending down a portion of the inner edge of the base member 8 medially, forming the vertically-disposed elongated girder 9, which is connected to the base member not only at its upper edge, but also by means of the obliquely-disposed webs 10 10, severally connecting an upright end of the girder to the adjacent horizontally-disposed base member 8. This girder 9 is advisably so disposed that it comes under the base of the rail A when the plate is in use, substantially in the manner shown in Figs. 2 and 3. The other girder 9' is formed by bending down a medial portion of the toe member 7 from its outer edge, forming the upright elongated girder, which is connected to the toe member by webs 10 10 like those that connect the girder 9 to the base member. The girders 9 9' on each plate are located opposite and adjacent to each other and medially of the length of the plate. By this construction the plates are greatly strengthened at the locality that comes under the joint formed by the abutting ends of the rails, there being two upright girders on each plate and four girders on the pair of plates employed, one at each side on the abutting ends of two rails, thus providing for four girders underneath the ends of the rails and across the vertical plane of their joint. The plates are provided with bolt-holes 11 11 and with spike-holes 12 12.

In the modified form of construction shown in Fig. 4 the base member 8' is corrugated,

forming longitudinal ribs on its upper and under surfaces, and the toe member 7' is ribbed on its under surface in continuation of and correspondingly with the under surface of the base member 8'. This corruga-
5 tion or ribbing of the under surface of the base member and the toe member results also in a corresponding ribbing or corrugating of the webs of the girders formed from the toe
10 and the base members.

What I claim as my invention is—

1. A rail-joint plate for railway-rails, comprising an integral metal plate, an upright member, a laterally-extending foot member,
15 an under inwardly-extending base member, a toe member extending laterally from the foot member and the base member and in the plane of the base member, and two girders medially of the length of the plate disposed
20 in upright planes, and formed respectively one of a turned-down portion of the toe member and the other of the turned-down edge of the base member, the girders being adjacent to and opposite each other.

25 2. In combination, the abutting ends of two railway-rails, a rail-joint plate on and bolted to the rails, the joint-plate comprising an integral metal plate an upright member, a lat-

erally-extending foot member, an under inwardly-extending base member, a toe member
30 extending laterally from the foot member and the base member and in the plane of the base member, and two girders medially of the length of the plate disposed in upright planes, and formed respectively one of a turned-down
35 portion of the toe member and the other of the turned-down margin of the base member, the girders being adjacent to and opposite each other.

3. In combination, the abutting ends of two
40 railway-rails, two rail-joint plates one at each side of and bolted to the rails, the joint-plates together comprising two upright members, two foot members, two toe members, two base
45 members, and four girders below the planes of the base members and so disposed as severally and collectively to be below the joint formed by the abutting ends of the two rails to which the plates are bolted.

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

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