

No. 708,605.

Patented Sept. 9, 1902.

W. C. WESSEL & H. W. JACOB.

RAILROAD RAIL JOINT.

(Application filed Jan. 20, 1902.)

(No Model.)

Fig. 1.

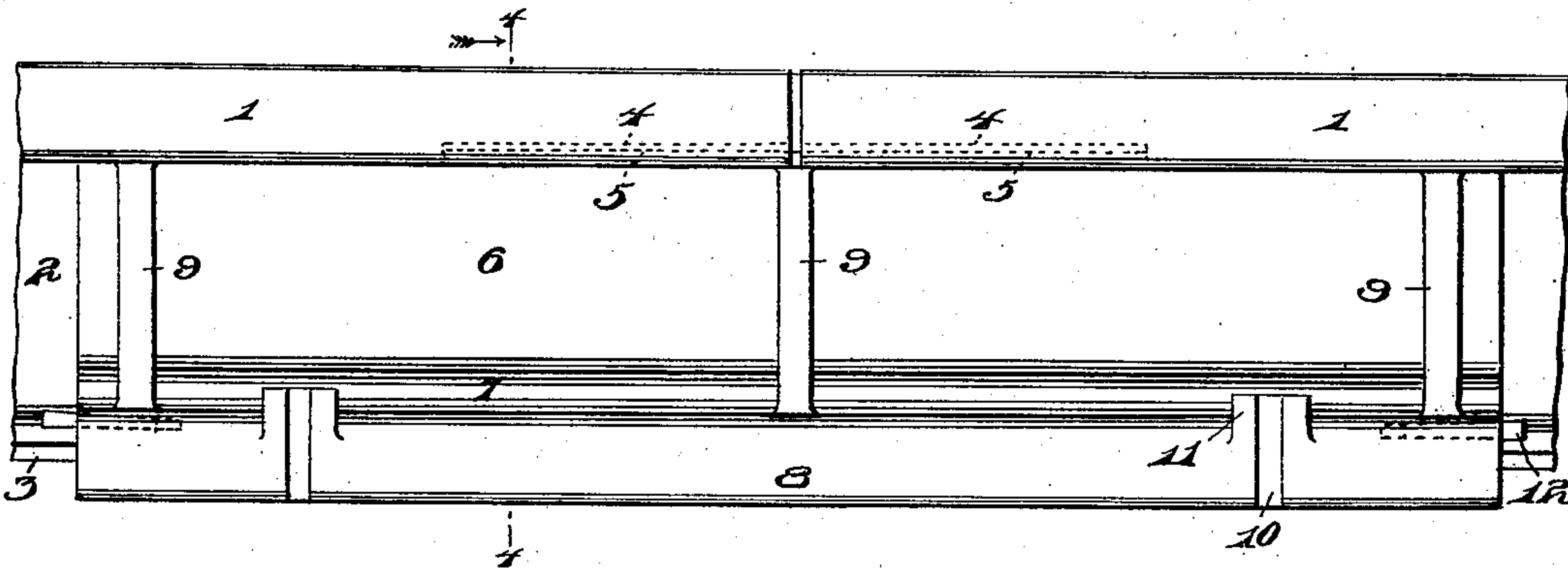


Fig. 2.

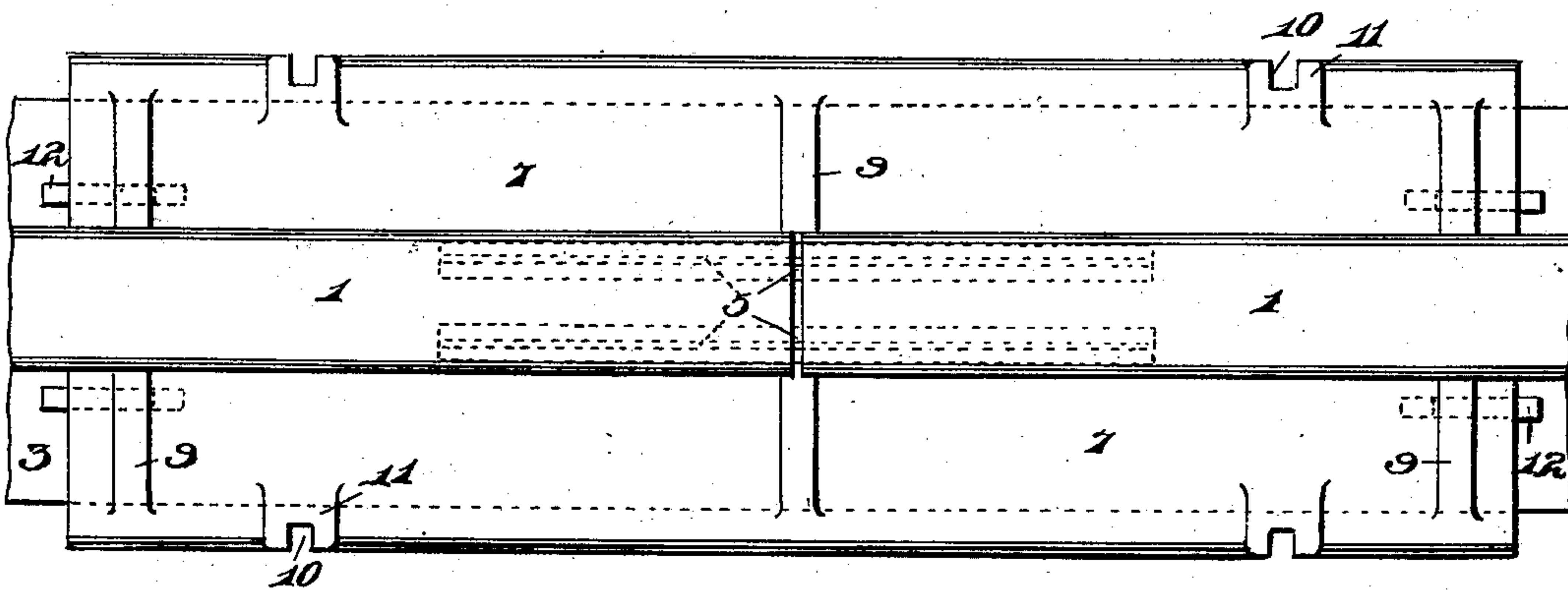


Fig. 3.

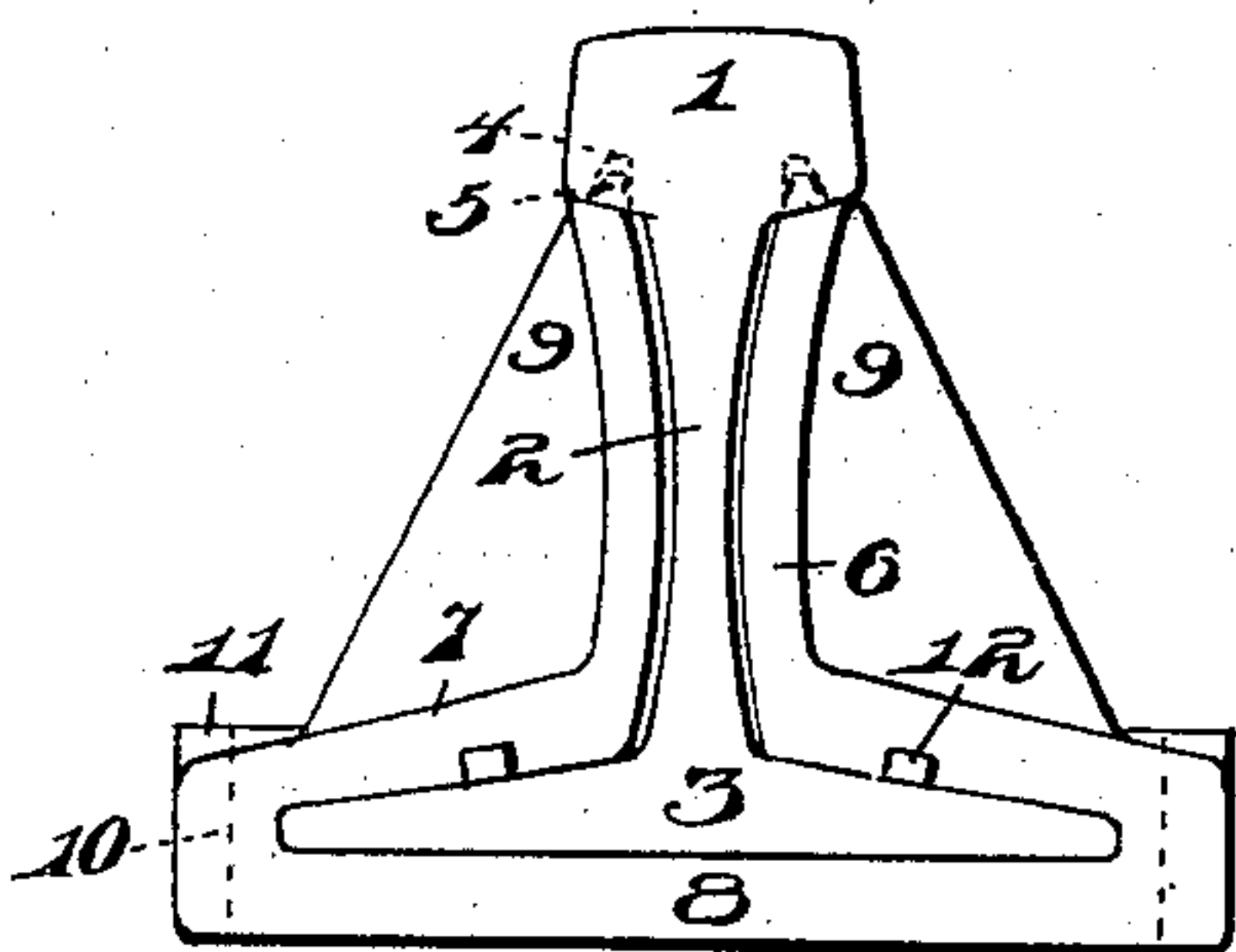
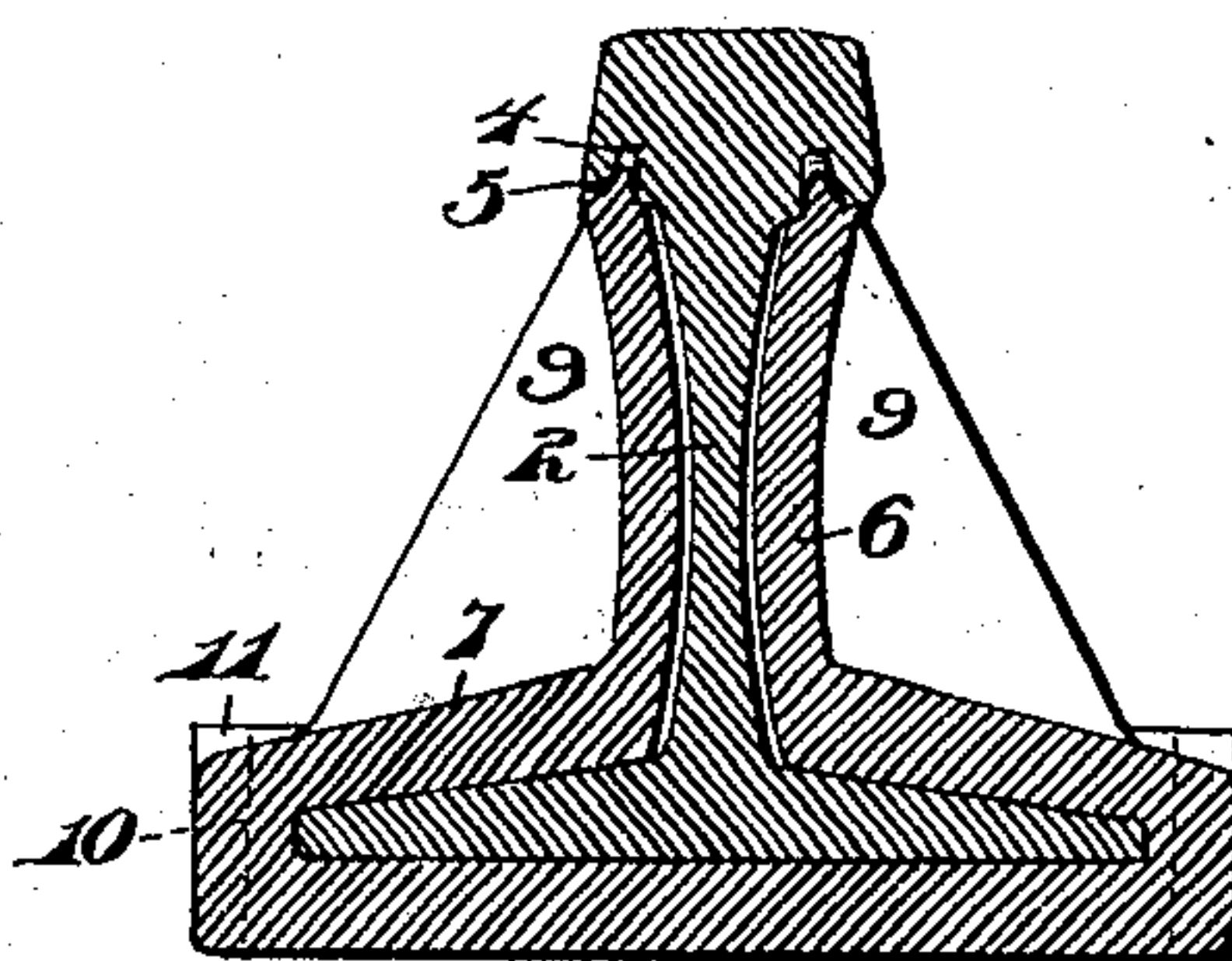


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM C. WESSEL AND HENRY W. JACOB, OF PITTSBURG, PENNSYLVANIA.

RAILROAD-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 708,605, dated September 9, 1902.

Application filed January 20, 1902. Serial No. 90,517. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM C. WESSEL and HENRY W. JACOB, citizens of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Railroad-Rail Joints, of which improvement the following is a specification.

This invention relates to certain new and useful improvements in rail-joints, and has for its object the provision of novel means for the effective joining of the rails together without the aid of the ordinary fish-plates and bolts and nuts.

Briefly described, our invention comprises a chair having a base and integral fish-plates and having flanges or ridges on the upper face of the fish-plates which engage into grooves provided therefor in the underneath face of the rail-tread. The flanges of the fish-plates have recesses formed therein to receive wedges, which are driven therein after the rails have been placed in position in the chair. The chair is preferably constructed with a series of ribs, so as to give rigidity and strength thereto, all of which construction will be hereinafter more fully described.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a side elevation of our improved rail-joint applied in position to the rails. Fig. 2 is a top plan view of the same. Fig. 3 is an end view of the rail, showing the joint in position. Fig. 4 is a transverse vertical sectional view taken on the line 4 4 of Fig. 1.

In the accompanying drawings, 1 indicates the tread of the rail, 2 the web thereof, and 3 the base. The tread of the rail has formed on each end on the underneath face a groove 4, which is adapted to receive a flange 5, formed on the upper edge of the fish-plates, this ridge or flange being of a length so as to project some distance on each side of the joint between the two rails. Our improved joint consists of a chair embodying integral fish-plates 6, having flanges 7 and a base 8. The fish-

plates where the web of the rail is made with a curve, as shown, are given the same curvature, so as to conform thereto, and in practice sufficient space is left between the fish-plates and the web of the rail to provide for expansion and contraction. The chair carries a series of ribs 9 to add strength and rigidity to the same and is provided with notches 10 to receive the securing-spikes. These notches are preferably made in the chair and short enlargements 11, as shown. The flanges 7 are provided at each end with recesses on their underneath face, into which are driven wedges 12, which are placed in position after the rails have been placed in the chair and serve to hold the joint in position. The recesses for these wedges, it will be observed, may as readily be made in the upper face of the base 8, and the projecting flange or ridge 5 may be made the full length of the joint instead of the length as shown in dotted lines in Fig. 1. Where this is done, it will of course be evident that the grooves on the underneath face of the rail-tread will also have to be lengthened.

With this construction it will be observed that the spreading of the rails or low joints will be impossible, while provision for the expansion and contraction has been made, and no bolts are employed in the fastening of the rails.

The chair may be overcast or rolled or made in any suitable manner, and in the practice of the invention it will be noted that various changes may be made in the details of construction without departing from the general spirit of our invention.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a rail-joint, the combination with the rails having the under faces of their treads grooved, of a chair carrying integral fish-plates, flanges and a base, and flanges on the upper ends of the fish-plates engaging in said grooved treads, vertical enlargements formed on the base of the chair and being apertured to receive the spikes, the said flanges of the base being recessed at their ends on the under

side, and wedges adapted to be received within
said recessed flanges and engage the upper
face of the base, the wedges being located on
each side of the rail-web and being engaged
5 from the exterior of the ends of the chair-
flanges, substantially as described.

In testimony whereof we have hereunto

signed our names in the presence of two sub-
scribing witnesses.

WILLIAM C. WESSEL.

HENRY W. JACOB.

In presence of—

JOHN GROETZINGER,

M. HUNTER.