

No. 775,473.

PATENTED NOV. 22, 1904.

A. A. KAPPENHAGEN.

RAILWAY TIE.

APPLICATION FILED JULY 27, 1904.

NO MODEL.

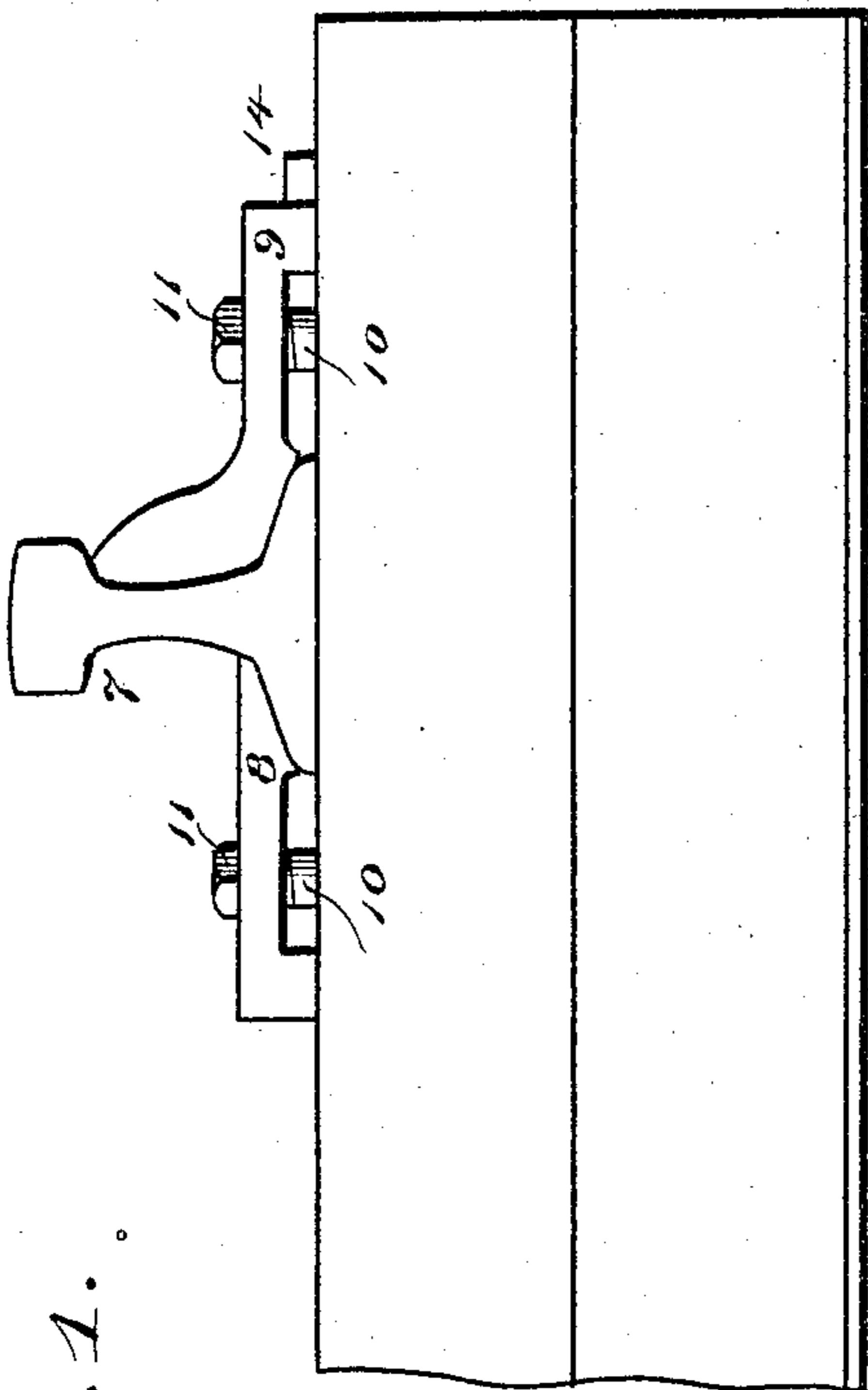
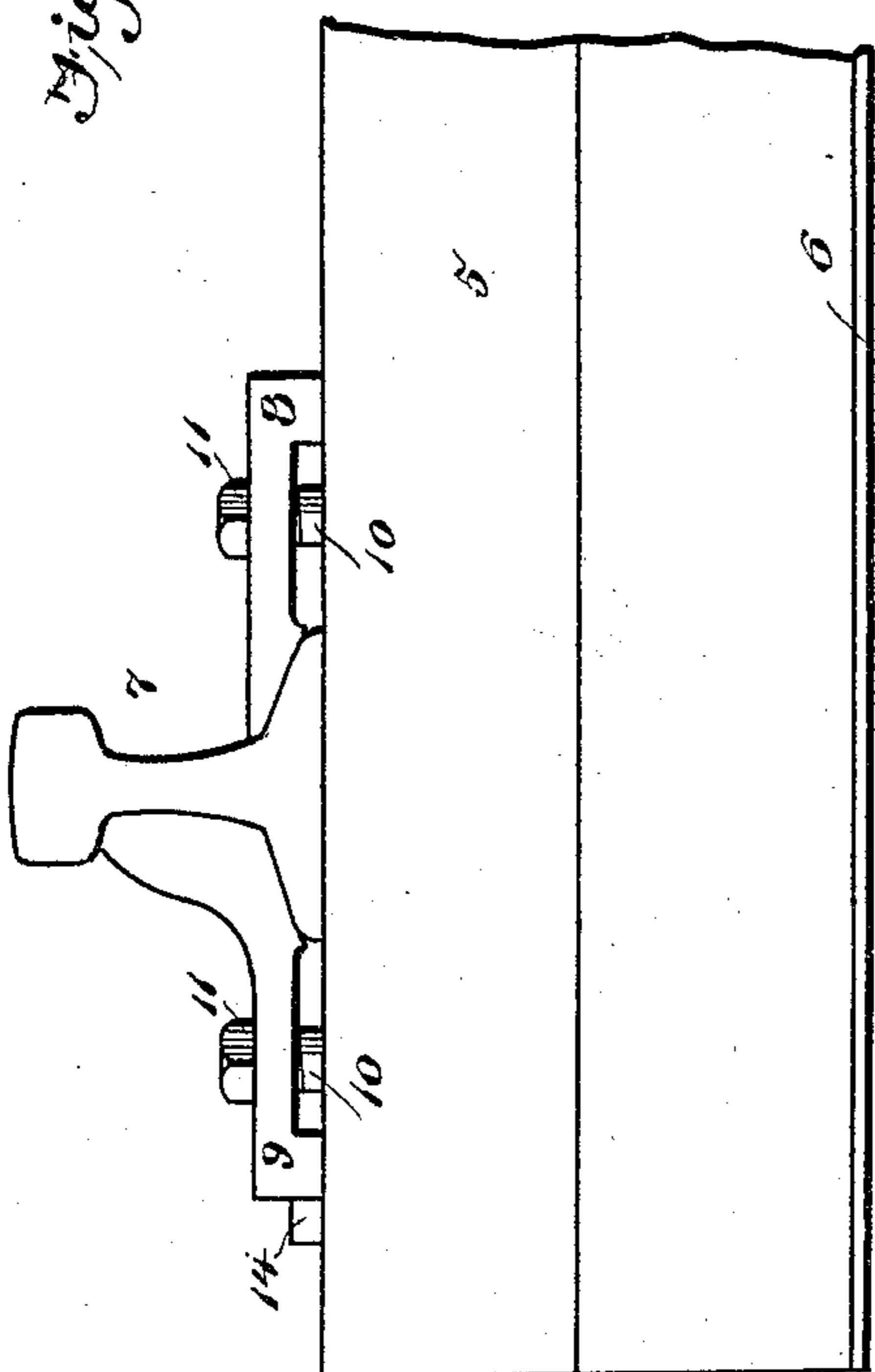


Fig. 1.



Witnesses

J. A. Parrow.
M. A. Schmidt.

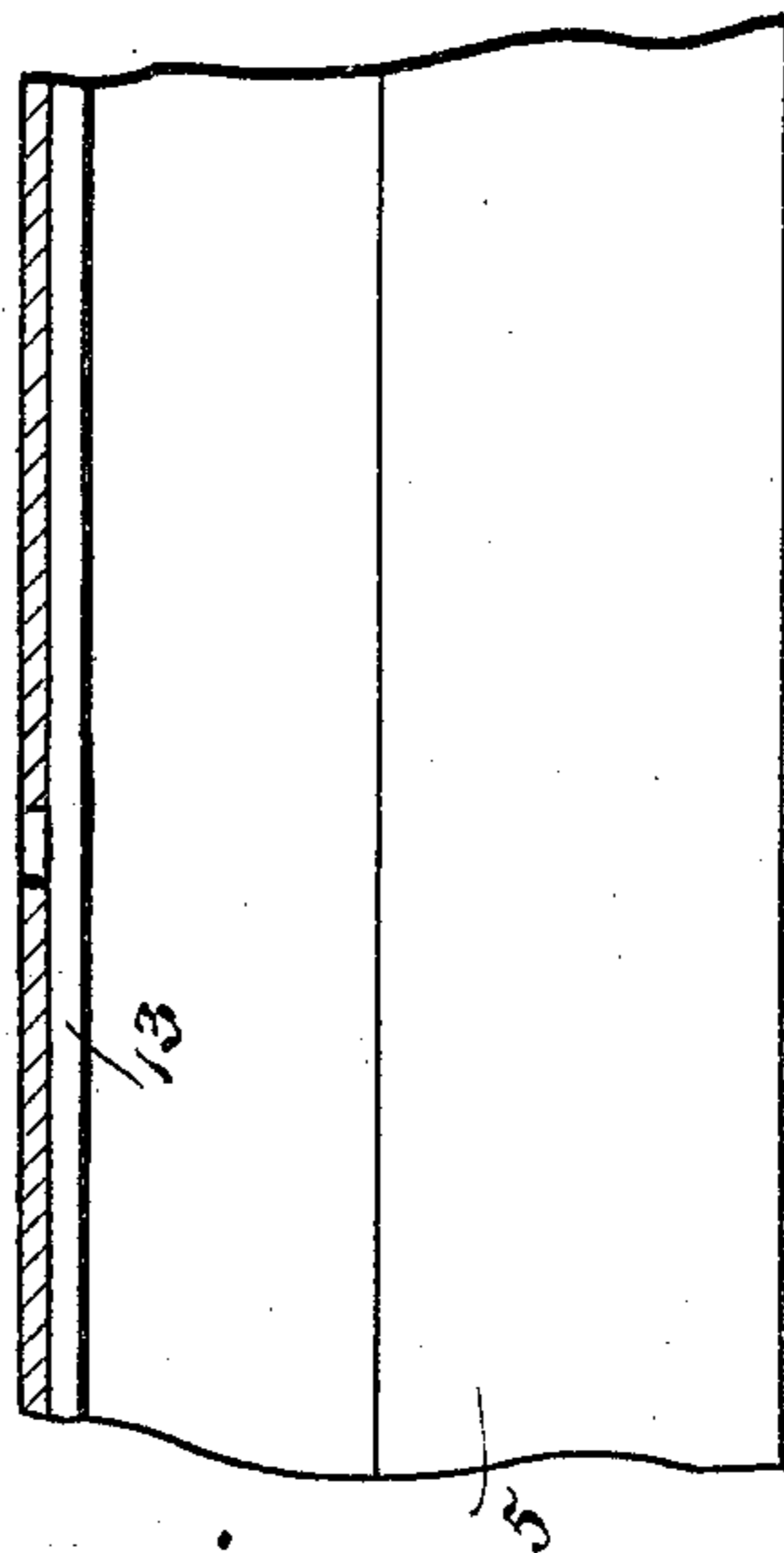


Fig. 3.

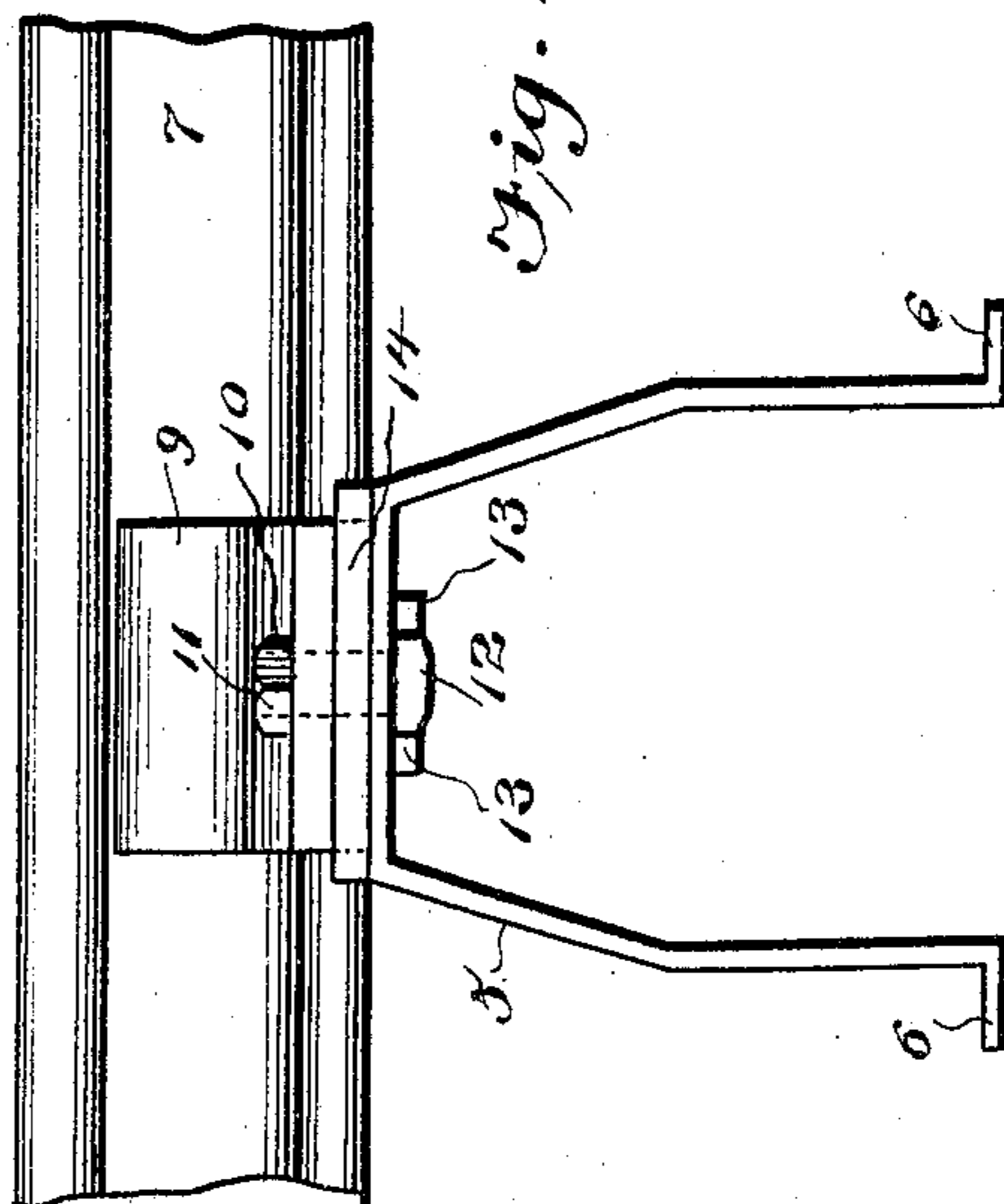


Fig. 4.

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by
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UNITED STATES PATENT OFFICE.

ANDREW A. KAPPENHAGEN, OF CLEVELAND, OHIO.

RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 775,473, dated November 22, 1904.

Application filed July 27, 1904. Serial No. 218,389. (No model.)

To all whom it may concern:

Be it known that I, ANDREW A. KAPPENHAGEN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Railway-Ties, of which the following is a specification.

My invention relates to railway-ties, and has for its object to produce a strong and durable metal tie, together with improved means for fastening the rails thereto; and to this end it consists in certain novel features of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is an elevation of the tie and rail, and Fig. 2 is an end view thereof. Fig. 3 is a longitudinal section of the tie.

Referring specifically to the drawings, the tie is shown at 5, being made of rolled steel or other suitable metal. It is in the form of an arch and has at the bottom outwardly-extending flanges 6, forming a base. In use the tie will be filled with concrete, cement, or other suitable material to add to its strength, it being open on both ends.

The rails are indicated at 7. They are fastened to the tie by clips 8 and 9, respectively, the first mentioned being on the inside of the rail and the other on the outside thereof. The latter extends over the base and under the head of the rail, as shown, and the former extends over the base only. Both clips are secured by bolts 10, which extend through the top of the tie and are fastened by nuts 11. The bolt-heads 12 fit between ribs 13 under the

top of the tie, on the inside thereof, and as said heads are made square the bolt is prevented from turning. The outer end of the clip 9 abuts against a ridge 14, extending across the top of the tie, which prevents spreading of the rails.

The tie is strong and durable and the fastening means are simple, which enables the track to be rapidly constructed. The clips will securely hold the rails and prevent spreading thereof.

Having thus described my invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. The combination with a railway-rail, of a hollow tie having ribs on the inside under the top thereof; clips for fastening the rails to the tie; and bolts extending through the clips and tie, the heads of the bolts fitting between the ribs on the inside of the tie.

2. The combination with a railway-rail, of an arch-shaped metal tie having ribs on the inside under the top thereof; a ridge across the top of the tie on the outside; clips for fastening the rails to the tie, one of said clips abutting against the ridge; and bolts extending through the clips and tie, the heads of the bolts fitting between the ribs on the inside of the tie.

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

ANDREW A. KAPPENHAGEN.

Witnesses:

JOHN A. BOMMARDT,

SHIRLEY BOMMARDT.