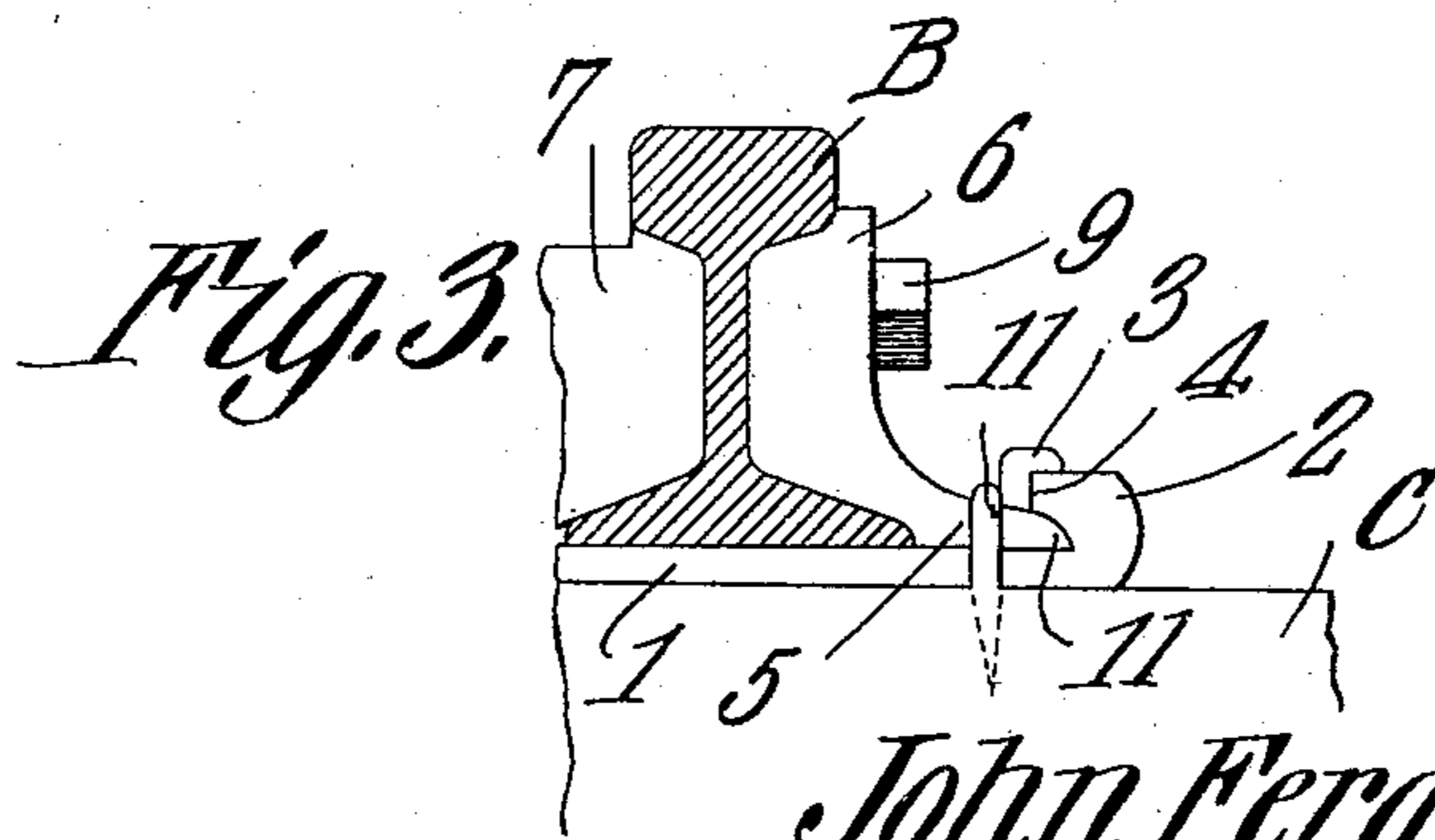
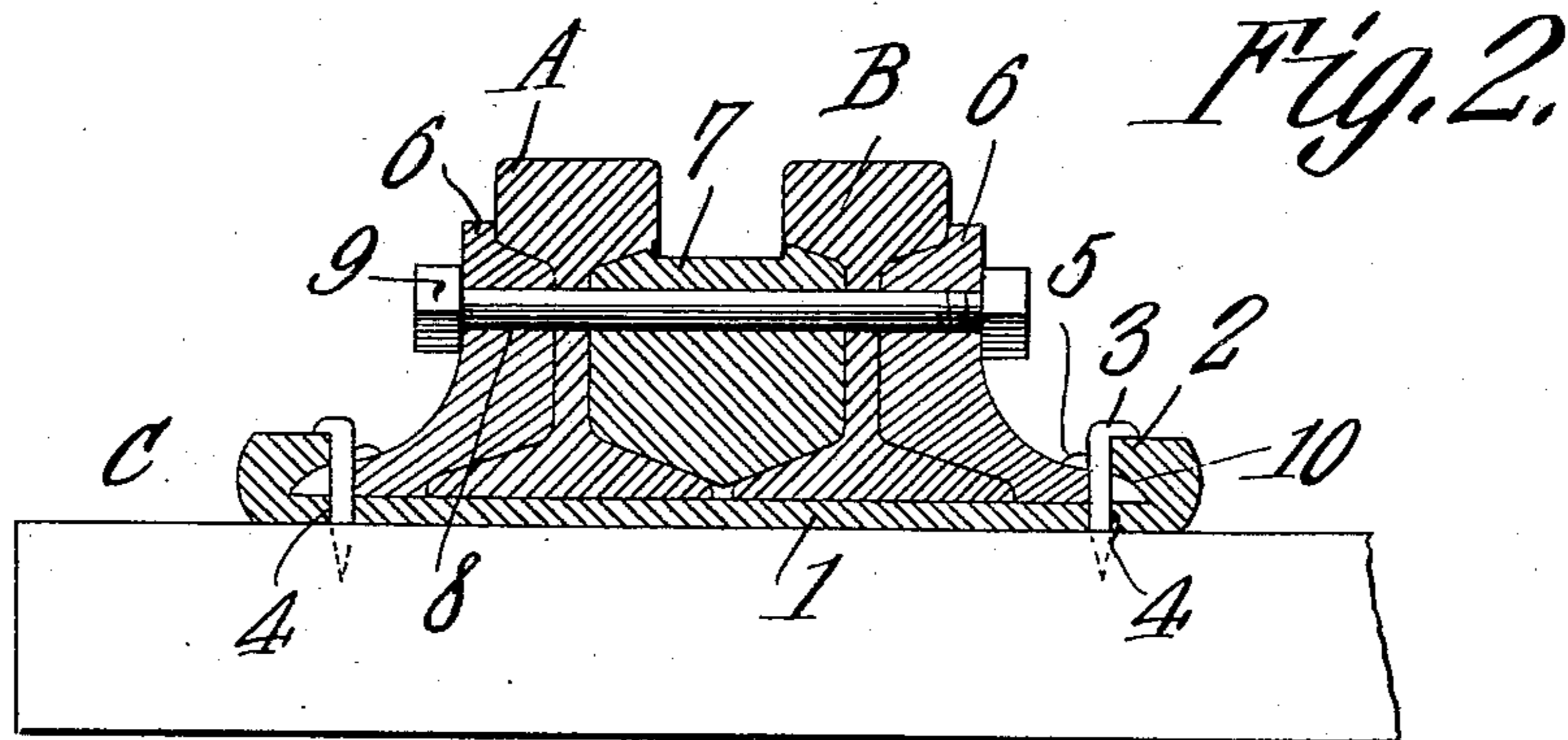
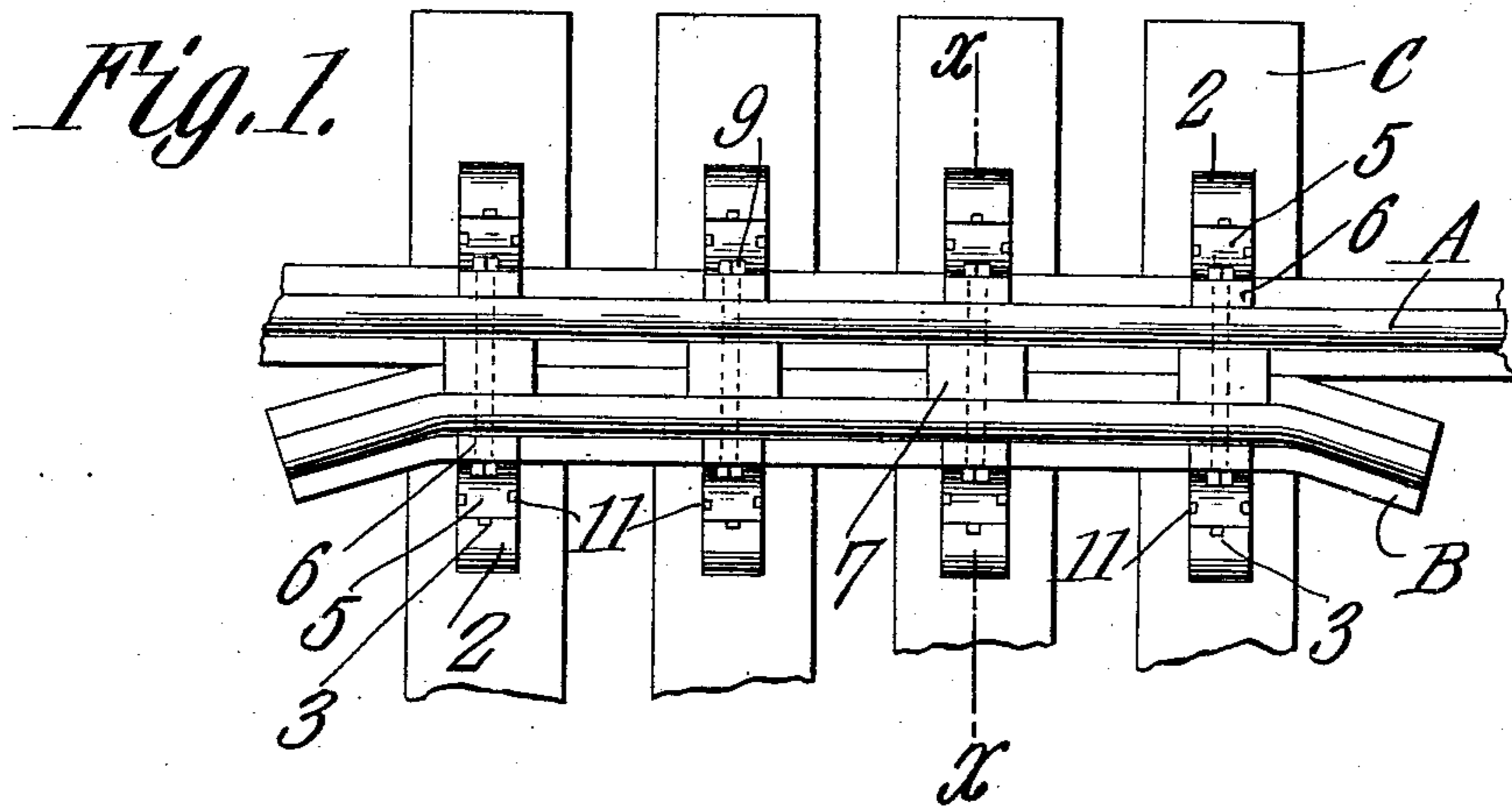


J. FERGUSON.  
 GUARD RAIL.  
 APPLICATION FILED FEB. 10, 1908.

912,453.

Patented Feb. 16, 1909.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN FERGUSON, OF MIDWAY, KENTUCKY.

## GUARD-RAIL.

No. 912,453.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed February 10, 1908. Serial No. 415,176.

*To all whom it may concern:*

Be it known that I, JOHN FERGUSON, a citizen of the United States, residing at Midway, in the county of Woodford and State of Kentucky, have invented a new and useful Guard-Rail, of which the following is a specification.

This invention relates to guard rails for use in connection with railway tracks at points opposite frogs and relates more particularly to means whereby the guard rail can be braced so as to be held positively in an upright position when subjected to lateral pressure. Heretofore it has been difficult to properly secure guard rails of this character in position and as a result they have even been partly turned or tilted when subjected to lateral pressure and thus rendered unsatisfactory for the purposes intended.

The object of the present invention is to provide a device designed to overcome these objectionable features and which also serves to prevent the guard rail from cutting down into the ties on which it rests.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claim.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a plan view of a guard rail provided with bracing means such as embodied in the present invention. Fig. 2 is an enlarged section on line  $x-x$ , Fig. 1. Fig. 3 is a side elevation of a portion of the chair and rail brace.

Referring to the figures by characters of reference, 1 designates a chair preferably in the form of a metal plate having inwardly extending retaining flanges 2 at its ends which lap the plate and are provided at their inner or free edges with notches 3 disposed above and registering with openings 4 formed in the plate 1. These flanges are designed to lap base flanges 5 formed along the lower edges of brace blocks 6. Each block is shaped to fit snugly against the web, head, and base flange of a rail. A combined bracing and spacing block 7 is also utilized in connection with the blocks 6 and is shaped so as to fit snugly against the webs, heads, and

base flanges of two adjoining rails, all of the blocks 6 and 7 being formed with openings 8 for the reception of a tie bolt 9 which is insertible through the rails to be connected.

In the drawings a track rail A and a guard rail B have been shown. When it is desired to connect the guard rail to the track rail and properly brace it a desired number of chairs or plates 1 are placed upon the ties C so as to extend transversely under the two rails A and B. The spacing blocks 7 are then interposed between the two rails directly above the plates 1 and as shown particularly in Fig. 2 will fit snugly upon the adjoining base flanges of the two rails and against the webs and the lower faces of the heads thereof. The brace blocks are then inserted laterally into engagement with flanges 2 until they assume positions directly above the plates 1 whereupon the tie bolts 9 are inserted through the parts and secured so as to bind them together. Each chair is preferably fastened to the tie thereunder by means of spikes of the usual form, certain of said spikes being insertible through the notches 3 and openings 4 of the chair and also through corresponding notches 10 within the flanges 5 of the brace blocks 6. Said brace blocks and the plate 1 are also additionally provided with registering side notches 11 for the reception of spikes. Obviously by providing the bracing means herein described it becomes absolutely impossible for a guard rail to tilt or turn in relation to the track rail and it becomes moreover impossible for either of the rails to cut downward into the ties. The guard rails are thus positively positioned and danger of accidents resulting from their displacement is thus eliminated.

What is claimed is:

The combination with a track rail, and a guard rail; of a chair extending transversely beneath the rails and having overhanging engaging retaining portions, bracing blocks engaging the retaining portions and fitting snugly against the outer faces of the rails, a combined spacing and bracing block interposed between and fitting snugly against the inner or adjoining faces of the rails and upon the adjoining base flanges of said rails, said block filling the space between the webs of said rails, said retaining portions and the

bracing blocks having registering notches  
there being apertures in the chair alining  
with the notches, means extending through  
the notches and the apertures for securing  
5 the chair and block to a tie, and means ex-  
tending transversely through the blocks and  
rails for binding the parts together.

In testimony that I claim the foregoing as  
my own, I have hereto affixed my signature  
in the presence of two witnesses.

JOHN FERGUSON.

Witnesses:

J. T. WASH,  
R. M. WINN.