

No. 683,035.

Patented Sept. 24, 1901.

J. GILLEN.

RAIL JOINT.

(Application filed July 25, 1901.)

(No Model.)

Fig. 1.

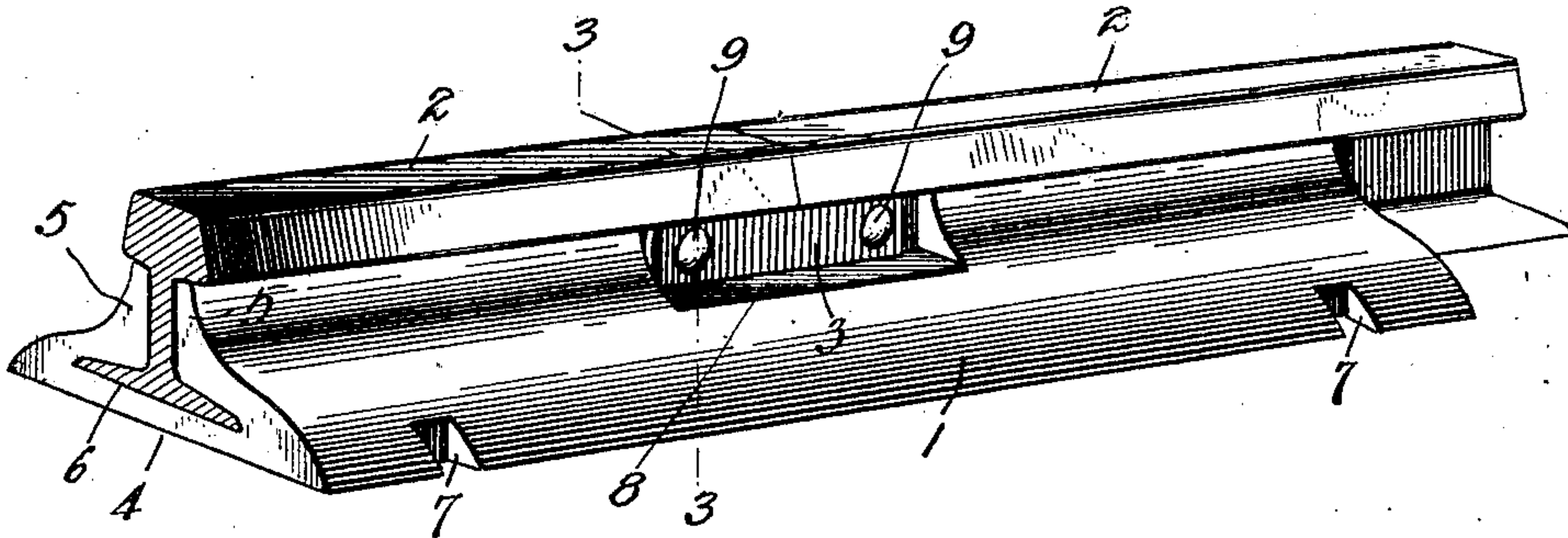


Fig. 4.

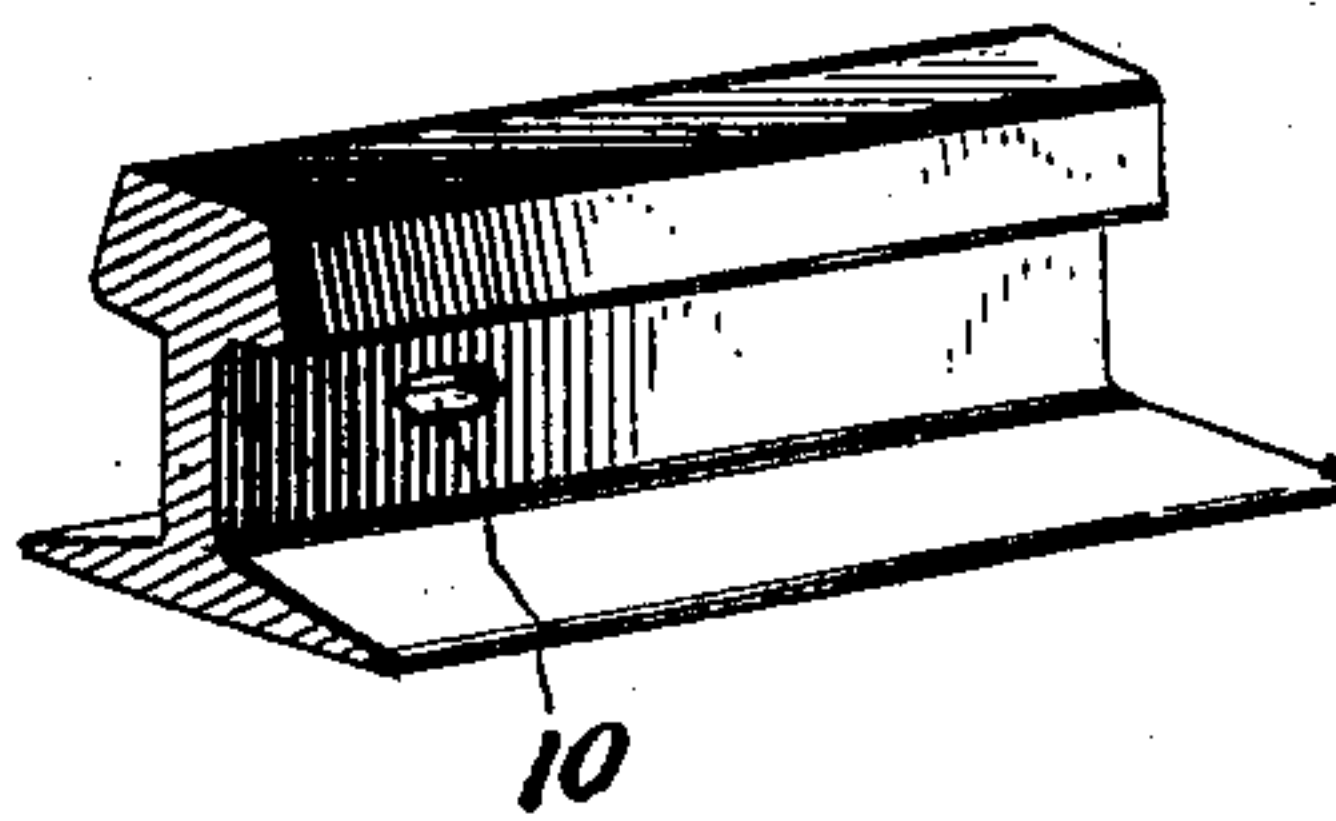


Fig. 2.

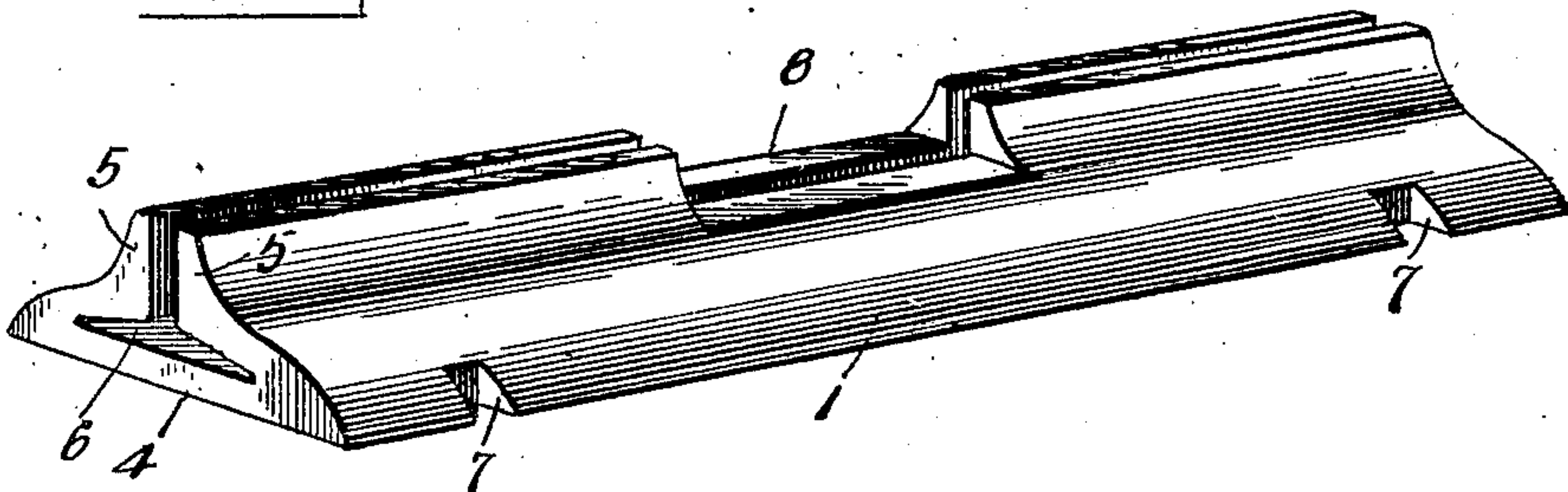


Fig. 5.

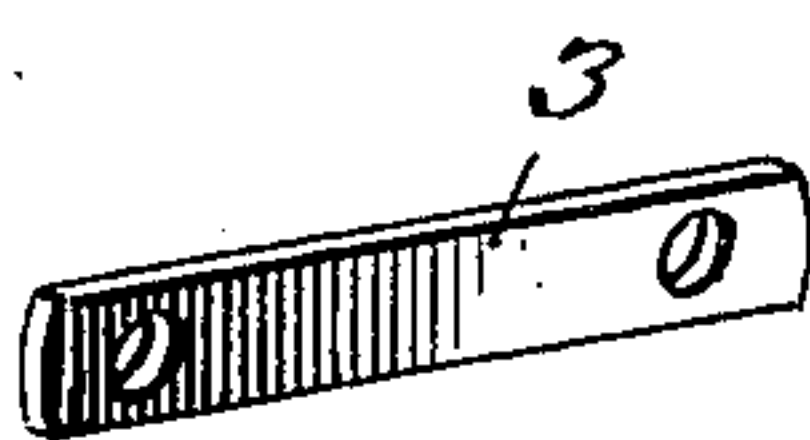
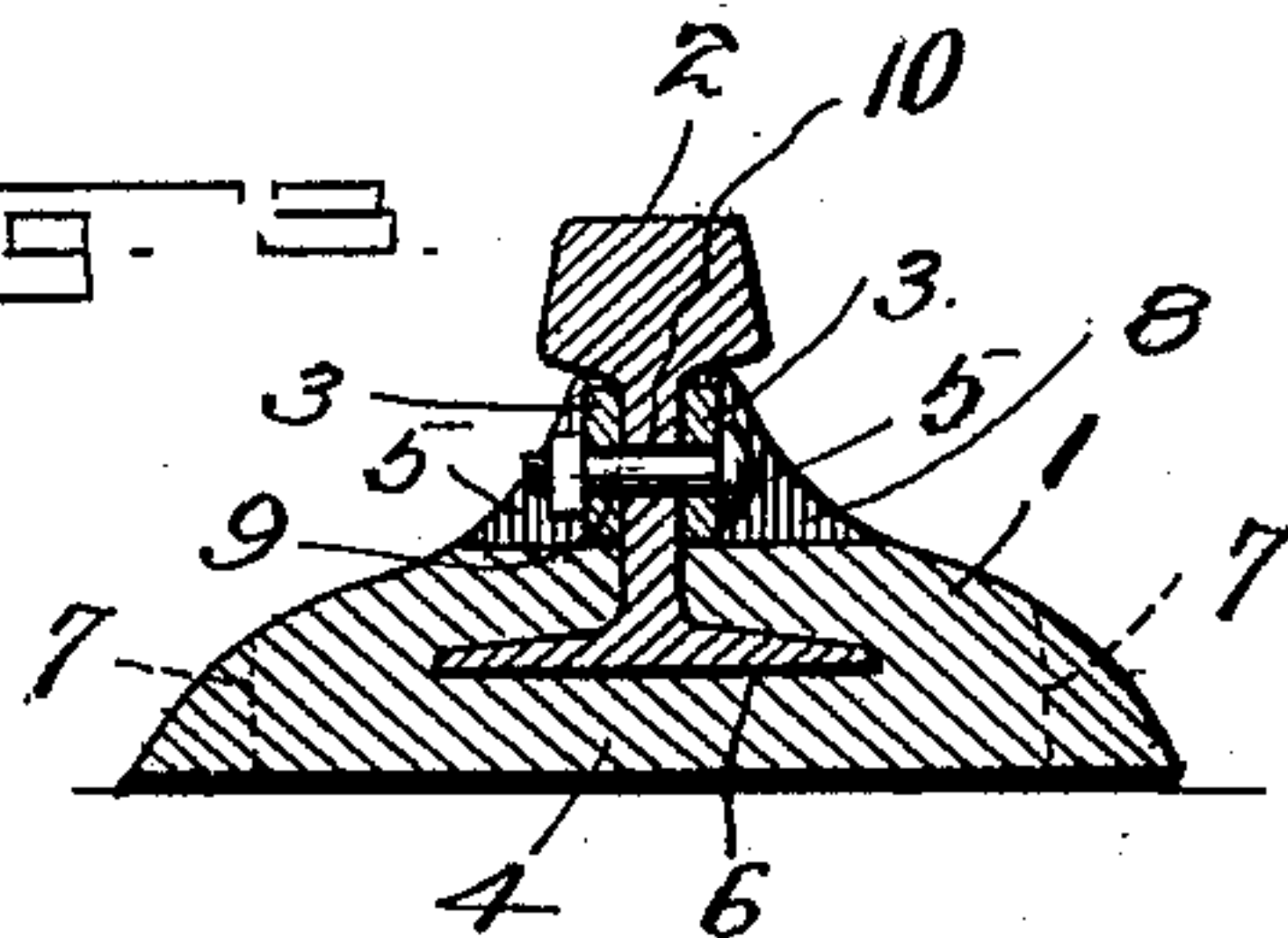


Fig. 3.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN GILLEN, OF FORT WORTH, TEXAS.

## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 683,035, dated September 24, 1901.

Application filed July 25, 1901. Serial No. 69,695. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN GILLEN, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented a new and useful Rail-Joint, of which the following is a specification.

This invention relates to railway-rail joints, and has for its object to present a simple, durable, inexpensive, and readily-constructed appliance which when placed in position to span two rails will relieve all strain from the ends of the rails caused by the weight and jar of the rolling-stock in passing over them, that will operate to reinforce the rails at their points of juncture to hold the treads true and even, and may be readily manufactured and applied to use without necessitating any change in the structural arrangement of the existing rail.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and the combination of parts of a railway-rail joint, as will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, forming a part of the specification, and in which like numerals of reference indicate corresponding parts, I have illustrated a form of embodiment of my invention capable of carrying my ideas into effect, it being understood that the elements herein exhibited may be varied or changed as to shape, proportions, and exact manner of assemblage without departing from the scope of my invention.

In the drawings, Figure 1 is a view in perspective, exhibiting a railway-rail joint or chair with two sections of rail seated therein. Fig. 2 is a perspective view of the chair with the rails detached. Fig. 3 is a view in transverse section, taken on the line 3-3, Fig. 1. Fig. 4 is a perspective detail view of the section of one of the rails, exhibiting the bolt-opening therein by which expansion and contraction of the rail are permitted. Fig. 5 is a detail perspective view of one of the fish-plates.

Referring to the drawings, 1 designates the chair, 2 the rails, and 3 the fish-plates. The chair 1, which constitutes the essential feature of the present invention, is constructed

of a solid piece of metal, either cast or drop-forged, and is provided with a base portion 4 to lie upon the cross-ties and with side wings 5 to bear against the web and under the tread thereof, as clearly shown in Figs. 1 and 3. The chair is provided throughout its length with a channel 6 of a shape to closely hug the base of the rail, it being the object of the present invention to have the assemblage between the rails and the chair of such character that the employment of fish-plates for holding the rails assembled will not be absolutely essential. That is to say, should the bolts holding the fish-plates together be destroyed, so that the fish-plates would drop away from the rails, the chair would still be effective for holding the rails in operative position. Each side of the base of the chair is provided with two or more recesses 7, adapted to receive the spikes by which the chair is held in position upon the cross-ties, and intermediate of its ends the chair is transversely recessed, as at 8, the object of this recess being to provide means to permit attachment to the rails of the fish-plates.

When the chair is to be associated with the ends of two rails, these are slipped into the chair, after which the latter is secured upon the cross-ties in a ready manner. The fish-plates are then placed against the sides of the web of the rail, and bolts 9 are passed through openings at each end of the fish-plates and through two openings 10 in the web of the rail, these latter openings, as shown in Fig. 4, being elongated to permit of the requisite expansion and contraction of the rails without interference with the fish-plates.

In constructing the chair the rail-receiving recess is to be made of such size as while embracing the base, web, and tread of the rails with sufficient closeness to prevent any rattling or vibration of the rails it will permit lateral expansion of the rails, thereby obviating any danger of damage to the chair.

As will be appreciated from the foregoing description, the chair of this invention is exceedingly simple of construction, and its application to an ordinary railway-rail will not require any change in its construction, so that the device will be adaptable to any railway employing standard-gage rails.



Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A railway-rail chair constructed of a  
5 solid piece of metal provided throughout its  
length with a rail-receiving channel of a shape  
closely to embrace the base-web and under  
side of the tread of the rail, the chair being  
provided near its extremities with recesses to  
10 be engaged by the holding-spikes, and inter-  
mediate of its ends with a transverse recess  
to permit application of the fish-plates to the  
rails.

2. The combination with a railway-rail  
15 chair provided with a longitudinal rail-re-  
ceiving recess shaped to conform to the con-  
tour of the base, web, and under side of the

tread of the rail, and having intermediate of  
its ends a transverse recess, of rails housed  
in the rail-receiving recess, and provided at 20  
their meeting ends with elongated bolt-open-  
ings, fish-plates engaging the transverse re-  
cess and bearing against the under side of  
the tread of the rail, and bolts passed through  
the fish-plates and through the bolt-openings 25  
of the rails, substantially as described.

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

JOHN GILLEN.

Witnesses:

C. T. SCOTT,

C. W. RAMSEY.