

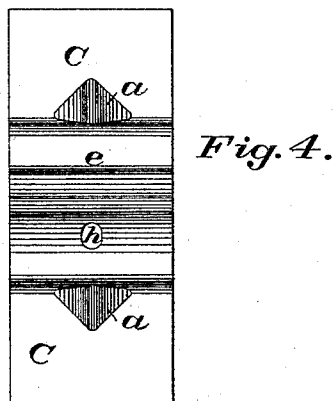
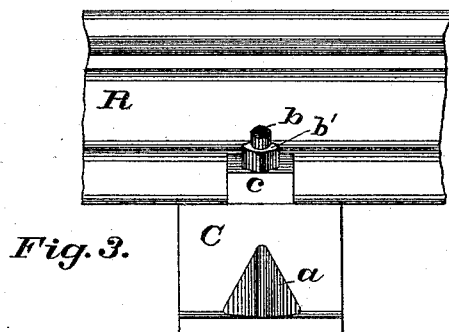
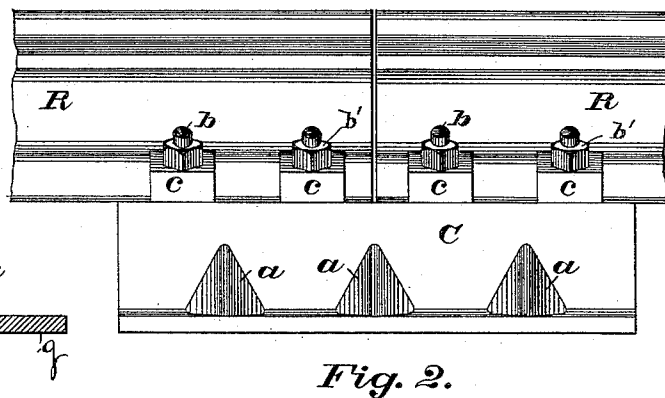
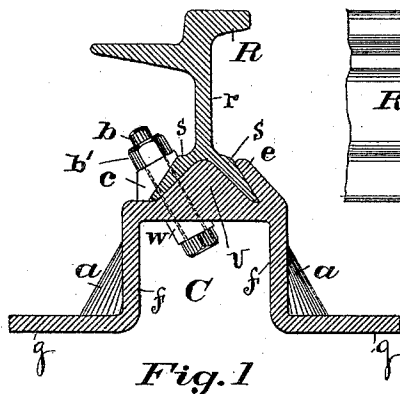
(No Model.)

2 Sheets—Sheet 1.

H. C. EVANS.  
RAILROAD RAIL AND CHAIR.

No. 492,464.

Patented Feb. 28, 1893.



WITNESSES :

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Francis P. Bailey  
W. A. Brückel,

INVENTOR

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(No Model.)

2 Sheets—Sheet 2.

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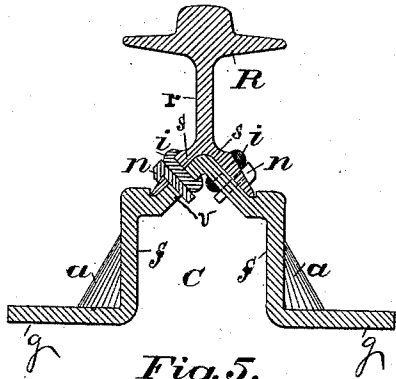


Fig. 5.

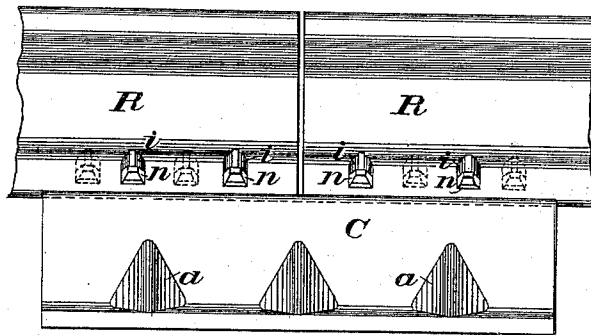


Fig. 6.

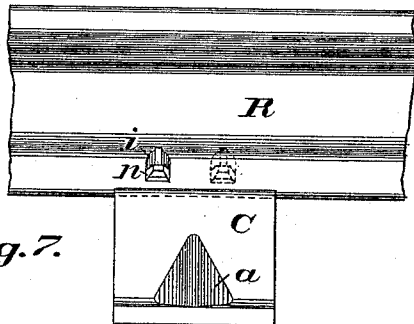


Fig. 7.



Fig. 8.

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# UNITED STATES PATENT OFFICE.

HENRY C. EVANS, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE JOHNSON COMPANY, OF JOHNSTOWN, PENNSYLVANIA.

## RAILROAD-RAIL AND CHAIR.

SPECIFICATION forming part of Letters Patent No. 492,464, dated February 28, 1893.

Application filed September 30, 1891. Serial No. 407,234. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY C. EVANS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Railroad-Rail and Chair for the Same, which invention is fully set forth and illustrated in the following specification and accompanying drawings.

The object of this invention is sufficiently indicated by its title above given.

The invention will first be described in detail and then particularly set forth in the claims.

In the accompanying drawings, Figure 1 shows the rail and chair in cross-section. Fig. 2 is a side-elevation showing the chair performing the office of a rail-joint uniting the ends of two contiguous rails. Fig. 3 is a side-elevation of Fig. 1, looking from the left. Fig. 4 is a view of the chair in plan, the rail and the bolt, for securing it being omitted. Fig. 5 shows in cross-section a modified form of chair, seating a rail having a different shape of head than the rail shown in Fig. 1. Fig. 6 is a side-elevation showing the chair illustrated in Fig. 5, uniting the ends of two contiguous rails. Fig. 7 is a side-elevation of the chair shown in Fig. 5. Fig. 8 is a view of said chair in plan, the rail and its fastenings being removed.

In said figures the several parts are respectively indicated by reference letters as follows:

Referring first to Figs. 1 to 4, inclusive: The letter R indicates a girder-rail having at the bottom of its vertical web, *r*, two downwardly-extending flanges *s*, the base of said rail thus being of an A, or inverted V shape. The letter C indicates a chair for the rail R, its upper surface being preferably formed as shown at *v*, to fit into the A-base of said rail, and having a clip or lug *e*, to clamp one of its flanges, *s*. The other flange *s*, of the rail is clamped to the chair by means of the bolt *b*, provided with washers *c*, *w*, under its nut and head respectively. Said bolt passes through said flange and a hole, *h*, in the top surface of the chair and is secured by the nut *b'*. When the chair is used as an intermediate chair between joints, as shown in Fig. 3, one bolt will usually be sufficient to secure it to the rail; but where the chair is used as a joint-chair, uniting the ends of two contiguous rails, as shown in

Fig. 2, the length of the chair is increased and any number of bolts may be used that may be desirable.

Referring now to Figs. 5 to 8, inclusive: The letter R indicates a girder-rail having a base similar in form to that of the rail shown in Fig. 1 and a center bearing head. The letter C, indicates a chair for the rail R, its upper portion being bent upward as shown at *v* to form a recessed projection fitting into the A, or inverted V, base of said rail and being provided with side-lugs *x*, against which the flanges *s*, bear. The rail is clamped to the chair by the clips *i*, and keys *n*, which pass through the flanges *s* of the rail and through the top of the chair. The clips *i*, are first inserted in the holes *h*, and then securely held in place by driving in the hook-headed keys *n*. Said clips and keys are preferably diagonally located or staggered as shown in Figs. 6 and 7, but they may be located directly opposite each other if desired. When the chair is used as a joint-chair as shown in Fig. 6, its length is increased and as many clips and keys *i*, *n*, may be used as may be desired.

It is obvious, that if desired, the clip or lug *e*, formed on the chair shown in Fig. 1 might be omitted and the bolt fastening, *b*, or other clamping device, substituted therefor. The clip and key fastening, *i*, *n*, shown in Fig. 5, might also be substituted for the fastening devices shown in Fig. 1, and said bolt-fastening devices might be substituted for said clip and key fastening, without departing from this invention, suitably shaped washers being used for the bolt fastening. The shape of the head of the rail is immaterial and said rail may be made by any suitable method. The chair also may be made by any suitable method and its lower portion may be varied in shape as circumstances may require.

As shown in the drawings the chairs are of box-form having vertical sides *f*, and lower flanges *g*, for securing them to the cross ties. Braces, *a*, may be used for purposes of strength, if desired, and splice bars may be added at the rail joints above or between the chairs.

Having thus fully described my said invention, I claim—

1. The combination with a railroad rail having a vertical web and lower flanges forming an A-base, of a chair having its upper sur-

face shaped so as to fit between said flanges and extend over one side of said base.

2. The combination of a railroad-rail having an A-base; a chair having its upper surface shaped so as to form a seat for said base and extend over one side of the same; and a bolt passing through the other side of said base and the upper surface of the chair.

3. A rail-chair having on its upper surface a projection, as *v*, and a side lug or lugs.

4. A rail-chair provided on its upper surface with a recessed projection, as *v*, and a side lug or lugs.

5. In combination with a railroad-rail hav-

ing downwardly and outwardly extending base-flanges, a chair having a projection fitting between said flanges and provided with a side-lug or lugs.

6. The combination with a railroad-rail having a vertical web and downwardly and outwardly extending base-flanges, at the bottom of said web of a chair having a recessed projection fitting said flanges, and fastening devices for securing said rail and chair together.

HENRY C. EVANS.

Witnesses:

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