

(No Model.)

4 Sheets—Sheet 1.

A. J. MOXHAM.
RAILROAD RAIL CHAIR.

No. 367,434.

Patented Aug. 2, 1887.

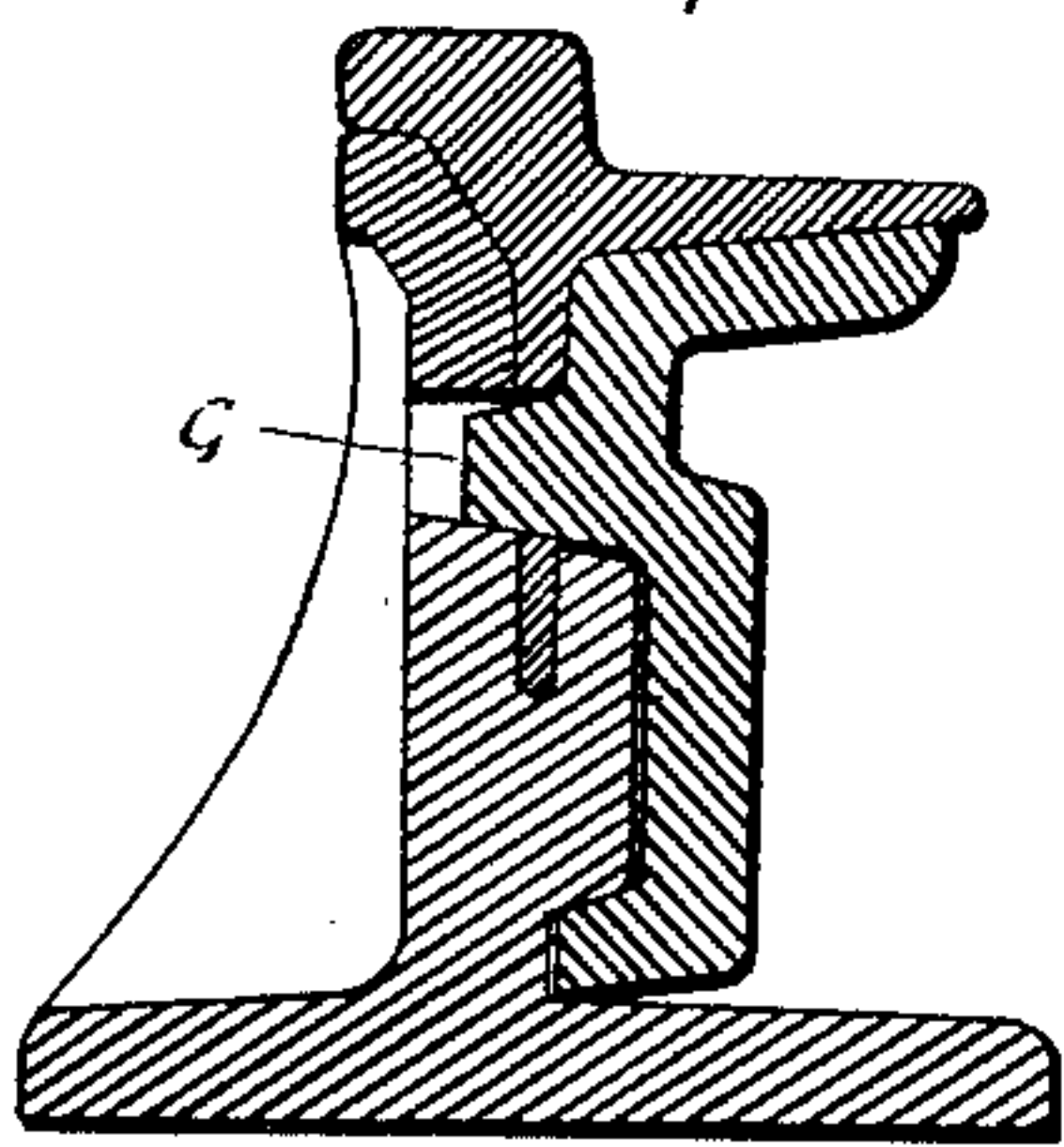


Fig. 1^a

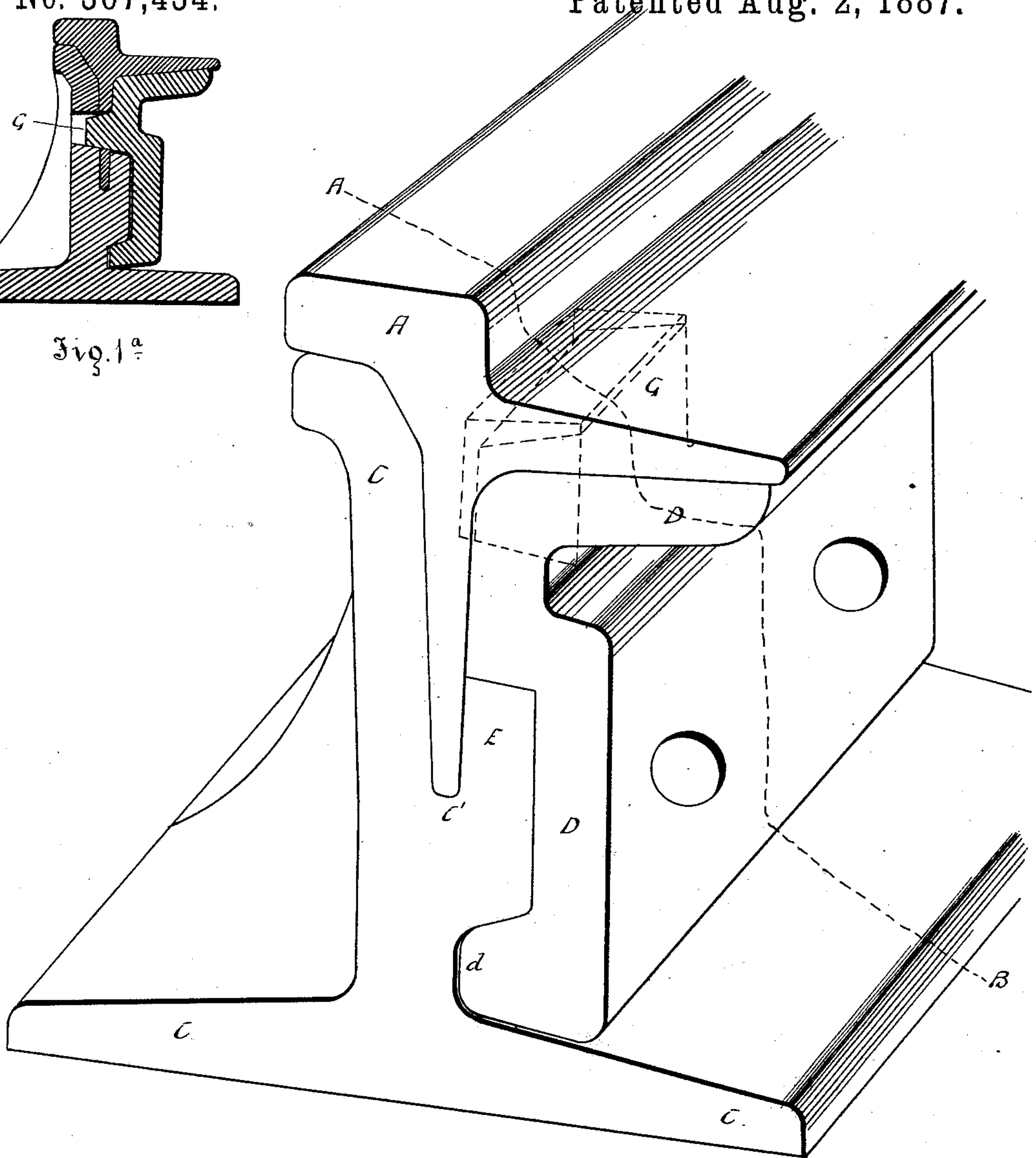


Fig. 1.

Witnesses
Francis P. Reilly
Frank Brewer

Inventor
A. J. Moxham
By his Attorney P. H. Voorhes

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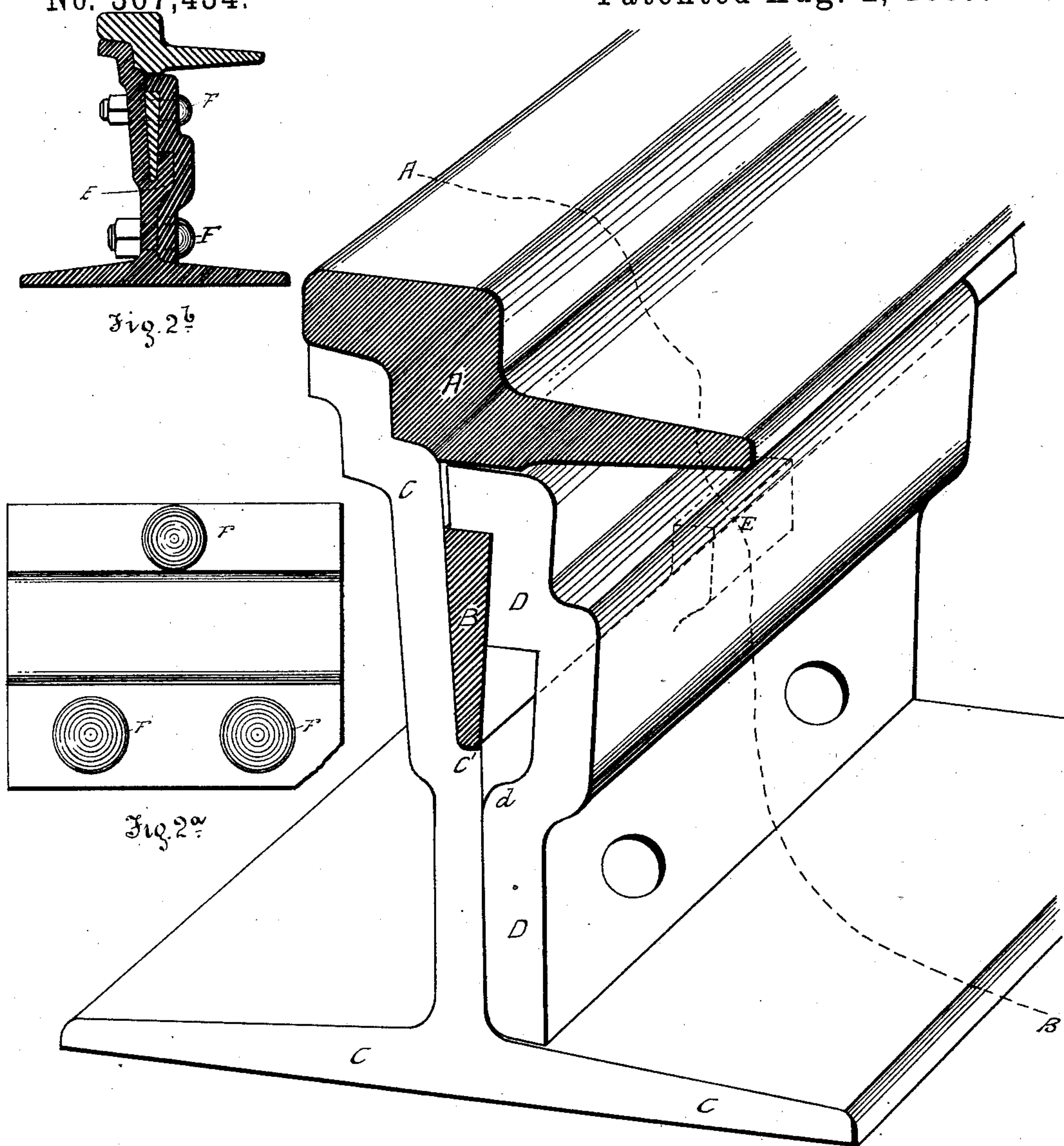


Fig. 2.

Witnesses
Francis P. Reilly
Frank Brewer

Inventor
A. J. Moxham
By his Attorney P. A. Voorhes

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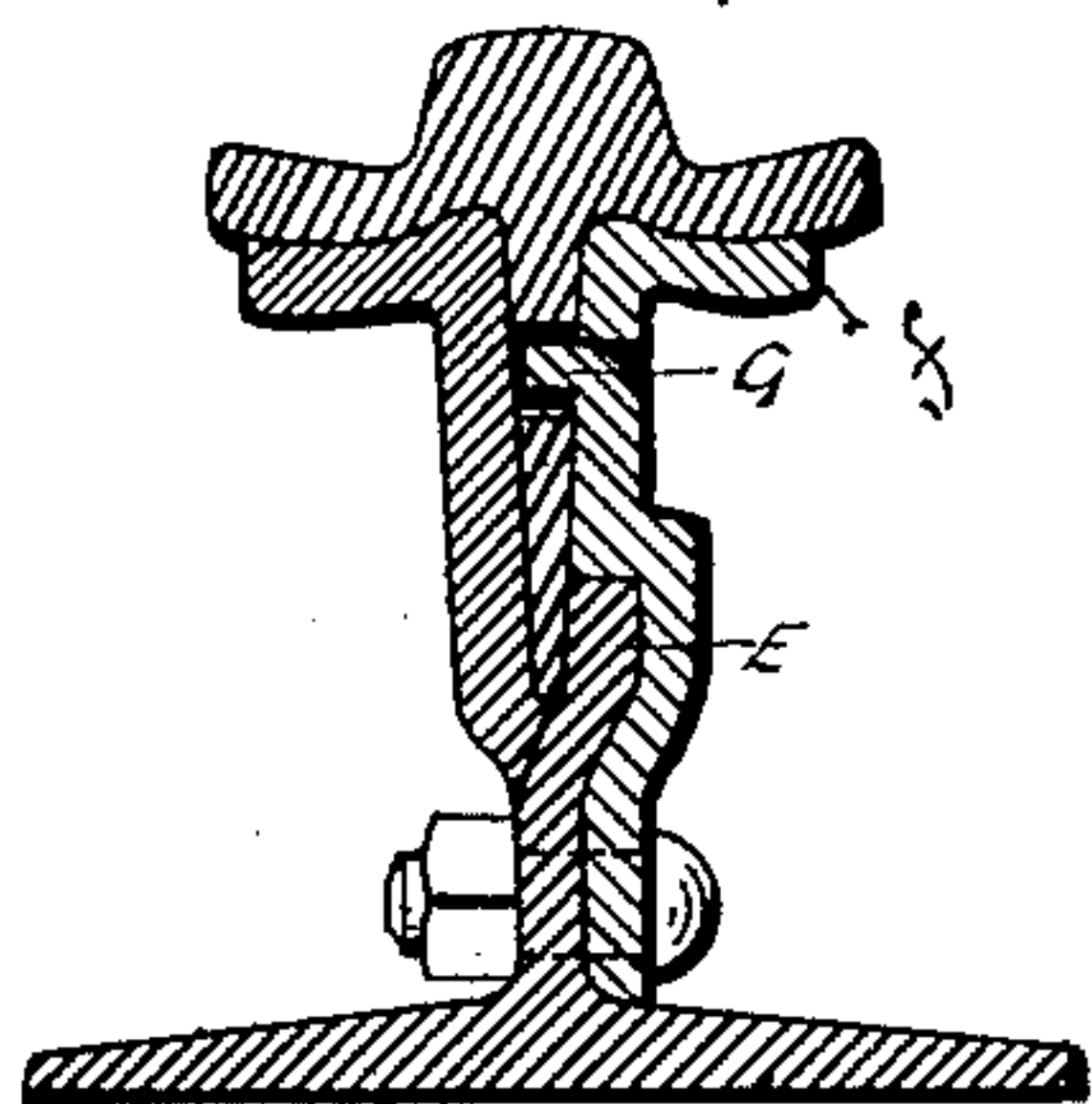


Fig. 3a.

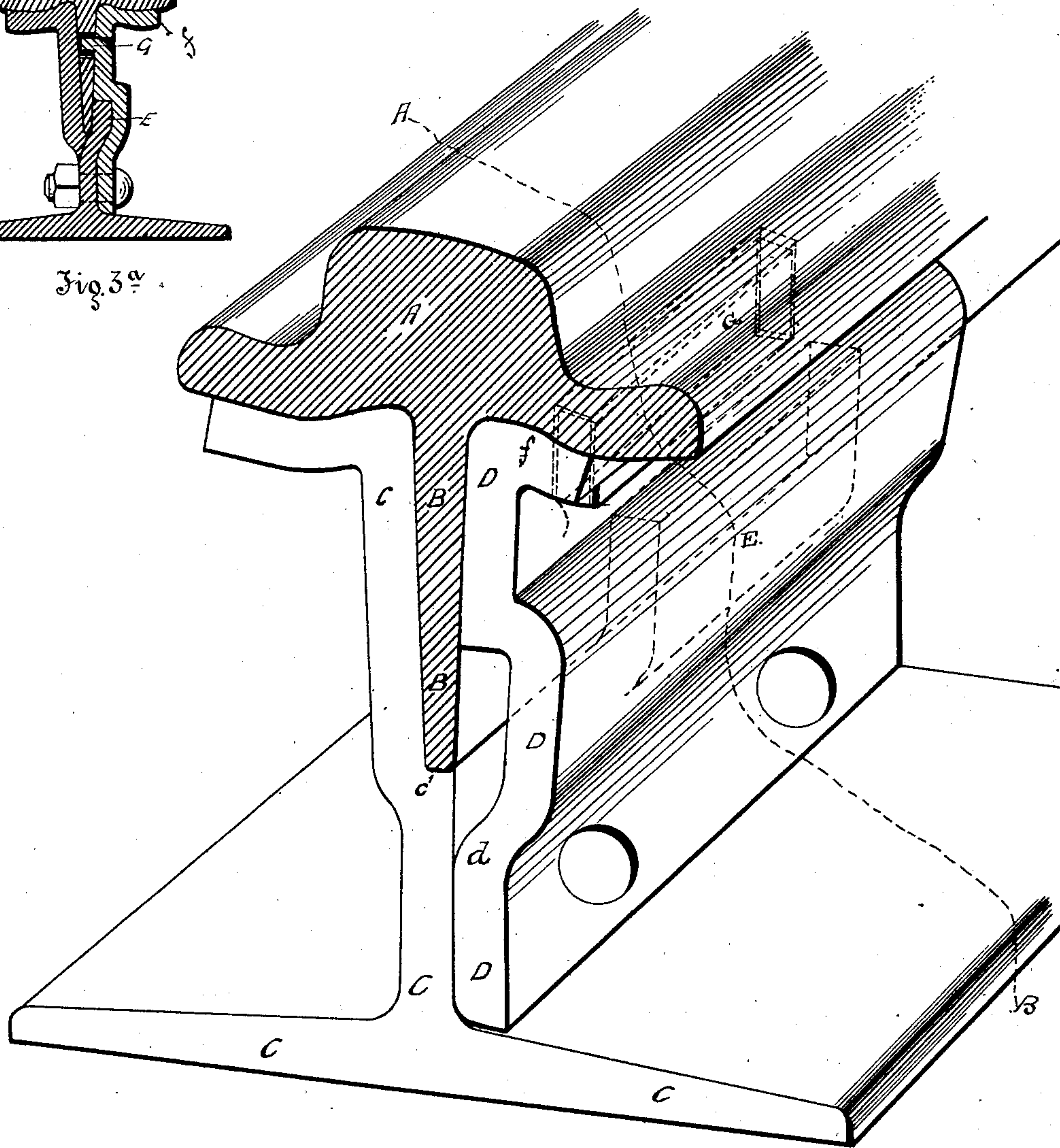


Fig. 3.

Witnesses
Francis P. Reilly
Frank Brewer

Inventor
A. J. Moxham
By his Attorney P. M. Voorhes

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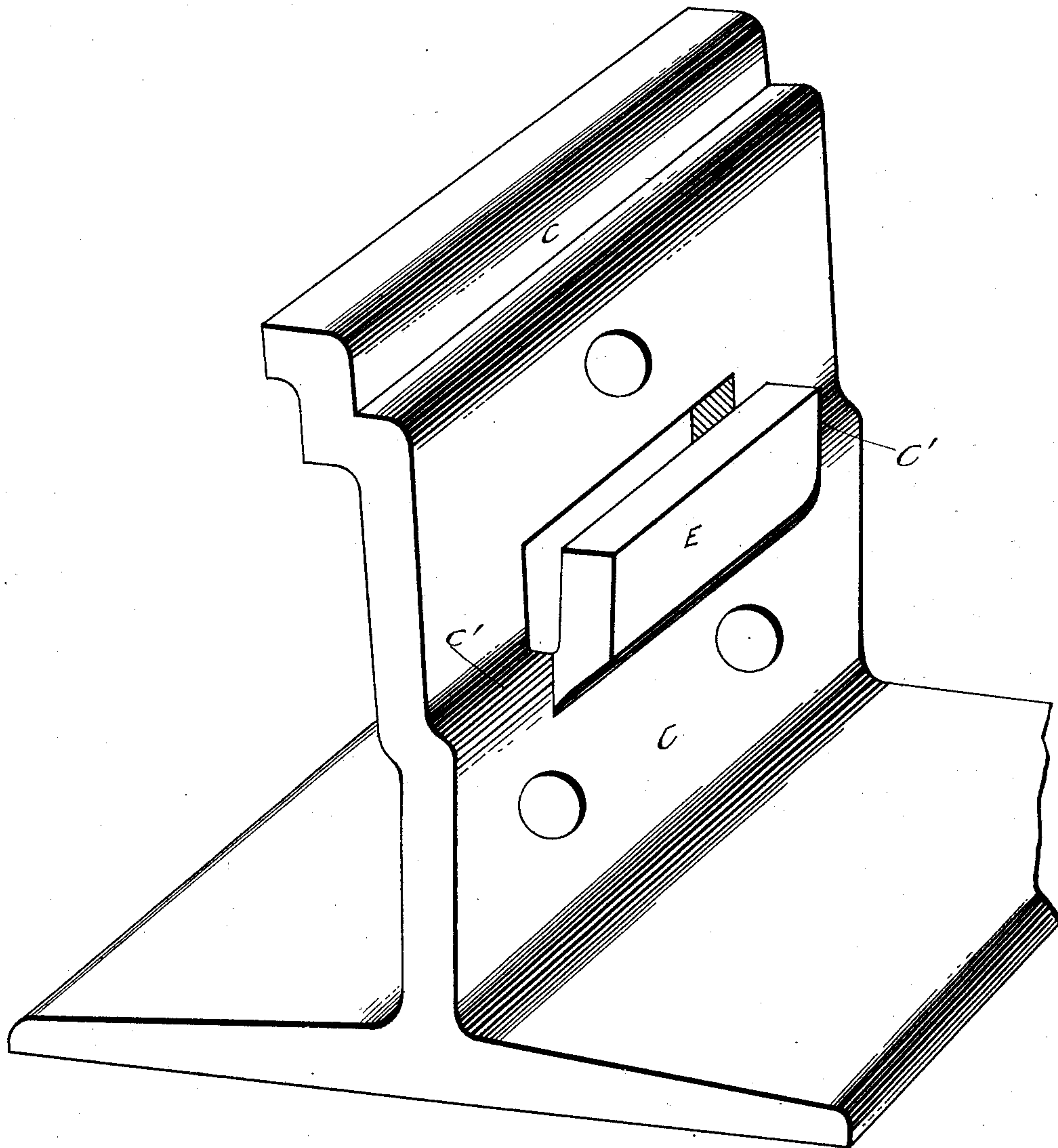


Fig. 4.

Witnesses
Francis P. Reilly
Frank Brewer

Inventor
A. J. Moxham
By his Attorney P. M. Voorhes

UNITED STATES PATENT OFFICE.

ARTHUR J. MOXHAM, OF JOHNSTOWN, PENNSYLVANIA.

RAILROAD-RAIL CHAIR.

SPECIFICATION forming part of Letters Patent No. 367,434, dated August 2, 1887.

Application filed March 29, 1887. Serial No. 232,920. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR J. MOXHAM, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Railroad-Rail Chair, which invention is fully set forth and illustrated in the following specification and accompanying drawings.

The object of this invention is, in particular, to adapt a T-chair to that class of girder street-rails which are provided with a vertical web, without either lower flanges or enlarged terminations of any kind.

The invention consists of the parts and combinations of parts, hereinafter described and claimed.

In the accompanying drawings, Figure 1 illustrates a cast-iron chair as applied to this invention, and Fig. 1^a a cross-section through said figure at the line A B. Fig. 2 is a modification of said chair adapted to be manufactured of forged steel; and Figs. 2^a, 2^b show, respectively, the location and spacing of the bolts and a cross-section through said figure at the line A B. Fig. 3 shows a further modification for steel manufacture; and Fig. 3^a a cross-section through said figure at the line A B. Fig. 4 shows in detail part of the chair shown in Fig. 2.

In said figures the several parts are indicated by letters as follows: A, the rail proper; B, its web, straight or tapered, and having no bulb, bead, or flange at its base; C, the supporting-chair proper for said rail. Said chair is provided with the offset *c'*, to support the stem or base of the web of said rail. E indicates a bottom keeper or lug to prevent the rail from heeling over and to keep it in a vertical line, said part E being stamped out of the metal C when of forged metal.

The holding-bolts F F connect the clamp D to the rail, said clamp being provided at *d* with a shoulder hugging neatly into and under the keeper E. The tongue G passes through a slot or aperture in the web of the rail. The upper shoulder, *f*, in Fig. 3 is upset or stamped out of the clamp D in a similar manner to the stamping out of the keeper E. In said figures the shape of the head of the rail A is shown in several forms, the shape of such head being immaterial.

Hitherto all connections between girder-rail

and cross-ties devoid of lower flanges or fillets have depended upon bolts. Such fastenings have, however, proved deficient. Owing to the contingencies of manufacture, such bolts cannot economically be given a machine-fit, and the small amount of play originally existing soon becomes increased from the wear of street traffic, which causes loose joints and connections. The substructure also being buried in the street, any movement therein soon tends to work earth and loose ballast beneath the same and to lift it from its bed. In street-railroad work the problem is not only to support the rails but to keep them down. In other words, the connections must provide against motion up as well as down. Where the rails are provided with a lower flange, this desired result is effected by what is known as the "splice-bar fit;" but in case the rails have no provision made on their webs for such a splice-bar fit, no other provision has heretofore been made for otherwise securing the webs of the rails to the chairs than by means of bolts. It will be observed, however, that in all the devices herein illustrated the effect of a splice-bar fit is obtained without depending upon bolts alone—that is, a clamping together is effected of rail and chair, both downward and upward, as fully as can be secured with the well-known splice-bar fit—and this is accomplished by a transverse pull of the bolt or bolts F. This method of union also effects such a clamping of the parts that ample provision is made for such adjustment of the parts as is required by manufacturing considerations—that is, the tighter the bolts are drawn the tighter will the clamping effect be between rail and chair. This clamping may be effected by putting some bevel in the slot in the web of the rail through which the tongue G passes, as seen in Fig. 1; but in practice it will be preferable to punch out or form said slot without bevel, and to get the necessary draft by only a slight angle or bevel given to the offsets D and E at *d*.

Having thus fully described my said improved rail-chair as of my invention, I claim—

1. A two-part T-chair for girder-rails, provided with a tongue in one part adapted to pass through a slot in the web of the rail for clamping the rail to the other part of said chair, substantially as and for the purposes set forth.
2. A two-part T-chair for girder-rails, con-

sisting of the parts C and D, respectively, provided with the keeper E and tongue G, the former to support the web of the rail and the latter adapted to enter through a slot in its
5 web, whereby said chair is adapted to be adjustably clamped to the web of the rail, substantially as and for the purposes set forth.

3. A two-part T-chair for girder-rails, consisting of the part C, provided with an offset,
10 as c', and a lug, as E, and the part D, provided

with a tongue, as G, adapted to pass through a slot in the web of the rail to be supported in said chair, said parts C and D being bolted together, substantially as and for the purposes set forth.

ARTHUR J. MOXHAM.

Witnesses:

ROBT. W. WELCH,
C. R. POWELL.