

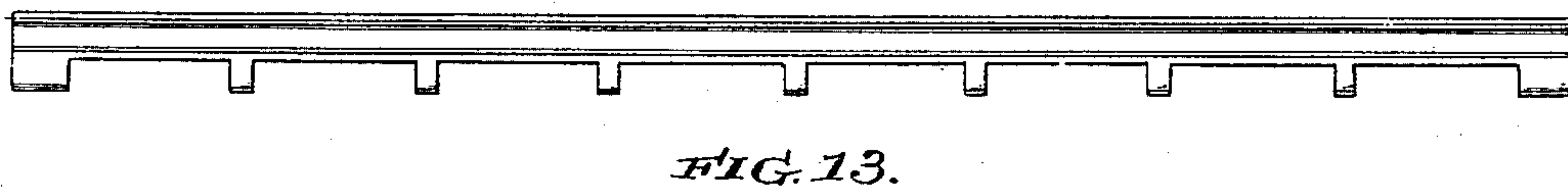
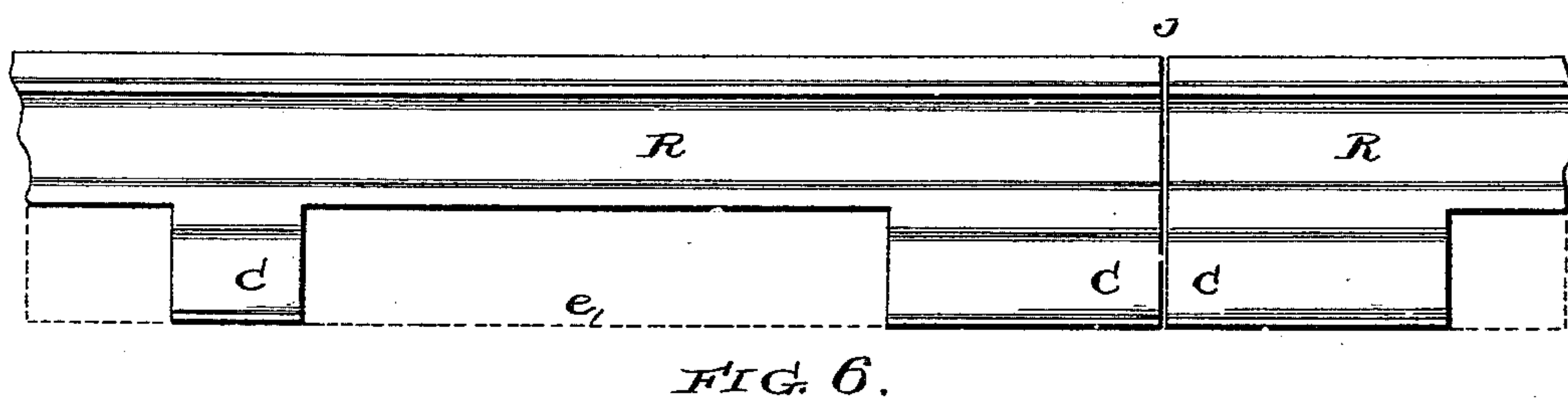
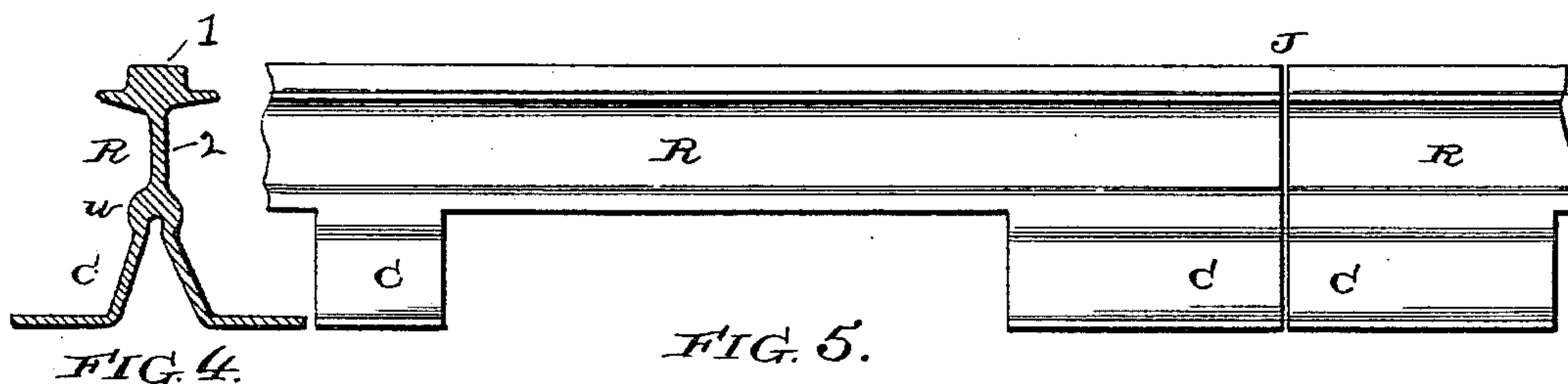
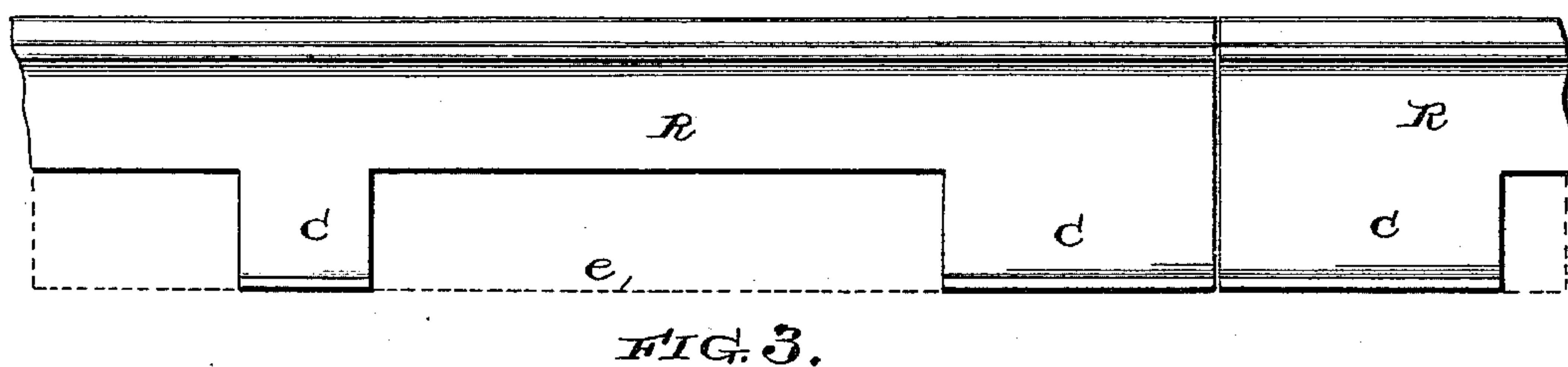
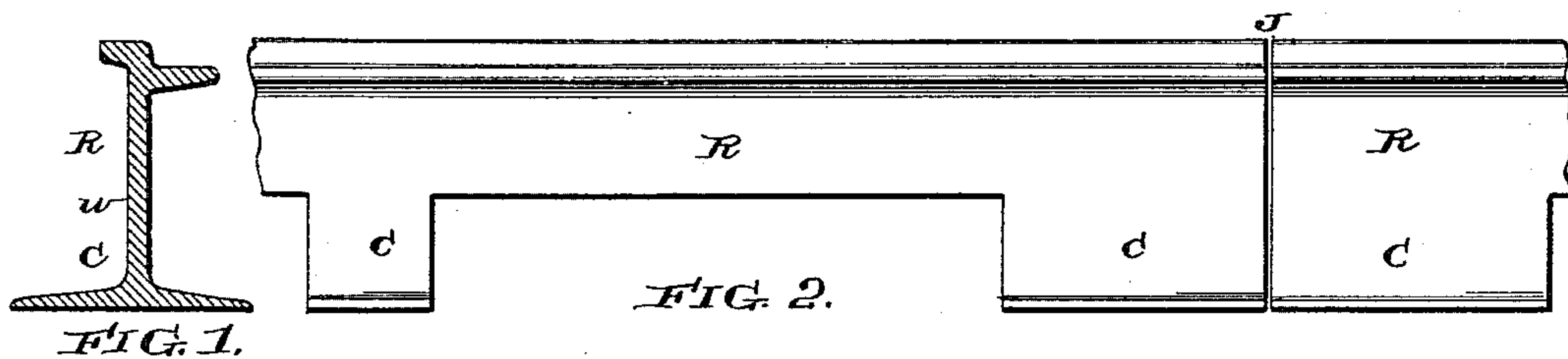
(No Model.)

3 Sheets—Sheet 1.

M. M. SUPPES.
RAILROAD RAIL.

No. 460,064.

Patented Sept. 22, 1891.



Witnesses:

W. H. Brückel,
Francis P. Reiley

Inventor:

Max M. Suppes
by P. H. Voorhies
Atty.

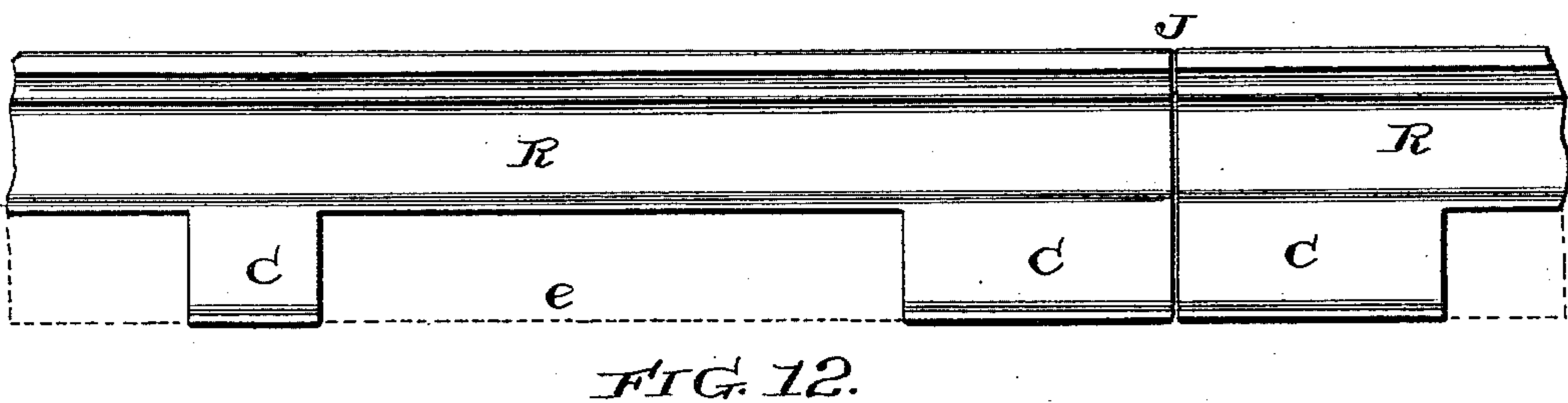
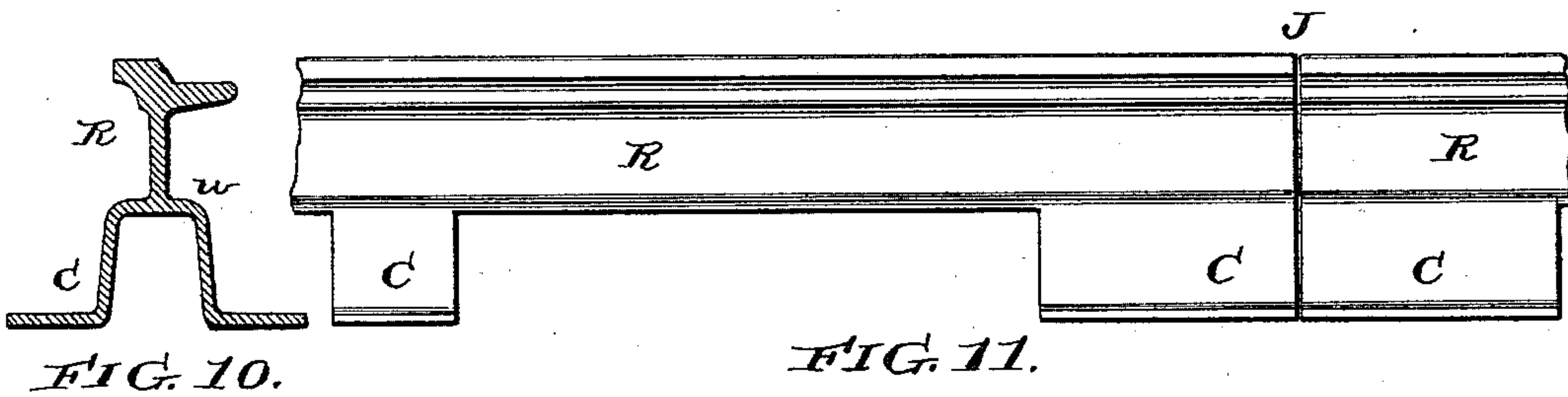
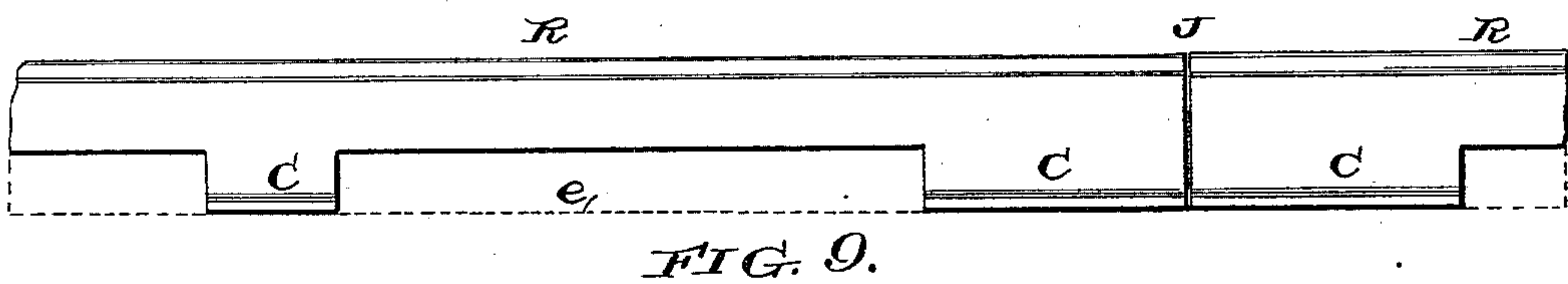
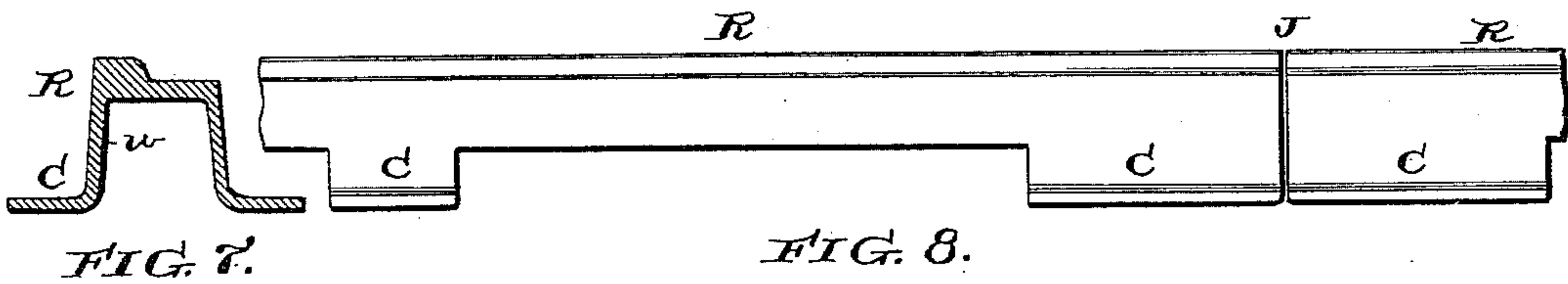
(No Model.)

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M. M. SUPPES.
RAILROAD RAIL.

No. 460,064.

Patented Sept. 22, 1891.



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(No Model.)

3 Sheets—Sheet 3.

M. M. SUPPES.
RAILROAD RAIL.

No. 460,064.

Patented Sept. 22, 1891.

FIG. 14.

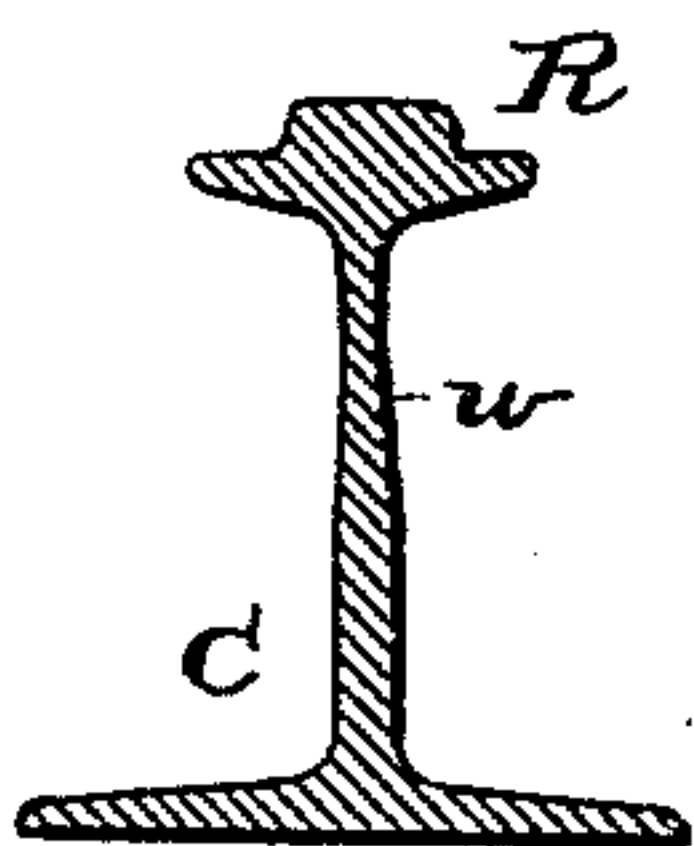


FIG. 15.

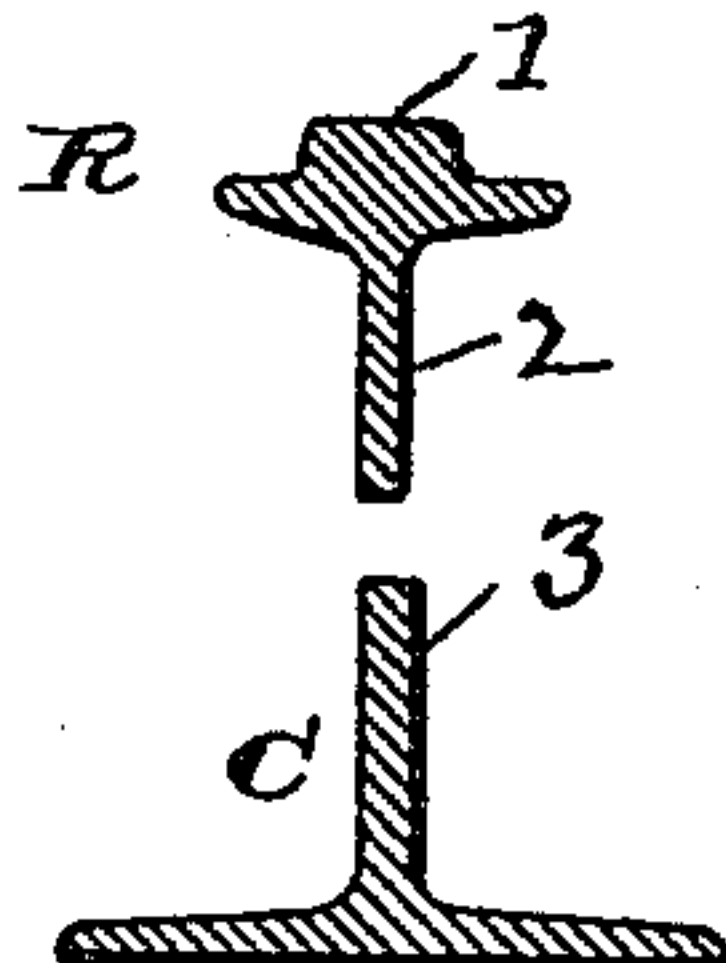


FIG. 16.

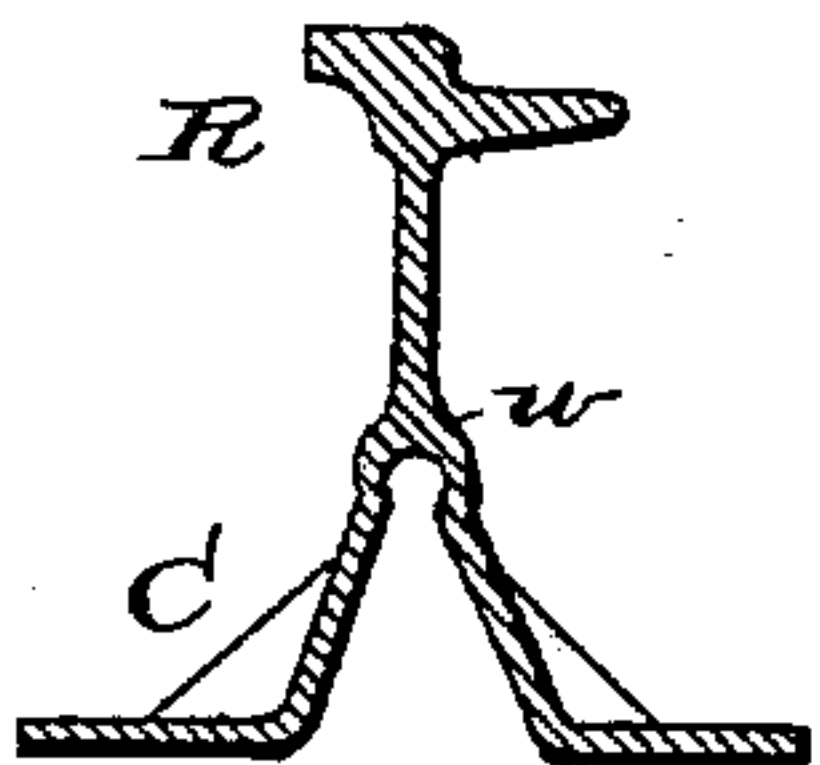


FIG. 17.

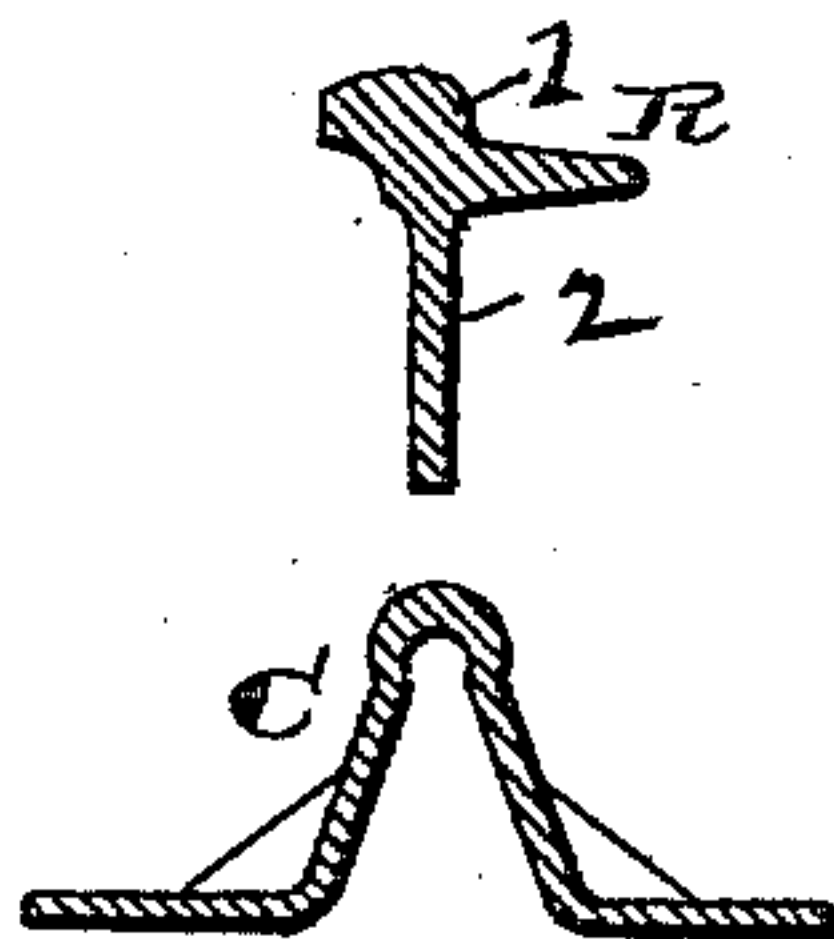


FIG. 18.

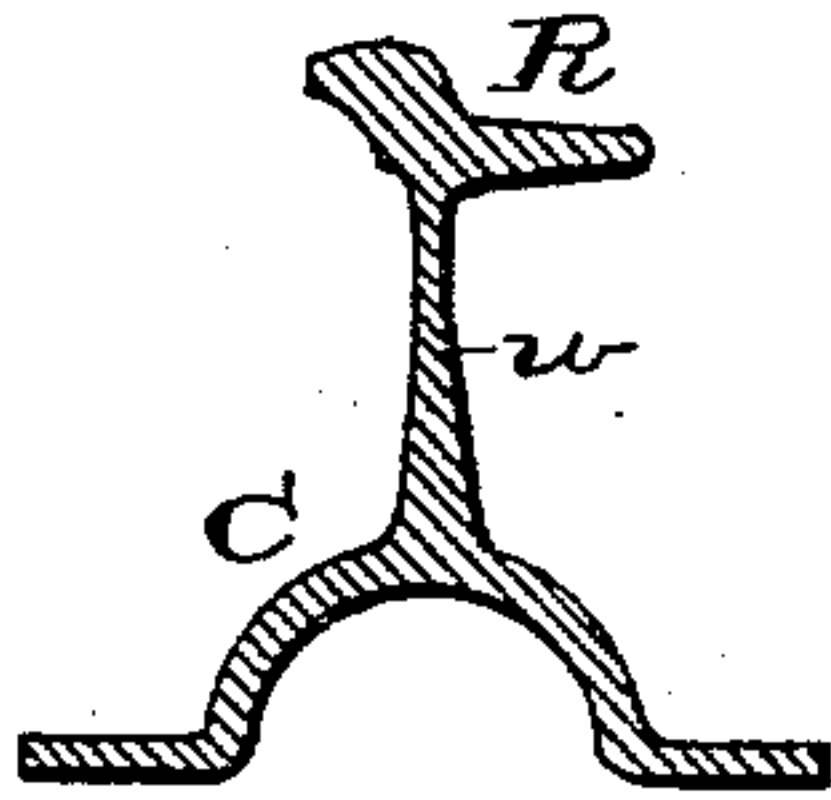


FIG. 19.

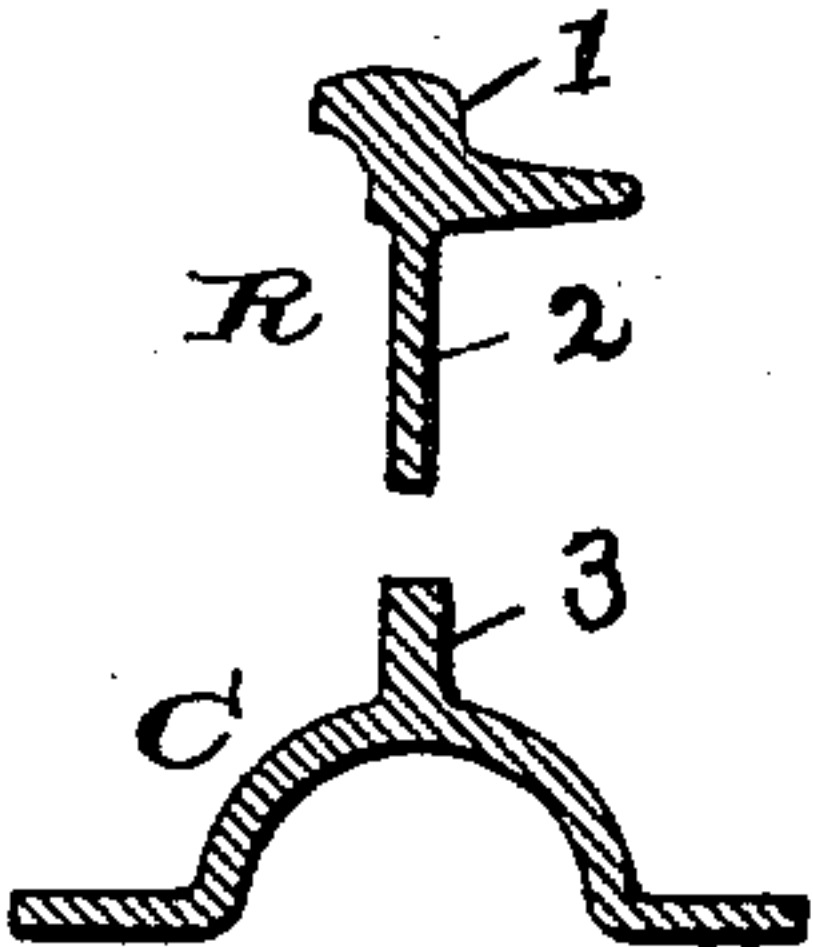


FIG. 20.

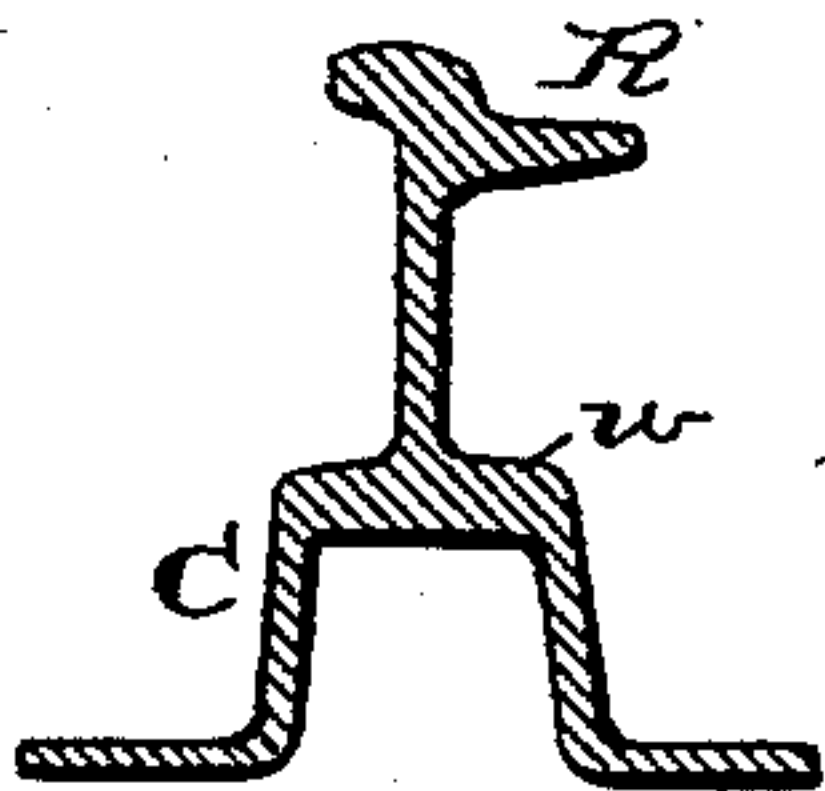
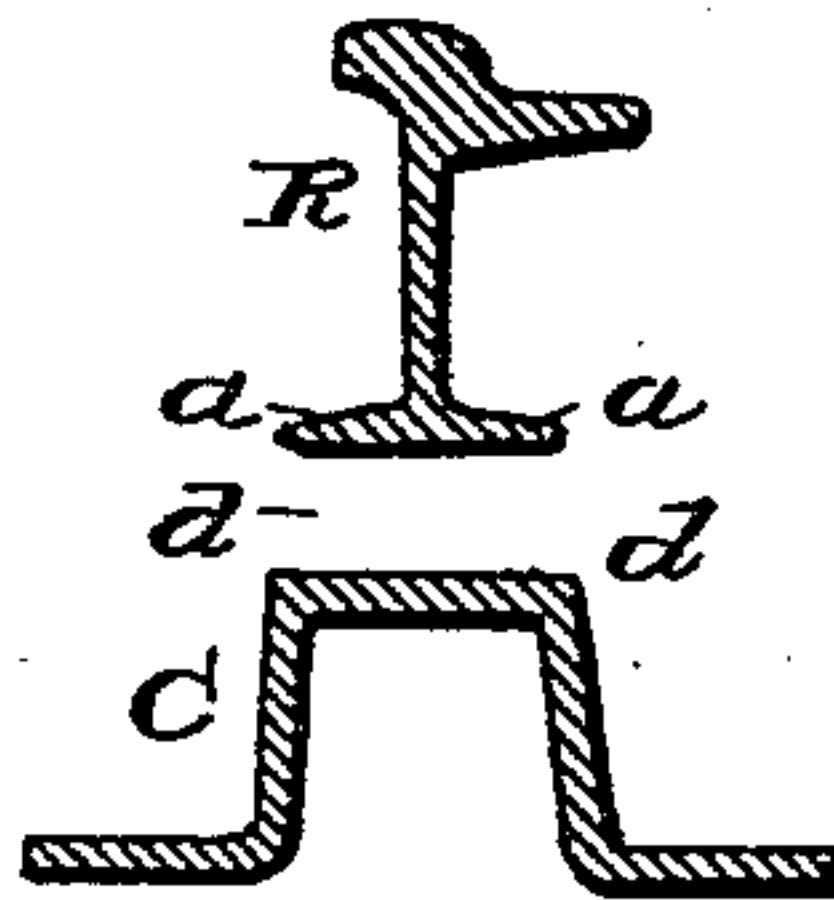


FIG. 21.



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UNITED STATES PATENT OFFICE.

MAXIMILIAN M. SUPPES, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE
JOHNSON COMPANY, OF SAME PLACE.

RAILROAD-RAIL.

SPECIFICATION forming part of Letters Patent No. 460,064, dated September 22, 1891.

Application filed June 20, 1891. Serial No. 396,916. (No model.)

To all whom it may concern:

Be it known that I, MAXIMILIAN M. SUPPES, a citizen of the United States, residing at Johnstown, county of Cambria, and State of Pennsylvania, have invented a new and useful Improvement in Railroad-Rails, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

The object of this invention is to provide girder-rails, more particularly for use as street-railway-track rails of great depth, and to produce rails that may, if desired, be placed directly in position in the road without the medium of independent supporting-chairs.

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

In the accompanying drawings, Figure 1 shows one form of girder-rail and base or support in cross-section, forming the subject of this invention, the place of cross-section being through the support. Fig. 2 is a side elevation of Fig. 1, showing also the junction of two contiguous rails. Fig. 3 is a side elevation similar to Fig. 2, the dotted lines between the supports indicating the bottom line of the supports which would be formed were the base or support continuous. Fig. 4 shows in cross-section another form of girder-rail and base or support. Fig. 5 is a side elevation of Fig. 4, showing also the junction of two contiguous rails. Fig. 6 is a side elevation similar to Fig. 5, the dotted lines being shown for the purpose indicated in describing Fig. 3. Fig. 7 shows in cross-section another form of rail and base or support. Fig. 8 is a side elevation of Fig. 7, showing the junction of the two contiguous rails. Fig. 9 is a side elevation similar to Fig. 8, the dotted lines being shown for the purpose indicated in describing Figs. 3 and 6. Fig. 10 shows in cross-section another form of rail and base or support. Fig. 11 is a side elevation of Fig. 10, showing the junction of two contiguous rails. Fig. 12 is a side elevation similar to Fig. 11, the dotted lines being shown for the purpose indicated in describing Figs. 3, 6, and 9. Fig. 13 shows in side elevation a girder-rail of full

length, say thirty feet, with its supports at intervals. Figs. 14 to 21, inclusive, show in cross-section modifications in shape of heads and supports of girder-rails before and after being united, as hereinafter described.

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

The letter R indicates the rail proper, which may be of any desired form, several forms being shown in the drawings, the number 1 indicating the head and 2 the web of the same.

The letters C indicate the base or support for said rail. As shown in some of the figures, these supports are provided with an upward extension 3, (although my invention may be used whether or not there be an upward extension of the support.) As shown in the figures, the rail is formed throughout with head and web or webs, while the supports are provided at intervals only at the extremity of rail and intermediate points where the rail is to be secured in track.

The rail proper is rolled, in the usual manner, from a pile bloom or ingot.

The supports may be made of any desired form, several forms being shown in the drawings, and they may be produced by any method or process, such as rolling, forging, casting, or otherwise, or some may be made by one method or process and some by another. Preferably, however, both the rails and supports are made of rolled steel. When the supports are produced by rolling, they are rolled in long lengths, which are cut into pieces of the length of the supports required.

The preferred method of making the complete rail is as follows: The rolled rail and supports having been separately formed into the desired shapes, as above described, the supports are then united to the rail, so as to be integral therewith, at the desired distance apart by welding the parts together, in the ordinary acceptance of the term, in connection with pressure or force, or that species of welding called "autogenous welding" or "burning." I prefer electric welding as an efficient means of uniting the parts together.

The letter *w* indicates the point of union between rail and support. Thus a rolled

5 rail with supports at intervals is formed, which when delivered from the shop is ready to be placed in the track and secured to the cross-ties without the intervention of any separate or detachable supports.

10 In street-railroad practice it has been found desirable to use a rail supported at intervals upon supports of great depth, no matter what the shape of the latter, and, by the process herein described, by forming the supporting-
15 base and the rail separately and then uniting the two together, so as to form an integral structure, I obtain this desired result without the necessity of using removable fasteners
20 between the rail and the supporting-base, and without the risk of loosening incident to such fastenings. If additional strength is desired in the supports C, braces c may be stamped upon the same, as shown in Figs. 16 and 17, when the shapes of the supports permit.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

1. As a new article of manufacture, a rolled

25 rail provided at intervals with a base or support integral with said rail.

2. As a new article of manufacture, a rail provided at intervals with a base or support welded to said rail.

3. As a new article of manufacture, a rolled 30 rail provided at its extremities and intermediate points with a base or support integral with said rail.

4. As a new article of manufacture, a railroad-rail provided with a rolled head and web 35 throughout its length and provided at intervals with a base or support integral with said rail.

5. As a new article of manufacture, a railroad-rail provided with a rolled head and web 40 throughout its length and at intervals with a base or support having an upward extension integral with said web.

MAXIMILIAN M. SUPPES.

Witnesses:

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WILLIAM D. HALL.