

Freeland & Ward,

Rail Joint.

No. 100,996.

Patented Mar. 22. 1870.

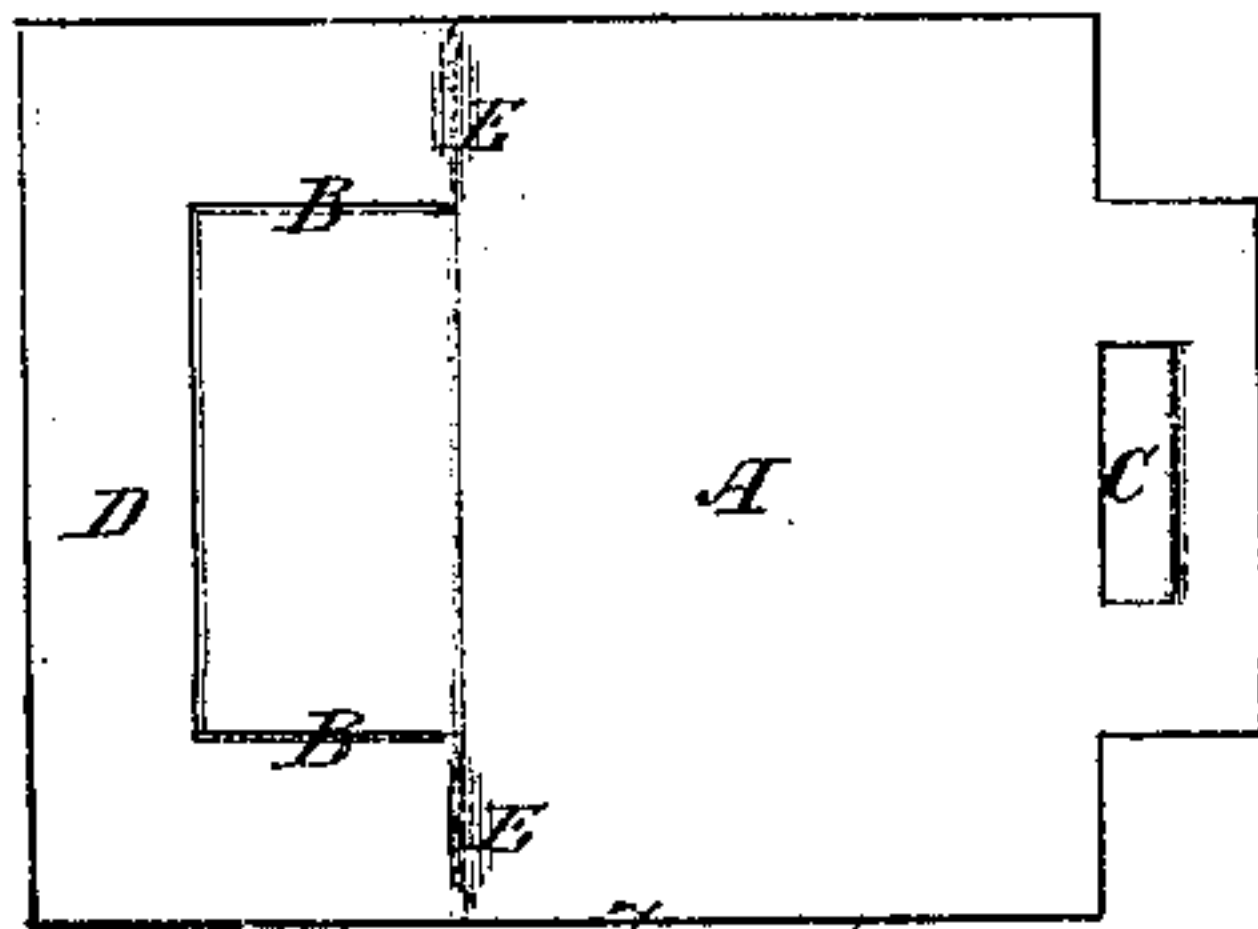


Fig. 1.

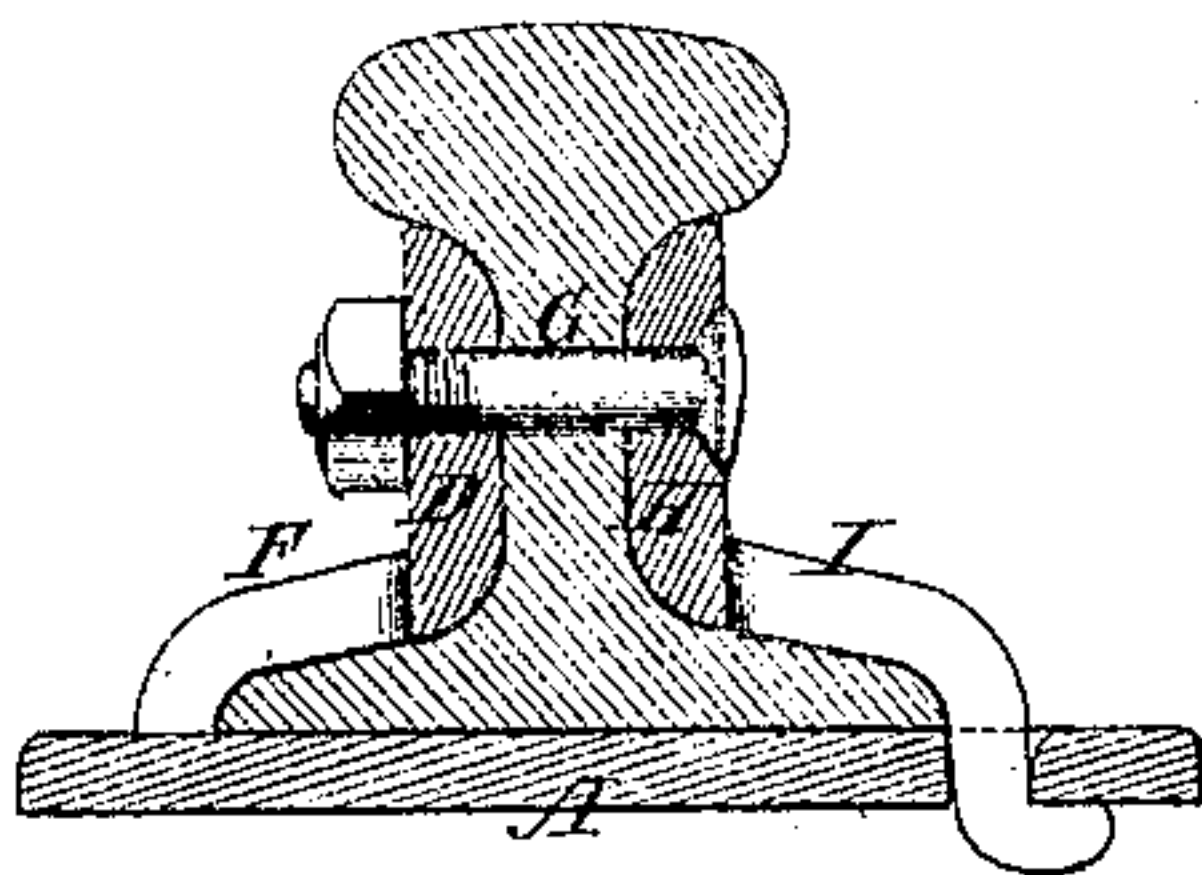


Fig. 2.

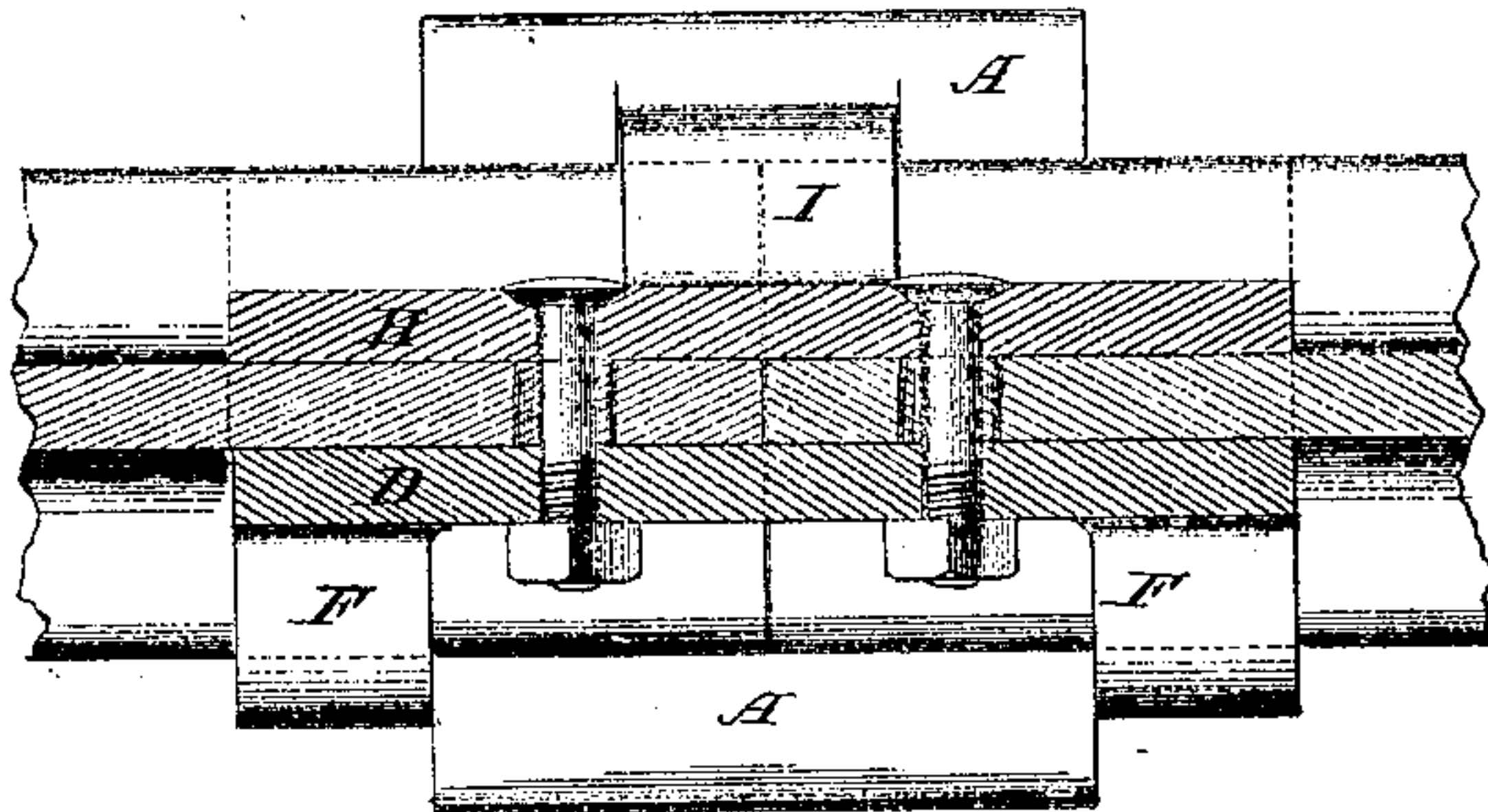
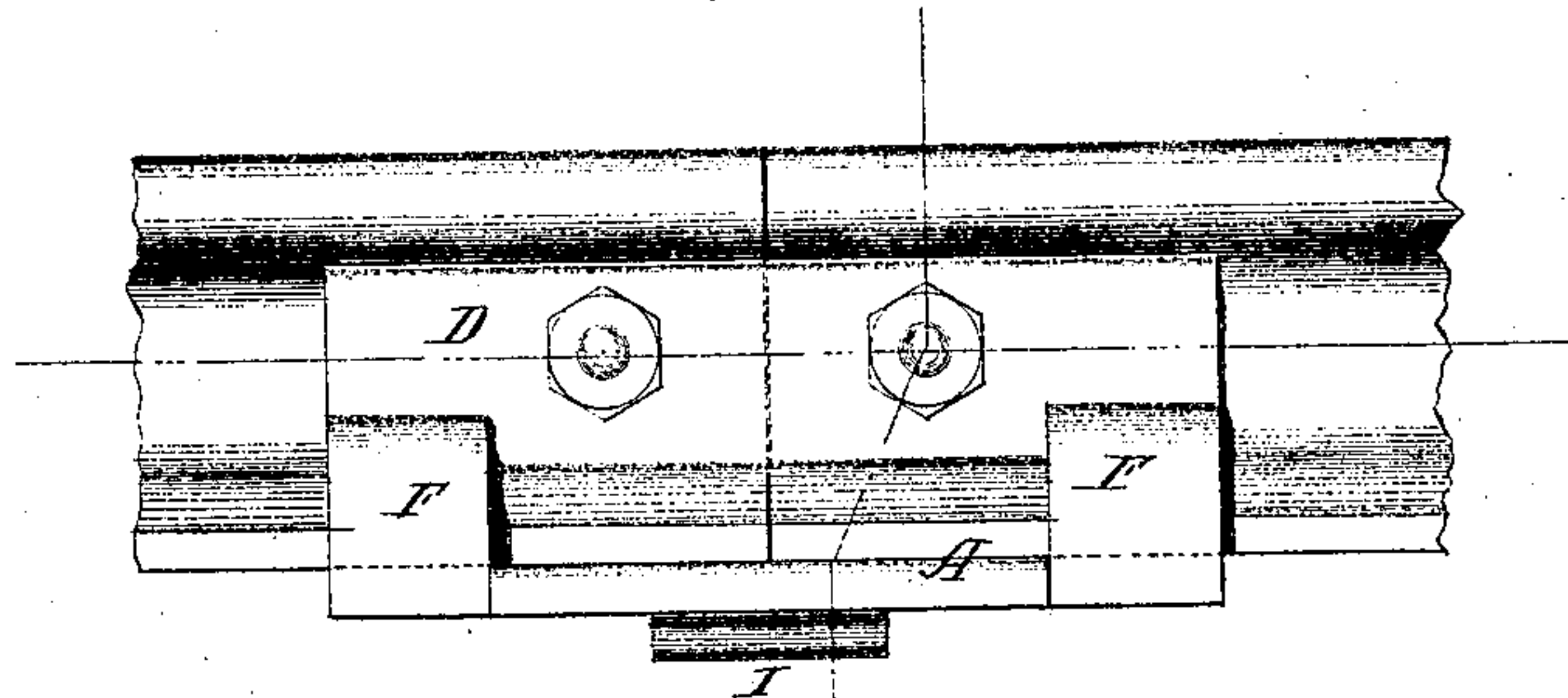


Fig. 3.



Witnesses:

Gustave Dittusich
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JOHN FREELAND AND DANIEL WARD, OF NEW YORK, N. Y.

Letters Patent No. 100,996, dated March 22, 1870.

IMPROVED RAILWAY RAIL-JOINT.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, JOHN FREELAND and DANIEL WARD, of the city, county, and State of New York, have invented a new and improved Railroad Rail-Joint; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification.

This invention relates to railroad rail-joints, and consists in certain improvements thereon which will be specified hereinafter.

Figure 1 is a transverse section of a rail and the joining devices;

Figure 2 is a horizontal section of the same;

Figure 3 is a side elevation; and

Figure 4 is a diagram of the blank for the chair and one fish-plate to be contained in one piece.

Similar letters of reference indicate corresponding parts.

We take a flat piece, A, of wrought or fibrous iron, of the size required and in the form represented in the diagram, and cut it through on the line B.

We also punch or otherwise form the slot C, and then bend the part D up on the line E, into the position represented in the sectional fig. 1, when the said part D is caused to assume the form and position of a fish-plate, connected to the plate A by the ribs F, which are shaped to the curvature of the upper side of the base of the rail; but, previous to binding the part D up in this manner, we swage or otherwise shape the face which is to fit the curvature of the rail at G, to the reverse form of the said curvature.

We then provide another fish-plate, H, for the other side, with a curved projection, I, shaped to pass

through the slot C in the plate A, hook under it at the lower outer edge of the slot, and fit down snugly upon the upper side of the base.

When the plate H is brought to its seat, both the fish-plates are then bolted together through the rail in the common way.

The base-plate A, or chair, is bolted or spiked down upon the tie, after receiving the rails, in the usual way.

We also propose to make these chairs or plates A, fish-plates D, and connecting-bars F by casting, when preferred.

The cutting, bending, and shaping of the parts D F H I may be done in any of the well-known ways.

We may in some cases make both the fish-bars separate from the plate A, and hinge-joint either one or both of them to the said plate, and this we propose to do when found best.

Having thus described our invention,

We claim as new and desire to secure by Letters Patent—

1. A flat base-plate, A, slotted at C, cut in the line B, and having the fish-plate D formed therefrom by bending and shaping, in the manner described.

2. The combination of the base A and fish-plate D, formed in one piece, with the fish-plate H having curved projection I thereon, and fitting through the slot C, as set forth.

The above specification of our invention signed by us this 3d day of December, 1869.

JOHN FREELAND.
DANL. WARD.

Witnesses:

GEO. W. MABEE,
EDGAR TATE.