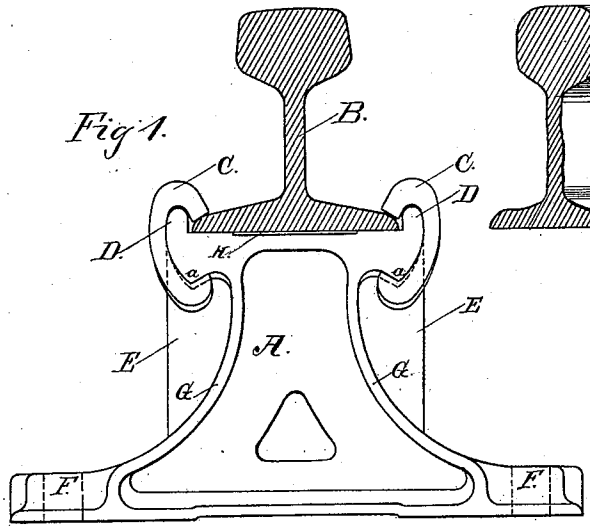
(No Model.)

J. A. DUGGAN.

STREET RAILWAY TRACK.

No. 472,164. Patented Apr. 5, 1892.

Fig 1.



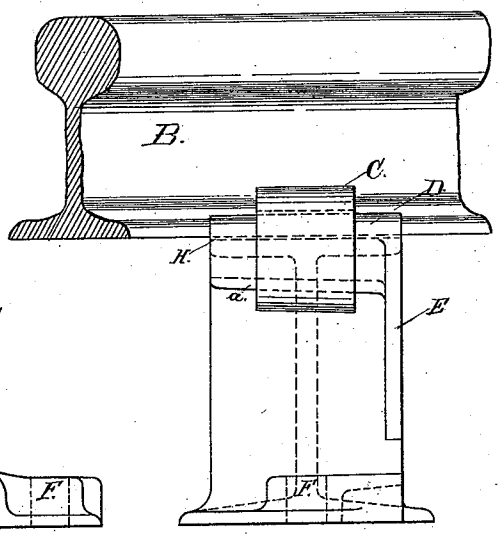


Fig 2.

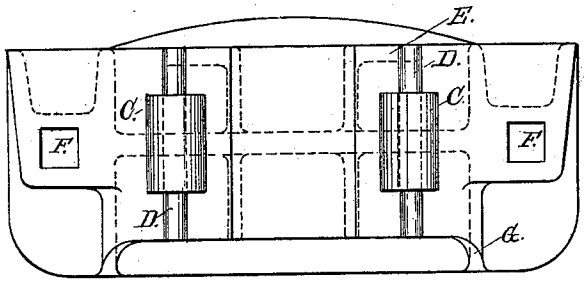


Fig 3.

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UNITED STATES PATENT OFFICE.

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STREET-RAILWAY TRACK.

SPECIFICATION forming part of Letters Patent No. 472,164, dated April 5, 1892.

Application filed October 3, 1890. Serial No. 367,124. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. DUGGAN, a citizen of the United States, residing at Quincy, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Street-Railway Tracks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to tracks for street-railways, and has for its object the securing of the rails to the chairs on which they are placed, and it is more especially designed to be applied to chairs of cast-iron.

In the drawings I have shown in Figure 1 a sectional elevation of a rail and a chair embodying my invention; in Fig. 2, a side view, and in Fig. 3 a plan view, of the same.

A is a cast-iron chair designed to be secured in its place by suitable fastenings at F F.

a a are side pieces, D D projecting pieces or flanges upon the side pieces *a*, between which the flange of the rail B is placed.

B is the rail, the flange of which is placed upon the chair between the flanges D D, which hold the rail, so as to prevent lateral motion. The side pieces *a* are made wedge-shaped—that is of a greater interior than exterior width—as shown in Fig. 2, so as to permit the clamp C, which is to be placed thereon sidewise, being driven up so as to firmly secure the flange of the rail, as shown in Fig. 1.

H is a small space made in the upper surface of the chair for the purpose of enabling the rail-flange to rest more firmly thereon, as without it rough places which might be upon the casting would cause the chair to sit unsteadily, and thus permit it to vibrate somewhat.

E E are side pieces provided for the purpose of giving strength to the chair. In securing the rail to the chair after the rail is placed in position the clamps C C, made to fit over the side pieces *a a*, and the flanges D D are placed in position, as shown in Fig. 1. By forcing them sidewise along the projecting part of the chair, on which are the side pieces *a a* and the flanges D D, until the rail is firmly clamped by the upper part of the clamp bearing upon the base of the rail, and the under part bearing under the side pieces *a*, the clamp is thus held securely by the flange D above and the under part of the side piece *a* below, so that it cannot slip off.

G G are flanged ribs provided for the purpose of adding strength to the chair. The chair constructed as shown, having a center web and flanged ribs on the sides, can be cast without cores.

The clamp C should be so constructed as that its extremities shall be turned down parallel, or substantially so, to the main portion of the clamp, and so that the ends shall have a bearing upon the upper surface of the base of the rail and under the projecting part *a* of the chair, respectively, so that the clamp shall exert a downward pressure upon the base of the rail. It is pushed into position sidewise, as above explained, the flange for this purpose being made narrower at the end (which I call the "exterior") on which the clamp is to be placed gradually increasing in width at the other (or interior) end, and as the clamp is pushed inward toward the portion of the flange called the "interior," it is gradually tightened and becomes at length firmly fixed in its place, having its bearing on its ends, respectively, pushed down upon the base of the rail and upward against the part *a*, and requiring no screws or sidewise motion to put it in place or adjust it. It will be seen that the flanges D D prevent any side motion of the rail, and the clamp prevents all upward motion.

What I claim, and desire to secure by Letters Patent, is—

1. The combination of the chair A, provided with flanges D, projecting above the upper surface of the chair to prevent the lateral motion of the rail placed thereon, the rail B placed within the flanges D, and the clamp C, having its extremities turned down parallel, or substantially so, with its main portion, so that its bearing is upon its extreme ends, substantially as and for the purpose above described.

2. The combination of the chair A, provided with side pieces *a*, made of a greater interior than exterior width and having thereon flanges D, the rail B, and the clamp C, having its extremities turned down parallel, or substantially so, with its main portion, so that its

bearing is upon its extreme ends, substantially as and for the purpose above described.

3. The chair A, having a center web and provided with side ribs G, the side pieces *a*, and flanges D, substantially as and for the purpose above described.

4. The chair A, provided with side pieces *a*, and flanges D, projecting above the upper surface of the chair and having thereon the space H, in combination with the rail B, substantially as and for the purpose above described.

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Witnesses:
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