(No Model.)

H. F. COX.

RAIL CHAIR.

No. 420,438. Patented Feb. 4, 1890.

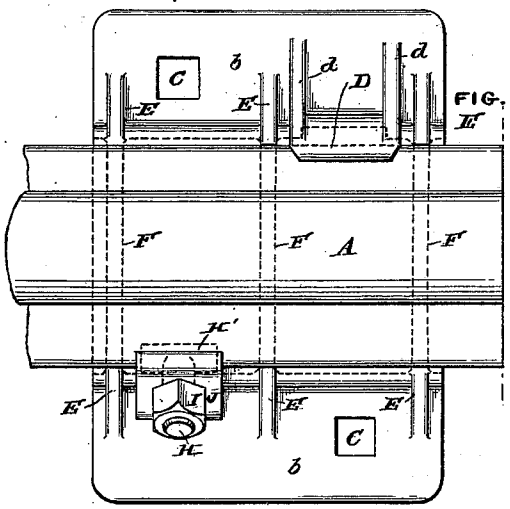


FIG. 1.

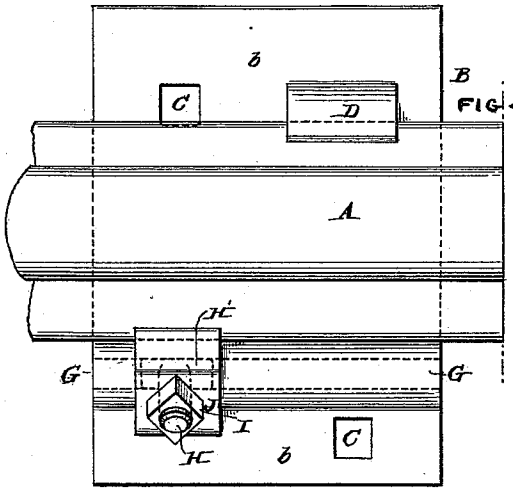


FIG. 4.

FIG. 2.

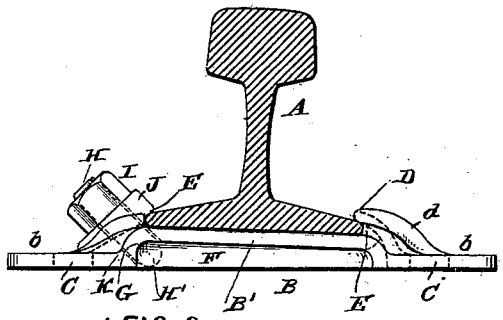


FIG. 3.

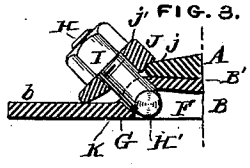


FIG. 5.

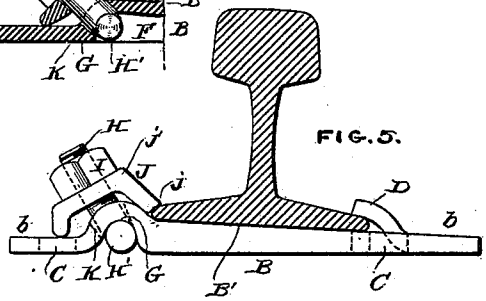
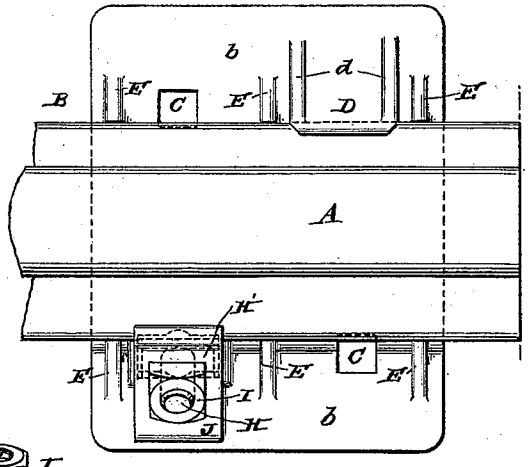


FIG. 6.



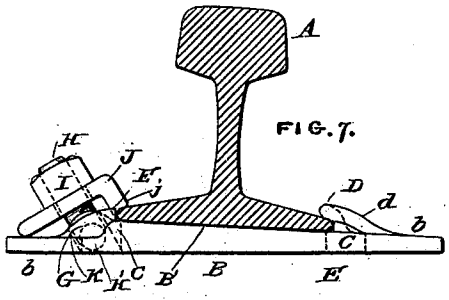


FIG. 7.

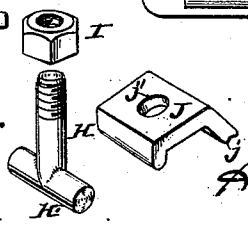


FIG. 8.

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UNITED STATES PATENT OFFICE.

HENRY F. COX, OF ALTOONA, PENNSYLVANIA.

RAIL-CHAIR.

SPECIFICATION forming part of Letters Patent No. 420,438, dated February 4, 1890.

Application filed May 16, 1889. Serial No. 311,000. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. COX, of Altoona, county of Blair, State of Pennsylvania, have invented a new and useful Improved Rail-Chair, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to the construction of rail-chairs for railways, and has for its object to provide a chair which can be made at small cost and upon which the rail can be clamped with ease and great security.

My invention will be best understood after a description of the drawings, in which it is illustrated, and its novel features are hereinafter clearly pointed out in the claims, reference being now had to the drawings which illustrate my invention, and in which—

Figure 1 is a view of my improved rail-chair as made of malleable casting, showing the rail in place upon the chair. Fig. 2 is an end view of the same device; Fig. 3, a section through the base-plate of the chair and the adjustable clamping-block, showing the manner in which said clamping-block is held in position. Fig. 4 is a plan view of my improved rail-chair as made of a rolled section of metal, showing the rail in position as in Fig. 1. Fig. 5 is an end view of the rail-chair shown in plan in Fig. 4. Fig. 6 is a plan view of a somewhat modified form of rail-chair embodying my invention and made of a casting, Fig. 7 being an end view of the same; and Fig. 8 shows in perspective my preferred form of clamping-block and bolted together with the nut which fits upon the end of the bolt.

A indicates the rail secured upon the chair; B, the base-plate of the rail-chair, having a central portion B′, preferably inclined, as shown, which serves as the seat of the rail, and flanges *b b*, extending out on each side of the rail-seat, and through which spike-holes C C are formed to enable it to be spiked to the tie. The desired inclination to the rail-seat may be given by casting or rolling the metal to the wedge form shown in Figs. 5 and 7; or the metal of the base-plate may be cast in the arched form shown in Fig. 2; and strengthening-ribs F F F provided to increase its strength.

D is a stationary jaw, against and beneath the end of which one edge of the rail-base rests. This jaw, where a cast base-plate is used, is cast integral with it, and preferably provided with strengthening-ribs *d d*. Where wrought metal is used, the jaw is punched up from the base-plate, as is shown in Fig. 5.

E E, &c., are projecting lugs, which, where the base-plate is made of cast metal, are advisable to assist in holding the rail to its proper seat.

G is a socket formed in the base-plate on the side opposite to that on which the stationary jaw D is formed. Where the base-plate is inclined, this socket is formed beneath the higher part thereof, while the stationary jaw is at the lower part. The socket G is formed in the cast section, as is shown in Figs. 2, 3, and 7. In the wrought section it is conveniently formed of a slot running the whole length of the base-plate, as is indicated at G G in Figs. 4 and 5.

K is a perforation extending through the base-plate into the socket G.

H is a bolt, having a head H′ adapted to fit in the socket G, and preferably made in the T shown as giving the best hold and entire freedom of motion within desirable bounds.

I is a nut screwing on the end of the bolt H, and J a clamping-block, having a perforation J′, through which the bolt H passes, and preferably a crotched end *j*, which fits against the edge of the rail-base, as shown. The form of this clamping-block can of course be flat to suit the exigencies of use. The U form shown in Figs. 5 and 8 I consider to be the most advantageous.

The principal novel feature of my device is the formation of the base-plate of the chair with the socket formed on its lower side and the perforation leading into the said socket, whereby the bolt holding the adjustable clamping-block in place can be secured in the socket above the level of the tie and a sufficient degree of adjustability given to it to insure the tight clamping of the rail between the fixed and adjustable jaws.

While, as I have described, my device can be made of either cast or wrought sections, I believe the plan of making the base-plate of the chair of the wrought section shown in Figs. 4 and 5 to be the most advantageous.

Having now described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. A rail-chair consisting of a base having a stationary jaw on one side, a socket G on its other side, and a perforation K, leading through the base to said socket, in combination with a bolt H, having a head adapted to fit in the socket G, a clamping-block J, and nut I, all substantially as and for the purpose specified.

2. A rail-chair consisting of a slanting base, a stationary jaw on the lower side of the base, a socket G on the higher side of the base, and a perforation leading through the base to said socket, in combination with a bolt H, having a head adapted to fit and turn in the socket G, a clamping-block J, and nut I, all substantially as and for the purpose specified.

3. A rail-chair consisting of a wrought-iron base having a socket-groove running along one side, a perforation K, leading through the base-plate to said socket, and a jaw D, struck up on the other side from the socket-groove, in combination with a bolt H, having a head adapted to fit in the socket-groove, a clamping-block J, and a nut I, all substantially as and for the purpose specified.

4. A rail-chair consisting of a wedge-shaped wrought-iron base having a socket-groove running along one side, a perforation K, leading through the base-plate to said socket, and a jaw D, struck up on the other side from the socket-groove, in combination with a bolt H, having a head adapted to fit in the socket-groove, a clamping-block J, and a nut I, all substantially as and for the purpose specified.

5. A base-plate for a rail-chair having a fixed jaw on one side and a socket formed in its bottom on the other side, with a perforation leading through the plate into said socket, substantially as and for the purpose specified.

6. A wrought-iron base-plate for a rail-chair having a jaw struck up on one side, a groove rolled in its bottom on the other side, and a perforation leading into said groove, all substantially as and for the purpose specified.

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