

(No Model.)

H. F. COX.  
RAIL CHAIR.

No. 420,438.

Patented Feb. 4, 1890.

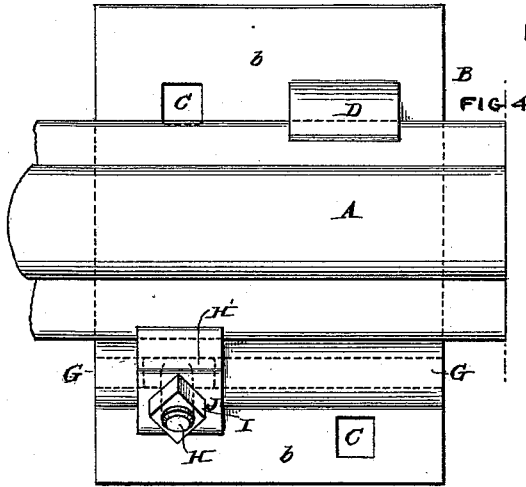
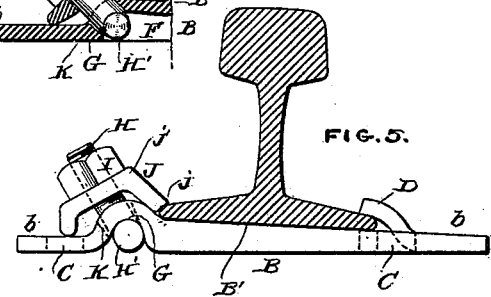
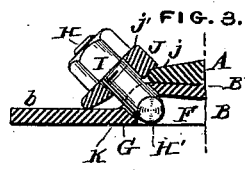
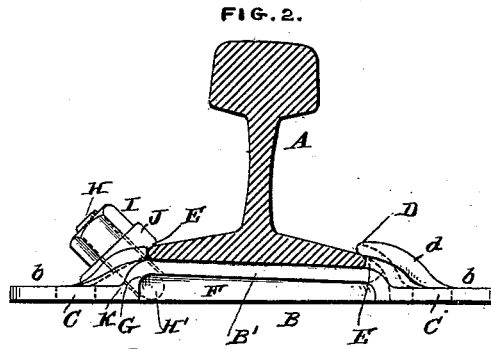
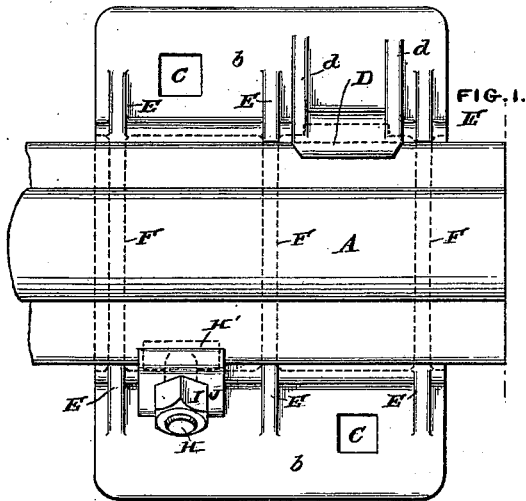


FIG. 6.

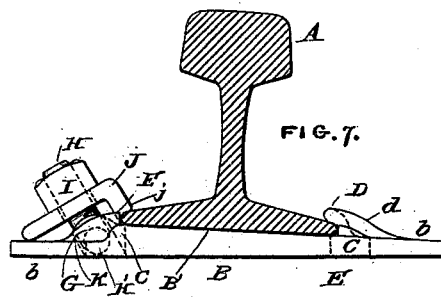
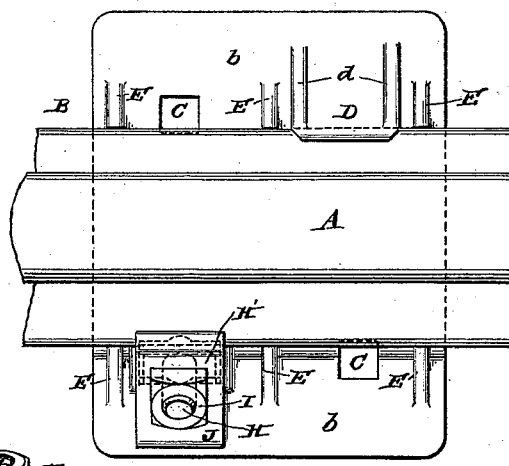
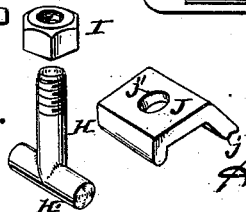


FIG. 8.



WITNESSES:

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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 herein-after 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 clamp-

ing-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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