

No. 755,449.

PATENTED MAR. 22, 1904.

C. A. CARBAUGH.  
RAIL CHAIR AND JOINT.  
APPLICATION FILED JULY 18, 1903.

NO MODEL.

FIG. 1.

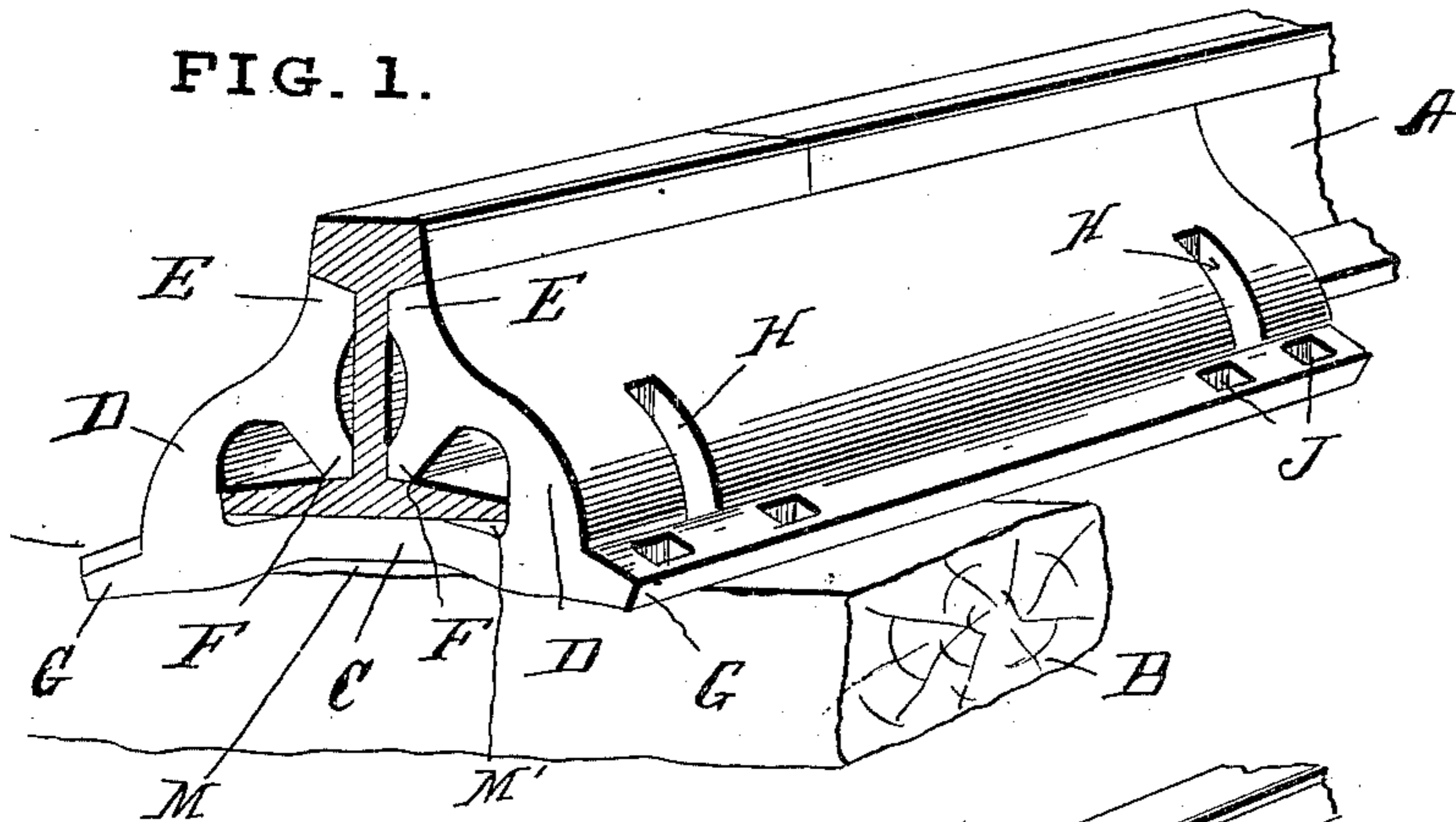


FIG. 2.

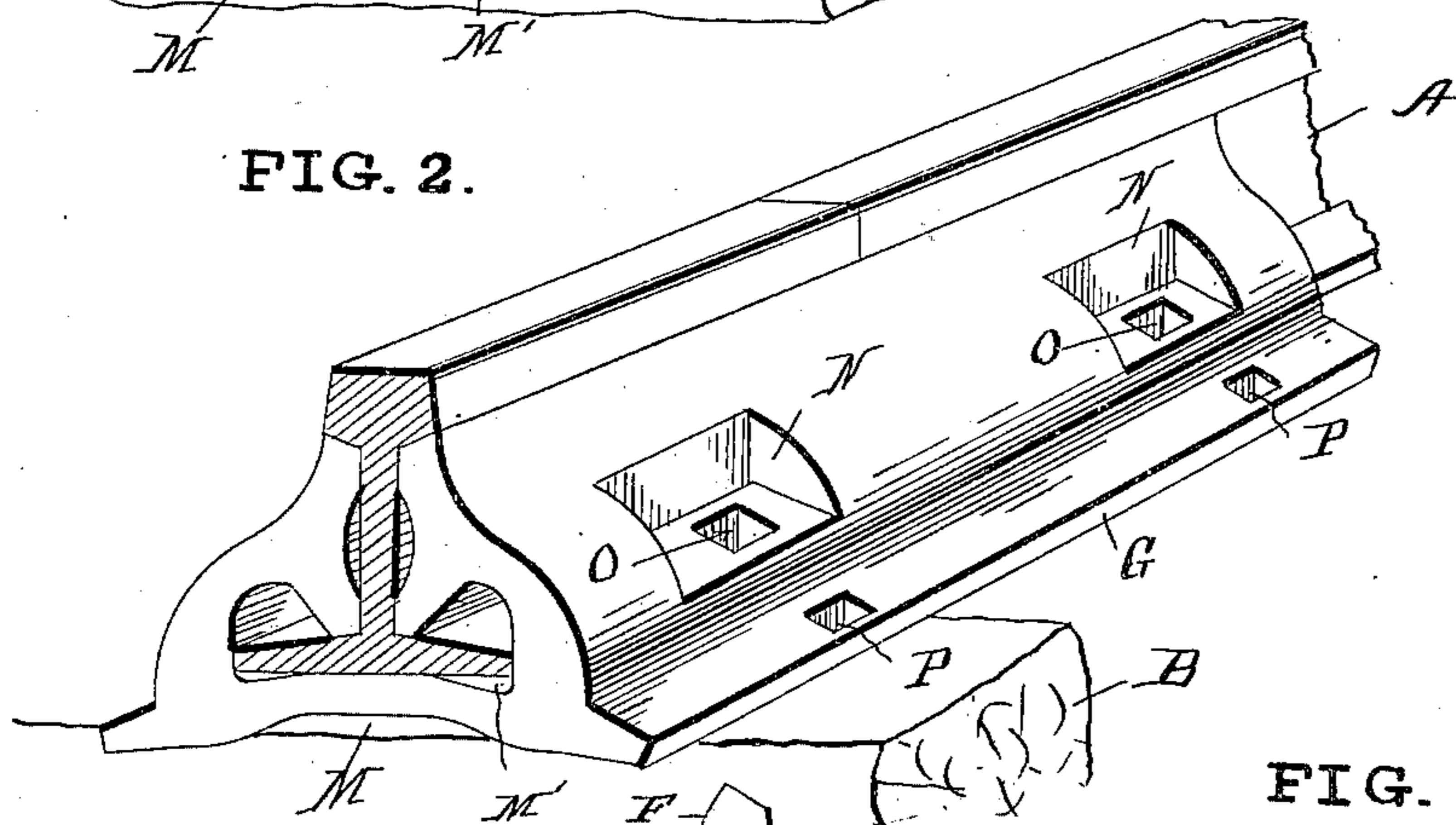


FIG. 4.

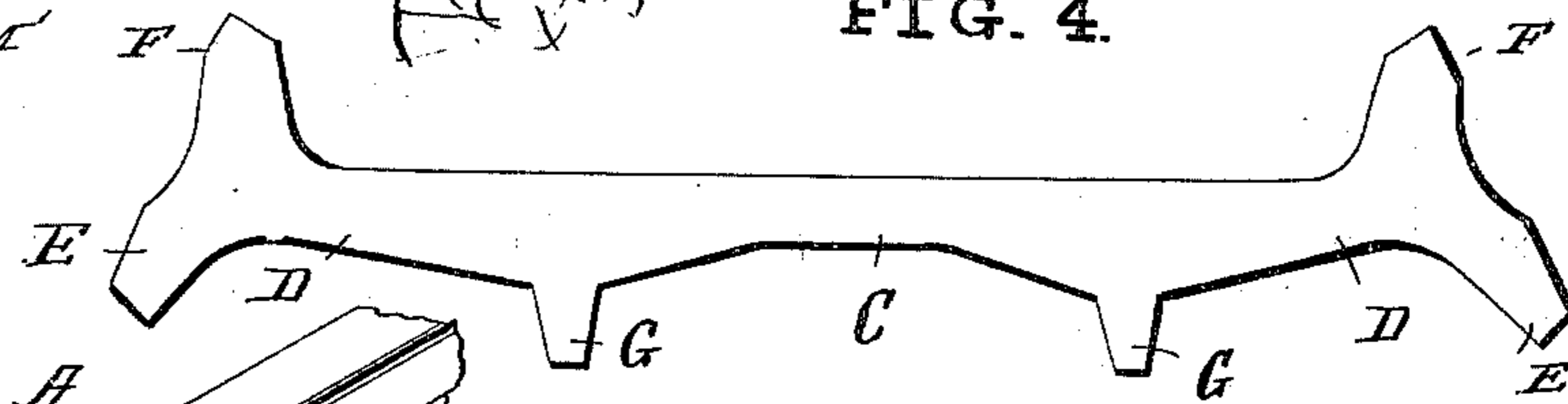


FIG. 3.

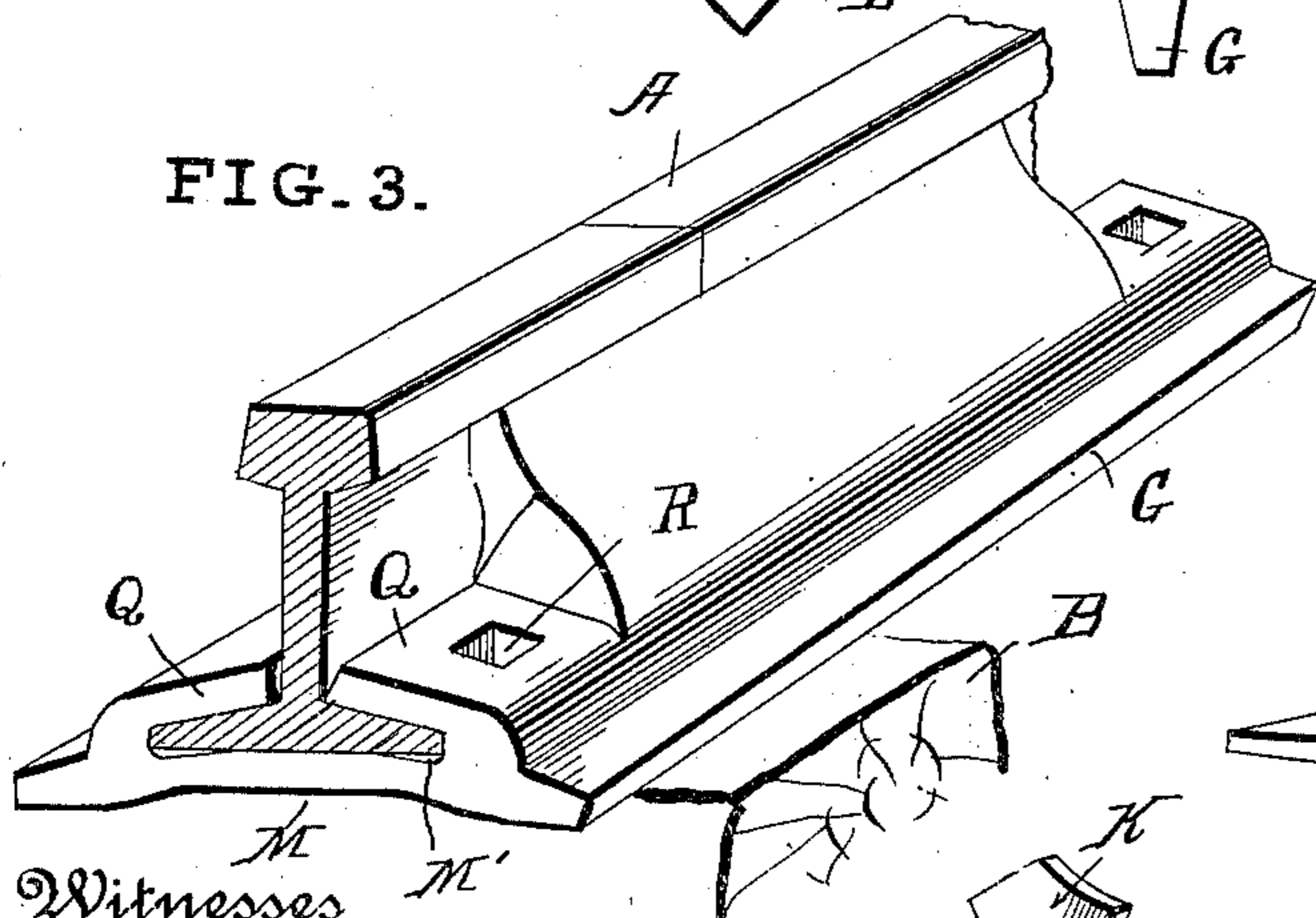


FIG. 5.

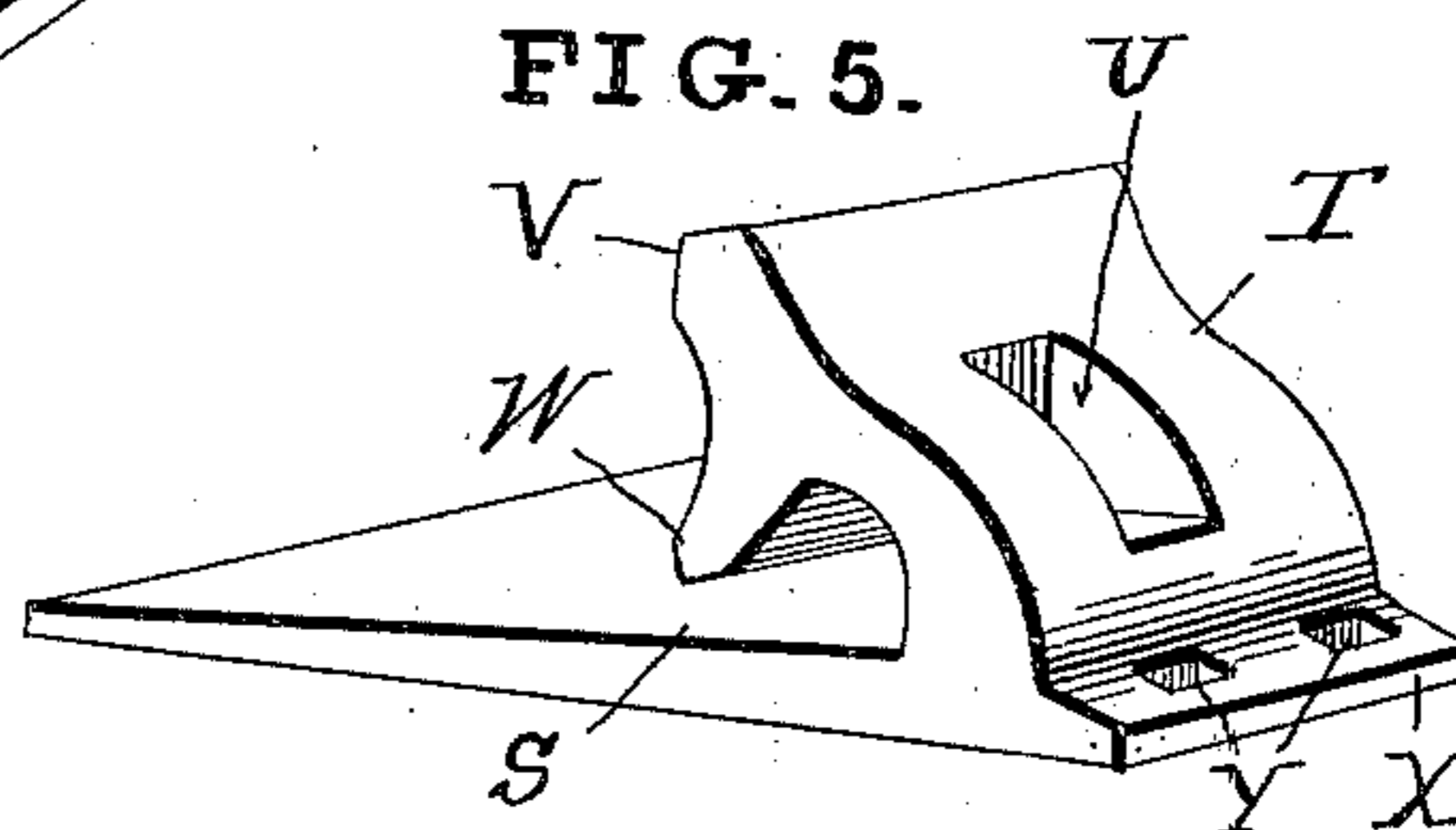
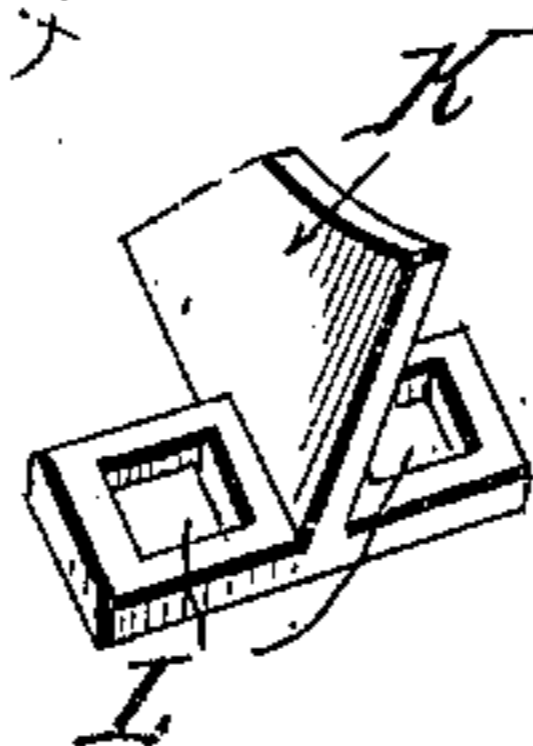


FIG. 6.



Witnesses  
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## UNITED STATES PATENT OFFICE.

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## RAIL CHAIR AND JOINT.

SPECIFICATION forming part of Letters Patent No. 755,449, dated March 22, 1904.

Application filed July 18, 1903. Serial No. 166,071. (No model.)

*To all whom it may concern:*

Be it known that I, CONRAD A. CARBAUGH, a citizen of the United States, residing at Plumrun, in the county of Fulton and State of Pennsylvania, have invented certain new and useful Improvements in Rail Chairs and Joints, of which the following is a specification.

My invention relates to improvements in rail chairs and joints; and one object of my invention is the provision of a chair and joint which will form a perfect support for the rails and which will have sufficient elasticity, but at the same time prevent the head of the rail from being damaged by the weight of the train in its passage over the rails.

Another object of my invention is the provision of a chair and joint which can be made from a single blank and which can be made into the desired form at a very small expense.

Another object of my invention is the provision of a chair and joint which will form a broad support for the rails and make a perfect joint at the meeting edges of the rails and which can be easily and quickly secured upon the ties and cannot possibly work loose or become detached.

Another object of my invention is the provision of a chair and joint which will be of simple, inexpensive, and durable construction and which will be efficient and practical in every particular.

With these objects in view my invention consists of a rail joint and chair embodying novel features of construction and combination of parts substantially as disclosed herein.

Figure 1 represents a perspective view of my rail chair and joint applied in operative position. Fig. 2 represents a perspective view of a slightly-modified construction of my invention. Fig. 3 represents a perspective view of another modified construction of my invention. Fig. 4 represents an end view of the blank constituting my chair and joint before it has been formed into the chair and joint. Fig. 5 represents a perspective view of the form of joint used upon a frog or where only one side of the rail is to be engaged, and Fig. 6 is a perspective view of the form of fastening device used in connection with the construction of joint and chair shown in Fig. 1.

Referring by letter to the drawings, in which similar letters of reference denote corresponding parts in the several views, the letter A designates the rail, which is of well-known construction and in connection with which my joint and chair is employed, and B designates the ties upon which the chair and joint is supported.

In the form of my invention shown in Fig. 1 the joint and chair is made from a single piece of rolled steel to form the base portion C, the side wall D having the engaging portions E, which rest under and support the head of the rail, also the engaging portions F, which bear upon the foot and web of the rail, and the lateral extensions or flanges G, which rest upon the tie and form practically the support for the structure. I also provide the joint and chair with the seats H in the side walls and provide the bolt-openings J in the lateral supporting-flange, and in connection with the recesses and bolt-openings I employ the fastening device shown in Fig. 6, which consists of the plate K, engaging the recesses and having the base portion formed with bolt-openings L, which aline with the bolt-openings in the flanges, and this makes a perfect fastening for the joint and chair.

It will be observed from the construction described that when the device is applied to the meeting ends of the rail the base-space M is provided, also the spaces M' under the foot of the rail, and when the joint is in use these spaces permit a certain vibration or elasticity to the joint, so that when the train passes over the rail the side walls of the chair and joint, with their engaging portions, will be brought firmly against the head, foot, and web of the rail and form a rigid lock and support for the rails and absolutely prevent working loose of the rail or injury thereto.

In the form of my invention shown in Fig. 2 the side walls are formed with seats or depressions N, having an opening O to receive a fastening, and the lateral supporting-flanges are also provided with openings P to receive suitable fastenings. In the form of my invention shown in Fig. 3, instead of making the recesses or depressions to receive the fastening means, I cut away a portion of the

walls to form engaging lips Q, which I provide with openings R to receive the fastenings.

In the form of my invention shown in Fig. 5, which is only employed for fastening a frog or where one side of the rail only is engaged, the device consists of a base portion S, formed with a wall or fish-plate T, having a recess or seat U, inner engaging portions V and W, and a lateral flange X, provided with openings Y to receive the fastening devices.

In all the forms of my invention the operation or function is practically the same and each provides the space under the base portion and under the foot of the rail in connection with the engaging portions for the head, web, and foot of the rail, and the inherent elasticity in the joint and chair will insure the proper giving or yielding action under extreme weight and at the same time will insure a perfect joining and supporting of the meeting ends of the rails and prevent collapsing or working loose of said rails.

I would have it understood that I reserve

the right to make such changes in the form and proportions of the parts of my invention that come within the spirit and scope without sacrificing any of the advantages of my joint and chair.

I claim—

In a rail joint and chair, the combination with the rail and ties of the joint and chair consisting of the base portion supporting the foot of the rail, the lateral flanges to rest upon the tie, the side walls or fish-plates having the engaging portions resting against and supporting the head, web and foot of the rail, fastening devices engaging the side walls and flanges, and said joint and chair forming the cushioning-spaces under the base portion and foot of the rail.

In testimony whereof I affix my signature in presence of two witnesses.

CONRAD A. CARBAUGH.

Witnesses:

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CHAS. E. RIORDON.