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RAIL JOINT.

APPLICATION FILED NOV. 24, 1908.

955,750.

Patented Apr. 19, 1910.

Fig. 1.

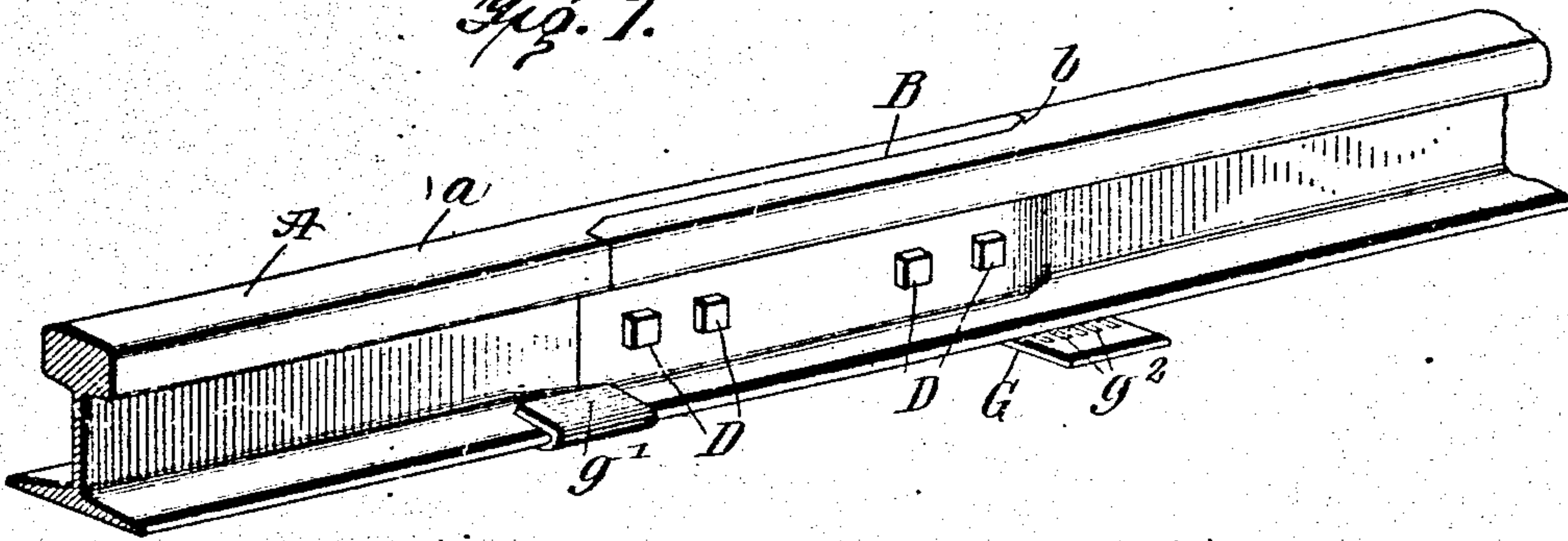


Fig. 2.

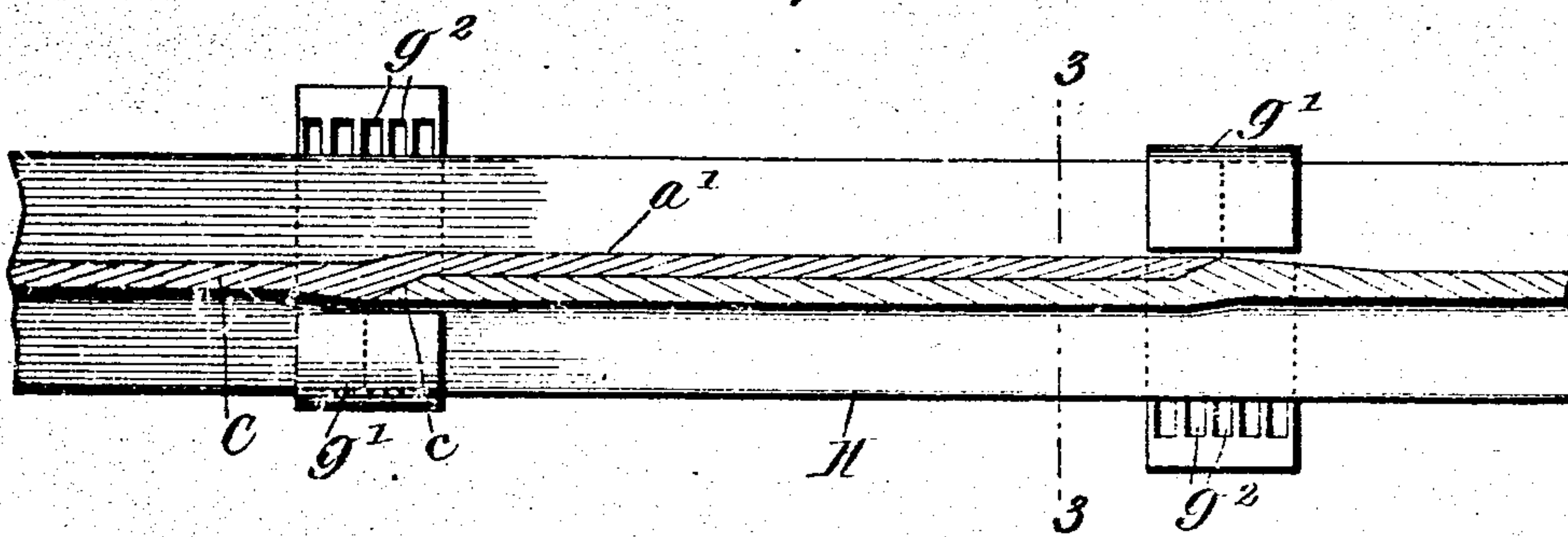


Fig. 3.

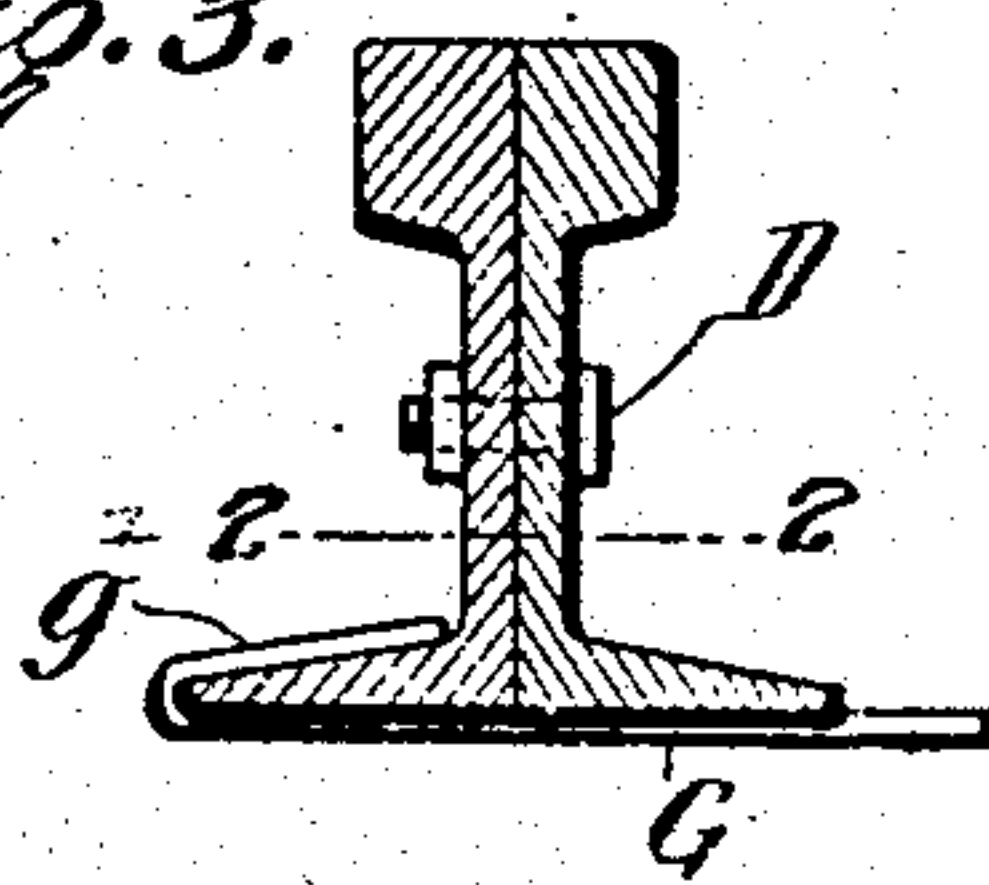


Fig. 5.

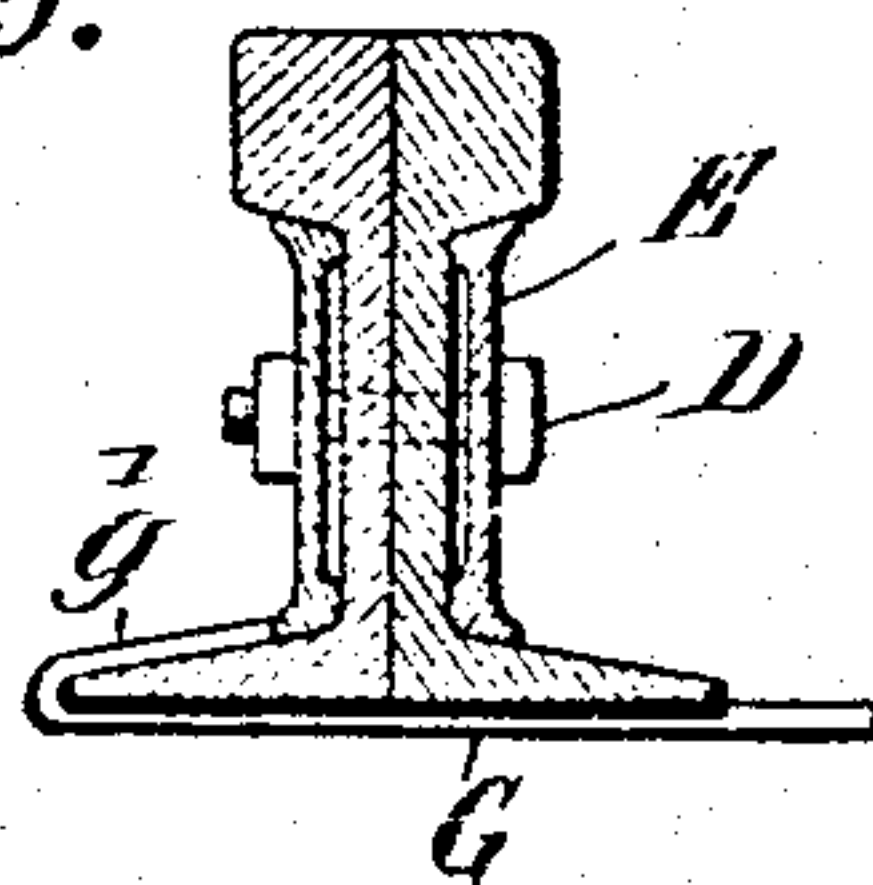
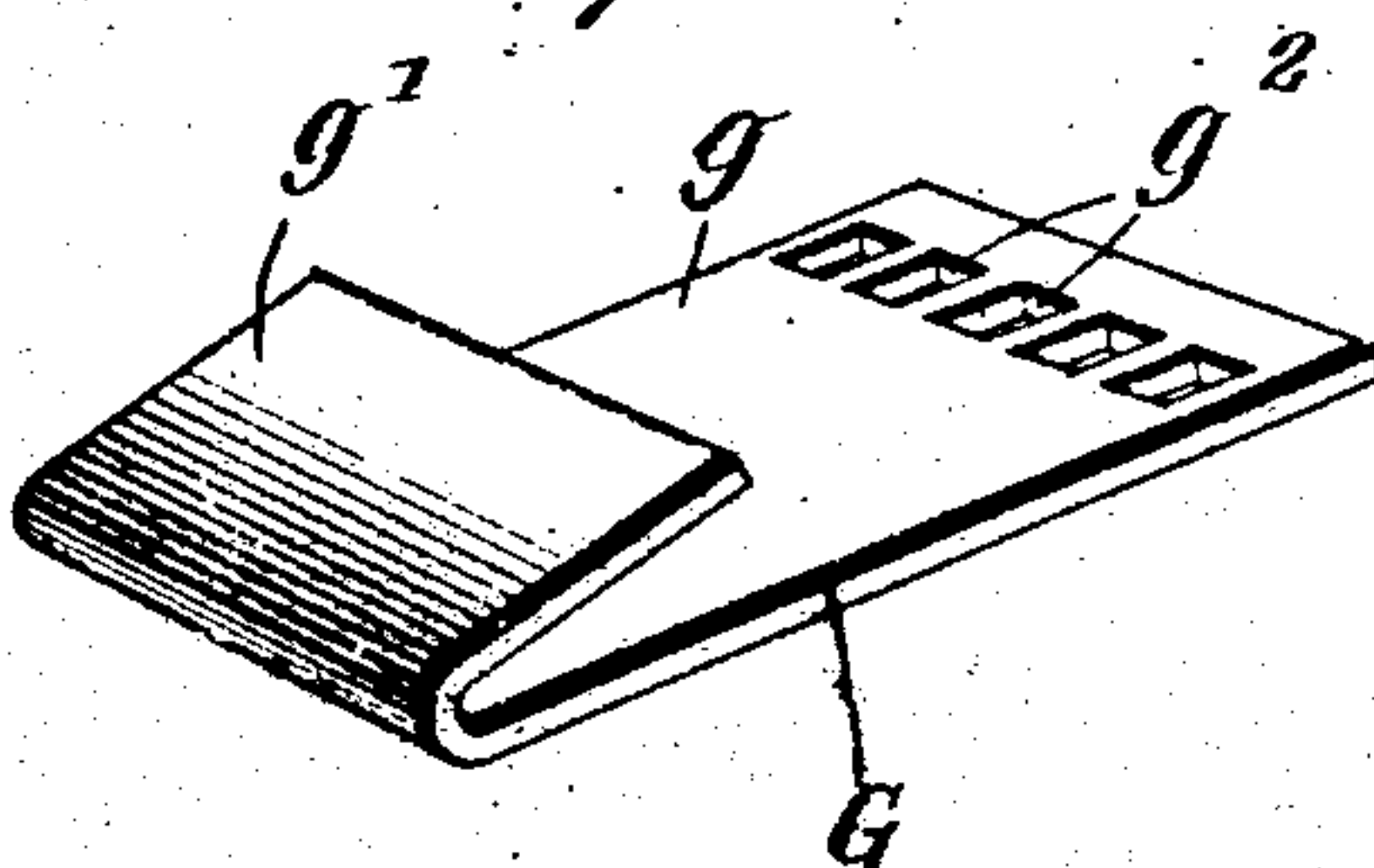


Fig. 4.



WITNESSES

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# UNITED STATES PATENT OFFICE.

CHARLES E. BISER, OF SELMA, AND WILLIAM W. McCRAE AND JOHN E. McCRAE, OF BIRMINGHAM, ALABAMA.

## RAIL-JOINT.

955,750.

Specification of Letters Patent.

Patented Apr. 19, 1910.

Application filed November 24, 1908. Serial No. 464,235.

To all whom it may concern:

Be it known that we, CHARLES E. BISER, WILLIAM W. McCRAE, and JOHN E. McCRAE, all citizens of the United States, CHARLES E. BISER residing in Selma, in the county of Dallas and State of Alabama, and WILLIAM W. McCRAE and JOHN E. McCRAE residing in Birmingham, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

Our invention is an improvement in rail joints, and consists in certain novel constructions and combinations of parts hereinafter described and claimed.

Referring to the drawings forming a part hereof, Figure 1 is a perspective view of the joint; Fig. 2 is a section on the line 2—2 of Fig. 3. Fig. 3 is a section on the line 3—3 of Fig. 2. Fig. 4 is a detail perspective view of one of the chairs or bed plates, and Fig. 5 is a perspective view through a joint provided with fish plates.

In the present embodiment of the invention, the rails have a portion of the tread A and a corresponding portion of the base H, cut-away as at B, the cut-away portion extending longitudinally of the rail a sufficient distance to form a good joint, and extending transversely of the tread approximately half the width thereof. The ends of the cut-away portion are rounded somewhat as at b, and the webs C of the rails are off-set laterally throughout the extent of the joint to overlap, as clearly shown in Fig. 2, and the ends of the web are beveled as at c. The webs are also perforated transversely for receiving bolts F, whereby to secure the webs together, and if desired, fish plates E may be arranged on each side of the overlapping webs.

Chairs G shown in Fig. 4 are arranged at each end of the joint, each chair comprising a flat bottom plate g, provided at one end with an overlying flange g', and at the other end with a transverse series of openings g<sup>2</sup> for receiving a spike. A chair is arranged transversely of the rails at each end of the joint as shown in Figs. 1 and 2, the end of

the joint being at approximately the center of the chair, and the overlying flange overlying the base H of the rail. Each end of the joint is spaced to rest upon a tie, with a chair thereunder, and a spike is passed through one of the openings g<sup>2</sup>, the head of the spike engaging the base of the rail in the usual manner.

A joint arranged as set forth will be very strong, firm, and safe and will be practically noiseless insuring smooth running of the roller stock, and eliminating jar, thus adding to the comfort of the traveler, and also to the life of the rail and the road bed.

We claim:

1. A rail joint composed of rails having the tread and the base cut away on one side and the web off-set throughout the extent of the cut-away portion, whereby to overlap the web of the other rail, said webs abutting closely against each other being transversely perforated, bolts traversing the perforations for securing the webs together, and a chair or bed plate at each end of the joint, each of said chairs consisting of a base plate adapted to lie transversely of the rail and provided at one end with an overlying flange and at the other with a transverse series of spike openings.

2. The rail joint substantially as herein described, composed of adjoining rails having at their meeting ends the tread and the base cut away on one side of each of the meeting rails and having the cut away portions lapping side by side and having the remaining web portion off-set throughout the extent of the cut away portion and having the base portions and the tread portions along the cut away portion of the rails adapted to combine to form the tread and the base of the lapped portions of the rails, bolts securing the lapped portions of the webs together, and chair plates at the opposite ends of the lapped portions and lapping partly over the cut away portions of the rails and partly on the uncut portions of the respective rails and having at one end hooks which overlap the joint between the free end of the cut away portion of one rail and the uncut portion of the other rail at the



juncture therewith of its cut away portion,  
the said chairs being provided with their  
hooked portions on one side of the rails at  
one end of the lapped joint and with the  
5 hooked portion of the other chair on the  
other side of the rail at the opposite end of  
the lapped portion and fastening means for  
securing the said chairs at their ends oppo-

site the hooks all substantially as and for  
the purposes set forth.

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Witnesses:

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