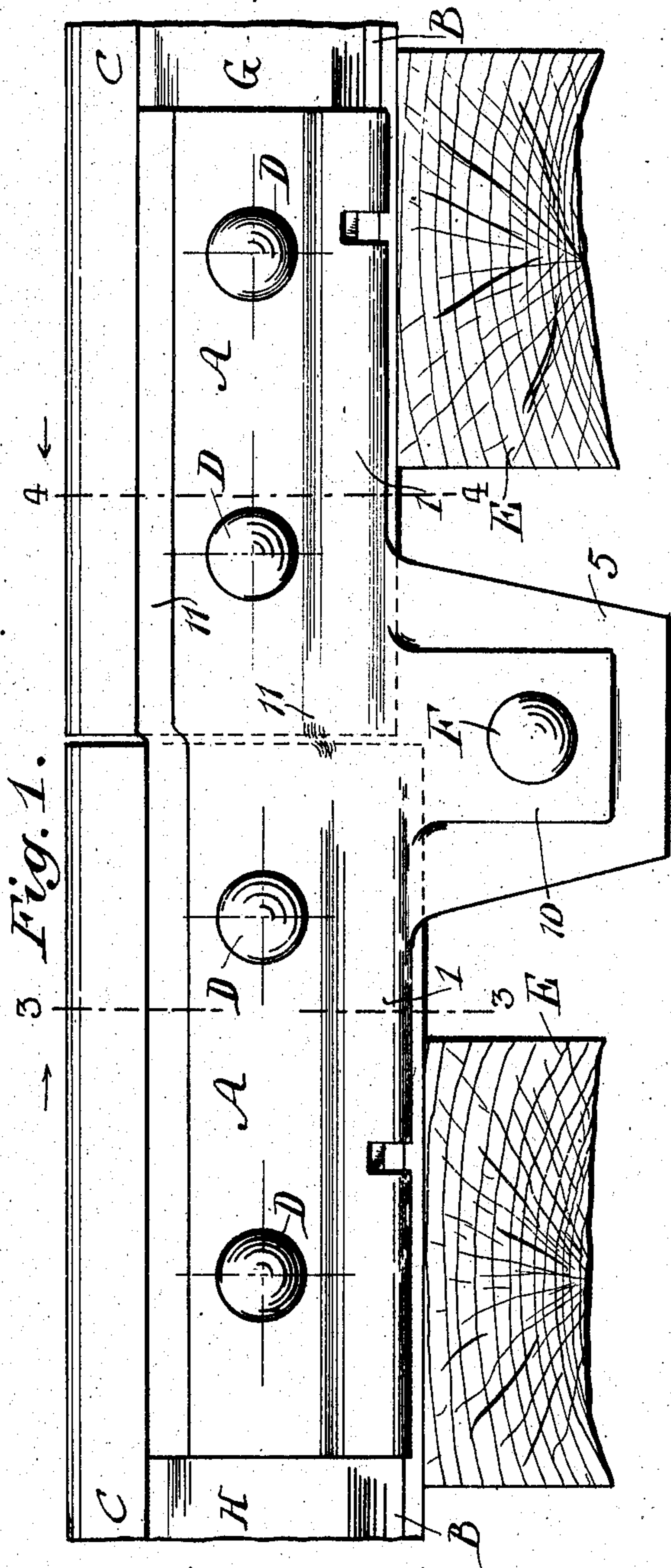


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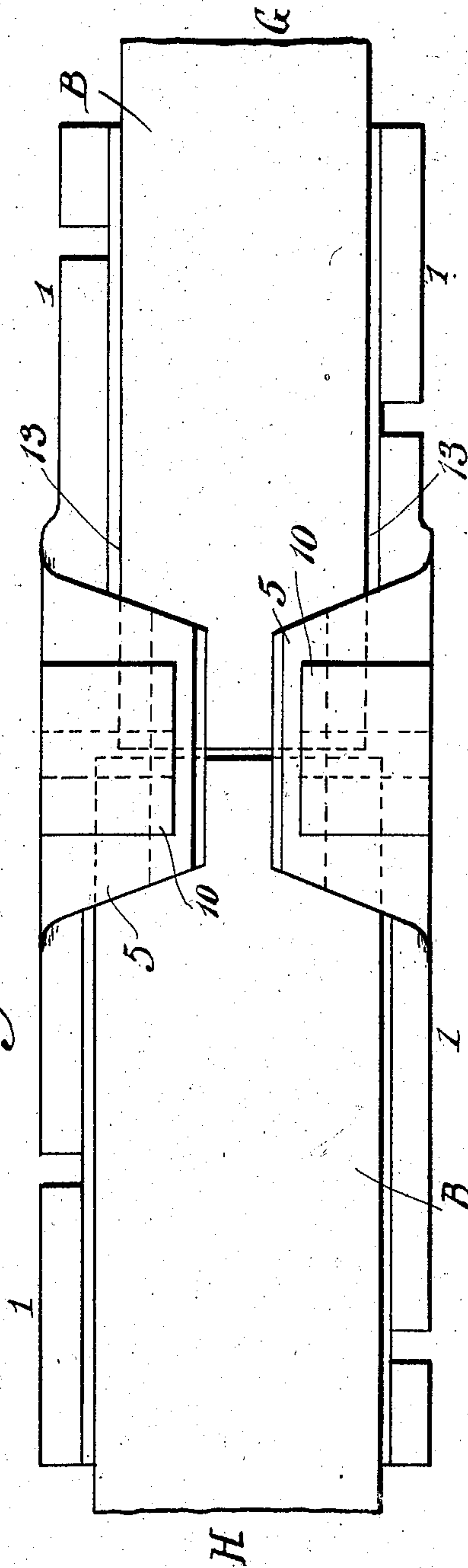
PATENTED JUNE 26, 1906.

S. S. DEEMER.  
RAILROAD RAIL JOINT.  
APPLICATION FILED OCT. 5, 1905.

2 SHEETS—SHEET 1.



*Fig. 2.*



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2 SHEETS—SHEET 2.

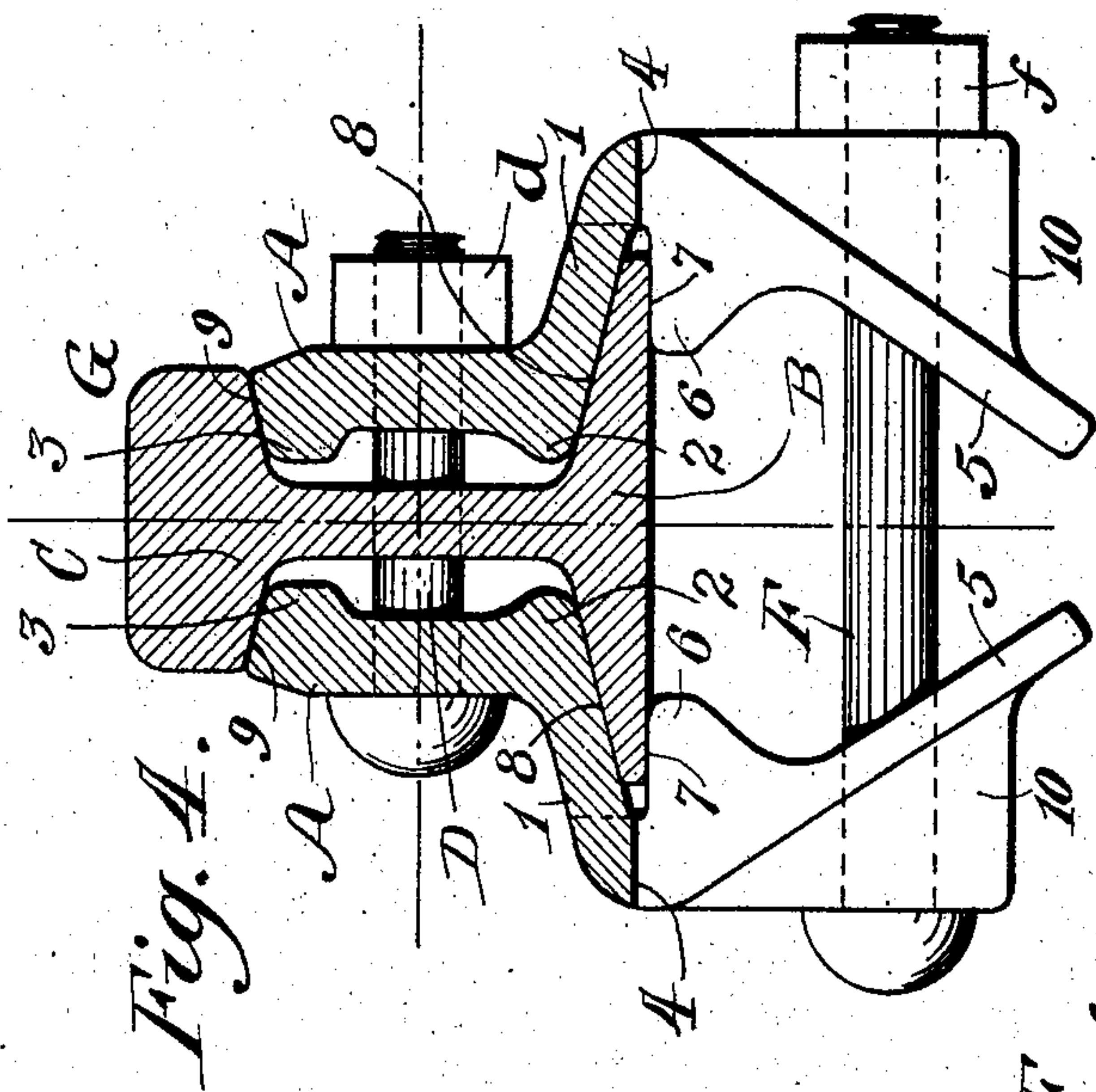


Fig. 4.

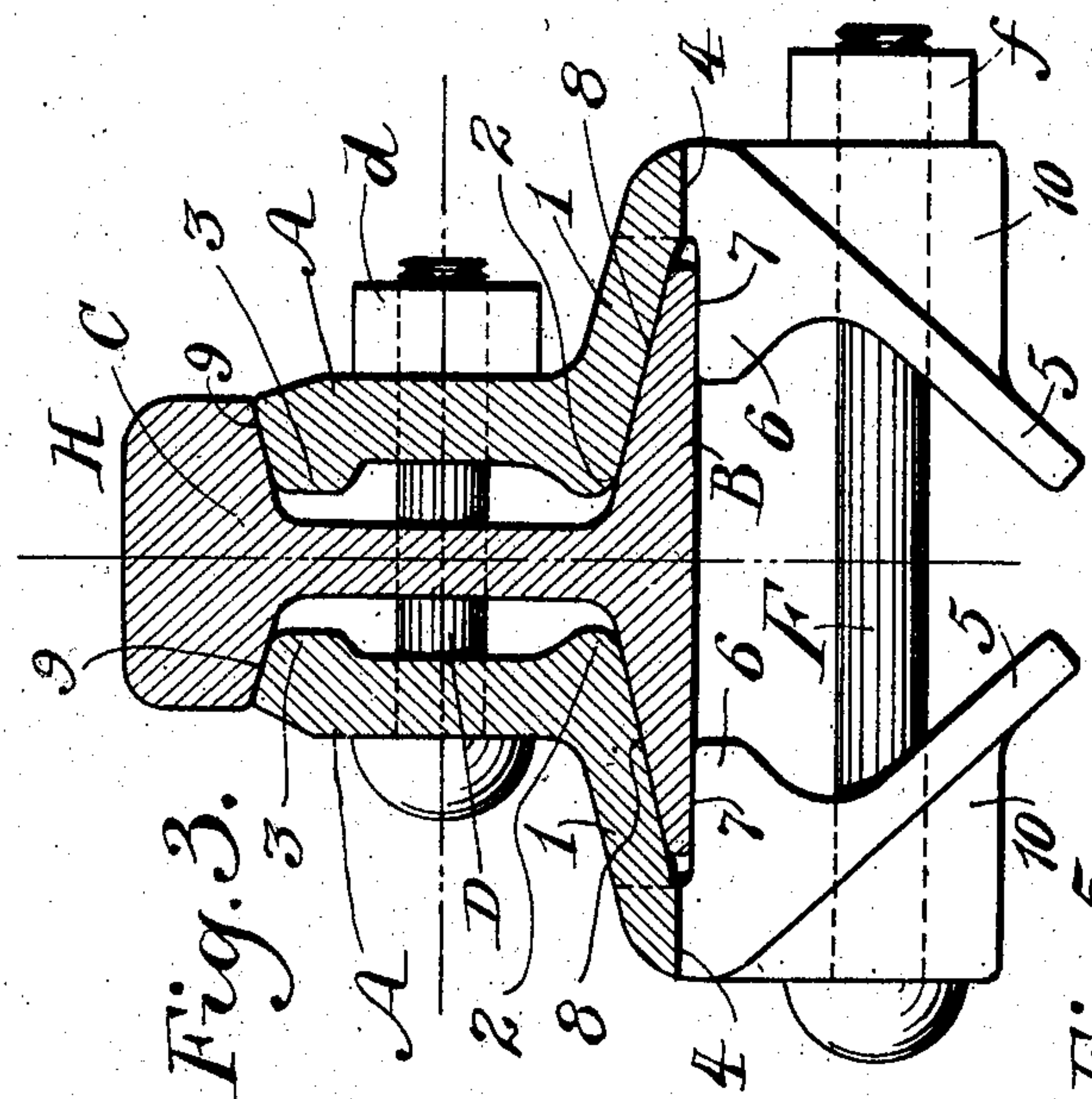


Fig. 3.

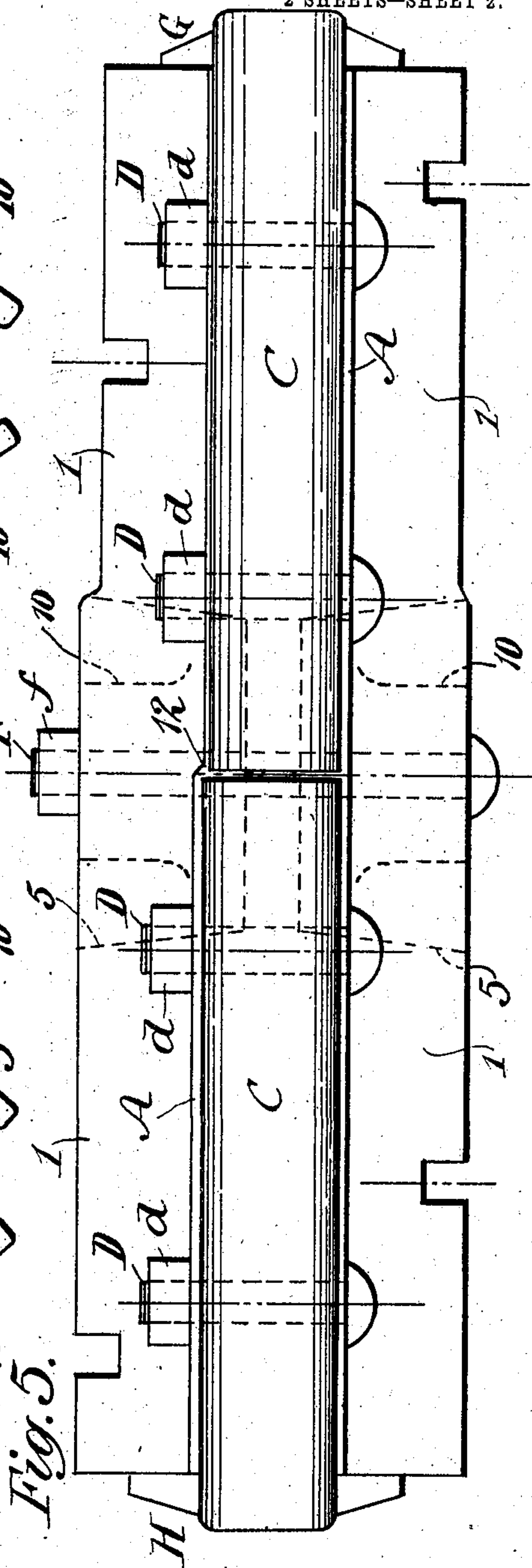


Fig. 5.

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# UNITED STATES PATENT OFFICE.

SELDEN SCRANTON DEEMER, OF NEW CASTLE, DELAWARE.

## RAILROAD-RAIL JOINT.

No. 824,099.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed October 5, 1905. Serial No. 281,468.

*To all whom it may concern:*

Be it known that I, SELDEN SCRANTON DEEMER, a citizen of the United States, residing at New Castle, in the county of New castle and State of Delaware, have invented new and useful Improvements in Railroad-Rail Joints, of which the following is a specification.

This invention relates to railroad-rail joints, and has for its object to provide a device of this character which comprises a lightweight inexpensive structure embodying novel features of durability, simplicity, and general effectiveness in operation. The device is so constructed that its strongest parts are adjacent to the point of intersection between two rail-sections, whereby said parts are securely clamped to maintain perfect alinement and an even tread at the joint.

The invention will be hereinafter fully described, and specifically set forth in the annexed claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side view of my improved rail-joint; Fig. 2, an inverted plan view; Fig. 3, a view in cross-section taken on line 3 3 of Fig. 1 and looking in the direction of the adjacent arrow; Fig. 4, a similar view taken on line 4 4 of Fig. 1 looking in the direction of that arrow, and Fig. 5 is a top plan view.

In the drawings, A designates two metallic plates, which are respectively provided with a base-flange 1, which diverges downwardly and outwardly by an angle parallel with the upper surface of the foot B of the rail-sections. Each plate A has a longitudinal rib 2 extended inwardly along its lower edge part, and a similar inwardly-extended rib 3 is provided at the upper edge of each plate, and said plate at its upper edge diverges upwardly and outwardly by an angle parallel with the lower surface of the rail-head C. The plates A are pierced by bolt-holes, which register with each other and receive the bolts D, which are fastened by means of the nuts d. The lower edge 4 of each flange 1 terminates at a point above the lower surface of the rail-flange B, whereby the flanges 1 of the plates A do not bear on ties E, but are clamped tightly over the flanges of the rail-sections when the two plates A are coupled to said rail-sections.

To strengthen the structure, there is extended at an angle downwardly and inwardly from the lower edge 4 of each flange 1 and

formed integral therewith a tongue 5. These tongues 5 are located centrally at a point directly beneath the point of intersection between the abutting ends of the rail-sections, and they are respectively provided with a longitudinal rib 6, embodying a shelf for supporting the rail-flange, whereby when the plates are coupled there are provided three points of contact 7, 8, and 9 with the rail-section, which makes a rigid and secure coupling. The plates 5 have preferably integrally-formed studs 10, which are pierced by bolt-holes to receive the bolts F, which act as an auxiliary means for coupling the plates in secure engagement and are held in place by means of the nuts f.

It will be noted by reference to the drawings that I have illustrated my invention as applicable to "compromise" or "step" joints; but it is obvious that it may also be constructed to accommodate the contiguous ends of rail-sections which are of equal proportions.

When rail-sections of different proportions are coupled, the contacting longitudinal surfaces of the plates A, adapted for engagement with the smaller rail-section, as G, are raised above the level of the corresponding parts engaging the larger rail-section H, as shown at 11, Fig. 1, of the drawings, and the space between said parts is also laterally contracted, as shown at 12, Fig. 5, and 13, Fig. 2, of the drawings.

In the operation and use of the device the rail-sections, as G H, are placed between the plates A with the flanges 1 resting on the top of the rail-flange and the shelves 6 contacting with the lower surface of said rail-flange. Thus when the bolts D and F are secured the coupling-plates A are in secure engagement with the contiguous rail-sections, an efficient rail-joint is provided, and the several parts are assembled in such a secure manner as to maintain a perfectly even tread and positive registration of the rail-sections.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a rail-joint, the combination with rail-sections of oppositely-located longitudinal plates engaging the upper surfaces of the rail-base flanges and each having a centrally-located tongue extending obliquely inwardly and downwardly from the edges of said rail-base flanges, an integrally-formed shelf ex-



tending inwardly from the base of each tongue for supporting contact with the lower surface of said rail-section bases, and means for clamping the plates to the rail-sections 5 and for connecting the tongues to each other, substantially as shown and described.

2. A fish-plate having a downwardly and outwardly extended flange for contact with the upper surface of a rail-base flange, a 10 tongue extended obliquely downwardly and inwardly therefrom, an integrally-formed shelf extending inwardly from the base of said tongue for supporting contact with the lower surface of a rail-base flange, said plate 15 and tongue being provided with bolt-holes, substantially as shown and described.

3. In a compromise rail-joint, the combination with rail-sections of different proportions, of oppositely-located plates each hav-

ing a portion formed with surfaces to engage 20 the larger rail end and an offset or reduced portion having surfaces to engage the smaller rail end, a tongue downwardly extending from the junction of said portions on each plate and formed with a step-shelf to pre- 25 sent surfaces in different planes to support the foot of said rail ends respectively, and means for clamping said plates to the rail-sections and for connecting the tongues, substantially as shown and described. 30

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SELDEN SCRANTON DEEMER.

Witnesses:

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WM. DEAKYNE.