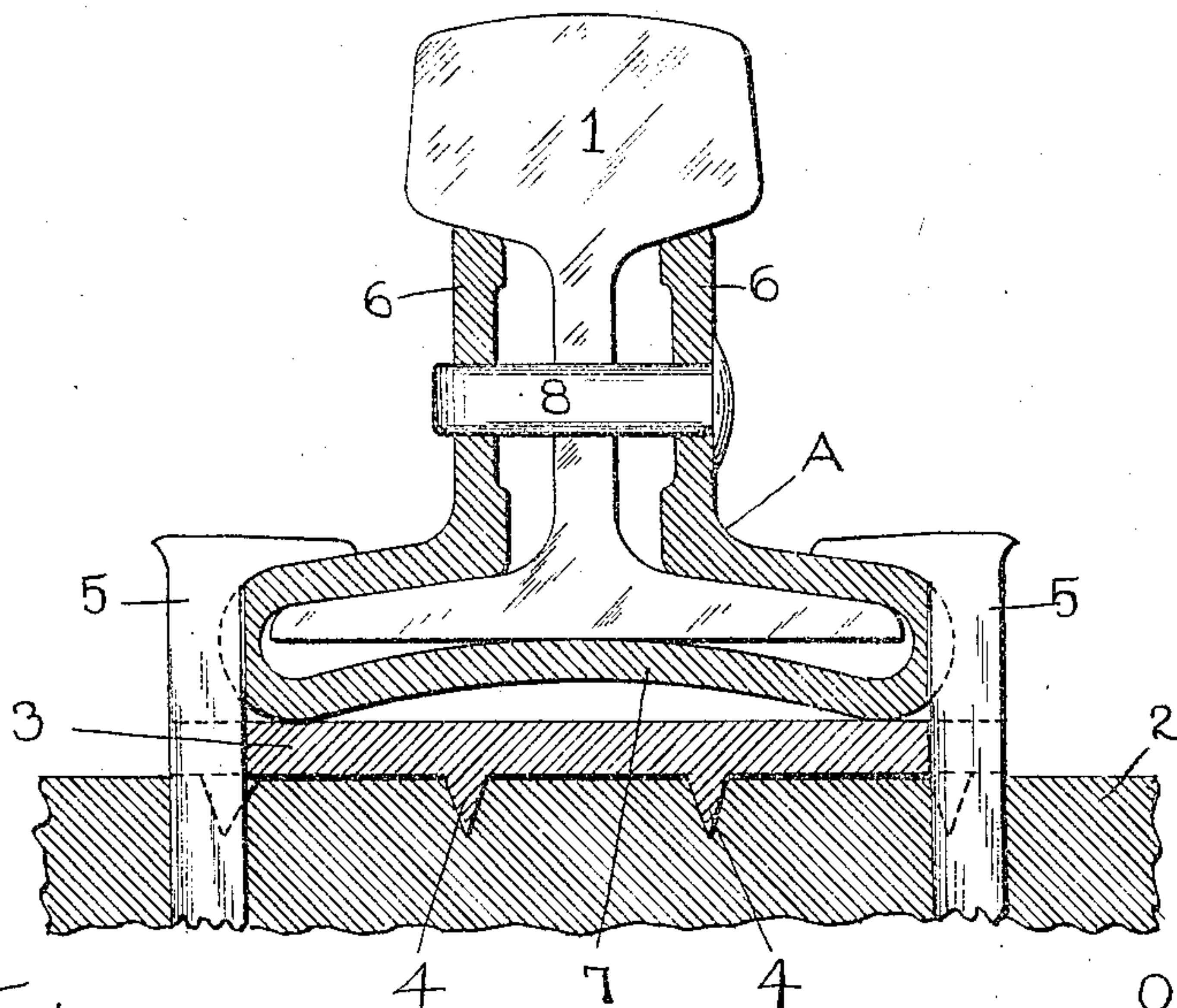
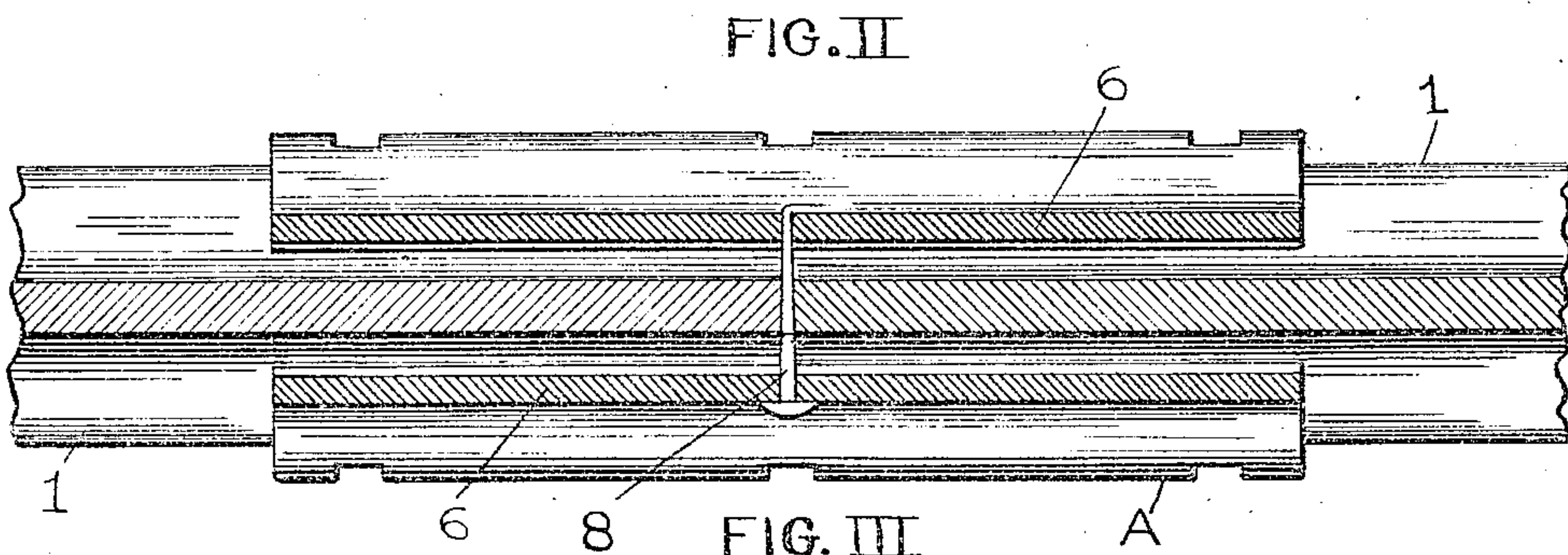
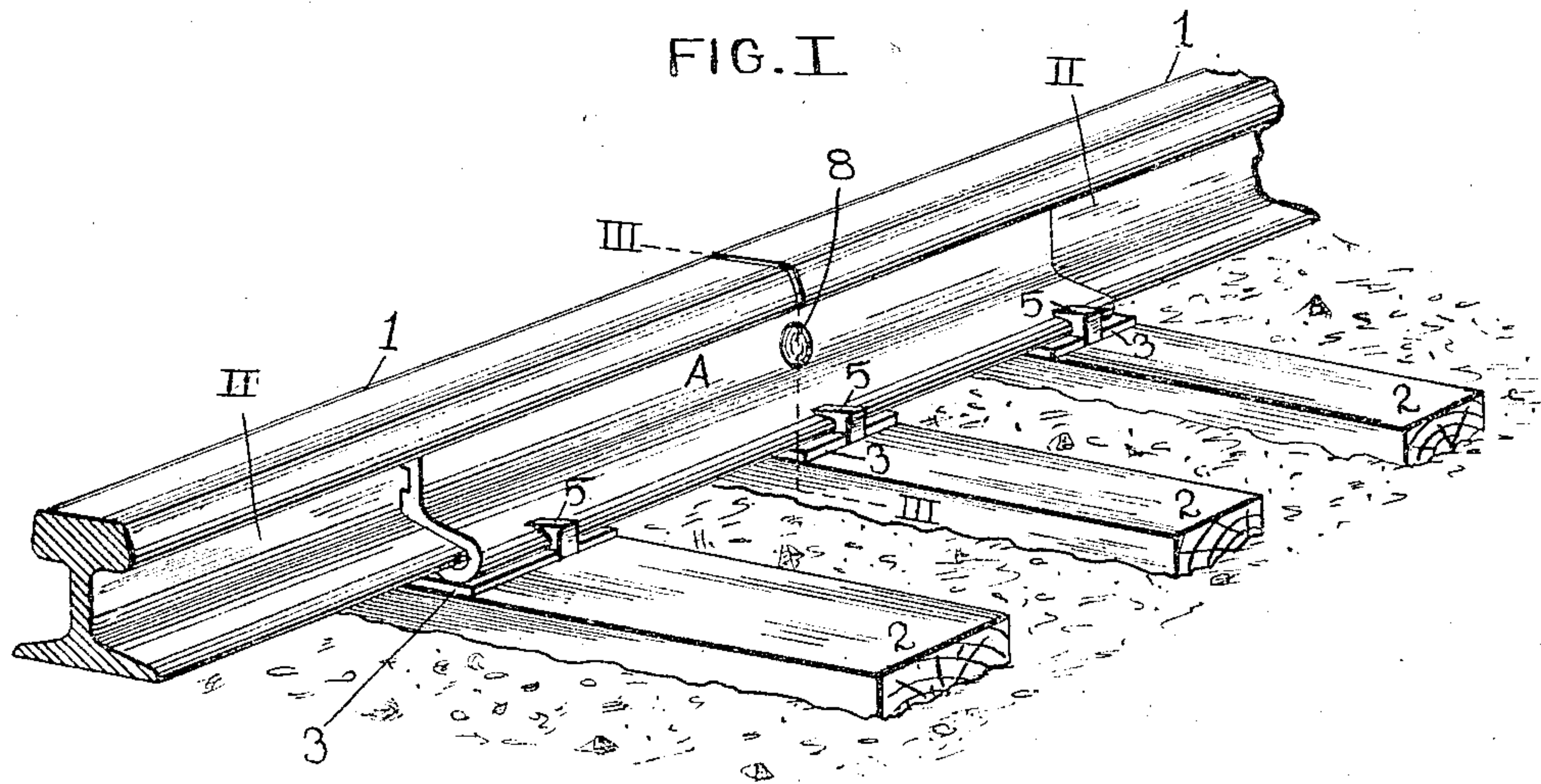


No. 792,163.

PATENTED JUNE 13, 1905.

O. S. PULLIAM.
RAILWAY RAIL JOINT.
APPLICATION FILED JAN. 25, 1904.



ATTEST.

H. G. Fletcher.
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By Wright, Pro
ATTY'S.

UNITED STATES PATENT OFFICE.

OSWALD S. PULLIAM, OF ST. LOUIS, MISSOURI, ASSIGNOR TO COMMON-WEALTH STEEL COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION.

RAILWAY-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 792,163, dated June 13, 1905.

Application filed January 25, 1904. Serial No. 190,466.

To all whom it may concern:

Be it known that I, OSWALD S. PULLIAM, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have
 5 invented certain new and useful Improvements in Railway-Rail Joints, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 My invention relates to a rail-joint for securing and holding the adjoining ends of railway-rails, the object of the present improvement being to furnish a joint-chair that is integral throughout and which is provided with
 15 a concavo-convex bottom through the medium of which the sides of the chair are caused to be pressed inwardly to the rail with a greater degree of holding efficiency when weight is imposed on the connected rails by the passage
 20 of car-wheels thereover. By this means I provide a joint that is the most secure at the time that the car-wheels are passing it, as is most desirable.

25 The invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a perspective view of my joint shown applied to the adjoining ends of two railway-rails. Fig. II is an enlarged longitudinal horizontal section taken on line II II, Fig. I. Fig. III is an enlarged vertical transverse section taken on line III III, Fig. I.

30 1 designates the adjoining ends of two railway-rails that surmount supporting-ties 2, as seen in Fig. I. On the ties 2 are bed-plates 3, that are placed at the location of the joint and are held in connection with the joint-chair by spikes 5. The bed-plates 3 are also additionally secured by prongs 4, that enter into
 40 the ties. (See Fig. III.)

A designates a chair of spring metal, such as steel, and which is integral throughout. This chair consists of sides 6, that occupy po-

sitions at each side of the webs of the railway-rails and beneath the balls of the rails and extend downwardly onto the rail-flanges. The chair has a bottom 7, that is in the form of a continuation of the sides 6 and is of concavo-convex shape in cross-section, as seen most clearly in Fig. III. The convexity of the chair-bottoms is uppermost, and the crown thereof receives and supports the bases of the railway-rails. When the car-wheels of a car pass along the railway-rails connected by my joint, the weight of the car they carry causes a slight depression of the rail ends at the joint, and as a consequence the concavo-convex bottom of the joint-chair is sprung downwardly, and the sides of the chair are as a consequence carried inwardly toward the webs of the rails and beneath the rail-balls, thereby tightly clamping the rails to prevent any shifting thereof. The joint is therefore made very secure at the time the greatest security is desirable—namely, when the wheels of a car are passing it.

The chair A may be united to the ends of the rails by any suitable means. I prefer to use a key 8, that passes through the sides of the chair at the junction of the rail ends and between the ends of the rails, so that the rails may move longitudinally to a slight degree whenever such movement should take place due to expansion and contraction in extremes of temperature.

I claim as my invention—

The combination of a railway-joint chair, of spring metal comprising sides and a concavo-convex bottom integral throughout, and a key passing between the ends of the rails and tying the sides together.

OSWALD S. PULLIAM.

In presence of—

E. S. KNIGHT,
 BLANCHE HOGAN.