

C. D. PORTERFIELD.

RAIL JOINT.

APPLICATION FILED NOV. 3, 1904.

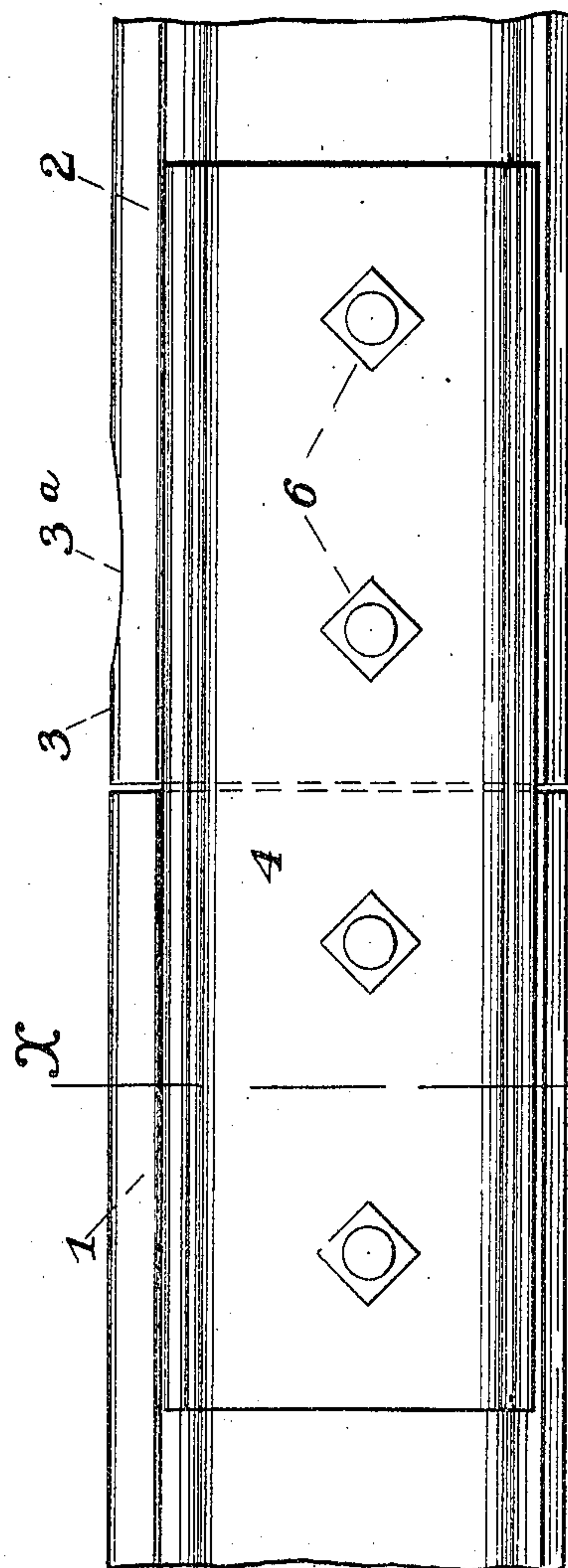


Fig. 1.

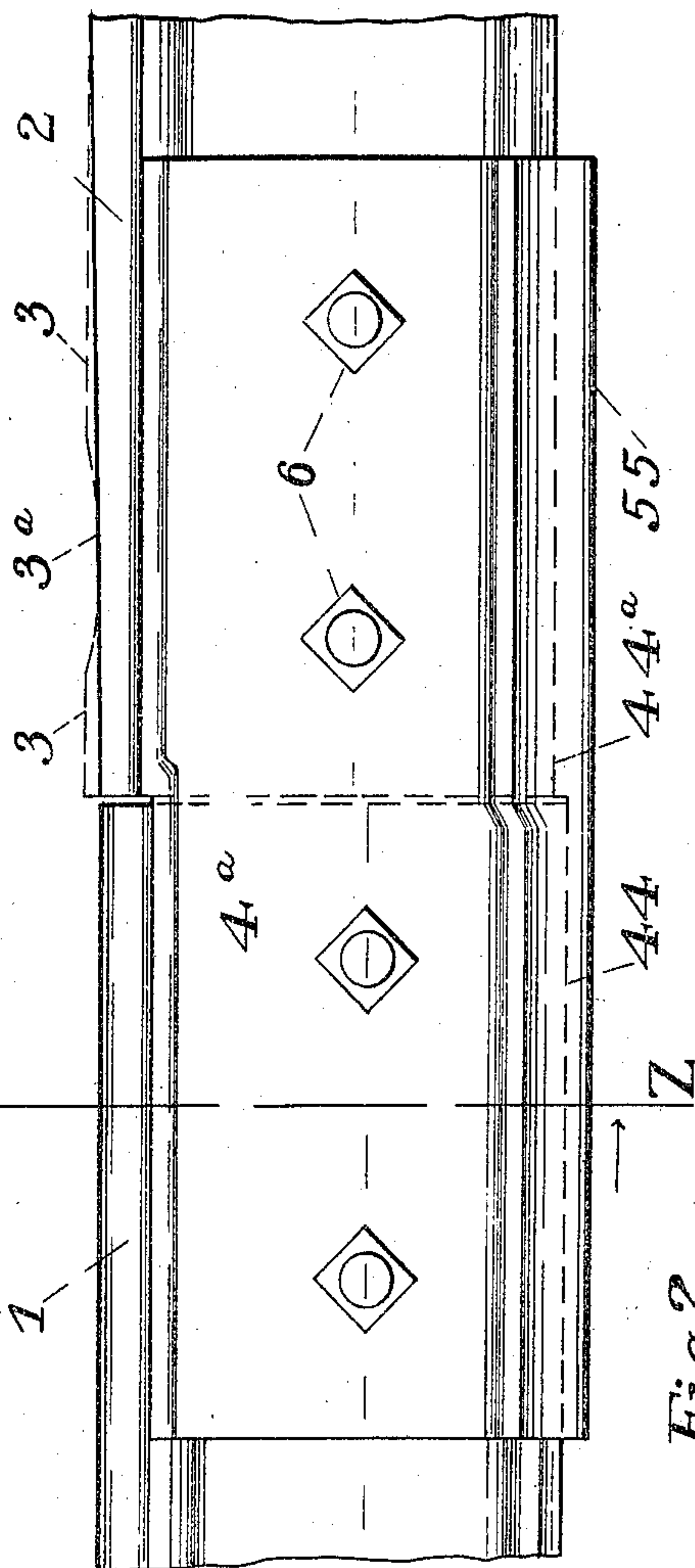


Fig. 2.

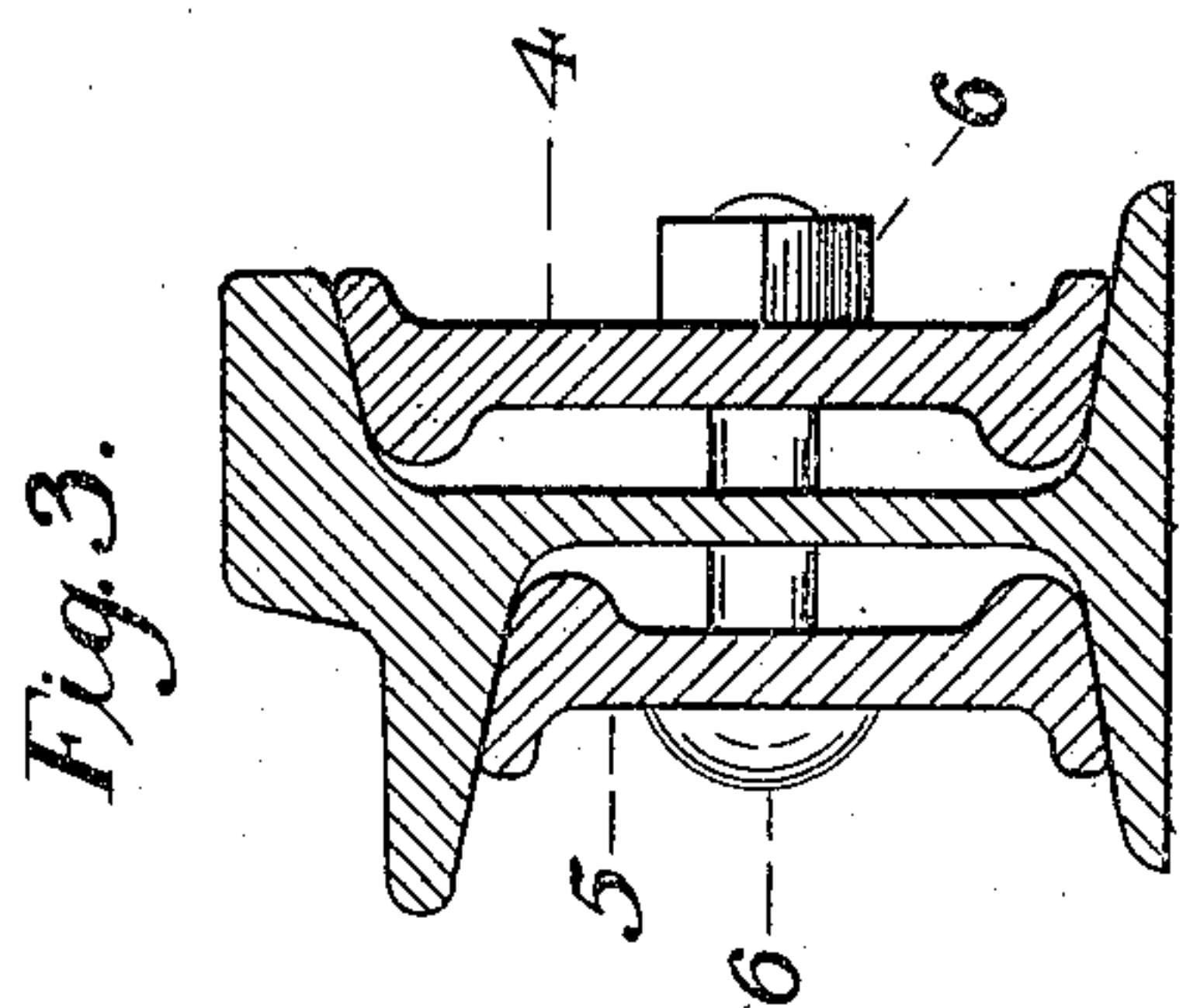


Fig. 3.

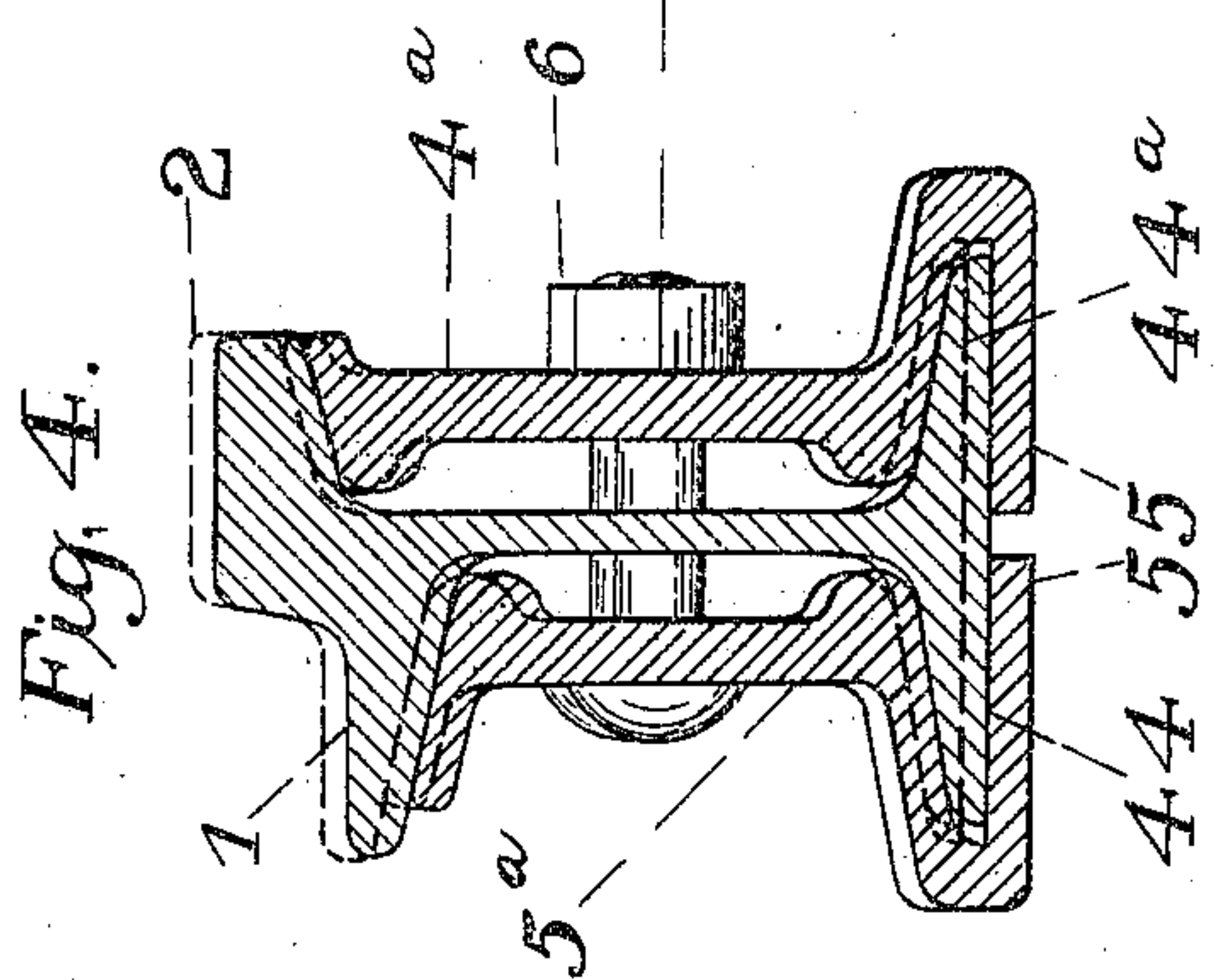


Fig. 4.

WITNESSES:

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CLARENCE D. PORTERFIELD, OF NEW YORK, N. Y.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 789,878, dated May 16, 1905.

Application filed November 3, 1904. Serial No. 231,241.

To all whom it may concern:

Be it known that I, CLARENCE D. PORTERFIELD, a citizen of the United States of America, residing in the city of New York, in the borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

My invention relates to joints between adjacent rails of a railway, and particularly to the repairing of such a joint.

To this end my invention consists, broadly, of stepping up one of the rail ends and aligning its tread with that of the other rail end.

I hereinafter describe a rail-joint embodying my invention and then point out the novel features in the claims, having reference to the accompanying drawings, in which similar characters of reference indicate similar parts throughout the various views, of which—

Figure 1 is a side elevation of a rail-joint to which my invention is to be applied. Fig. 2 is a similar view of a rail-joint to which my invention has been applied. Fig. 3 is a sectional view on the line X Y of Fig. 1, and Fig. 4 is a sectional view on the line V Z of Fig. 2.

It will be understood that the direction of travel is from rail end 1 to rail end 2. Referring to Fig. 1, 4 is the ordinary splice-bar or fish-plate, and 6 the bolts securing the joint. The wear of the joint has been found to produce a depression of the tread of the receiving rail end 2 at a point just beyond the junction of the rail ends, as shown at 3^a in Fig. 1, and should the joint be continued in use in the condition shown in Fig. 1 great damage will result in the operation of the railroad. Of course the defect may be remedied by replacing rail 2; but in order to obviate that expense and the expense and impracticability of welding the two rail ends 1 and 2 together I have provided the following method of repair-

ing the rail-joint: I raise the rail end 2, so that its depressed portion 3^a is in substantial alinement with the tread of rail end 1, and hold said rail end 2 in that raised position by an upset or angular fish-plate 4^a and cut off the portions 3 3 of rail end 2. This cutting off of the portions 3 3 of rail end 2 may be accomplished in various ways without departing from my invention. Said portions may be planed off or they may be allowed to be worn away or crushed down by the wheels of the trains moving over the joint.

It will be understood that in Fig. 2 I have shown a joint in which base-support is furnished for the rail ends. I do not limit myself in my invention to any particular class of joint. When, as is shown in Fig. 2, base-support is furnished, the said base-support is also upset, as shown at 55, to support the bases 44 and 44^a of the rail ends.

Many types of joints may be supplied with my invention—as, for instance, base-supports might be furnished with lugs and bolts to give further strength, or wood blocks may be used between the web portions of the rails and the fish-plates or splice-bars.

What I claim, and desire to secure by Letters Patent, is—

1. The process of repairing rail-joints, which consists of raising the worn rail, removably holding the same in raised position and cutting down its tread.

2. In a rail-joint the combination of a normal rail end, a rail end worn by traffic with means for removably holding the cut-down tread of the worn rail end in alinement with the tread of the other rail end.

In witness whereof I have hereunto set my hand this 2d day of November, 1904.

CLARENCE D. PORTERFIELD.

In presence of—

H. V. N. PHILIP,
J. F. BOUDREAU.