

No. 799,540.

PATENTED SEPT. 12, 1905.

J. F. COX.
RAILWAY JOINT.
APPLICATION FILED JUNE 1, 1905.

2 SHEETS—SHEET 1.

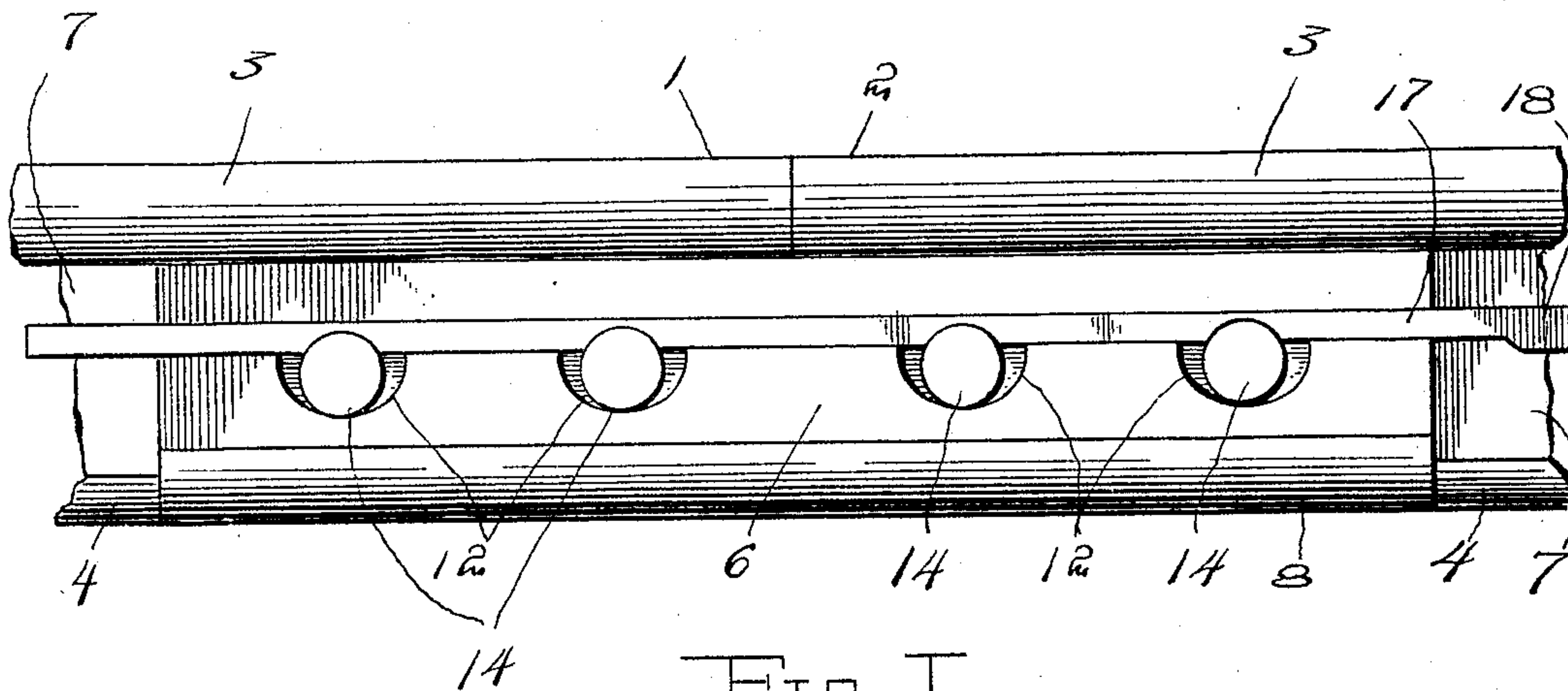


Fig. I.

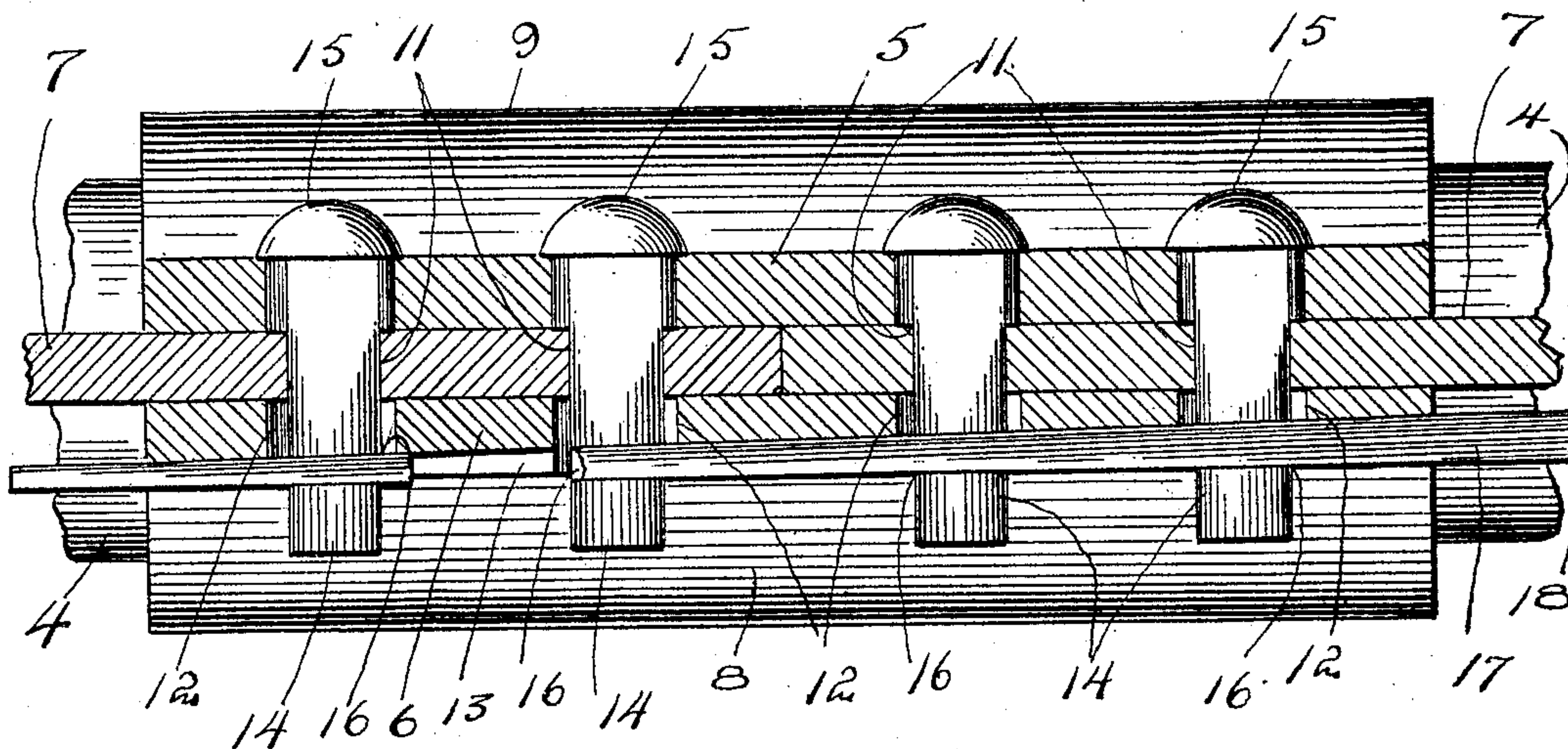


Fig. 2.

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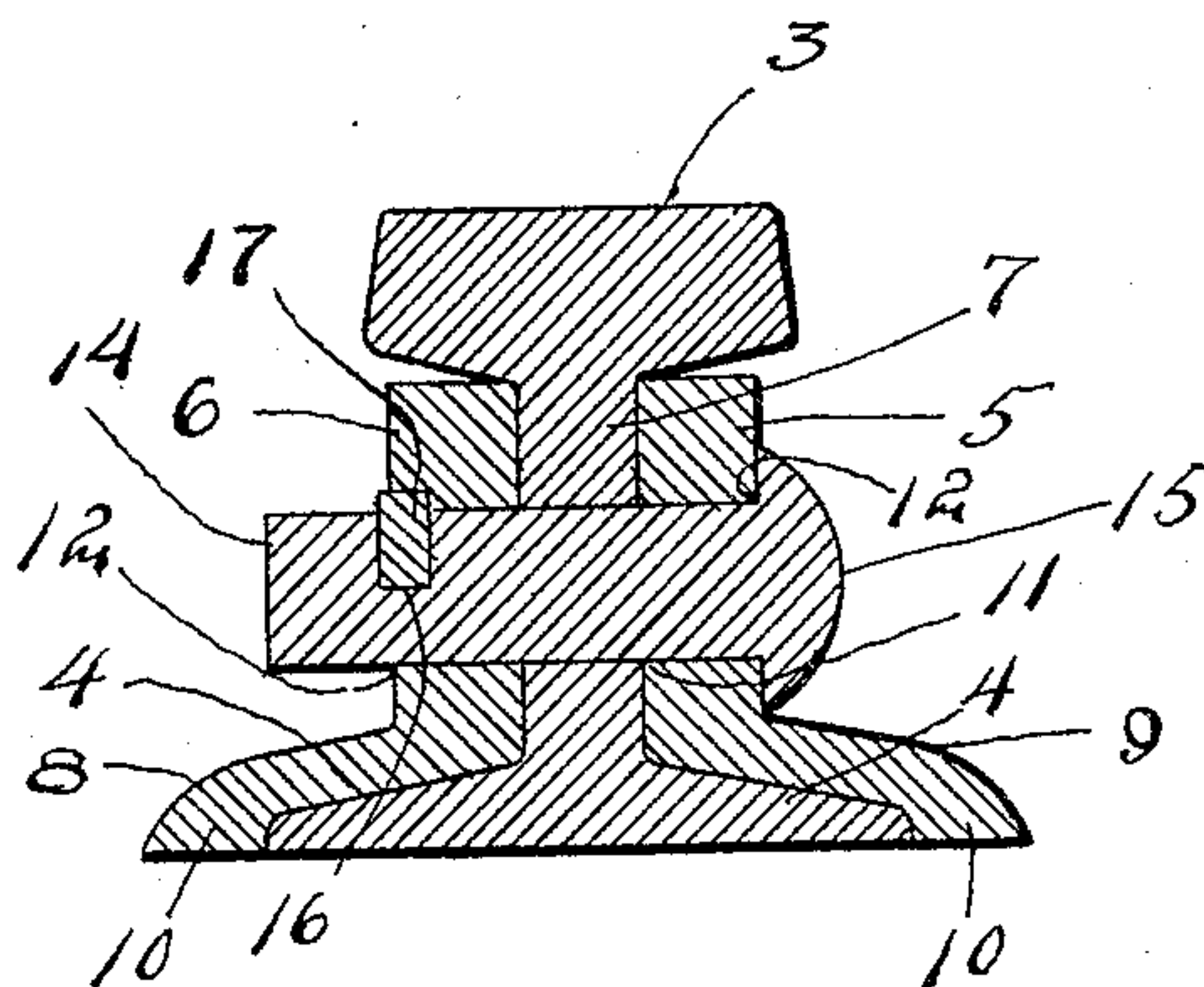


Fig. 3

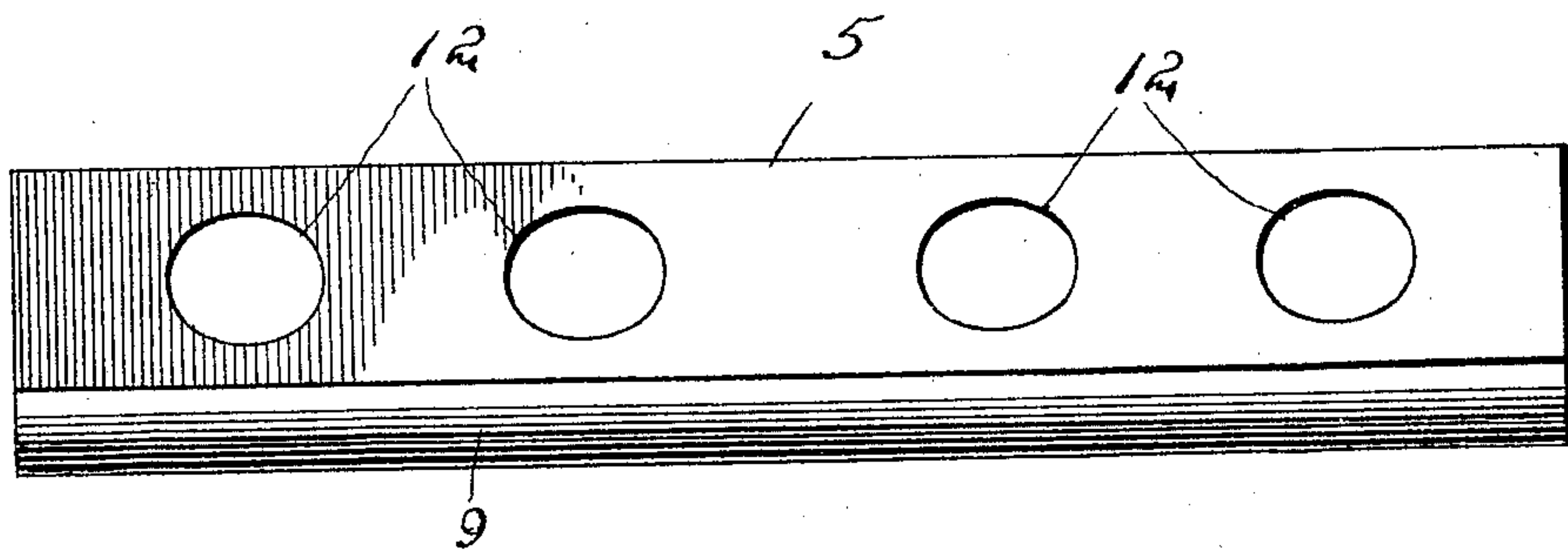


Fig. 4

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UNITED STATES PATENT OFFICE.

JAMES F. COX, OF STATESBORO, GEORGIA.

RAILWAY-JOINT.

No. 799,540.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed June 1, 1905. Serial No. 263,230.

To all whom it may concern:

Be it known that I, JAMES FRANK COX, a citizen of the United States, residing at Statesboro, in the county of Bulloch, State of Georgia, have invented certain new and useful Improvements in Railway-Joints; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to rail-joints.

One object of the invention is to provide an exceedingly simple, inexpensive, durable, and efficient device of the character named.

Another object of the invention is to provide a rail-joint embodying such characteristics that the joint will be made rigid and positively locked against separation.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is an elevation of my invention. Fig. 2 is a horizontal section taken longitudinally through the separator, the wedge being partly in top plan and partly broken away. Fig. 3 is a vertical transverse section through the structure. Fig. 4 is an elevation of one of the fish-plates.

Referring now more particularly to the accompanying drawings, the reference characters 1 and 2 designate rail-sections, each having a tread 3 and base-flange 4.

The reference characters 5 and 6 designate fish-plates designed to overlap the joint between the abutting ends of the rail-sections and lie with their inner faces in engagement with the respective sides of the web 7, the upper longitudinal edges of the fish-plate being designed to fit snugly with the under faces of the tread portions of the sections and each having an outwardly-directed flange 8 and 9, respectively, at its lower end for engagement over the base-flange 4 of the sections. It will be observed that the outer longitudinal edge of each flange 8 and 9 is provided with a downwardly-directed portion, resulting in a

longitudinal shoulder 10 for engagement with the longitudinal edges of the base-flange.

The web portion 7 of each rail is provided with two or more circular perforations 11, and each fish-plate 5 and 6 is provided with two or more horizontally-arranged elliptical-shaped perforations 12, designed to register with the circular perforations in the webs of the rail-sections. These elliptical-shaped perforations in the fish-plates permit of expansion and contraction, as well understood.

Passed through the alining perforations of the web 7 of the rail-sections and the fish-plates 5 and 6 are bolts 14, each having a head 15, whose inner face is designed to lie flush with the outer face of the fish-plate 7, the free ends of each bolt being provided with a notch 16, so that it may be wedged tightly in the circular opening 11 of the web 7 of the rail-sections, the extremity of each bolt beyond the notch 16 being circular in cross-section. Now when it is desired to assemble the elements embodying my invention the bolts are passed through alining circular openings of the webs 7 and the oval-shaped perforations of the fish-plates 5 and 6, the notch 16 of each bolt being directed upwardly to permit of the key 17 being passed through the groove 13 of the fish-plate 6 and register with the said notches of the bolts to prevent turning of the latter. It will be observed that the key 17 tapers from its head 18 toward its opposite end to permit of the same being wedged between the upper face of the groove 13 and the bottoms of the notches 16 of the bolts.

From the foregoing it will be observed that it is not necessary to screw-thread the bolts and that therefore the use of nuts is entirely eliminated from the structure. It is apparent that by reason of the wedging action of the bolts in the circular openings of the webs of the rails and the wedging action of the key 17 between the top of the groove 13 and the bottoms of the notches of the bolts a firm and rigid structure results and that the elements cannot become detached without removing the elongated locking-key 17 from engagement with the aforesaid groove and notches.

What is claimed is—

1. A rail-joint comprising abutting rail-sections, each having circular perforations in its web, fish-plates disposed against the adjacent corresponding faces of the rail-sections,

tions and each provided with elongated-shaped perforations for alinement with the circular perforations of the rail-sections, bolts passed through the alining perforations
5 aforesaid, said bolts being wedged in the circular perforations of the rail-sections, and provided with notches in their free ends, a longitudinal groove formed in the outer face of one of the fish-plates, and a tapering key
10 engaging the said longitudinal groove and the notches of each bolt.

2. A rail-joint comprising abutting rail-sections, the web of each section being provided with circular perforations, fish-plates
15 disposed upon the opposite sides of the webs of the rail-sections and overlapping the joint

between the latter, said fish-plates each having a series of elongated-shaped perforations designed to register with the circular perforations of the rail-sections, bolts passed
20 through the fish-plates and webs of the rail-sections, each bolt having a notch in its free end, a tapering longitudinal groove formed in the outer face of one of the fish-plates, and a tapering key engaged in said groove and
25 the aforesaid notches of the bolts.

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

JAMES F. COX.

Witnesses.

T. P. SAFFOLD,
S. C. GROOVER.