No. 813,057. PATENTED FEB. 20, 1906.

G. M. McCLURE.

RAILROAD JOINT.

APPLICATION FILED JUNE 10, 1905.

2 SHEETS—SHEET 1.

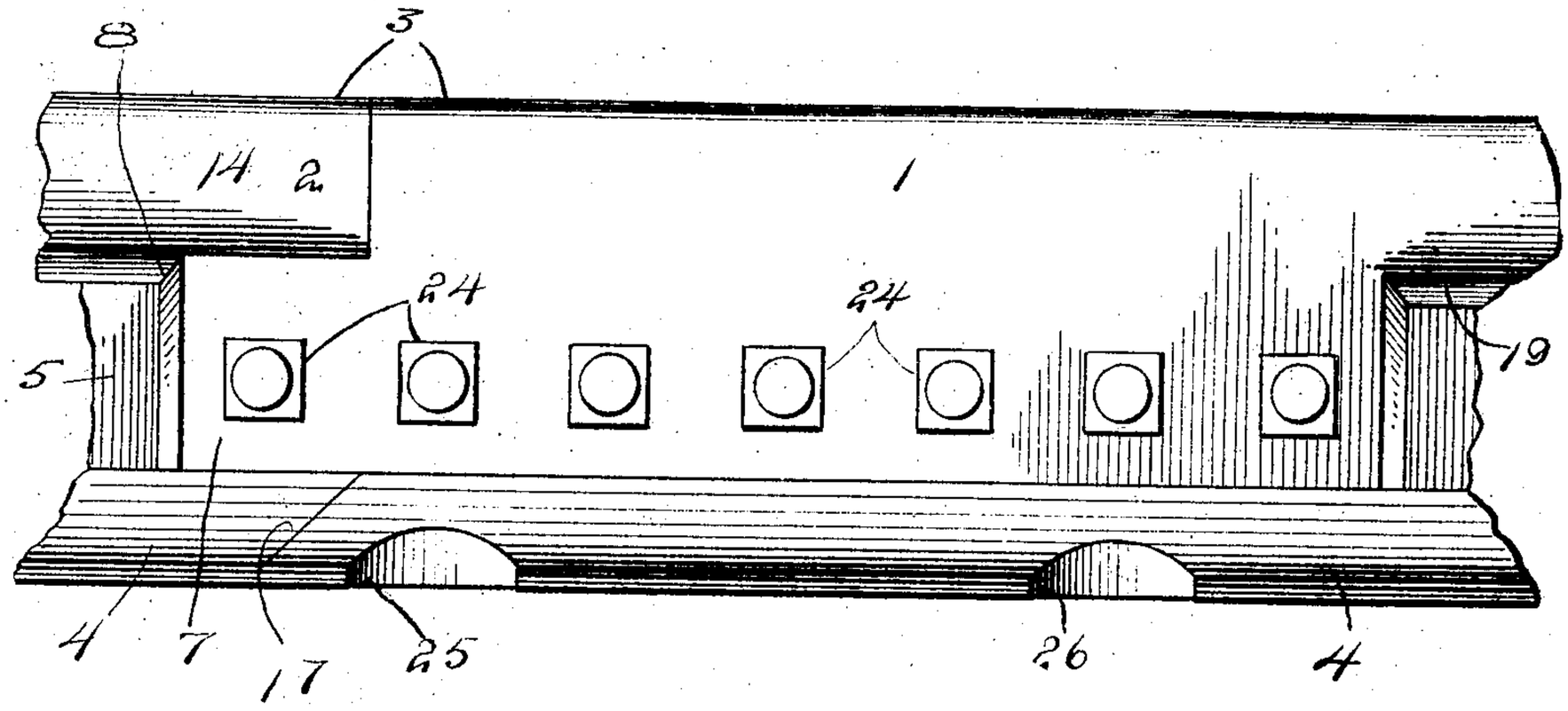

Fig. I.

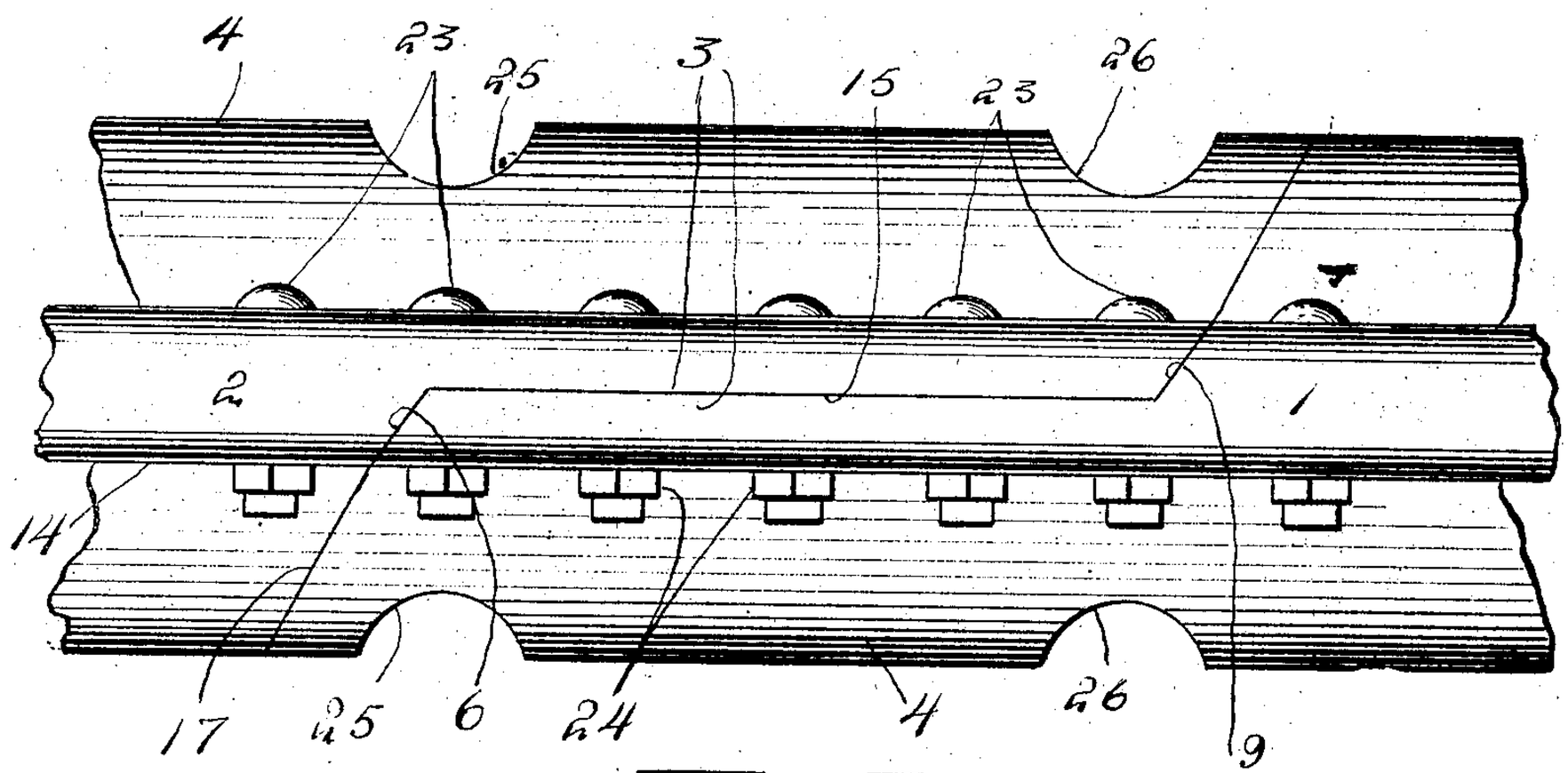

Fig. 2.

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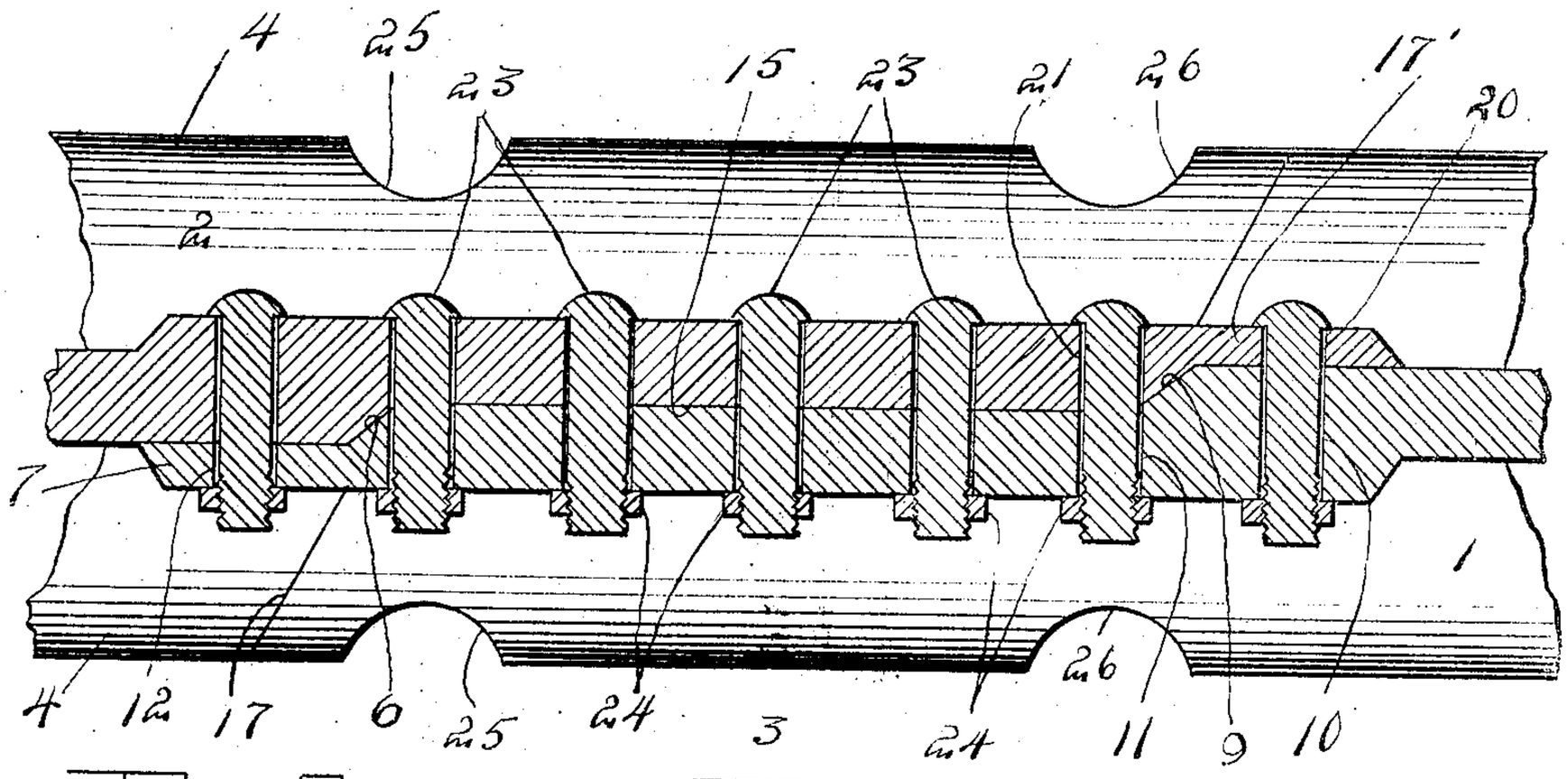

Fig. 3

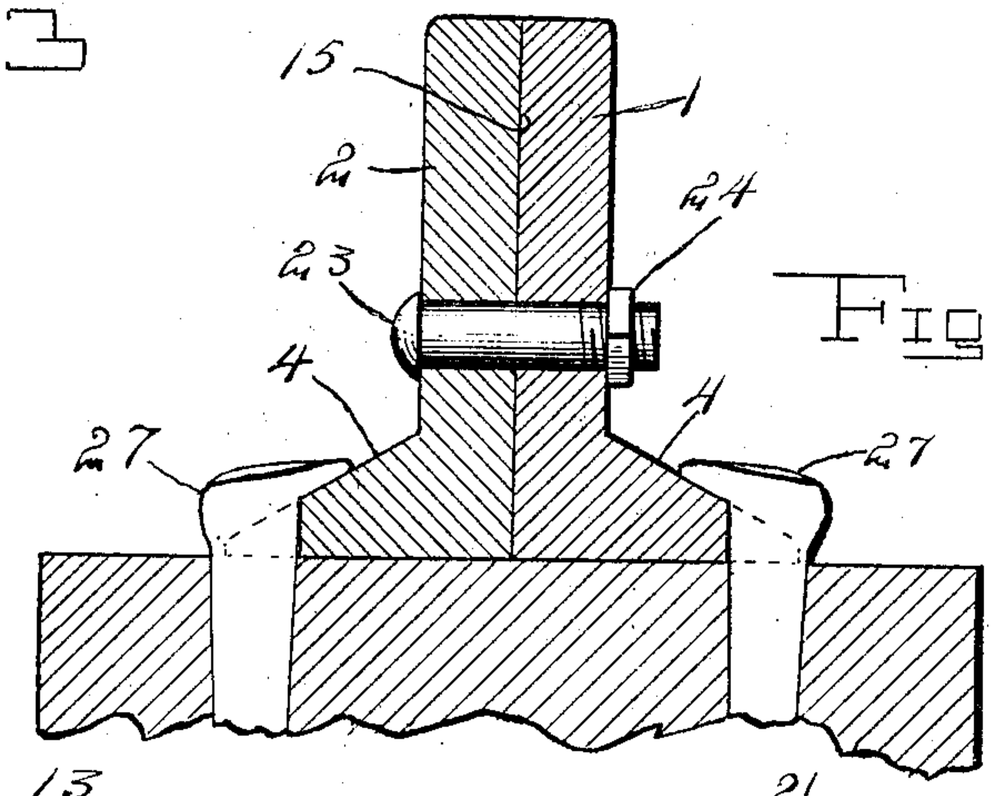

Fig. 4

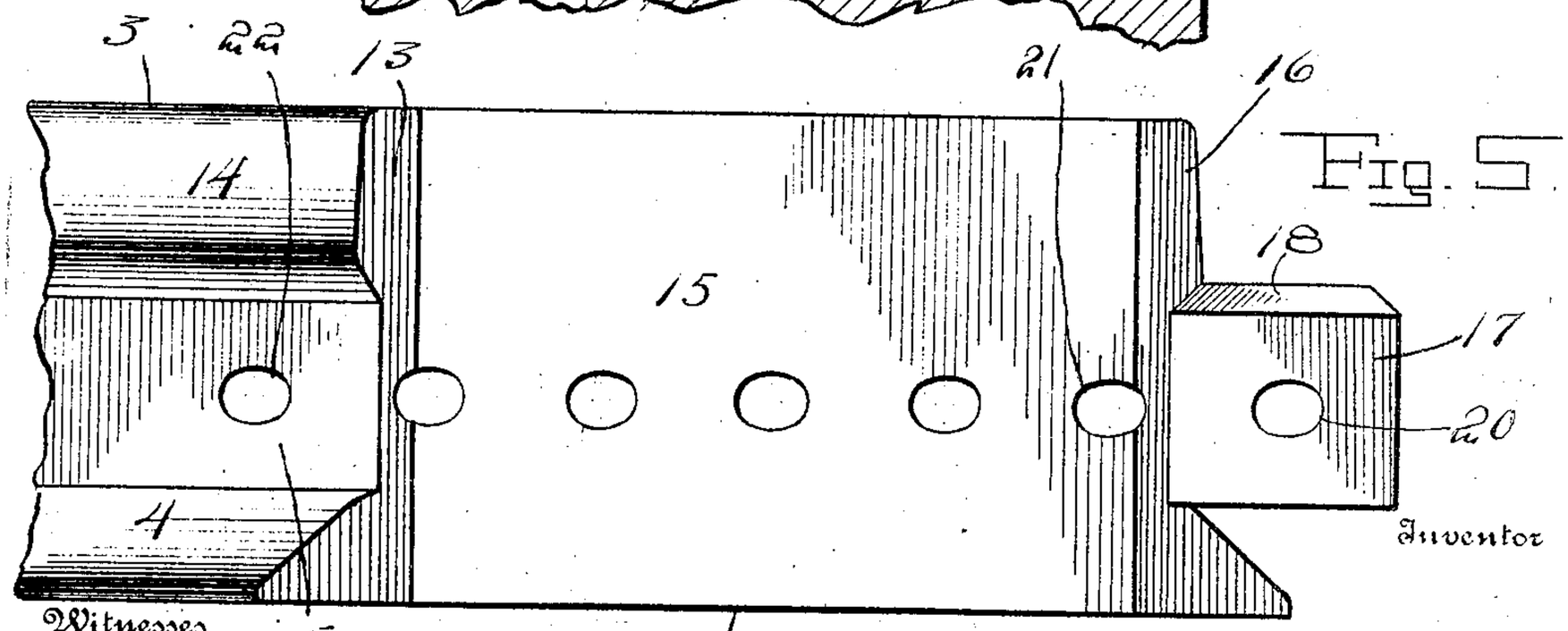

Fig. 5

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GEORGE M. McCLURE, OF STERLING, KANSAS.

RAILROAD-JOINT.

No. 813,057. Specification of Letters Patent. Patented Feb. 20, 1906.

Application filed June 10, 1905. Serial No. 264,639.

To all whom it may concern:

Be it known that I, GEORGE M. McCLURE, a citizen of the United States, residing at Sterling, in the county of Rice, State of Kansas, have invented certain new and useful Improvements in Railroad-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 a rail-joint embodying such characteristics that the use of fish-plates is obviated.

Another object of the invention resides in the provision of an exceedingly simple, inexpensive, durable, and efficient means for securing abutting ends of rail-sections together to prevent the usual jar or noise occasioned by the passing of rolling-stock over the ordinary connections between the abutting ends of rail-sections.

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 claim, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is an elevation of the connecting end portions of rail-sections. Fig. 2 is a top plan view. Fig. 3 is a horizontal section through the webs of the rail-sections. Fig. 4 is a transverse vertical section. Fig. 5 is an elevation of the end portion of one of the rail-sections, illustrating the cut-away portions.

Referring now more particularly to the accompanying drawings, the reference characters 1 and 2 designate abutting rail-sections, each having a tread portion 3, a base-flange 4, and a connecting-web 5.

The rail-sections 1 and 2 are designed to overlap each other, and therefore the section 1 has a portion of its tread, its base-flange, and its web upon one side cut away, the base-flange upon the opposite side of the section 1 extending outwardly to the end 6 of said section and terminating upon an incline corresponding to the inclination of the end 6, there being a projecting tongue 7 extending beyond the end 6 and the corresponding end of the base-flange, the said tongue 7 having its upper edge tapered inwardly, as at 8, the inner face of the projection 7 terminating considerably short of the inner cut-away face of the section 1 with its outer face flush with the outer face of the section.

It will be observed that that portion of the rail-section 1 which is not cut away has its inner end, including its tread, web, and base-flange, beveled upon an incline, as at 9. It will thus be understood that the section 1 is of three different thicknesses through its tread and web portion, one end being of greater thickness than the other end and the tongue being of less thickness than said other end and that the three different thicknesses each has at least one perforation therein, the perforation 10 piercing the thickest part of the section, the perforations 11 piercing the next adjacent portion, and the perforation 12 piercing the tongue 7, all of said perforations being arranged in alinement.

It will be observed that the second or abutting rail-section 2 is formed in the same manner as is the rail-section 1, except that the rail-section 2 has the formations referred to in connection with section 1 formed upon the side opposite to the said formations of section 1, so as to permit an overlapping of the sections. In other words, the beveled edge 13 of the rail-section 2 has one end of its base-flange terminated short of the inner end thereof and designed to meet the correspondingly inclined or beveled edge of the longer portion of the base-flange of section 1, with the beveled edge of the web portion engaging the beveled edge 6 of section 1 with the tongue 7 of the latter lying within the groove between the bottom flange and the upper thickened tread portion 14 of the section 2, the under face of the thickened tread portion 14 being beveled to correspond with the beveled upper edge 8 of said tongue.

It will be observed that the reduced portion of the section 2 has its inner face designed to lie flush with the inner face of the reduced end of the section 1, with its inner end beveled, as at 16, for engagement with the beveled edge 9 of the section 1, the base-flange upon the outer side of the said section 2 being also beveled in a plane parallel with the plane of the inclination or beveled portion 16, so as to meet the correspondingly-beveled inner end of the flange 17 of the base-flange of the section 1, the tongue 17′ of the

section 2 being of less thickness than the portion 15 of the section 2 and having its upper edge beveled, as at 18, the said tongue 17′ being designed to lie flush with the web 5 of section 1, with its upper inwardly-inclined or beveled edge 18 lying against the correspondingly beveled or inclined lower surface 19 of the tread 3 of section 1. The section 2 is provided with a series of perforations designed to aline with the aforesaid perforations of the section 1, the perforation 20 in the tongue 17′ registering with the perforation 10 in the section 1, the perforations 21 registering with the aforesaid perforations 11, and the perforation 22 of section 2 registering with the aforesaid perforation 12 in the tongue 7.

Bolts or other suitable elements 23 are designed to be passed through the aforesaid aliming perforations, and each is screw-threaded at its free end for the reception of a nut 24, designed to have its inner face screwed upon the bolts and tightly into engagement with the outer face of the section 2.

From the foregoing it will be seen that there are two breaks in the tread and base-flange of the sections in close proximity to each other, but that these breaks or joints are inclined with respect to the plane of the rail-sections and that the breaks or joints do not extend either at a right angle to the plane of the rail-sections or entirely thereacross. It will be observed also that the web of a completed rail-section is thicker, and consequently stronger, at the joint than is the case with respect to the web portions between said joints, as clearly shown in the drawings. It is obvious, however, that since I eliminate the usual fish-plates means should be employed in lieu thereof at the joint of the abutting ends of the sections. I might state that, if desired, the use of a bolt piercing the tongues 7 and 17′ and the webs of the sections might be eliminated and the tongues 7 and 17′ extended a greater distance against the webs of the rails between the under faces of the tread portions and the upper faces of the corresponding portions of the base-flanges.

Notches or openings 25 and 26 may be formed in the base-flange of each section for the passage therethrough of a suitable spike or the like 27.

What is claimed is—

A rail-joint comprising abutting rail-sections each including a tread, a web and a flange, the sections being halved and having their halved portions lapping, the web of each halved portion being extended laterally to the width of the tread at its opposite side from the cut-away portion excepting at its extreme end where it is further cut away, said other cut-away portion having the tread omitted and being engaged beneath the tread of the opposite section, and securing means engaged through the overlapped portions of the rail-sections.

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

GEORGE M. McCLURE.

Witnesses:
C. E. Johnson,
E K. Porter.