

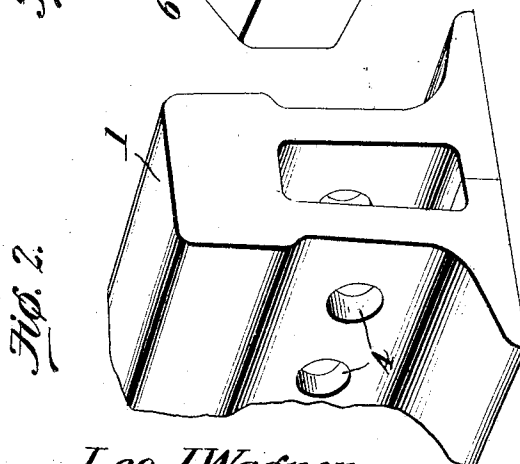
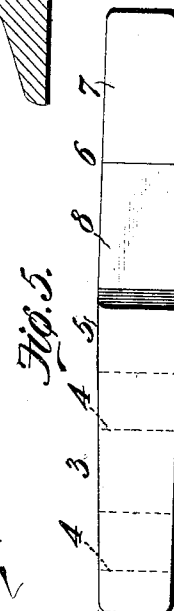
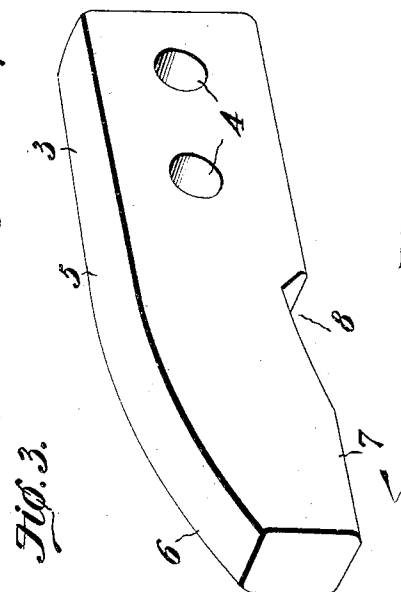
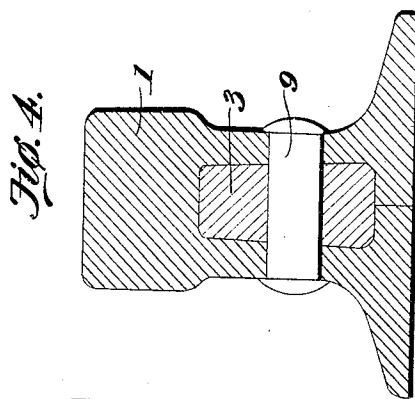
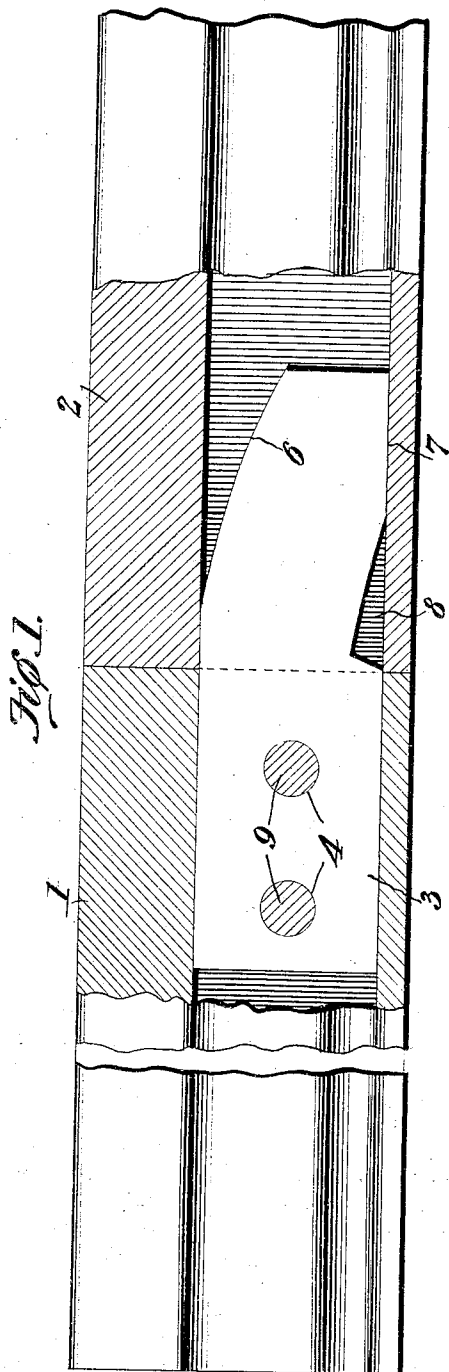
No. 771,288.

PATENTED OCT. 4, 1904.

L. J. WAGNER.
RAIL JOINT.

APPLICATION FILED JUNE 7, 1904.

NO MODEL.



Witnesses

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UNITED STATES PATENT OFFICE.

LEO J. WAGNER, OF SHARPSBURG, PENNSYLVANIA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 771,288, dated October 4, 1904.

Application filed June 7, 1904. Serial No. 211,517. (No model.)

To all whom it may concern:

Be it known that I, LEO J. WAGNER, a citizen of the United States, residing at Sharpsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Rail-Joint, of which the following is a specification.

This invention relates to rail-joints, and has for its object to provide a simple and improved joint capable of being conveniently assembled and arranged to effectually brace the abutted ends of rail-sections against lateral strains, while permitting of the necessary play to accommodate for expansion and contraction of the rails.

Another object of the invention is to have the locking member of the joint separate from the rail-sections and carried by one of the sections in such a manner as to be readily removed therefrom and replaced when broken, thereby to obviate the replacement of an entire rail when the locking member thereof becomes broken. In this connection it is designed to employ a hollow rail, so as to facilitate the application and removal of the locking member with respect to the rail-section which carries said locking member and to afford a socket in the other rail-section which is adapted to receive the locking member to complete the detachable joint.

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 a side elevation of a pair of abutted rail-sections with parts broken away to disclose the locking connection therebetween. Fig. 2 is a detail perspective view of the rail-section which carries the locking member. Fig. 3 is a detail perspective view of the locking member. Fig. 4 is a cross-sectional view of one of the

rails. Fig. 5 is a bottom plan view of the locking member.

Like characters of reference designate corresponding parts in each and every figure of the drawings.

In carrying out the present invention I propose to employ hollow rail-sections, two of which have been shown at 1 and 2, respectively, in the accompanying drawings. As the rail structure presents a different invention from the rail-joint, it has been disclosed in my copending application for patent filed June 7, 1904, Serial No. 211,516.

As best illustrated in Fig. 3 of the drawings, it will be seen that the locking member of the present invention is in the form of a solid metal bar having a shank portion 3 of a size and shape to fit snugly within the open end of one of the rail-sections and provided with a pair of transverse openings 4 to receive the fastenings whereby the member is held in place. The middle portion 5 of the bar is somewhat thicker than the remaining end portions, which taper in opposite directions from said middle portions. The upper edge of the forward end of the locking-bar is bowed or beveled downwardly, as indicated at 6, while the under face or edge is straight or flat for a suitable distance rearwardly from the front end of the member, as indicated at 7, while the rear portion of this under edge is cut away or provided with an elongated notch 8, whereby the forward end of the member presents a hooked tongue. After the completion of the locking member the shank 3 thereof is fitted into the open end of one of the rails up to the rear end of the notch or recess 8 and is then rigidly secured in place by means of rivets 9.

In assembling the two rails they are first brought together with their adjacent ends inclined upwardly in order that the tongue of the locking member may be readily inserted into the socket or open end of the other rail-section, the notch 8 in the under side of the tongue accommodating the bottom of said rail-section until the tongue has been entirely received within the rail, whereupon both rails are raised into horizontal alinement, so as to bring their ends into abutted relation. When

the rails have thus been assembled, it will be noted that the intermediate enlarged portion 5 of the tongue is disposed equally within the two rails, so as to bring the strongest portion of the member at the joint between the two rail-sections, so as to effectually brace the joint at its weakest point.

It will here be explained that the purpose of having the projected end of the locking member in the form of a hooked tongue is to permit of the abutted ends of two rails being slightly elevated, so as to disconnect the tongue from the other rail without entirely removing said other rail from the track, which is obviously a very important advantage. When the rails have been assembled and forced down to their normal positions upon the road-bed, there will be a binding action between the lower portion of the tongue along the edge 7 and the bottom of the interior of the other rail and also between the top edge of the tongue and the top of the interior of said rail, so as to obviate any looseness of the joint.

The locking member is permanently connected to one of the rail-sections only, there being no extraneous fastening devices whatsoever between the tongue and the other rail-section, whereby the tongue may be readily withdrawn from said rail-section merely by elevating the adjacent ends of the two rail-sections sufficiently to permit of the tongue being withdrawn.

Should the tongue break, it may be readily replaced, as it can be removed from the rail-section 1 by cutting off the heads of the rivets, which is a very important advantage, in that it is not necessary to remove and discard the entire rail-section.

In the original laying of a track the rails may be placed end to end in substantial horizontal relation, as it is not absolutely necessary to tilt the rails when there is sufficient room to bring the same together in an endwise direction, and therefore it will be understood that the rails are tilted only in replacing a rail or where it is impossible to have sufficient endwise play of one of the rails to bring the two rails together in substantial horizontal alinement, and the tongue has been given a hooked shape, so as to permit of the same being entered into a rail-section and withdrawn therefrom when the ends of the rails have been drawn up into inclined positions.

From the foregoing description it is apparent that the joint of the present invention is absolutely boltless, and there are no detach-

able fastenings or other devices which are liable to become loosened under the jarring action of passing trains, and therefore the joint requires little or no inspection, and it never becomes necessary to tighten the joints. 60

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

1. A rail-joint including a rail having a terminal socket closed at its top and bottom, and another rail-section having a locking-tongue projected beyond one end thereof and received within the socket of the first-mentioned rail-section, the top of the tongue at the inner end thereof being in engagement with the top of the socket and the forward portion of the top of the tongue being inclined downwardly, the forward portion of the bottom of the tongue being flat and lying upon the bottom of the socket, and the bottom of the tongue in rear of the forward flat portion being notched to receive the bottom of the socketed rail in assembling the rail-sections. 65 70 75

2. A rail-joint including a rail having a terminal socket, a hooked tongue having its shank riveted within the socket, and another rail-section having a terminal socket to receive the hooked tongue and the latter having a binding action against the top and bottom of the socket in said other rail-section. 80 85

3. In a rail-joint, a rail having a terminal socket, and a hooked locking-tongue having its shank riveted within the socket.

4. In a rail-joint, a hollow rail which is provided at one end only with a pair of transversely-alined openings, a hooked-shaped locking-tongue having its shank received within that end of the rail which is provided with the openings, and rivets passed through the openings and the shank to rigidly connect the latter to the rail. 90 95

5. In a rail-joint, a rail having a terminal socket, and a hooked locking-tongue having its shank rigidly secured within the socket, the intermediate portion of the tongue being laterally enlarged with the ends of the tongue tapered in opposite directions from said enlargement, and said enlargement being projected equally within and in front of the rail. 100 105

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LEO J. WAGNER.

Witnesses:

J. H. JOCHUM, Jr.,

J. ROSS COLHOUN.