

S. KENYERES.

RAIL JOINT.

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962,028.

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FIG. 1

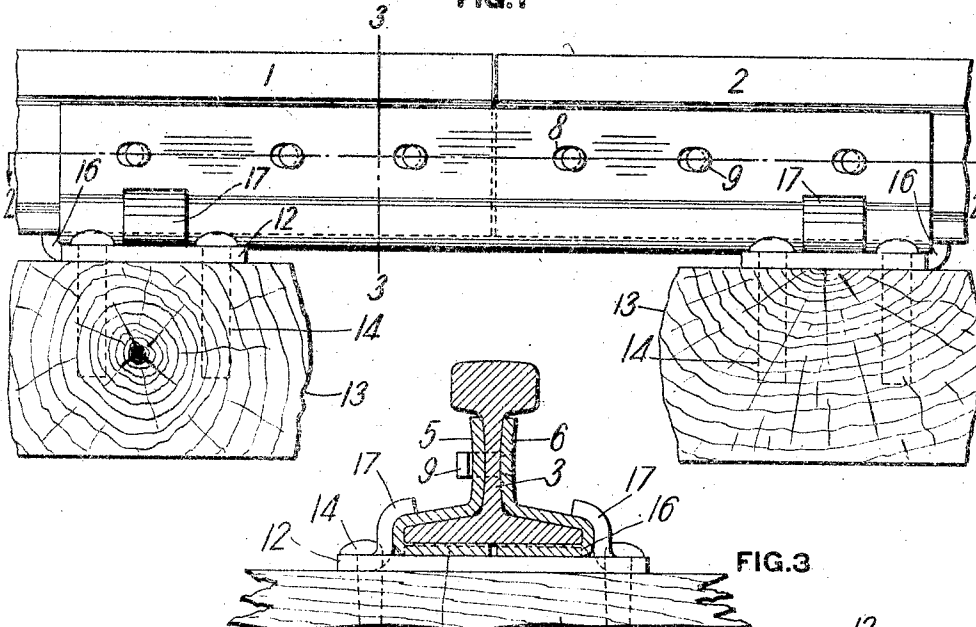


FIG. 3

FIG. 2

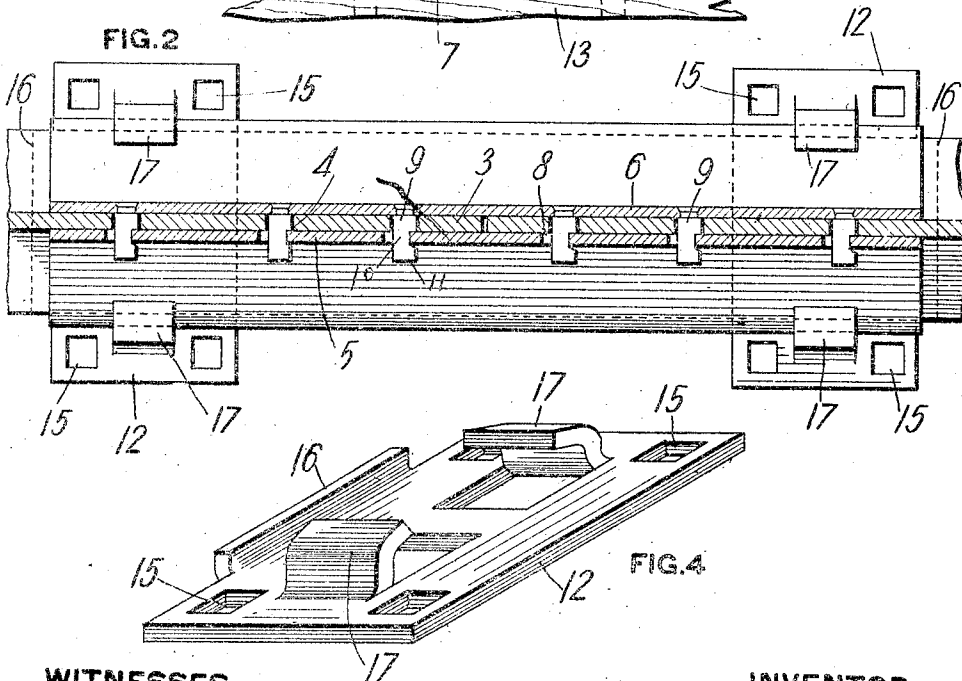


FIG. 4

WITNESSES

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RAIL-JOINT.

962,028.

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To all whom it may concern:

Be it known that I, SAMUEL KENYERES, a resident of Glassport, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Rail-Joints, of which the following is a specification.

This invention relates to rail joints.

The object of the invention is to provide a rail joint which dispenses with threaded bolts and nuts, which is strong, which securely locks the ends of the rail in position, which cannot accidentally become unlocked and which can be easily and quickly applied or taken apart, and in which all of the parts are capable of being made by rolling and ordinary machine operations so as to cheapen the same.

The improved joint comprises the construction and arrangement of parts herein-after described and claimed.

In the accompanying drawing, Figure 1 is a side view of my improvement applied to the rails; Fig. 2 is a horizontal section on the line 2-2, Fig. 1; Fig. 3 is a cross-section on the line 3-3, Fig. 1; Fig. 4 is a perspective view of the tie plate.

In the drawings, the meeting ends of two contiguous rails are indicated at 1 and 2 respectively. The webs 3 of these rails are provided with the usual holes 4. 5 and 6 indicate fish plates which may be of the usual or any preferred construction, preferably extending up and abutting against the heads of the rail as is now the practice, and also preferably, having portions 7 extending underneath the base of the rail. These plates can be formed by an ordinary rolling operation and then cut into the necessary lengths.

One of the plates, such as the plate 5, is provided with keyhole slots 8. In conjunction with these plates I employ locking studs 9 having the necks 10 with head portions 11, preferably slightly beveled as shown in Fig. 2. These studs may extend through openings in plate 6 with heads on the outer end, or may be secured in holes in said plate as shown in the drawing, which fastening may be effected by ordinary upsetting operations. The holes in the fish plates and in the rails are spaced to register and these parts are locked together as will be readily apparent, by merely moving the plate 5 end-wise to interlock the same with the necked

studs. This forms a very simple and effective fastening as long as endwise movement of the plate 5 is prevented. To prevent such endwise movement, I provide tie plates 12 adapted to be fastened to the ties 13 by means of ordinary spikes 14 extending through holes 15 in said tie plates. These tie plates are provided on one edge with an upwardly extending rib 16 adapted to engage the ends of the bottom portions 7 of the fish plates, as shown, and which prevent relative endwise movement of the fish plates. To prevent dis-engagement of the fish plates with the ribs 16, vertical relative movement between the rails and tie plates must be prevented. This is effected by providing the tie plates with upwardly projecting lips or flanges 17 which overhang the rail bases or fish plates as shown in Fig. 3. These lips are formed by punching up portions of the metal of the tie plates.

The tie plates illustrated can be made from an ordinary flat rolled plate or bar by a simple bending and punching operation and can be formed by a single stroke of a punching and bending press, said stroke simultaneously forming the spike holes 15, punching out and bending the flanges or lips 17, and bending over one edge of the plate to form the rib 16.

The consequence is, that the fish plates and tie plates can be made by ordinary machine operations, namely, rolling, punching and bending, and no special handwork or castings are required. The studs can be made by an ordinary forging process. The result is that the joint parts can be cheaply manufactured and also are strong, being formed of rolled or wrought metal as distinguished from cast metal. The parts can be very readily put in place and also readily separated. The ends of the lips 17 on the tie plates are spaced apart sufficiently to permit the tie plate being put under the rail while the latter is in position by first hooking one of said lips over one edge of base and then moving the plate slightly sidewise so that the other lip can pass the opposite edge of the rail base. The consequence is that these parts can be put in place on rails which are already fastened down without disturbing the latter. To take the joint apart it is merely necessary to draw the spikes holding one of the tie plates in position so as to release said tie plate to permit

the fish plate 5 to be moved slightly endwise when it will disengage the necked studs, and the joint is free.

The joint described dispenses with threaded bolts and nuts, holds the joint securely and firmly in place and also provides the usual tie plates.

What I claim is:

1. In a rail joint, the combination of a pair of fish plates and necked studs arranged to interlock by relative endwise movement of the plates, and tie plates arranged to be secured to the ties and provided with means to engage the fish plates and prevent relative endwise movement thereof.

2. In a rail joint, the combination of a pair of fish plates and necked studs arranged to interlock by relative endwise movement of the plates, tie plates arranged to be secured to the ties and having means

engaging the fish plates to prevent relative endwise movement of the latter and having portions overhanging the rail base.

3. In a rail joint, the combination in a pair of fish plates and necked studs arranged to interlock by relative endwise movement of the plates, tie plates provided with upwardly projecting ribs to engage the ends of the fish plates and prevent relative endwise movement of the latter and also having punched therethrough upwardly projecting lips having parts arranged to overhang the rail base and prevent relative vertical movement between the rail and tie plates.

In testimony whereof, I have hereunto set my hand.

SAMUEL KENYERES.

Witnesses:

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MARY E. CAHOON.