

No. 843,135.

PATENTED FEB. 5, 1907.

J. J. COUSINS.
RAIL JOINT.
APPLICATION FILED OCT. 31, 1905.

Fig: 3.

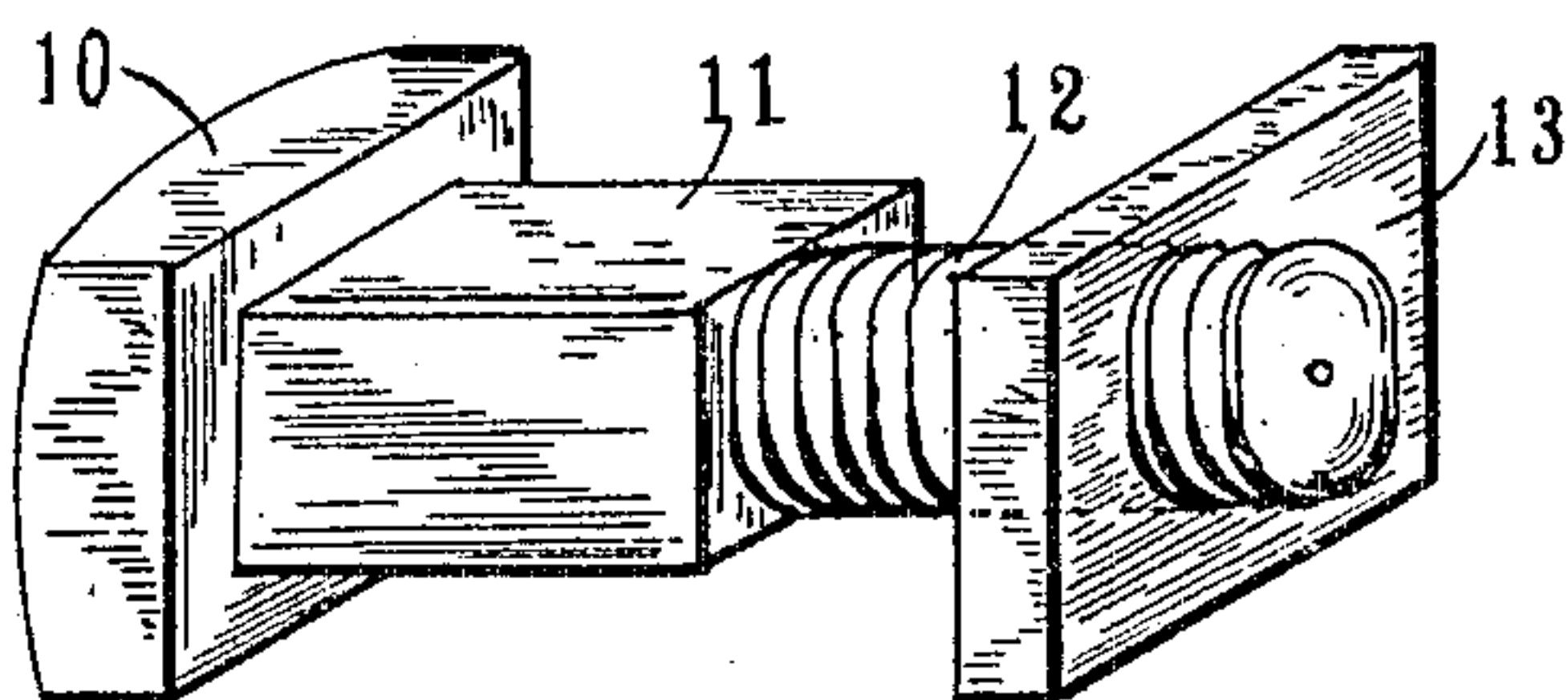


Fig: 2.

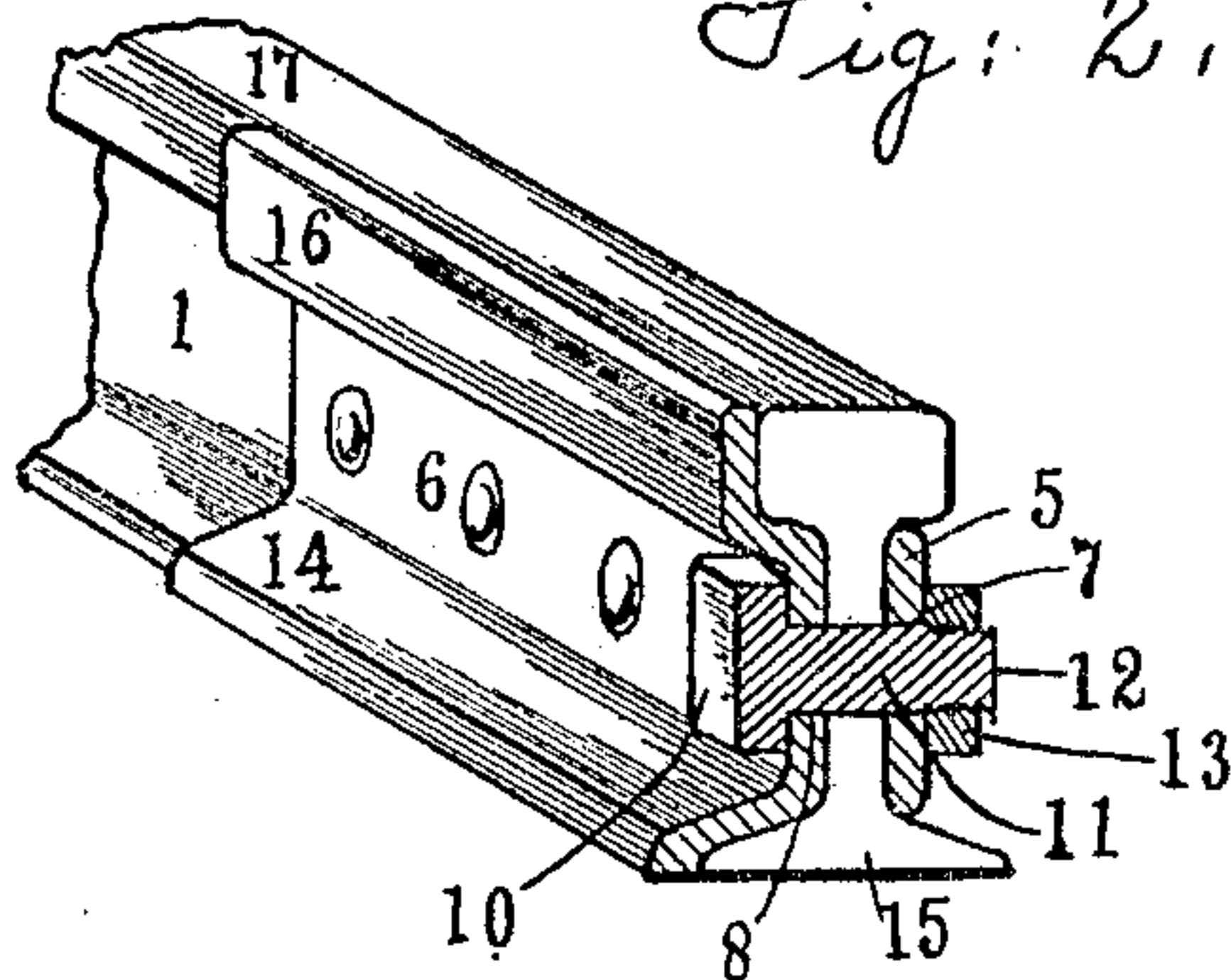


Fig: 4.

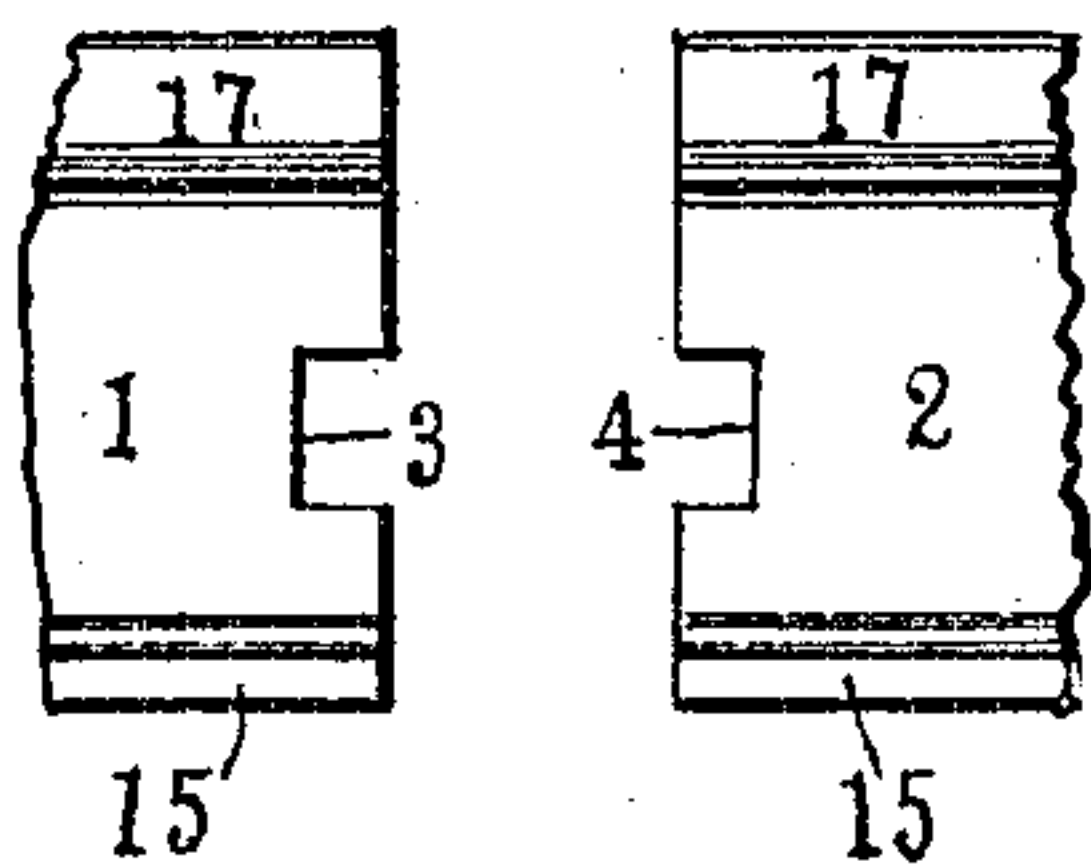
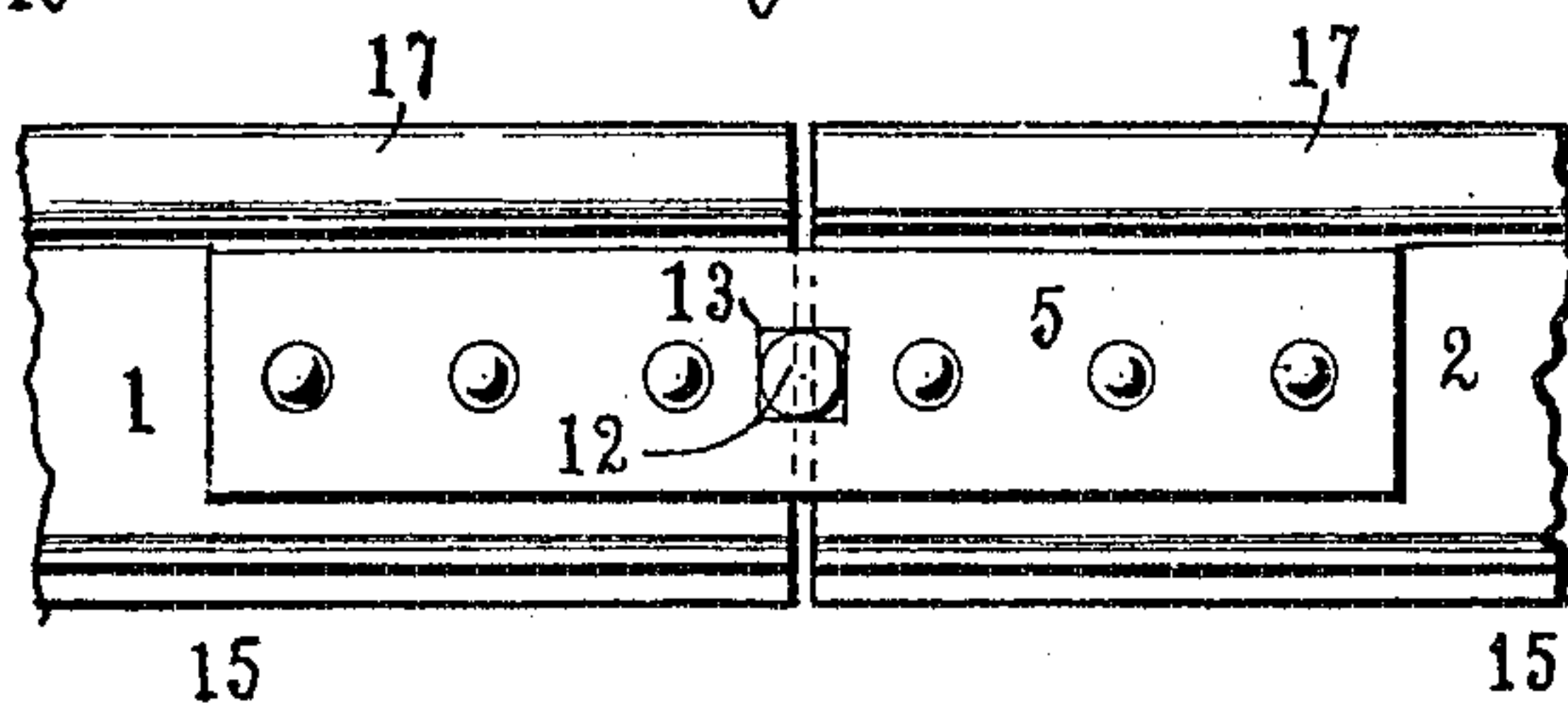


Fig: 1.



Witnesses
Samuel L. Litch
Florence M. Rose

Joseph J. Cousins, Inventor
By his Attorney *Robert H. Hillgar*

UNITED STATES PATENT OFFICE.

JOSEPH J. COUSINS, OF NEW YORK, N. Y.

RAIL-JOINT.

No. 843,135.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed October 31, 1905. Serial No. 285,280.

To all whom it may concern:

Be it known that I, JOSEPH J. COUSINS, a citizen of the United States, residing at New York city, in the county of New York 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 improvements in joints for the abutting ends of rails and my objects are to prevent vertical movement of the ends of the rails with respect to one another, to minimize the breakage of fish-plates, and to form a rigid joint over which the rolling stock will pass as easily and solidly as it does over the body of the rail. These objects are attained by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a face view of my improved rail-joint; Fig. 2, a sectional view on the joint of the structure of Fig. 1; Fig. 3, a view of my key-bolt, and Fig. 4 a view of the abutting faces of the rail.

The usual T-rails 1 and 2 are employed and have key-seats 3 and 4 cut in the webs thereof at the abutting ends. Fish-plates 5 and 6 have corresponding openings 7 and 8 alining with the key-seats 3 and 4.

On account of the simplicity in construction my preferred form of key is the bolt having the head 10, squared body 11 fitting the holes 7 and 8 in the fish-plates 5 and 6, and the key-seats 3 and 4. This bolt terminates in the threaded stem 12, which receives the nut 13. The fish-plate 6 on the outside of the joint is preferably of the type having a web 14, extending over the flange 15 of the rail, and another web 16 under and supporting the head 17 of the rail.

I have found by experience that the ends of the rails have considerable vertical movement with respect to one another when the rolling-stock is passing over the joints, even when the most approved form of fish-plates are used. In some cases a movement of a quarter-inch has been observed.

By the use of my key the ends of the rails are interlocked with respect to one another, and vertical movement is impossible, thereby lessening the wear on the rail ends and preventing the cracking of the fish-plates. The head of the rail is not interfered with in any manner, and no obstruction is offered to the passage of the rolling-stock. Being in the form of a readily-separable joint, repairs and replacements are easily effected at a low cost.

I claim as new—

1. A rail-joint comprising rails having key-seats cut in the webs thereof at their abutting faces, fish-plates on either side thereof, a key-bolt provided with a head, a key passing through the fish-plates and engaging the key-seats in the rails and means for holding said key-bolt in operative position.

2. A rail-joint comprising rails having key-seats cut in the abutting faces of the webs thereof, fish-plates on either side thereof provided with openings, a key-bolt consisting of a head, a key-part and a threaded extension, said key-part passing through the openings in the fish-plates and the key-seats in the abutting rails, and a nut to engage the threaded extension for holding the parts in place.

3. A rail-joint comprising rails having rectangular key-seats in the abutting faces of the webs thereof, fish-plates on either side thereof having rectangular openings therein, a key-bolt comprising a head, a rectangular key and a threaded extension, said head abutting against one fish-plate, the rectangular key passing through the rectangular openings in the fish-plates and the rectangular key-seats in the rails, and a nut to engage the threaded extension to secure the parts together.

In testimony whereof I have affixed my signature in presence of two witnesses:

JOSEPH J. COUSINS.

Witnesses:

ROBT. B. KILLGORE,
O. H. HOPWOOD.