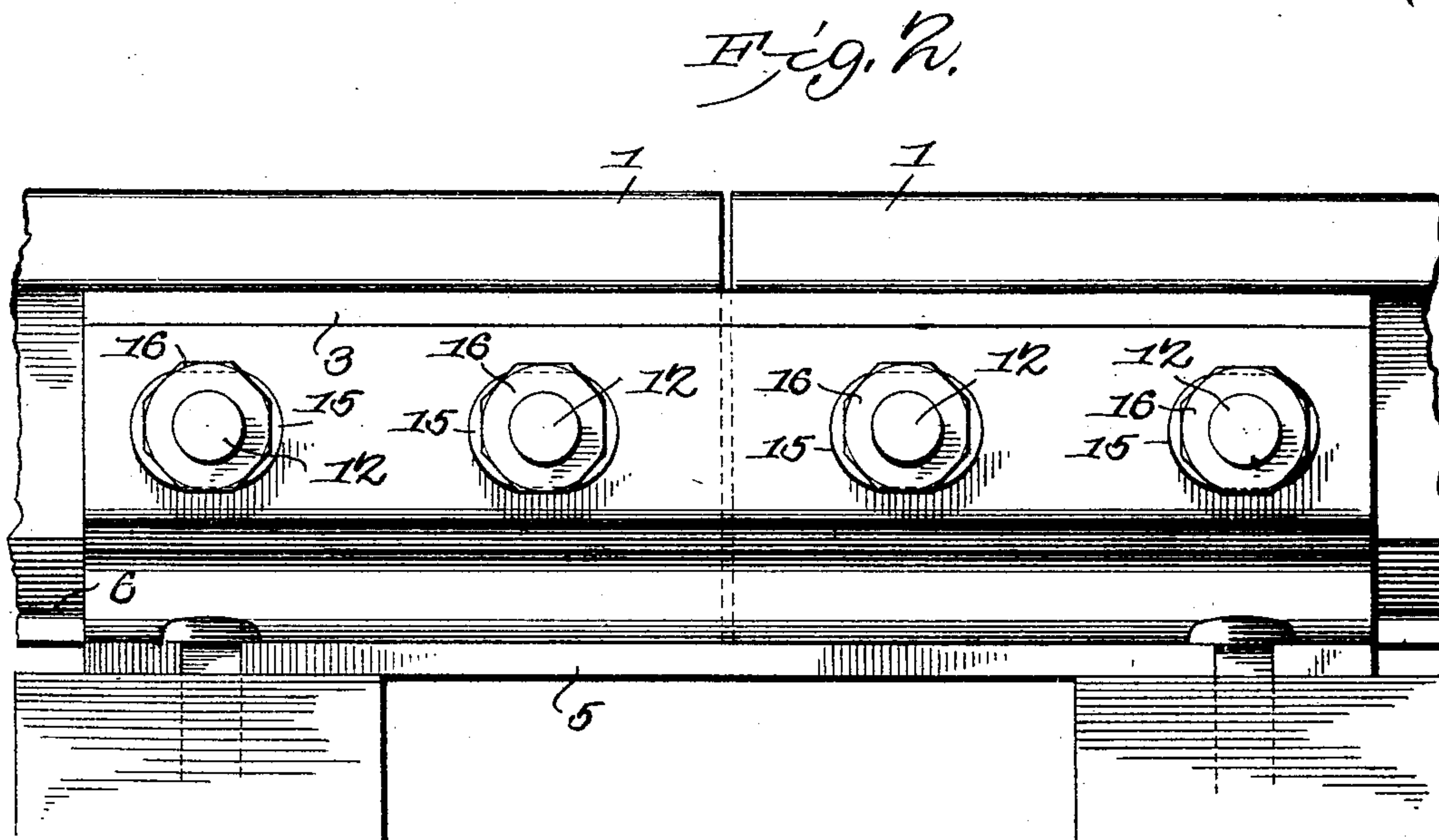
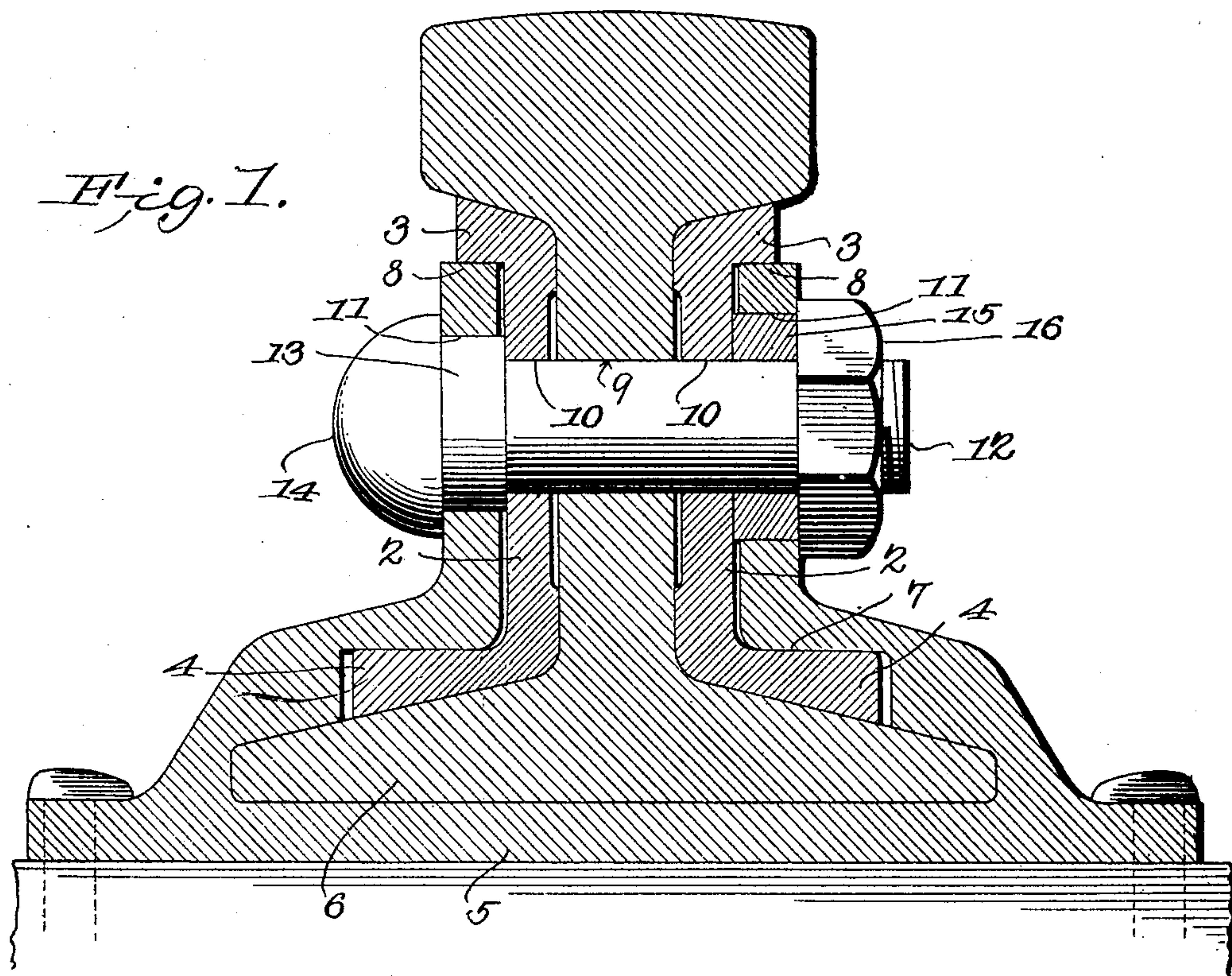


No. 803,813.

PATENTED NOV. 7, 1905.

W. B. DAVIS.
RAIL JOINT CHAIR.
APPLICATION FILED JULY 12, 1905.



Witnesses

E. J. Bennett
L. L. Morrill

William B. Davis, Inventor.

by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM BOOKER DAVIS, OF POPES FERRY, GEORGIA.

RAIL-JOINT CHAIR.

No. 803,813.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed July 12, 1905. Serial No. 269,357.

To all whom it may concern:

Be it known that I, WILLIAM BOOKER DAVIS, a citizen of the United States, residing at Popes Ferry, in the county of Monroe and State of Georgia, have invented a new and useful Rail-Joint Chair, of which the following is a specification.

My invention relates to rail-joints, and has for its object to provide a device of the class embodying novel and improved features of utility, reliability, and adaptability to rails at present in common use.

A further object of my invention is to provide a rail-joint comprising a box-chair and means for clamping the abutting rail ends rigidly within the box.

A further object of my invention is to provide a rail-joint comprising fish-plates having outturned flanges wedge-shaped in cross-section and a box-joint chair embracing the rail ends and fish-plates and embodying bearing-surfaces, against which the wedge-shaped flanges bear and between which and the rails the fish-plates exert a high degree of clamping pressure upon a slight lateral movement of the fish-plate.

With these and other objects in view the invention consists in the improved construction and novel combination and arrangement of parts hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a transverse sectional view of my improved rail-joint in operative position. Fig. 2 is a view of my improved rail-joint in side elevation.

Like characters of reference indicate corresponding parts in both figures of the drawings.

My improved rail-joint comprises abutting rail ends 1 of the usual construction and the fish-plates 2, provided with outturned flanges 3 and 4, formed wedge-shaped in cross-section. About the rail ends and the fish-plates is disposed a box-joint chair 5, with a longitudinal opening conforming loosely to the base 6 of the rail and to the fish-plates. The box is provided with bearing-surfaces 7, inclined to the surface of the base-flange 6 and between which and the said base 6 are disposed the flanges 4. The flanges 3 rest upon the top edge 8 of the upstanding sides of the chair-box 5, between which and the head of the rail the wedge-shaped flanges are disposed to exert a clamping pressure.

The rails 1 are provided with the usual bolt-openings 9 and the fish-plates with registering openings 10. The boxing is provided

with openings 11, larger than but concentric with the openings 10 of the fish-plates. Through the openings is inserted a bolt 12, provided with a washer or enlarged portion 13 and a head 14, larger than the portion 13. The enlarged portion 13 is somewhat longer than the thickness of the wall of the boxing and arranged to bear upon the surface of the fish-plate. Upon the end of the bolt 12, protruding therefrom, is placed a washer 15, proportioned to pass free within the opening 11 of the box and to bear against the fish-plate, and a nut 16, larger than the opening 11, is placed upon the end of the bolt.

In use the boxing 5 is slipped over one of the ends of a rail and when another rail is brought into position the boxing is slidably moved to embrace the joint. The fish-plates are then slidably inserted into the box between the sides of the rails and boxing. When the bolt 12 is inserted through the openings, it is evident the shoulders of the enlarged portion 13 will contact with the outer surface of the fish-plate and the bolt-head standing slightly away from the external surface of the box. The washer 15 is then placed upon the bolt and within the opening 11 of the boxing and against the outer surface of the fish-plate. The nut 16 is then placed upon the bolt and when tightened will force the enlarged portion 13 and the washer 15 against opposite outside surfaces of the fish-plates. It is obvious that a continued tightening upon the nut will move the fish-plates laterally and that the wedge-shaped flanges 3 and 4, moving in contact with the bearing-surfaces 7 and 8 of the boxing, will grip tightly between the rail and the box.

Having thus described the invention, what is claimed is—

1. A rail-joint comprising, a box provided with a longitudinal opening, abutting rail ends disposed within the opening, a fish-plate disposed within the opening and between the rail and the boxing, and means whereby a lateral movement of the fish-plate produces a clamping strain between the fish-plate and the box and between the fish-plate and the rail.

2. A rail-joint comprising, abutting rail ends, a fish-plate spanning the joint and provided along its lower edge with an outturned flange wedge-shaped in cross-section, and a box embracing the rails and fish-plate and presenting a bearing-surface for cooperation with the wedge-shaped flange.

3. A rail-joint comprising, abutting rail

ends, a fish-plate spanning the joint and provided along its longitudinal edges with out-turned flanges wedge-shaped in cross-section, and a box embracing the rails and fish-plate
5 and presenting bearing-surfaces for coöperation with the wedges of the flanges.

4. A rail-joint comprising, abutting rail ends, a fish-plate spanning the joint and provided along its longitudinal edges with out-
10 turned flanges wedge-shaped in cross-section, a box with a longitudinal opening embracing the rails and fish-plate and presenting bear-

ing-surfaces for coöperation with the wedges of the flanges, and means for moving the fish-plate laterally within the box and into grip- 15 ping contact with the rail and the bearing-surfaces of the box.

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

WILLIAM BOOKER DAVIS.

Witnesses:

C. C. MORGAN,

Mrs. C. C. MORGAN.