No. 731,181. PATENTED JUNE 16, 1903.

J. P. HEUER.

RAIL JOINT.

APPLICATION FILED APR. 24, 1903.

NO MODEL.

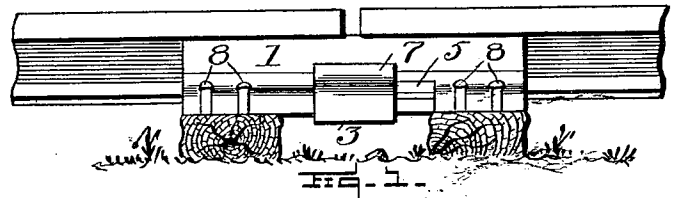

Fig. 1.

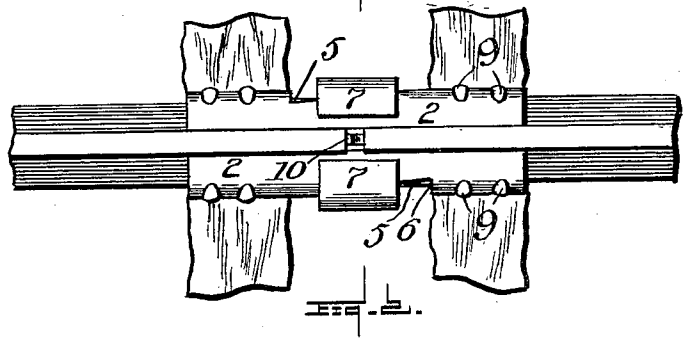

Fig. 2.

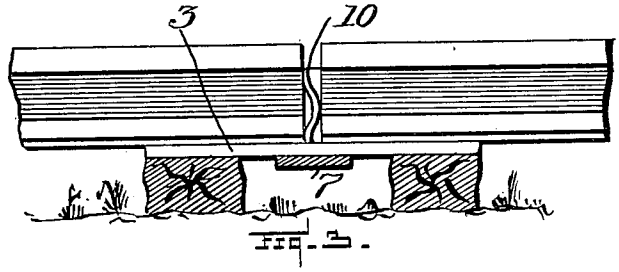

Fig. 3.

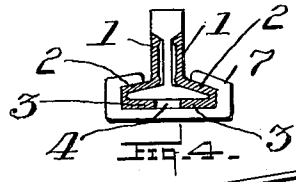

Fig. 4.

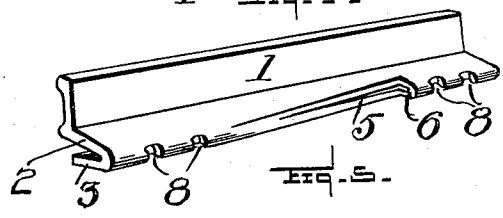

Fig. 5.

Witnesses:
F. H. Burton.
E. E. Potter.

Inventor,
J. P. Heuer,
By N. C. Evert & Co.
Attorneys.

No. 731,181. Patented June 16, 1903.

UNITED STATES PATENT OFFICE.

JOHN PIUS HEUER, OF PITTSBURG, PENNSYLVANIA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 731,181, dated June 16, 1903.

Application filed April 24, 1903. Serial No. 154,084. (No model.)

To all whom it may concern:

Be it known that I, JOHN PIUS HEUER, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in rail-joints; and one of the principal objects of my invention is to construct a rail-joint by means of which the rails may be easily, quickly, and effectively joined together without the aid of the ordinary bolts and nuts.

Briefly described, my invention comprises a chair embodying two members, each consisting of a fish-plate, flange, and a base-plate, the latter adapted to project underneath the rails. These members are provided with an inclined edge, forming a wedge-face, the incline or wedge face on one member being the reverse to that on the other member. A shoe is slidably engaged with the chair and wedges against the inclined or wedge faces of the members to securely bind the same in position.

In connection with the improved joint I may employ a spring interposed between the two ends of the rails to offer resistance to the rails when under expansion, though this construction is not essential to the operation of the device.

In describing the invention in detail reference will be had to the accompanying drawings, forming a part of this application, and wherein like numerals of reference will be employed for designating like parts throughout the different views of the drawings, in which—

Figure 1 is a side elevation of my improved joint as applied to the rails. Fig. 2 is a top plan view of the same. Fig. 3 is a side elevation with one-half of the chair removed, showing the shoe in section. Fig. 4 is a transverse vertical sectional view through the chair, showing the rail and shoe in end elevation; and Fig. 5 is a detached detail perspective view of one member of the chair.

My improved joint is adapted to be applied to the ordinary form of rails, no especial construction of the latter being required in connection with my invention. My device embodies a chair consisting of two similar members and each comprising an integral fish-plate 1, flange 2, and base-plate 3. The base-plate 3 is preferably constructed of less width than the flange 2, and thus when the chair is fitted on the rail the inner edges of the two members are some distance apart, leaving a space 4 between the said inner edges of the base-plates. The outer edge of the chair member is cut away at an incline, forming a wedge-face 5, terminating at one end in a shoulder 6, which forms a stop. These wedge-faces on the two chair members are made in reverse directions—that is, the stop 6 is adjacent the end of one of the chair members, and the stop 6 of the other chair member is adjacent the other or opposite end of said member. A shoe 7 engages the chair members and embodies in its construction a base plate or member, side walls, and overlying flanges, which latter engage the upper face of the flanges 2 of the chair members. Each chair member is preferably provided with notches 8 to receive the spikes 9, which secure the rails and chair to the cross-ties. The shoe is placed on the two members of the chair, and after the rails have been inserted between the chair members the shoe is tightened by moving one chair member in one direction and the other in the opposite direction, whereby to tighten the wedge-faces of the chair members against the side walls of the shoe, it being understood that the chair members are so placed that when so moved in opposite directions to tighten the same in the shoe that when in position the ends of the chair member will be opposite. The spikes are then driven into the ties to secure the device and the rails to the cross-ties.

In practice I preferably employ a spring 10, interposed between the adjacent ends of the rails to offer resistance to the expansion of the rails, this spring straightening as the rails expand and resuming its normal shape as the rails again contract.

While I have herein shown and described the invention in detail as it is practiced by me, yet it will be evident that various slight

changes may be made in the details of construction without departing from the general spirit of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a rail-joint, the combination with the rails, of a chair comprising two similar members each embodying an integral fish-plate, flange, and base-plate, each of said chair members having its outer edge cut away on an incline forming a wedge-face, the wedge-face on the one chair member being reversed to that on the other chair member, and a shoe embracing the chair members and engaging said wedge-faces, substantially as described.

2. In a rail-joint, the combination with the chair comprising two similar members each embodying an integral fish-plate, flange and base-plate, each of said chair members having its outer edge cut away on an incline forming a wedge-face, said chair members having notches in their outer edges, of a shoe embracing the chair members and wedging against said wedge-faces of the chair members, substantially as described.

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

JOHN PIUS HEUER.

Witnesses:
A. M. WILSON,
E. E. POTTER.