No. 728,469. PATENTED MAY 19, 1903.

K. KOHN.

RAIL JOINT.

APPLICATION FILED DEC. 20, 1901. RENEWED AUG. 5, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

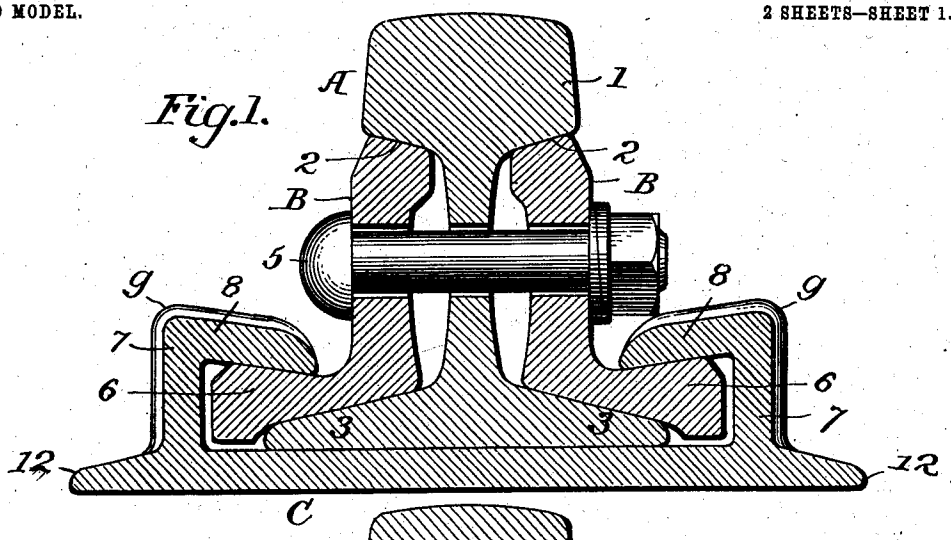


Fig. 3.

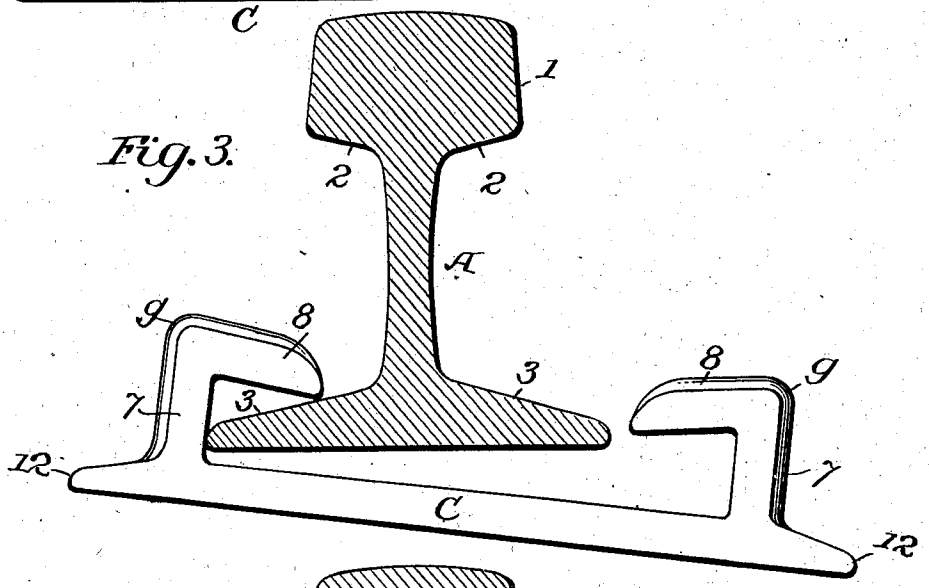
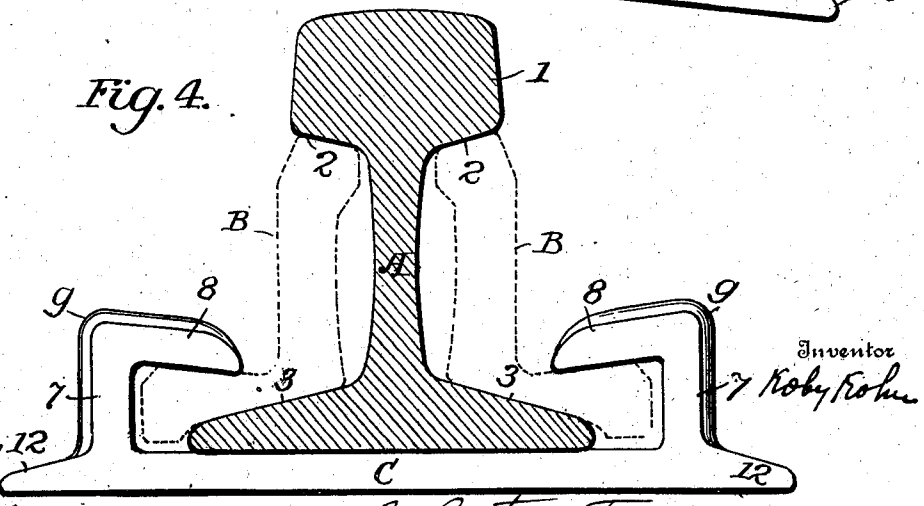


Fig. 4.



Witnesses
J. G. Stinkel
Harry Gilman Jr.

Inventor
Koby Kohn

By Foster & Freeman Attorneys

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

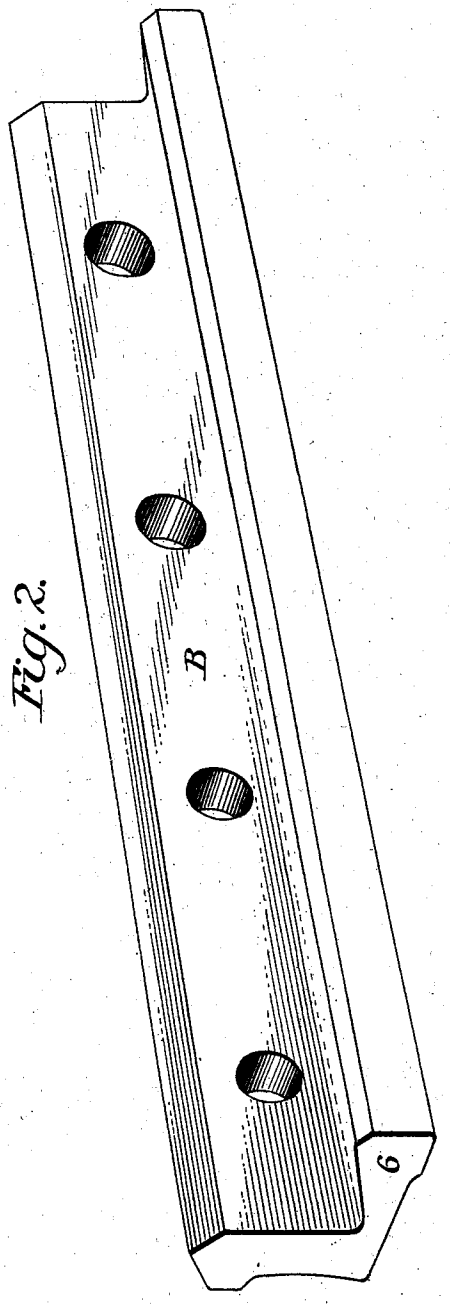
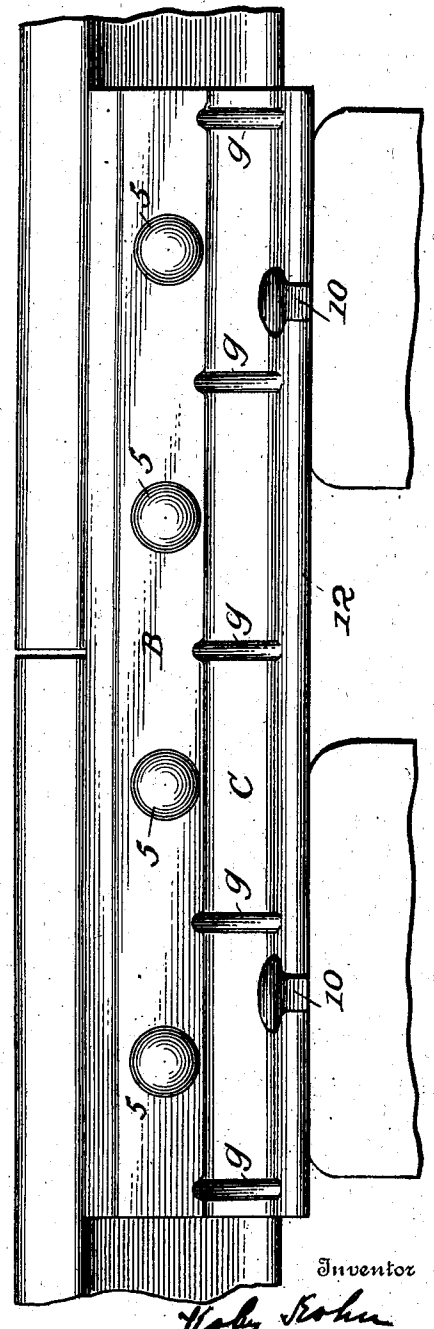


Fig. 5.



Witnesses

J. G. Hinkel

Wm. Gillman, Jr.

Inventor

Koby Kohn

By

Peter Freeman

Attorneys

No. 728,469. Patented May 19, 1903.

UNITED STATES PATENT OFFICE.

KOBY KOHN, OF LINCOLN, NEBRASKA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 728,469, dated May 19, 1903.

Application filed December 20, 1901. Renewed August 5, 1902. Serial No. 118,520. (No model.)

To all whom it may concern:

Be it known that I, KOBY KOHN, a citizen of the United States, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

My invention relates to rail-joints; and it consists of means whereby the tightening of the fish-plates to clamp the ends of the abutting rails is made the means of more securely binding the rails to the base-plate and of increasing the rigidity of the structure, as fully set forth hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is a cross-sectional view showing my improved rail-joint. Fig. 2 is a perspective view of one of the fish-plates. Fig. 3 is a transverse section illustrating the manner of applying the base to the rails; Fig. 4, a transverse section illustrating the position of the base and rail prior to applying the fish-plates. Fig. 5 is a side view of the structure.

My improved rail-joint is intended to be used in connection with any suitable rail. As shown, it is the ordinary T-rail A, having the head 1, with inclined under faces 2 2 and the bottom flanges 3 3, with inclined upper faces. The rail at the point where the joint is made rests upon a base-plate C, which also extends beneath the adjacent rail, the joint being at about the middle of the plate C, and the two rails are connected by means of fish-plates B B, connected thereto by transverse bolts 5. The fish-plates B B do not bear directly against the web of the rail A, but have inclined upper edges and inclined lower faces for bearing, respectively, against the faces 2 3 of the rail, so that as the bolts are tightened the fish-plates are forced inward with a wedge-like action, so as to become more firmly seated.

In many rail-joint constructions the inward adjustment of the fish-plates tends to loosen the connection with the base-plate, and to avoid this result I extend the lower portion of each fish-plate outward to form a flange, which is increased in thickness toward the outer end to constitute a wedge 6, and I provide the base-plate C at opposite sides with ribs 7, from which extend inward downwardly-inclined flanges 8, which engage the upper faces of the wedges 6. As a result of the above-described construction when the fish-plates are drawn inward toward the web of the rail the wedges 6 6 are drawn into the contracted channels between the faces 3 3 and the lower faces of the flanges 8 8, thereby exerting a lateral wedge-like action upon the flanges of the rail and the base-plate, so that in proportion to the extent of this inward adjustment the connection between the rail and base instead of being loosened is tightened, and great rigidity is imparted to the entire structure.

The base-plate C is secured to the tie in any suitable manner—as, for instance, by means of spikes 10, which engage ribs or lugs 12 of the base.

In assembling the parts of my improved rail-joint the base C is first applied beneath the rails in the inclined position shown in Fig. 3, then carried to the position shown in Fig. 4. The fish-plates are then pushed along the rail into place, with their wedge-like flanges between the flanges of the rail and the overhanging flanges of the base-plate, and the parts are then bolted together and the base-plate spiked in place. To secure increased rigidity, I prefer to rib the flanges of the base-plate. This may be done by corrugating the flanges, forming the ribs *g g*, as shown.

Without limiting myself to the precise construction and arrangement of parts shown, I claim as my invention—

1. The combination with the abutting rails of a railway and with a base extending beneath the same and provided with overhanging flanges, of fish-plates having wedge-like flanges extending between the flanges of the rails and the overhanging flanges of the base-plate and coöperating therewith to exert a lateral wedge-like action thereon, substantially as set forth.

2. The combination of the rails and base-plate provided with ribs having inturned flanges with downwardly-inclined lower faces and fish-plates fitting between the head and flanges of the rail and with wedge-shaped projections 6, 6, substantially as set forth.

3. The combination with the abutting rails of a railway, and with a base-plate having overhanging ribbed flanges, of fish-plates fit-

ting between the head and flanges of the rails and provided with wedge-shaped flanges and bolts for binding the fish-plates to the rails and to cause them to exert a lateral wedge-like action upon the flanges of the rail and base, substantially as set forth.

4. The combination with the abutting rails of a railway, and with a base-plate having overhanging flanges, of fish-plates fitting between the head and flanges of the rails and provided with wedge-shaped flanges and bolts for binding the fish-plates to the rails and to cause them to exert a lateral wedge-like action upon the flange of the rail and base, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

KOBY KOHN.

Witnesses:
CHARLES E. FOSTER,
W. CLARENCE DUVALL.