No. 815,762. PATENTED MAR. 20, 1906.

N. SUMIC.

RAIL JOINT.

APPLICATION FILED JULY 6, 1905.

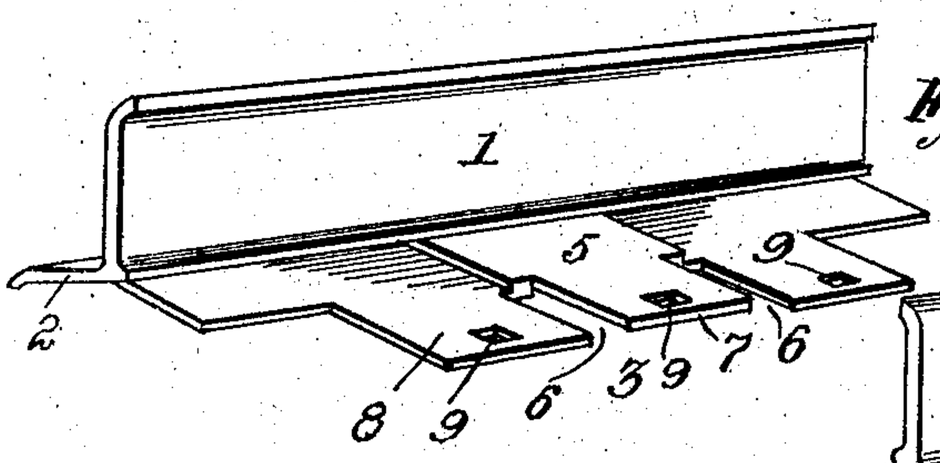


Fig. 1.

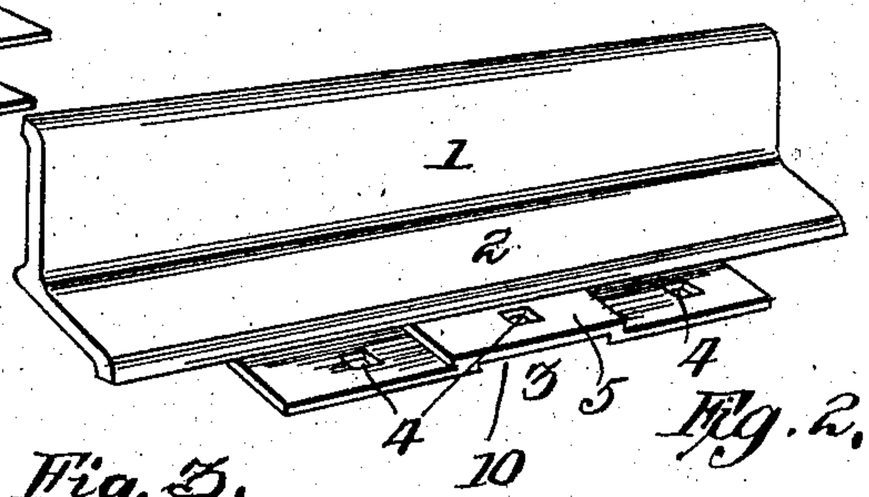


Fig. 2.

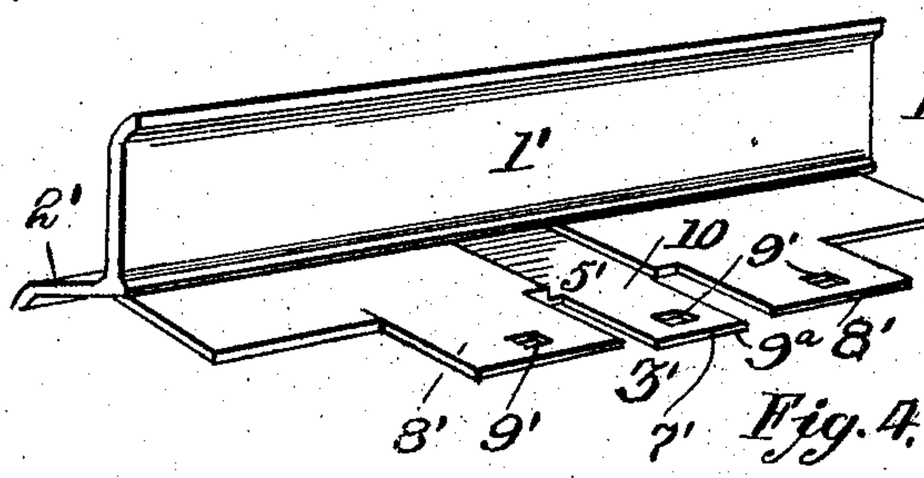
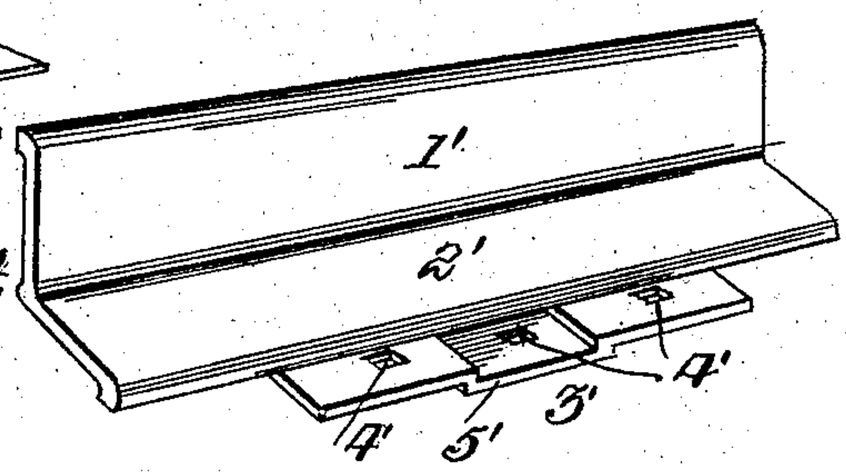


Fig. 3.

Fig. 4.



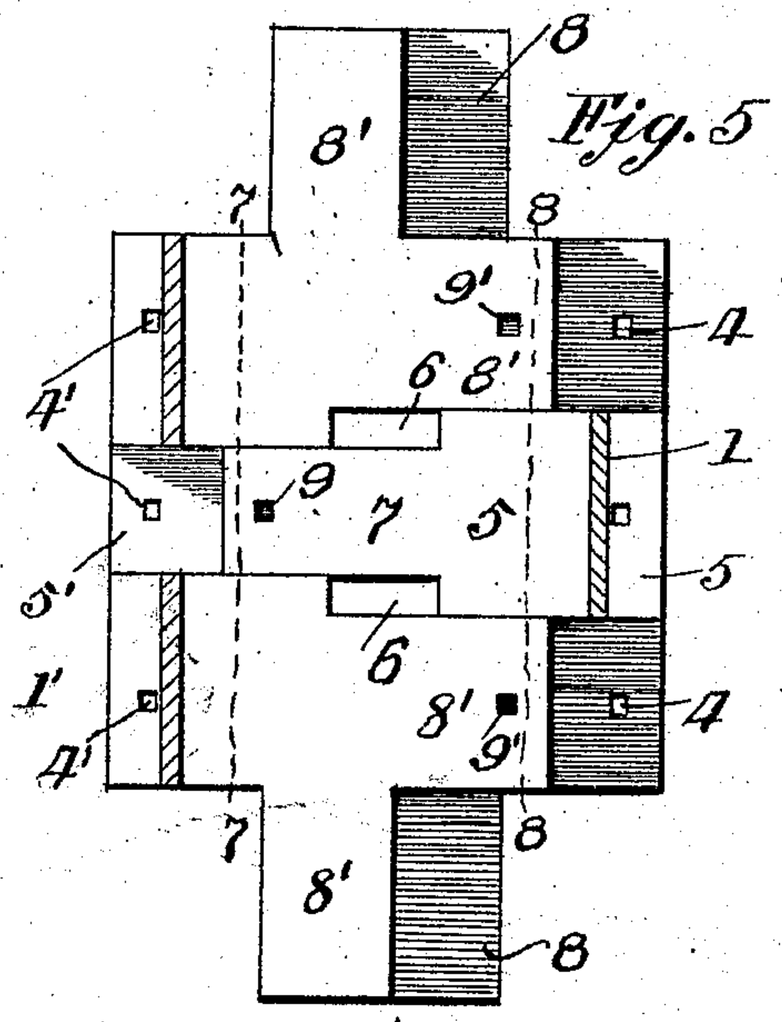


Fig. 5

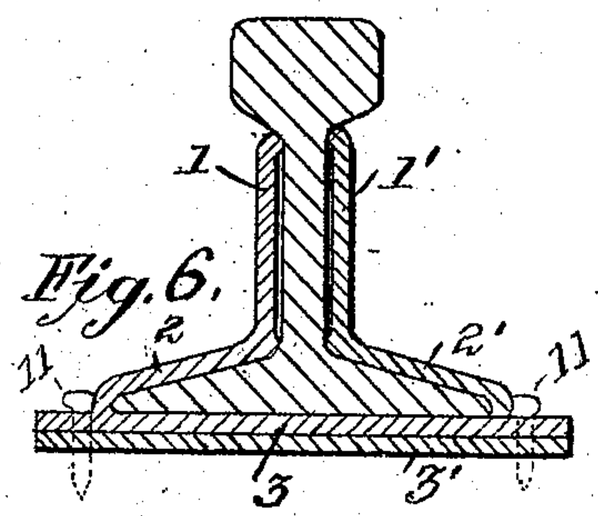


Fig. 6.

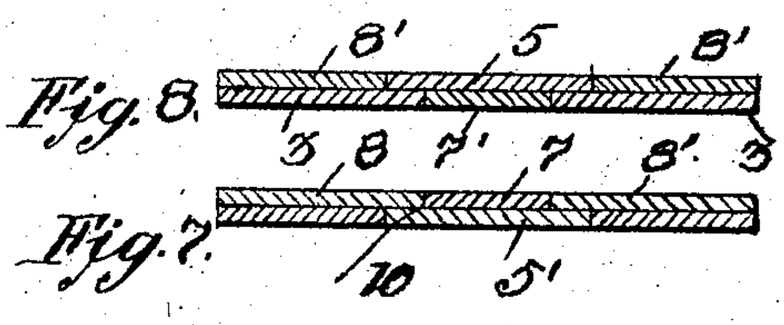


Fig. 8.

Fig. 7.

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UNITED STATES PATENT OFFICE.

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RAIL-JOINT.

No. 815,762. Specification of Letters Patent. Patented March 20, 1906.

Application filed July 6, 1905. Serial No. 268,584.

To all whom it may concern:

Be it known that I, NICHOLAS SUMIC, a citizen of the United States of America, residing at Allegheny, 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 the invention has for its object the provision of a novel form of fish-bar wherein the use of nuts and bolts and nut-locks is entirely dispensed with.

Another object of this invention is to provide fish-bars adapted to interlock with one another and prevent the confronting ends of two rail-sections from becoming displaced or spreading upon the ties or road-bed supporting the same.

A further object of this invention is the provision of novel means for supporting the confronting ends of two rail-sections, whereby the rails cannot become disjoined owing to the vibratory stresses or strains exerted upon the same by the rolling-stock.

A still further object of this invention is to provide a rail-joint which will be extremely simple in construction, strong and durable, comparatively inexpensive to manufacture, and highly efficient as means for retaining the confronting ends of two rail-sections together.

The invention consists in the novel construction, combination, and arrangement of parts which will be hereinafter more fully described and then specifically pointed out in the claims, and, referring to the drawings accompanying this application, like numerals of reference designate corresponding parts throughout the several views, in which—

Figure 1 is a detail perspective view of one of my improved fish-bars. Fig. 2 is a similar view of the opposite side of said fish-bar. Fig. 3 is a perspective view of the adjoining fish-bar. Fig. 4 is a similar view of the opposite side of the adjoining fish-bar. Fig. 5 is a horizontal sectional view of my improved fish-bars joined together. Fig. 6 is a vertical sectional view of a rail equipped with my improved fish-bars. Fig. 7 is a cross-sectional view taken on the line 7 7 of Fig. 5, and Fig. 8 is a similar view on the line 8 8 of Fig. 5.

To put my invention into practice, I construct my improved fish-bars whereby two fish-bars used to connect two sections of rails together will interlock with one another and form a substantial base-plate upon which the bases of the rails are adapted to rest and be supported.

In Figs. 1 and 2 of the drawings I have illustrated one of the fish-bars, which consists of a web portion 1, having an outwardly-extending base portion 2, carrying a base-plate 3. A particular feature of my invention resides in the novel construction of the base-plate 3, and by referring to Figs. 1 and 5 of the drawings it will be observed that the base-plate 3 is of a sufficient width to accommodate the base of a rail. That portion of the base-plate lying upon the outer side of the fish-bar is provided with apertures 4 to accommodate suitable spikes employed for securing the fish-bar to cross-ties or the like road-bed. The fish-plate is provided transversely with a central raised portion 5, and the one edge of the base-plate 3 is slotted, as indicated at 6 6, to provide an outwardly-extending raised tongue 7, which, together with the ends 8 8 of the base-plate 3, are provided with apertures 9 to accommodate spikes or the like fastening means. The adjoining fish-bar is similarly constructed with a web portion 1′, base portion 2′, and a base-plate 3′, but in this instance the central portion 5′ is countersunk, providing an outwardly-extending tongue 7′, which, together with the ends 8′ 8′ of the base 3′, are provided with apertures 9′. The opposite edge of the base-plate 3′ is also provided with apertures 4′, said apertures being employed in connection with spikes to retain the fish-bars in close proximity to one another.

The manner of joining the two rail-sections together by my improved fish-bars is as follows: The rail-sections to be connected together are placed upon the base-plate 3, the confronting ends of said rail-sections resting upon the raised portion 5 of said base-plate. The fish-bar illustrated in Fig. 3 of the drawings is now moved into engagement with the fish-bar illustrated in Fig. 1 of the drawings, the raised tongue 7 sliding into the groove 10, formed by the countersunk portion 5′, and the ends 8′ 8′ of the plate 3′ moving over the ends 8 8 of the plate 3. In so placing the fish-bars the countersunk tongue 9^a recedes into the groove 10′, formed by the raised portion 5 of the base-plate 3, and the extreme end of the tongue 7 passes under the base portion 2′, whereby the aperture 9 of the tongue

will aline vertically with the aperture 4′ of the countersunk portion 5′. This is also true of the apertures 9 of the base 3, as the ends 8 8 of the base 3 slide under the ends 8′ 8′ of the base 3′ and the apertures of one base aline with the apertures of its adjoining base-plate.

In Figs. 5 to 8, inclusive, of the drawings the relative position of the fish-bars when joined together is illustrated, this being true in connection with Figs. 7 and 8, where the relative positions of the raised and countersunk portions of the fish-bars is clearly illustrated. In connection with this construction it will be observed that it is impossible for one fish-bar to move longitudinally in respect to the other, the fish-bars being interlocked by the raised and countersunk portions of the base-plates. The fish-bars are adapted to be locked in engagement with the rail-sections, which they support and join by the employment of spikes 11 11 or the like fastening means; but in this connection I do not care to confine myself to the manner of securing the fish-plates to their respective road-beds.

From the foregoing it will be observed that I have devised novel means for supporting the confronting ends of two adjoining rail-sections and for retaining them in such a position as to prevent any longitudinal or lateral movement of one rail-section independent of the other.

While I have herein described the preferred manner of constructing my improved fish-bars, it is obvious that various changes may be made in the details of construction without departing from the general spirit and scope of the invention.

What I claim, and desire to secure by Letters Patent, is—

1. In a rail-joint, the combination with two sections of rails, of fish-bars, base-plates carried by said fish-bars, the base-plate of one of said fish-bars having a central raised portion and relatively depressed side portions, the base-plate of the other of said fish-bars having a central countersunk portion and side portions elevated relatively to the central portion, said base-plates being adapted to interlock one within the other, means to secure said fish-bars together upon a suitable road-bed, substantially as described.

2. Fish-bars of the character described, consisting of web portions having outwardly-extending base portions and inwardly-extending base-plates carried by said base portions, one of said base-plates having a central raised portion and relatively countersunk side portions formed therein and the other of said base-plates having a central depressed portion and relatively raised side portions, the said base-plates being adapted to interlock with one another, substantially as described.

3. A rail-joint comprising two fish-bars, one of said fish-bars having a base-plate with a central raised portion and relatively depressed side portions, said raised central portion having a projecting tongue and said depressed side portions having tongues, the other of said fish-bars having a base-plate with a depressed central portion adapted to receive the tongue on the central portion of the first-named fish-bar, substantially as described.

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

NICHOLAS SUMIC.

Witnesses:
E. E. POTTER,
C. KLOSTERMANN.