E. FIXTER.

RAIL JOINT.

APPLICATION FILED JUNE 20, 1921.

1,419,726. Patented June 13, 1922.

Fig. 1.

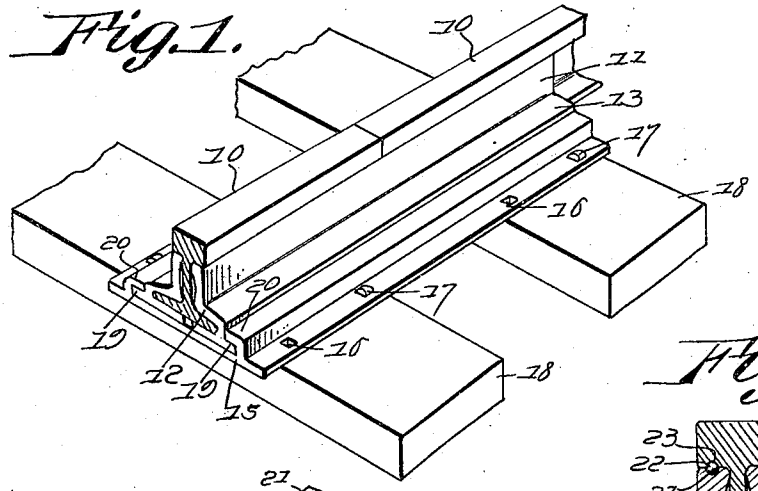


Fig. 2.

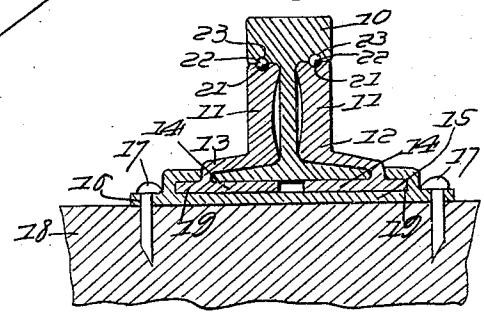
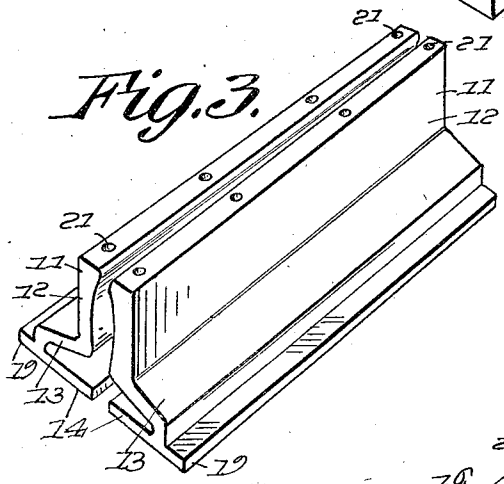


Fig. 3.



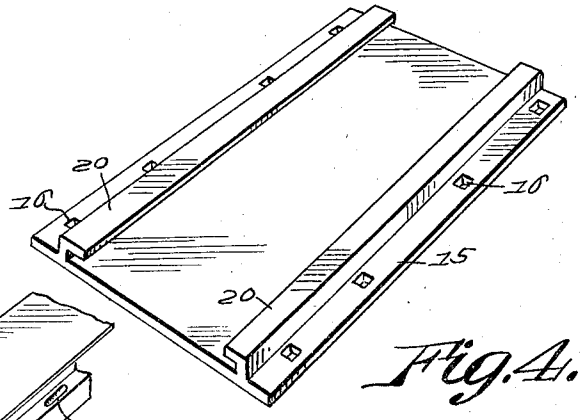
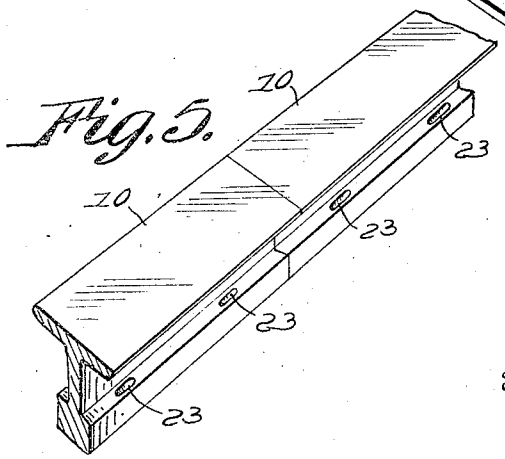


Fig. 4.

Fig. 5.



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RAIL JOINT.

1,419,726. Specification of Letters Patent. **Patented June 13, 1922.**

Application filed June 20, 1921. Serial No. 473,951.

To all whom it may concern:

Be it known that I, EDWARD FIXTER, a subject of the King of Great Britain, residing at Wilmington, in the county of New Hanover and State of North Carolina, have invented new and useful Improvements in Rail Joints, of which the following is a specification.

The object of the invention is to provide a simple and efficient form of rail joint wherein a limited relative movement of the rail sections with reference to the splice bars may be permitted under conditions avoiding strain upon the parts, without necessitating the use of transverse bolts, and under conditions providing against the accidental disengagement of the splice bars from the rail ends; and to provide in this connection a construction facilitating the assembling of the elements comprising the joint and the disconnection thereof when it is necessary to release the connected rail ends; and with this object in view the invention consists in a construction and combination of parts of which a preferred embodiment is shown in the accompanying drawings wherein:

Figure 1 is a perspective view of a joint embodying the invention.

Figure 2 is a transverse section of the same.

Figure 3 is a detail view of the splice bars arranged in their operative relations but disconnected from the rail.

Figure 4 is a similar view of one of the base plates.

Figure 5 is a view of the adjacent extremities of two rail sections inverted.

The joint between adjoining rail ends 10 is spanned by splice bars 11 having upright flanges 12 and foot engaging shoes 13 of which the lower walls 14 extend under the rail foot or base and receive the weight thereof and is provided with means for holding the bases of the splice bars in proper relation and engagement with the rail foot, and consisting in the construction illustrated of a base plate 15 which extends continuously and transversely under the splice bars and is provided at its extremities with spike holes 16 with which spikes 17 driven into the ties 18 may be seated.

The lower walls of the shoe forming elements of the splice bars are extended outwardly to form base flanges 19 for engagement by the terminals of the base plate 15 which as indicated in Figure 4 are returned or bent inwardly to form lips 20 which overlap the flanges 19 to insure against displacement.

The upper edges of the webs or upright portions 12 of the splice bars are arranged in contact with the under surfaces of the heads or tread portions of the rail sections and are provided with seats 21 for revoluble keys consisting in the construction illustrated of balls 22 of steel or like material, and the under surfaces of the rail heads are provided with elongated complemental seats 23 registering with the seats in the upper edges of the splice bars and thus, while locking the rails and splice bars positively against relative transverse or lateral movement, permitting relative longitudinal movement to compensate for expansion and contraction incident to changes of temperature.

As will be obvious the splice bars are applied to the rail section ends by placing the upper edges of the upright or web portions 12 of the former, in a tilted position under the overhanging portions of the rail heads, with the revoluble keys in place, after which the lower ends or base portions of the splice bars are swung into engagement with the base of the rail and are then secured by the base plate which is applied by a longitudinal sliding movement from one end of the related splice bars, the inturned lips 20 of the base plate engaging over the lateral flanges 19 of the splice bars. Therefore when the base plate has been positioned and secured by means of the spikes driven into the ties, the elements of the joint are secured in permanent interlocking relation.

Having described the invention, what is claimed as new and useful is:—

1. A rail joint having lateral splice bars and means for securing the same against transverse movement relative to the rails, said means including revoluble keys interposed between the splice bars and the rails.

2. A rail joint having lateral splice bars provided with shoes for engaging the rail foot and means for securing the shoes against transverse movement relative to the rail, and revoluble keys interposed between the upper edges of the splice bars and the under surfaces of the rail heads.

3. A rail joint having lateral splice bars provided with shoes for engaging the rail foot and means for securing the shoes against

transverse movement relative to the rail, and rolling keys engaging complemental registering seats in the upper edges of the splice bars and the under surfaces of the rail heads.

4. A rail joint having lateral splice bars provided with shoes for engaging the rail foot and means for securing the shoes against transverse movement relative to the rail, the facing surfaces formed by the upper edges of the splice bars and the under sides of the rail heads being provided with complemental seats, one of which is elongated in the direction of the length of the rail, and keys consisting of balls fitted in said complemental seats.

In testimony whereof I affix my signature.

EDWARD FIXTER.