No. 819,149. PATENTED MAY 1, 1906.

B. F. LUNG.

RAIL JOINT.

APPLICATION FILED SEPT. 13, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

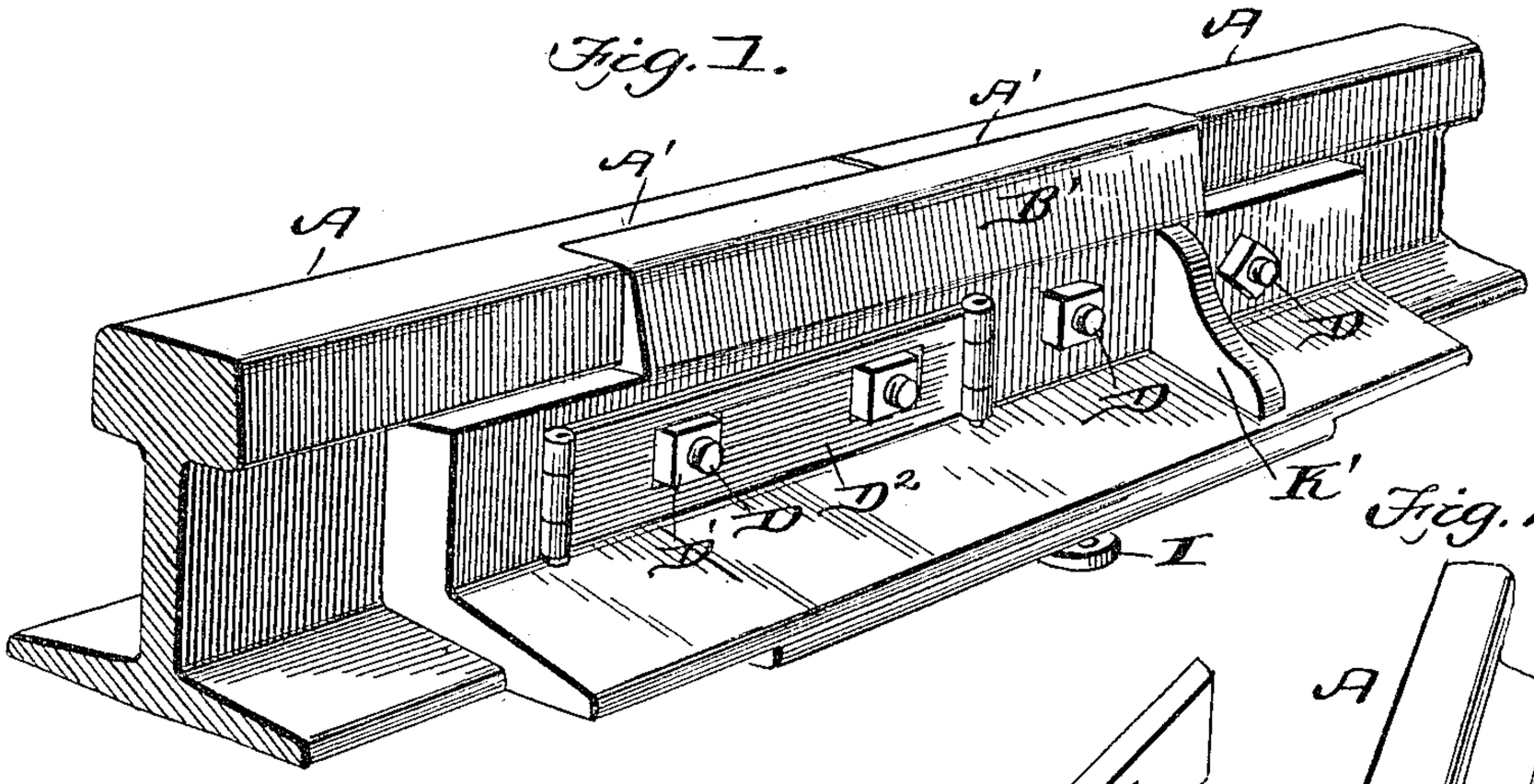

Fig. 2.

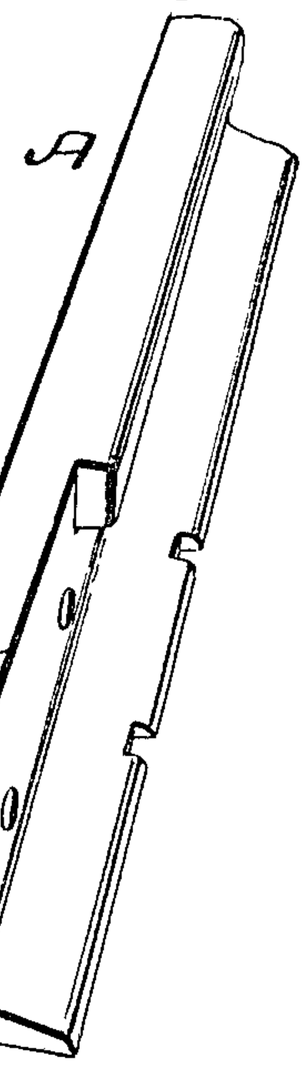

Fig. 6.

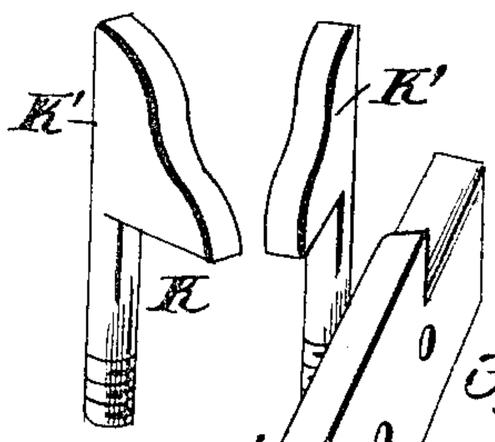

Fig. 5.

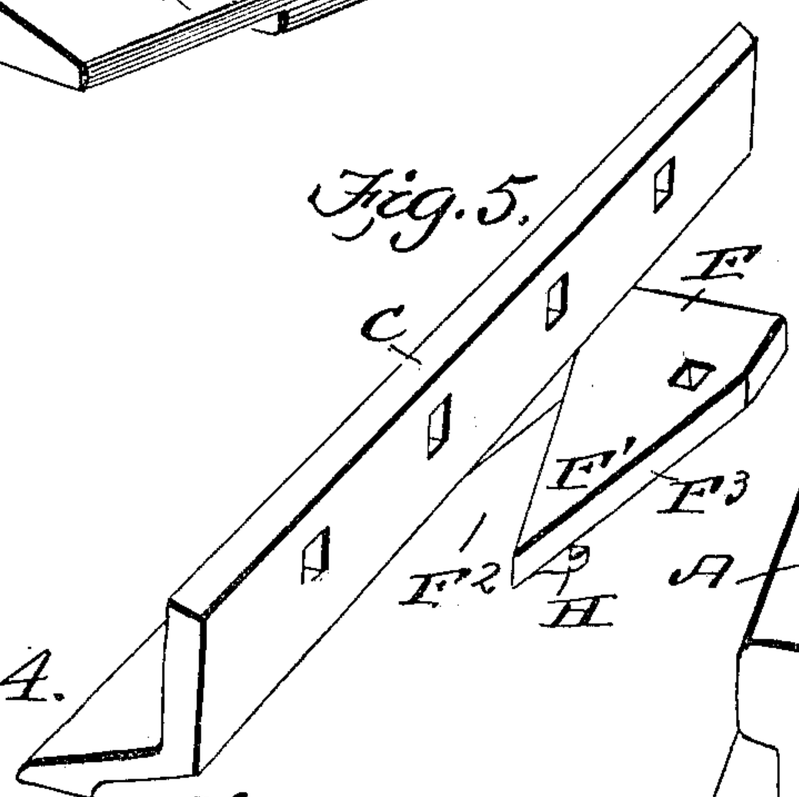

Fig. 4.

Fig. 7.

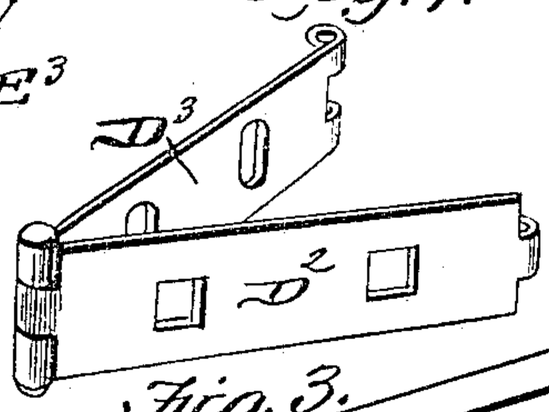

Fig. 3.

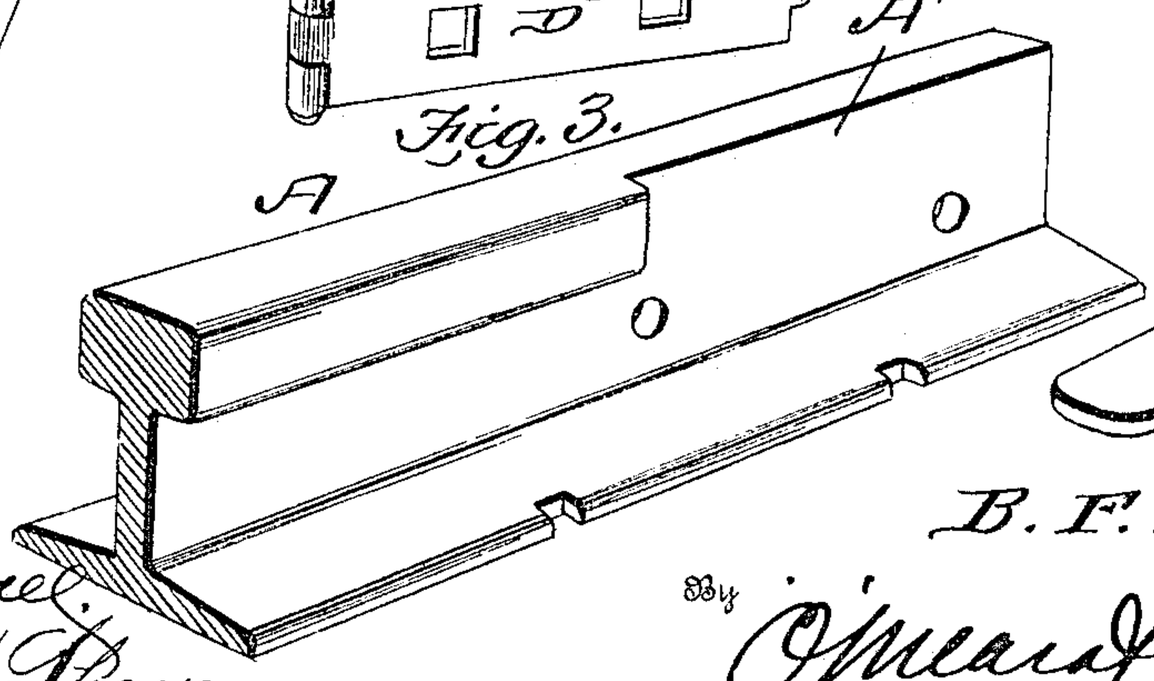

Fig. 8.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 9.

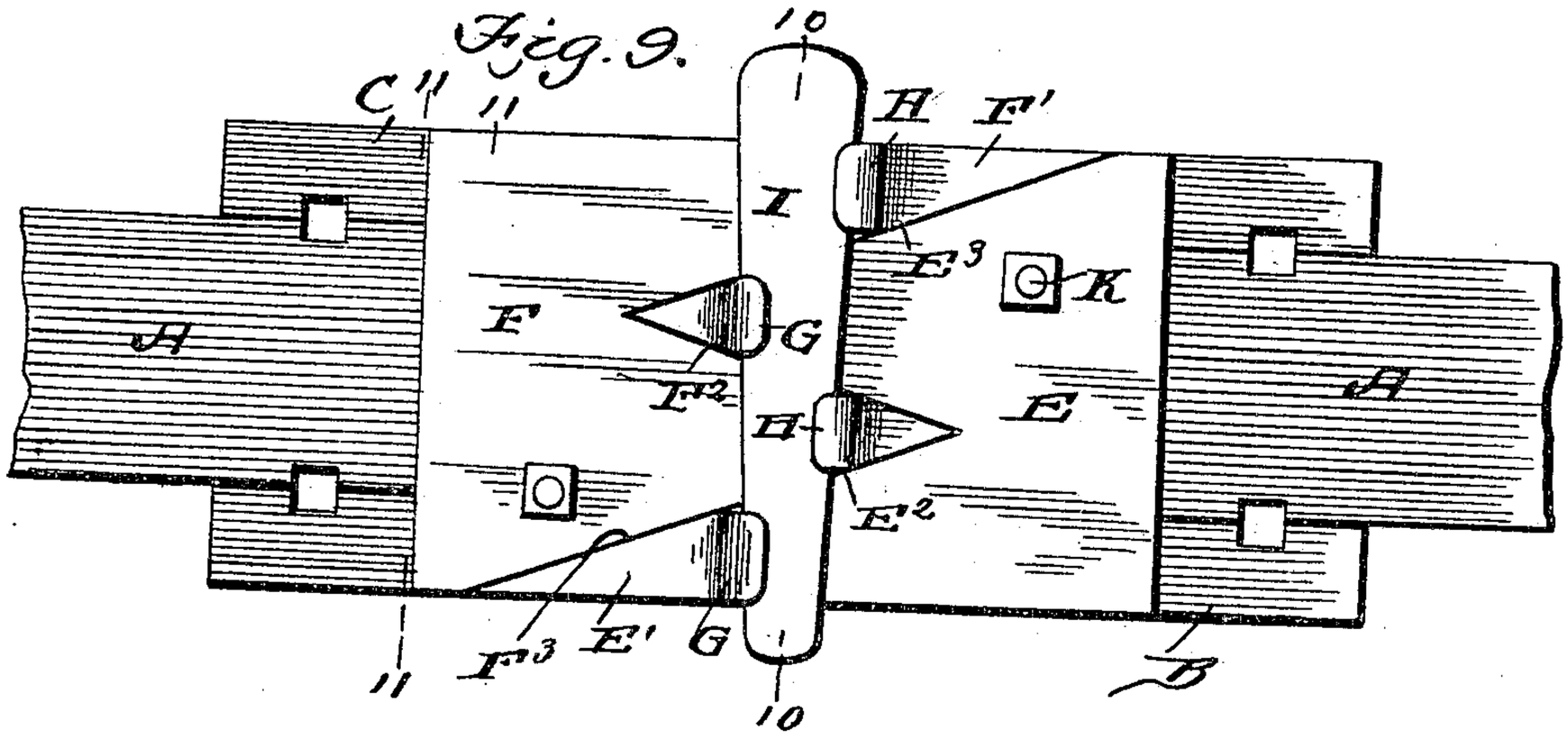


Fig. 70.

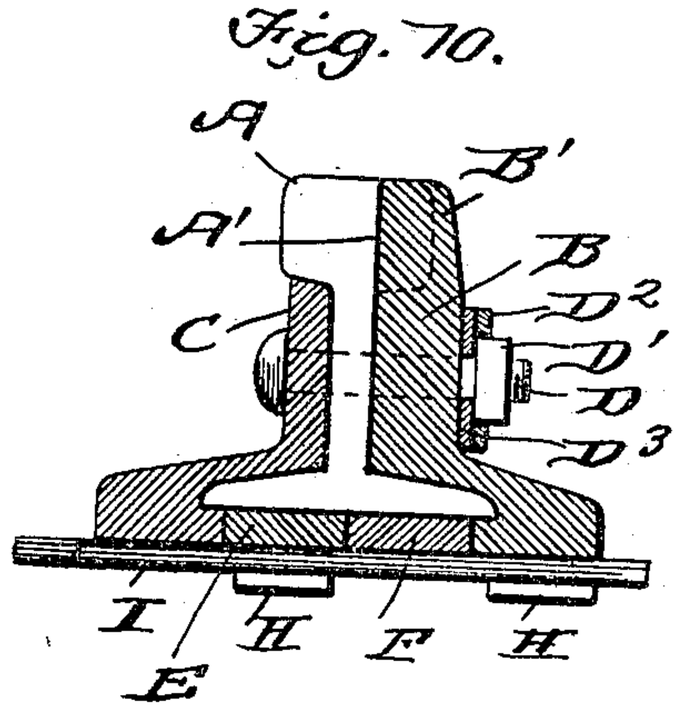


Fig. 71

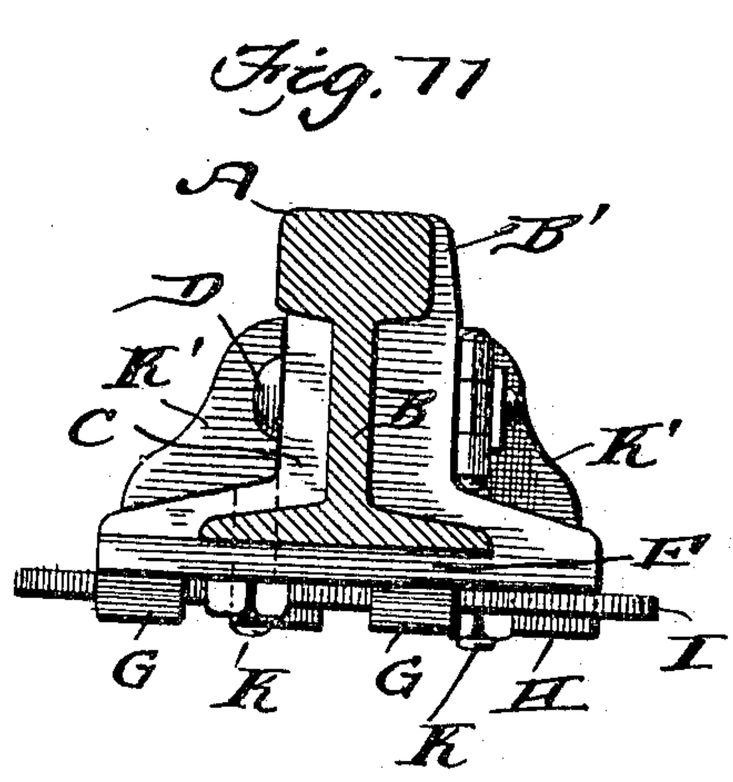
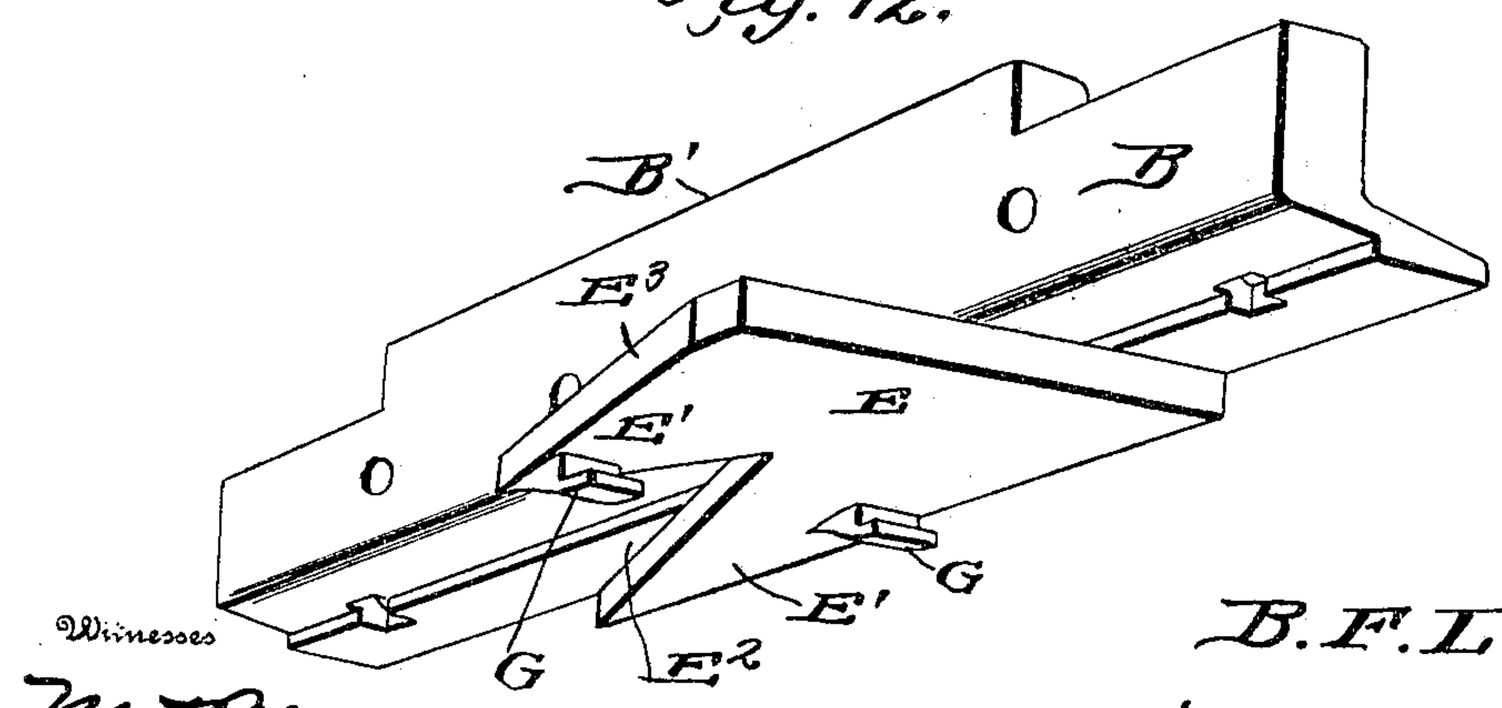


Fig. 72.



Witnesses

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UNITED STATES PATENT OFFICE.

BENJAMIN FRANKLIN LUNG, OF JOHNSTOWN, PENNSYLVANIA.

RAIL-JOINT.

No. 819,149. Specification of Letters Patent. Patented May 1, 1906.

Application filed September 13, 1904. Serial No. 224,272.

To all whom it may concern:

Be it known that I, BENJAMIN FRANKLIN LUNG, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Rail-Joint, of which the following is a specification.

This invention is an improved construction of rail joint or splice, the object being to provide a strong and durable connection between the meeting ends of the rails and one which will obviate the jarring of the train when crossing the joint.

Another object is to provide a rail-joint which not only protects the joint in the tread of the rails, but also the joint at the base.

With these objects in view my invention consists in the various features of construction hereinafter fully described, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a perspective view showing the practical application of my invention. Fig. 2 is a view showing the end of one of the rails. Fig. 3 is a view showing the end of the other rail. Fig. 4 is a perspective view of one of the splice-bars, and Fig. 5 is a view of the other splice-bar. Fig. 6 shows two novel forms of bolts employed for securing the splice-bars to the base of the rails. Fig. 7 is a perspective view of the means employed for locking the nuts upon the bolts, which pass through the splice-bars and web of the rails. Fig. 8 is a detail perspective view of the key for locking the splice-bars together beneath the bases of the rails. Fig. 9 is a bottom plan view of the joint completed. Fig. 10 is a sectional view of the joint on the line 10 10 of Fig. 9, and Fig. 11 is a sectional view on the line 11 11 of Fig. 9. Fig. 12 is an inverted perspective view of the splice-bar shown in Fig. 4.

Referring to the drawings, A indicates the meeting ends of two rails, the treads of said rails being cut away at the end upon one side, as shown at A′. When the rails are brought together, as shown in Fig. 1, an opening will be provided at one side and extending upon both sides of the joint between the rails.

B indicates one of the splice-bars, and C the other splice-bar, said splice-bars being angular in shape, so as to engage the bottom side of the tread, the top side of the base, and the side of the web of the rail, and the bar B is constructed with an upwardly-extending portion B′ of such size and shape as to snugly fit the recess or opening produced at the joint when the cut-away ends of the rails are brought together. This portion B′ constitutes one-half of the tread of the rail, and inasmuch as it overlaps the joint between the rails it is obvious that all jarring of the wheel passing thereover is avoided.

Bolts D are passed through the splice-bars B and C in the usual manner and have the nuts D′ screwed upon their threaded ends, said nuts being held in place by means of perforated locking-plates D^2, hinged to the washer-plates D^3.

In practice I prefer to make the splice-bar B considerably thicker and heavier than the splice-bar C, so that the projection B′ can be made heavy enough to stand the strain placed thereon.

The splice-bar B has a plate E rigidly connected to its lower edge, said plate being of a width equal to the combined bases of the rail and the two splice-bars, and the splice-bar C has a plate F rigidly connected to its lower edge and which is of the same width as the plate E. The opposing edges of these plates E and F are peculiarly shaped, each one having extending portions E′ and F′, respectively, and the intervening angles or recesses E^2 and F^2, respectively, and the cut-off sides E^3 and F^3, respectively, so that when the splice-bars are placed together the projections of one bar will fit into the recesses or cut-away portions of the opposing bar, as most clearly shown in Fig. 9. The extended portions E′ and F′ are provided with alternately oppositely disposed guide-lugs G and H, respectively, between which is forced a wedge-shaped locking-key I for the purpose of forcibly drawing the plates E and F together.

Bolts K, having heads K′, which fit the angles of the splice-bars, pass downwardly through the bases of said splice-bars and through the bases of the rails and also through the plates E and F, thus providing an additional locking means for the splice-bars.

If desired, the key can be locked by any suitable device, such as a padlock.

It will thus be seen that I provide a simple, strong, and durable construction of rail-joint and one which not only protects the joint at the tread, but also at the base of the rail.

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

1. The combination with a rail, of splice-bars, each splice-bar having a bottom plate,

the opposing faces of said plates being adapted to interlock, lugs carried by said interlocking portions, and means for engaging said lugs and drawing said interlocking plates closer together.

2. The combination with a rail, of splice-bars having bottom plates, the opposing faces of said bottom plates being adapted to interlock, guide-lugs carried by said interlocking plates, and a key adapted to be forced between said lugs for the purpose of drawing the plates closer together.

3. The combination with adjacent rails cut away at their ends, of splice-bars one of which has an upwardly-extending portion adapted to fit the cut-away portion of the rails, bottom plates carried by the splice-bars, the opposing faces of said plates interlocking, guide-lugs carried by the interlocking plates, a wedge-key adapted to engage said lugs, and means for connecting the splice-bars to the webs and bases of the rails.

BENJAMIN FRANKLIN LUNG.

Witnesses:

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EMLYN JONES.