

E. ESLIGER.
 RAIL AND SPLICE BAR.
 APPLICATION FILED AUG. 24, 1910.

991,284.

Patented May 2, 1911.

Fig. 1.

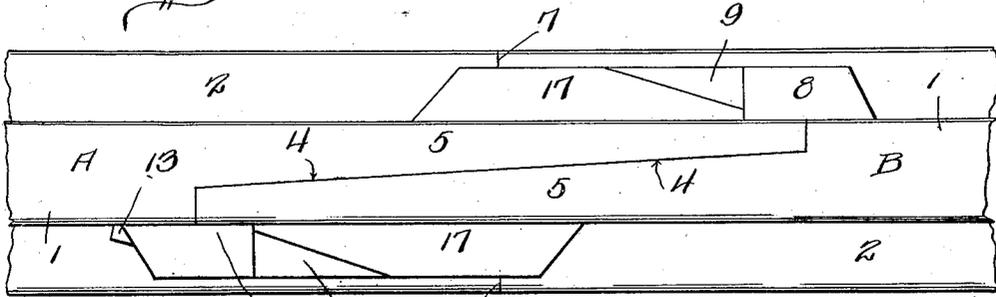


Fig. 2.

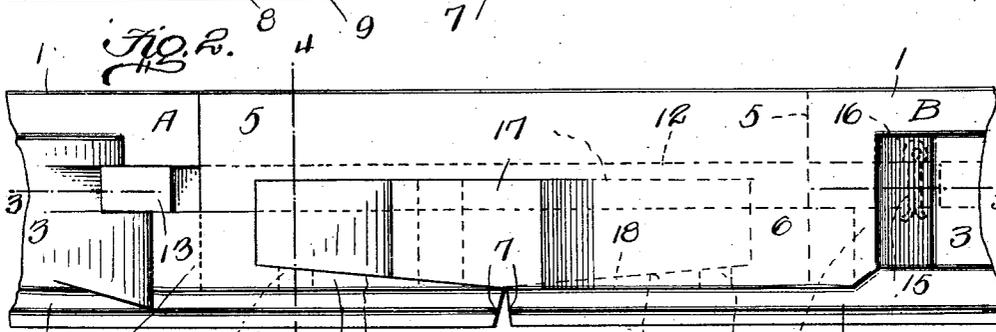


Fig. 3.

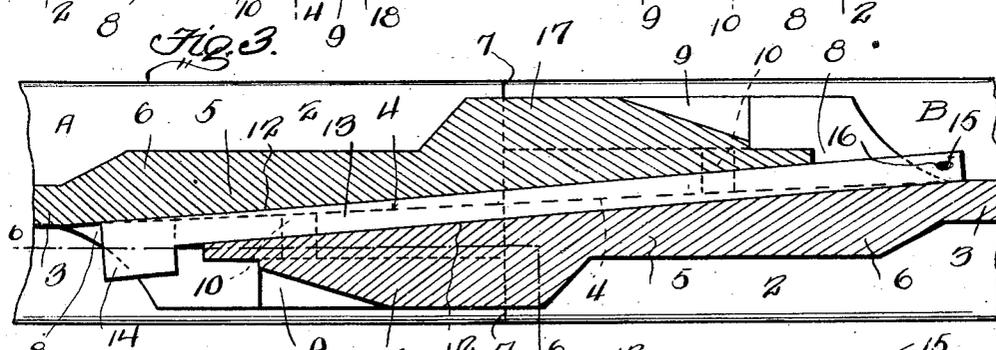
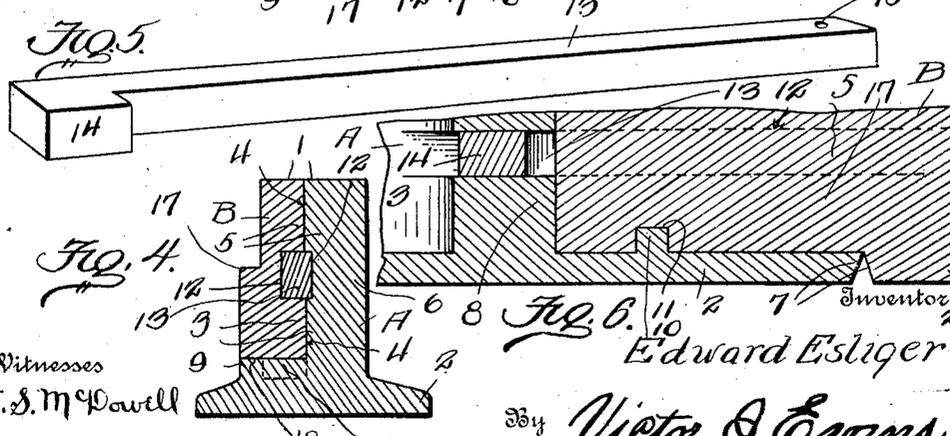


Fig. 4.



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UNITED STATES PATENT OFFICE.

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RAIL AND SPLICE-BAR.

991,284.

Specification of Letters Patent.

Patented May 2, 1911.

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To all whom it may concern:

Be it known that I, EDWARD ESLIGER, a citizen of the United States, residing at Everett, in the county of Snohomish and State of Washington, have invented new and useful Improvements in Rails and Splice-Bars, of which the following is a specification.

This invention while relating in general to the class of railroad-rails, yet contemplates more particularly the provision of means whereby the several sections of rails comprised in each of the tracks of a railway are so connected together as to approximate very closely, when under the strain incident to the passage of a railroad-train, the action of a single continuous rail without a joint, and therefore at all times in perfect alinement throughout the entire length of roadway.

One of the objects of this invention is to so construct the meeting ends of a pair of rails, that as they are placed in their normal position upon the ties, they will be automatically locked against any undesired longitudinal adjustment with respect to each other.

Another object is to form the extremities of the rail sections in a manner making possible the elimination of the usual fish-plates and securing bolts, thus greatly lessening the cost of laying a railroad.

A further object of the said invention is the provision of a rail-joint which comprises a comparatively few parts of such simple formation that the device, taken as a whole, can be manufactured at a minimum cost.

With the above and various other objects in view, this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more particularly described, claimed and illustrated in the accompanying drawing, in which:

Figure 1 is a fragmentary top plan view illustrating my invention. Fig. 2 is a side elevation partly in section of the same. Fig. 3 is a horizontal sectional view taken on the line 3—3 of Fig. 2. Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 2. Fig. 5 is a detail perspective view of the locking key. Fig. 6 is a section on the line 6—6 of Fig. 3.

Referring to the drawing by characters of reference, the letters A and B indicate the opposite ends of a pair of rails con-

structed in accordance with my invention and comprising the customary heads 1, base flanges 2, and connecting webs 3. The opposite sides of the ends of the rails A and B are recessed as at 4 producing outwardly tapered extensions 5, which conform with each other giving the appearance of one continuous rail when the tracks are viewed as in Fig. 1.

The connecting webs 3 are reinforced at their adjoining ends as at 6 by extending them a suitable distance upon the sides opposite the recesses 4, until they lie in the same planes with the outer edges of the heads of the rails.

The base flanges 2 terminate at points substantially intermediate the reinforced portions 6, in oppositely beveled shoulders 7 for a purpose to be hereinafter disclosed.

The opposite sides of the rail ends are provided with locking seats adapted to receive the tapered ends of the rails and hold them against longitudinal displacement. The said locking seats comprise rear walls 8 extending from the reinforced webs 3 and beveled side walls 9 formed integrally upon the base flanges 2. Transverse partitions 10 connect the side walls 9 with the webs 3, and engage transverse grooves 11 formed in the underside of the tapered extensions of the rail ends and prevent any unwished longitudinal displacement of the rails.

The inner faces of the recesses 4 are longitudinally channeled as at 12 for the reception of a locking key 13 which extends through an opening located in the rear wall 8 of one of the seats, the said key having formed upon one end thereof, an enlarged head 14 which is adapted to contact with the end of the rail, while the opposite end of the key extends through the rear wall of the other rail seat and is provided with an aperture 15 for the reception of a pin 16 which prevents its removal from the channels.

Bosses or enlargements 17 are integrally formed upon the sides of the reinforcements 6 of the connecting webs 3 and are provided with lower beveled faces 18 which overlie and rest upon the beveled side walls 9 of the seats and serve to prevent any transverse rocking of one rail in respect to the other.

The rails are assembled as follows: The recessed ends of the rails A and B are placed in engagement with each other and prefer-

ably slanted upward until the beveled terminals of the base flanges 2 contact with each other. As the rails are lowered to a horizontal position it is manifest that the tapered ends of the said rails will slip into the locking seats with the bosses or enlargement 17 resting on the side walls 9; and the transverse partitions 10 within the grooves 11. The longitudinal channels 12 will then become in alinement with each other and it is obvious that all that is necessary to securely lock the rails together is to insert the key 13 and place the pin 16 in the aperture 15.

15 In order to provide for the necessary expansion and contraction, due to the various acting elements, the transverse channels 11 are made slightly greater in width than the partitions 10 while the length of the key 20 13 is more than the distance between the two meeting ends of the pair of rail sections.

It is to be understood that slight changes in minor details of construction may be made without departing from the spirit of this invention.

Having thus fully described this invention what is claimed as new and useful is:—

1. In a rail joint, a pair of rail ends, the opposite sides of which are recessed to form a pair of extensions, the said extensions provided with channels opening into the recesses, locking seats formed upon the sides of the rails for the reception of the extensions, means for retaining the extensions within the locking seats and means for preventing any rocking of one rail in respect to the other.

2. In a rail joint, a pair of rail ends, the opposite sides of which are recessed to form a pair of extensions, the said extensions provided with channels opening into the recesses, locking seats formed integrally upon the sides of the rails, the said seats comprising rear walls and side walls, transverse partitions connecting the side walls with the connecting webs, and adapted to engage grooves located within the extensions, means for preventing vertical displacement of the rail ends, and means for preventing any rocking of one rail in respect to the other.

3. In a rail joint, a pair of rail ends, the opposite sides of which are recessed to form a pair of extensions, the said extensions provided with channels opening into the recesses, reinforcements formed upon the connecting webs of the rails by extending them upon the sides opposite to the recesses, to the edges of the heads of the rails, locking seats formed upon the sides of the rails and comprising rear walls extending from the reinforced connecting webs and side walls extending upward from the base flanges, transverse partitions, connecting the side walls with the connecting webs, and adapted to en-

gage grooves located within the extensions, means for preventing the vertical displacement of the rail ends, and means for preventing any rocking of one rail in respect to the other.

4. In a rail joint, a pair of rail ends, the opposite sides of which are recessed to form a pair of extensions, the said extensions provided with channels opening within the recesses, reinforcements formed upon the connecting webs of the rail by extending them upon the sides opposite to the recesses, to the edges of the heads of the rails, locking seats formed upon the sides of the rails and comprising rear walls extending from the reinforced connecting webs and side walls extending upward from the base flanges, transverse partitions connecting the side walls with the connecting webs, and adapted to engage grooves located within the extensions, a key positioned within the channels and preventing any vertical displacement of the rail ends, and means for preventing the rocking of one rail end with respect to the other.

5. The combination of a pair of rail ends, the opposite sides of which are recessed to form a pair of extensions, the said extensions provided with alining channels opening into the recesses, reinforcements formed upon the connecting webs of the rails by extending them, upon the sides opposite to the recesses, to the edges of the heads of the rails, locking seats formed upon the sides of the rails, and comprising rear walls extending from the reinforced connecting webs and side walls extending upward from the base flanges, transverse partitions connecting the side walls with the connecting webs, and adapted to engage grooves located within the lower edge of the extensions, a key positioned within the channels and preventing any vertical displacement of the rail ends, and enlargements or bosses formed upon the opposite sides of the rails and adapted to overlie and engage the beveled upper edge of the side wall of the locking seat and prevent the rocking of one rail in respect to the other.

6. The combination of a pair of rail ends, the opposite sides of which are recessed to form a pair of extensions, the said extensions provided with alining channels opening into the recesses, reinforcements formed upon the connecting webs of the rails by extending them upon the sides opposite to the recesses, to the edges of the heads of the rails, locking seats formed upon the sides of the rails and comprising rear walls extending from the reinforced connecting webs and side walls extending upward from the base flanges, transverse partitions connecting the side walls with the connecting webs, and adapted to engage grooves located within the lower edge of the extensions, a key positioned within the channels and preventing

any vertical displacement of the rail ends,
and enlargements or bosses formed upon the
opposite sides of the rails and adapted to
overlie and engage the beveled upper edge of
5 the side wall of the locking seat and prevent
the rocking of one in respect to the other, the
ends of the base plate terminating a distance
substantially intermediate the reinforced
ends of the connecting web in beveled ends

to permit the ends of the rails to be lifted 10
in assembling or when the rails are to be dis-
engaged.

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

EDWARD ESLIGER.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
