T. C. LACKLAND.

SPLICE BAR.

APPLICATION FILED MAY 21, 1909.

951,009. Patented Mar. 1, 1910.

Fig. 1.

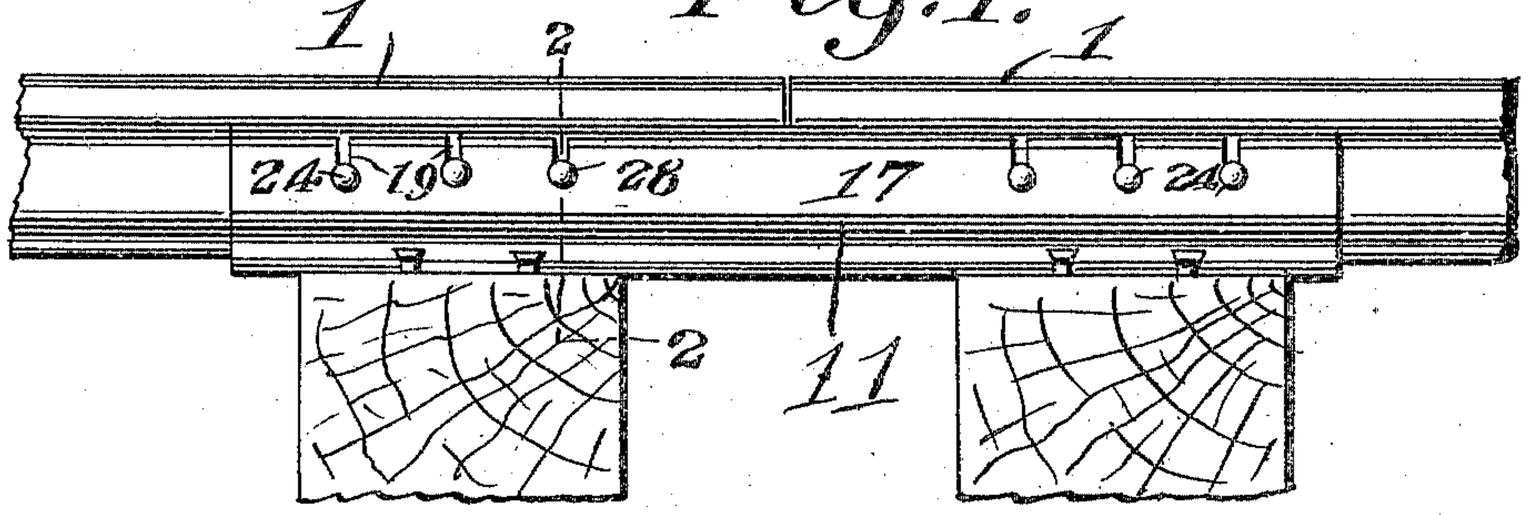


Fig. 6.

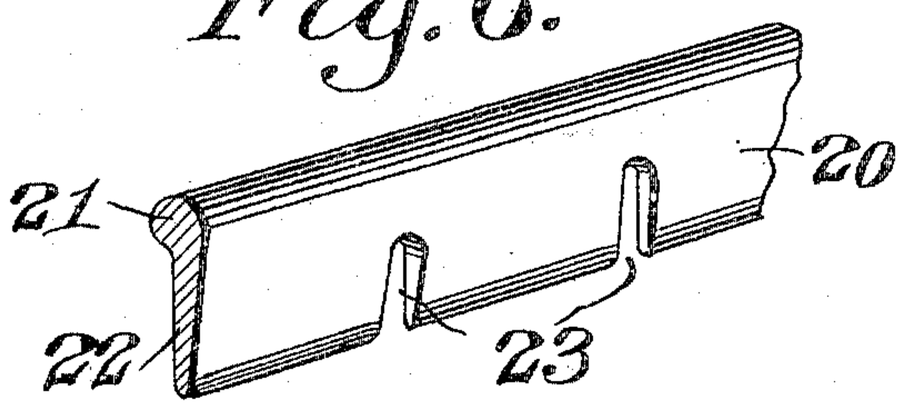


Fig. 3.

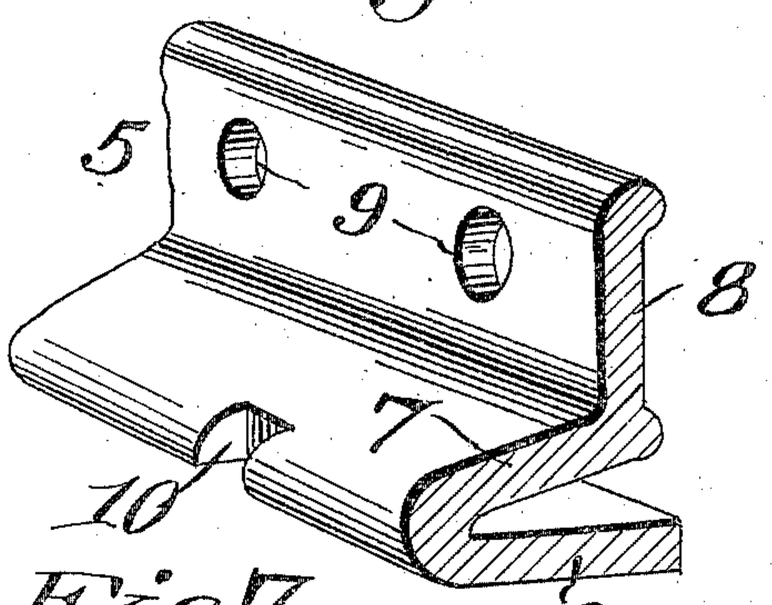


Fig. 5.

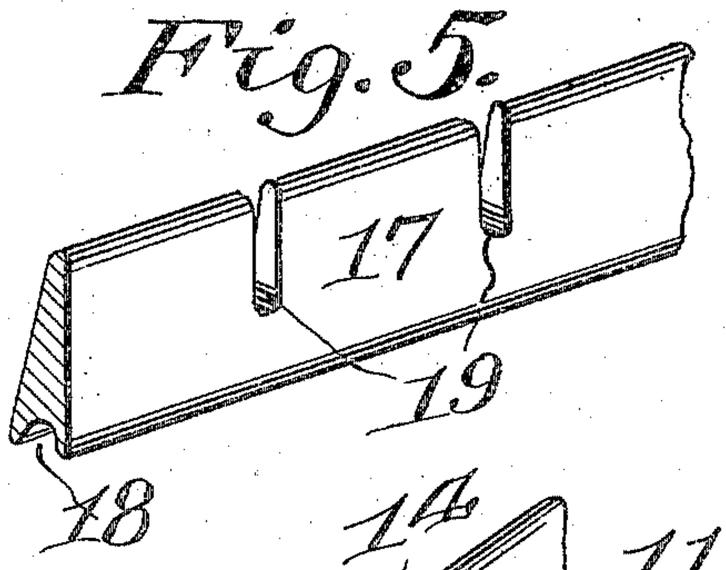


Fig. 7.

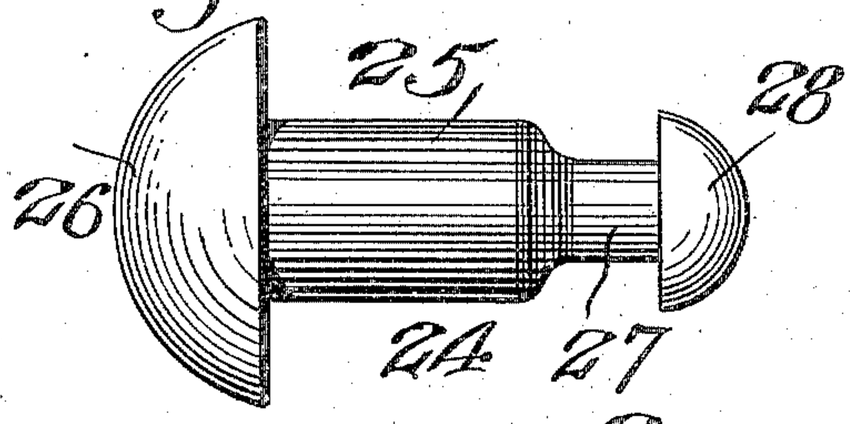


Fig. 4.

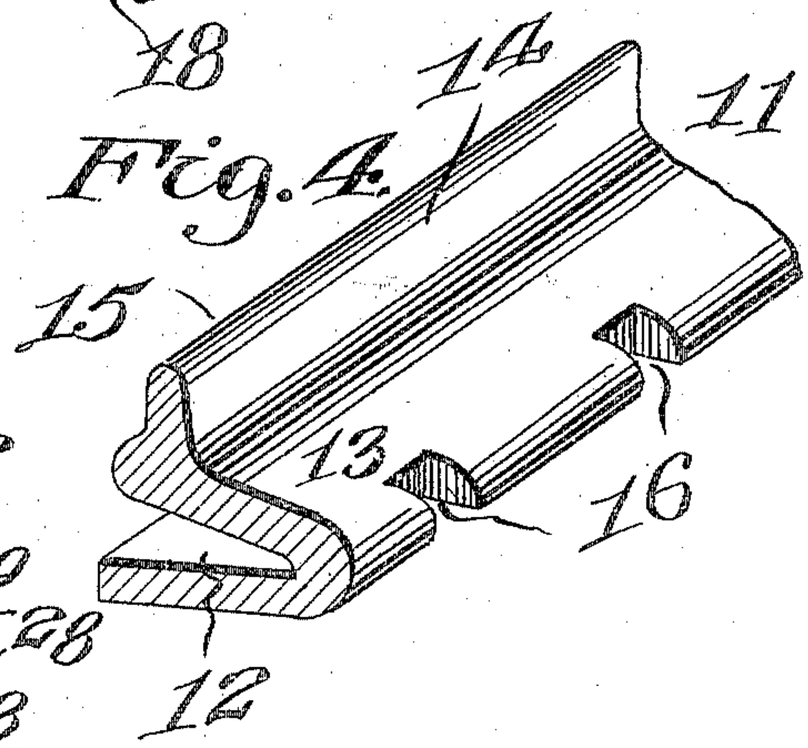
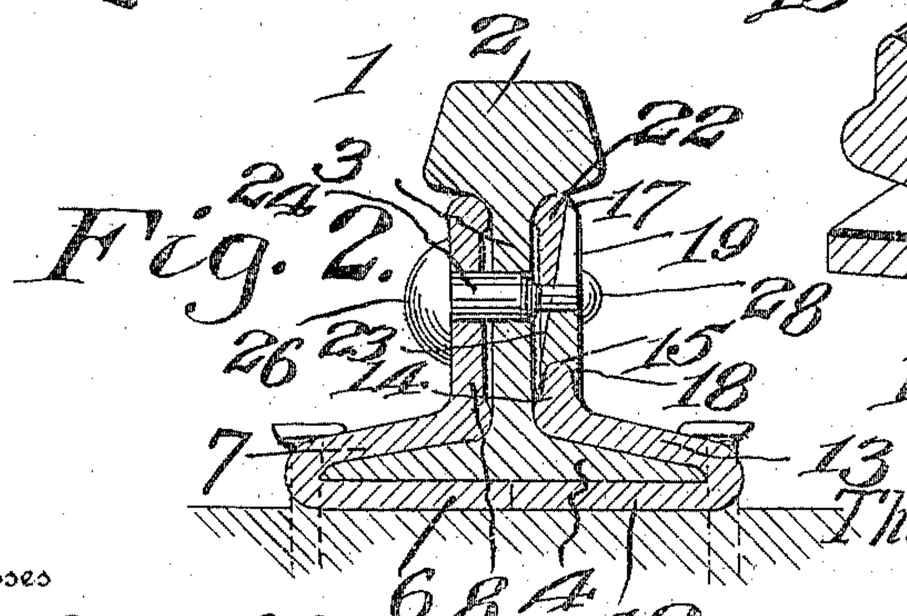


Fig. 2.



Witnesses

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SPLICE-BAR.

951,009. Specification of Letters Patent. Patented Mar. 1, 1910.

Application filed May 21, 1909. Serial No. 497,473.

To all whom it may concern:

Be it known that I, THOMAS C. LACKLAND, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented new and useful Improvements in Splice-Bars, of which the following is a specification.

This invention relates to rail joints or splice means for railroad rails and the primary object of the same is to provide a joint having structural features which will overcome the defects of ordinary joints as to noise and jar incident to car wheels moving thereover and the loosening of the parts of the joint itself, thereby obviating damage to the rails and injury to the rolling stock and jar to the traveling public.

A further object of the invention is to embody in a rail joint a construction which will so unite the rails as to make them practically continuous and prevent depression of the joints occurring between the ties and wherein the fish plate upon one of the sides of the rail joint members is constructed in wedge shaped sections so that the pounding upon the rail will force the outer fish plate more tightly into engagement with a double headed bolt member and thereby effectively prevent the disassociation of the rails.

With the above and other objects in view which will appear as the description progresses the invention resides in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawing, Figure 1 is a side elevation of the meeting ends of a pair of rails united by my improvement. Fig. 2 is a transverse sectional view upon the line 2—2 of Fig. 1. Fig. 3 is a detail perspective view of a portion of one of the members of the rail joint. Fig. 4 is a similar view of the opposite member of the rail joint. Fig. 5 is a similar view of the fish plate. Fig. 6 is a perspective view of the wedge member. Fig. 7 is an enlarged side elevation of the double headed retaining element.

Referring to the drawing the numeral 1 designates a pair of contiguous rail members. These rail members 1 are constructed in the ordinary manner being provided with the usual head 2, web 3 and base flange 4. The webs 3 of the rail members are each provided with a plurality of spaced openings which are adapted for the reception of the securing elements in the usual manner.

The numeral 5 designates one of the members of the rail joint. This member 5 is provided with a base flange 6 having an integrally formed overlying flange 7 from which is projected a vertical flange 8. The space between the flanges 6 and 7 is of a shape corresponding with one half of the base flange 4 of the rails. The vertical member 8 is provided with a plurality of spaced openings 9 corresponding with the openings within the webs of the rail members with which they are adapted to aline when the device is positioned upon the rail. The outer curved portion of the member 6 is provided with a plurality of cut away portions 10 which are adapted for the reception of suitable spikes whereby this portion of the device is secured to the rail ties. The numeral 11 designates the opposite member of the rail joint. This member is also provided with a base flange 12 having an overlying flange 13 from which projects vertically the integrally formed member 14. This member 14 is of a height greatly less than that of the member 8 provided by the joint section 5 and has its upper longitudinally extending edge rounded as indicated by the numeral 15. The lower outer edge of the member 11 is provided with a plurality of notches or cut away portions 16 and these notches are adapted for the reception of suitable spikes whereby this member is effectively retained upon the ties of the rails.

The numeral 17 designates the fish plate of the device. This fish plate is of a substantially V-shaped formation having its lower enlarged longitudinally extending edge provided with a continuous channel 18 and this channel is adapted to fit over the portion 15 of the vertically extending member 14 of the joint section 11. The fish plate 17 has its body portion provided with a plurality of cut away portions 19 extending vertically thereof and arranged in spaced relation with each other and alining with the

openings 9 of the joint member 5 and the openings provided in the wedge of the rail members.

As clearly illustrated in Fig. 5 of the drawings these slots or cut away portions terminate a suitable distance away from the bottom or reduced edge of the fish plate. The wedge member shown in Fig. 6 and indicated by the numeral 20 comprises an enlarged headed portion 21 and a substantially V-shaped body portion 22. This wedge member 20 has its body also provided with a plurality of vertically extending spaced cut away portions 23. These cut away portions 23 are arranged to aline with the cut away portions 19 and the openings 9 of the member 5 as well as the openings in the webs of the rails.

The numeral 24 indicates the retaining element. This element 24 is provided with an enlarged body portion 25 having a head 26 and a reduced body portion 27 also provided with a head 28.

In positioning the joint upon the rails the member 5 is first placed against one face of the said rail member having its upper longitudinally extending edge engaging beneath the head of the said rails, while its horizontally straight extension 6 engages beneath the flanges 4. The retaining element 24 is now inserted within the openings 9 and the openings of the webs of the rails, while positioned upon the reduced body portion 27 between its head 28 and the face of the webs of the rails, are placed the wedge member 20 and the fish plate 17. This is accomplished by first passing the cut away portions 23 of the wedge 20 over the reduced body portions 27 and next positioning the fish plate 17, through the medium of the cut away portions 19, adjacent the head 28 and the outer face of the wedge 20. After the wedge plate 20 and the fish plate 17 have been positioned upon the reduced portion 27 of the member 24 between the head 28 and the webs of the rail, the joint member 11 is positioned upon one side of the rail engaging its base flange and the lower portion of its web. The member 11 is slid under the fish plate 17 so that its rounded upper edge 15 engages the longitudinally extending recess 17 of the said fish plate. When the member 11 has been driven to its proper position the spikes are inserted within the opening 16, thus effectively securing all of the elements together.

Having thus fully described the invention what is claimed as new is:

1. In combination with the contiguous meeting ends of a pair of rails having their webs provided with openings, of joint members, one of said joint members having its vertical flange provided with spaced openings alining with the openings of the webs of the rails, the opposite connecting member being provided with an upstanding longitudinally extending offset adjacent its lower portion, a fish plate having its lower edge provided with a longitudinally extending channel adapted to be positioned upon the offset portion of the second joint member, said fish plate having its upper portion provided with a plurality of spaced openings, a wedge member having its lower face provided with vertical openings adapted to aline with the openings of the fish plate and of the webs of the rails, and a double headed retaining element adapted to engage all of the said openings.

2. The combination with the meeting ends of rails having their webs provided with spaced openings, a joint member comprising a base portion, an overlying flange and a vertical extension upon one side of the rails, the vertical wall of the joint member being provided with openings alining with the openings of the rails, a second joint member for the opposite side of the rails, said second joint member comprising a base portion, an overlying flange and a vertical longitudinally extending rounded bead, a cross sectionally V-shaped fish plate having its lower wall provided with a longitudinal depression adapted to engage the said bead, said fish plate being provided with spaced vertical openings, a wedge member having an enlarged top portion and being also provided with vertically arranged cut-away portions adapted to be positioned between the fish plate to engage beneath the heads and with the flanges of the rails the spaced cut away portions of both the fish plate and the wedge adapted to aline with the openings within the webs and the first joint member, and a plurality of double headed retaining elements engaging the openings of all of the members to secure the latter in locked position upon the rails.

3. In combination with the meeting ends of a pair of rails having their webs provided with spaced openings, of a joint member comprising a base portion and a vertical extension upon one side of the rails, a vertical extension of the joint member being provided with openings alining with the openings of the rails, a second joint member for the opposite side of the rails comprising a base portion, an overlying flange and a vertical longitudinally extending rounded bead a double headed retaining element adapted to engage the openings of the vertical members of the first joint section and the openings of the webs and to have its second head projecting beyond the face of the webs, a substantially V-shaped fish plate having its lower extremity provided with a longitudi-

nally extending groove engaging the beaded projection of the second joint member and having its face provided with vertically extending cut away portions whereby it is retained in position through the medium of the projecting head of the retaining element, and a wedge member also provided with vertical cut-away portions engaging the body of the retaining element between the fish plates and the webs of the rails.

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

THOMAS C. LACKLAND.

Witnesses:

GEO. M. BAKER,

JAMES M. LACKLAND.