

W. J. McDERMOTT.
RAILWAY APPLIANCE.
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995,272.

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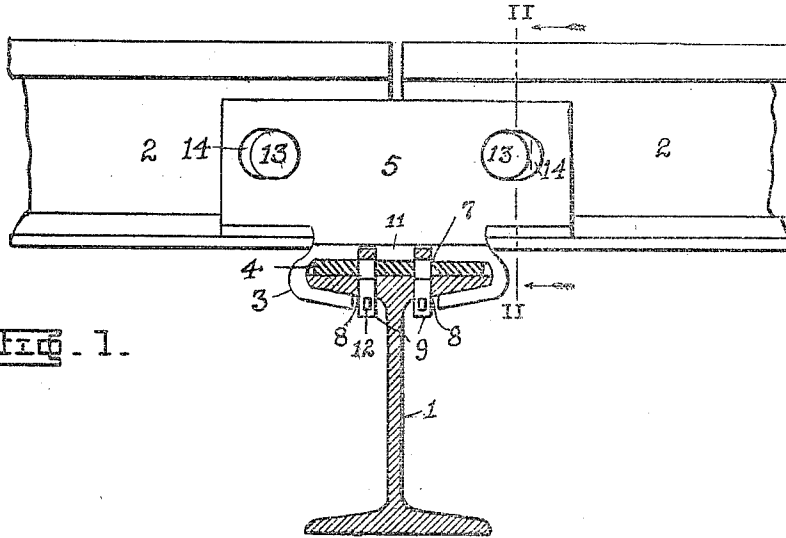


Fig. 1.

Fig. 2.

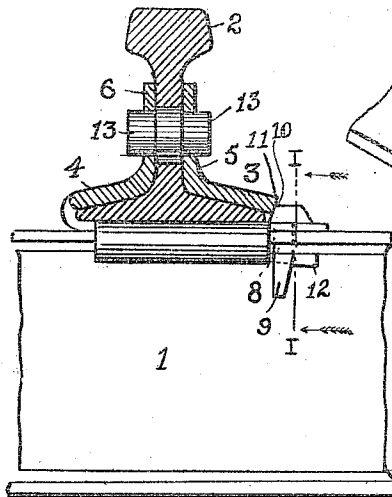


Fig. 3.

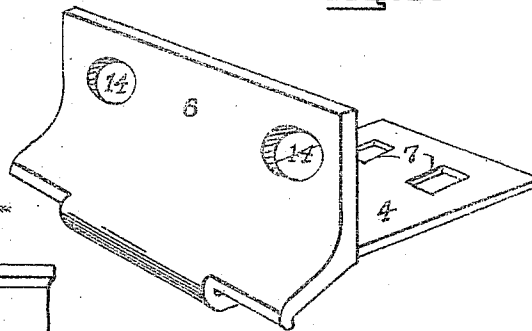


Fig. 4.

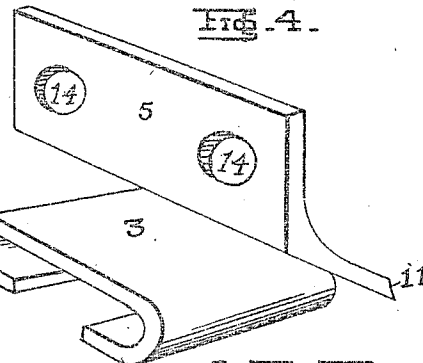
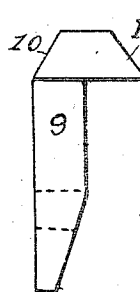


Fig. 5.



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RAILWAY APPLIANCE.

995,272.

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To all whom it may concern:

Be it known that I, WILLIAM J. McDERMOTT, a citizen of the United States, and residing in the Borough of West Homestead, in the county of Allegheny and State of Pennsylvania, have invented or discovered new and useful Improvements in Railway Appliances, of which the following is a specification.

My invention consists of new and useful improvements in railway appliances, more especially relating to splice-bars or devices for attaching together the abutting ends of rails and securing the same to the cross-tie or other support.

Generally speaking, it consists of a sleeve member slidably mounted on the tie and provided with a splice-bar portion adapted to engage one side of the rail bases and webs, and a second member adapted to be introduced between said first member and the tie and also provided with a splice-bar portion adapted to engage the other side of the rail bases and webs. The rail ends are clamped between said members which are themselves wedged together and to the tie. To prevent said members from becoming loosened or moving in relation to the tie, pins are driven in holes in one of said members and the tie, which pins, by their wedging action, draw said members more closely together. The heads of said pins are preferably beveled and coact with a corresponding surface on one of said members to prevent accidental loosening of said pins. The rails are secured to said members by means of pins engaging holes in the webs of the rails and in the said members. The holes in the rail webs are of larger diameter than those in said members and the pins are provided with an enlarged central portion to seat in said rail holes and smaller end diameters to seat in the holes in said members, so that when said members are in position, said pins are held in place. The method of securing said members to the tie may be used in connection with the fasteners which attach the rails to the ties intermediate of their ends.

In the accompanying drawings, Figure 1 is a side elevation, partially in section along the line I—I in Fig. 2, showing two rail ends secured together and to the tie; Fig. 2 is a vertical section taken along the line II—II in Fig. 1; Fig. 3 is a perspective of one of the members; Fig. 4 is a similar view of the

other member, and Fig. 5 is an elevation of one of the pins.

The following is a detailed description of the drawings.

1 is the tie, shown as a metal tie of the girder or I-beam type, and 2 and 2 are the rails whose abutting ends meet above tie 1.

3 and 4 are two coacting splice-bar members. The member 3 is in the form of a sleeve having a bottom slot or opening which permits it to be slid onto the tie 1. One end of the member 3 is provided with an upwardly extending splice-bar portion 5 which engages one side of the bases and webs of the rails 2—2, the member being mounted so that the portion 5 engages the inner side of the rails.

4 is the wedge member, having preferably a tapered body to increase the wedge action and adapted to be driven in between the top of the tie and the body of member 3. The member 4 is provided with an upwardly extending splice-bar portion 6 which engages the outer side of the rail bases and webs.

The member 3 is first placed in position and the rail ends adjusted thereon. The member 4 is now driven into place with the portion 6 engaging the rails, thus wedging the members together, into engagement with the rail ends and into close attachment to the tie.

The wedge portion of member 4 is provided with one or more holes, 7—7, and corresponding holes 8—8 are provided in the tie 1. When the members 3 and 4 have been wedged into place, as described above, a partial registration is effected between each hole 7 and the corresponding hole 8. The holes 7—7 and 8—8 are preferably square. A pin 9 is now inserted in the holes 7 and 8. Said pins are provided with a tapered or wedge-shaped lower end and a squared shank, so that the pin may be inserted into the said holes. As the pin is driven down into the holes, the tapered or wedge-shape portion of the pin forces the member 4 to move so that the registration between holes 7 and 8 is completed, increasing the wedging engagement between the members 3 and 4 and more firmly clamping the same to the rails and to the tie. When the holes 7 and 8 are in perfect registration, the squared shank of the pin 9 seats in said holes, thus avoiding the tendency of the pin to be forced upwardly out of said holes as would be the

case were the entire shank of the said pin tapered or wedge-shape. The heads of the pins 9-9 are beveled as at 10-10 and fit under the reversely beveled edge 11 of the member 3, thus locking said pins in place. The pins 9-9 are preferably made of resilient material so that their heads may be readily forced down under the beveled edge 11 of the member 3. If desired, the shanks of the pins 9-9 may be slotted and wedge-shape, split keys 12-12 driven in against the bottom of the top flange of the tie 1, thus wedging said pins down tightly in place and preventing their accidental loosening.

The rails are secured to the splice-bar portions 5 and 6 of the members 3 and 4 by means of the pins 13-13. The holes in the webs of the rails 2-2 are of larger diameter than the holes 14-14 in the members 3 and 4 and the central portions of pins 13-13 are of the proper diameter to fit in the holes in said webs, while the ends of pins 13-13 are of reduced diameter to fit the holes 14-14. It is evident that when the members 3 and 4 are in place, the pins 13-13 are held securely in place without the use of nuts or cotter pins. The holes 14-14 are preferably longitudinally slotted to allow of rail expansion and contraction.

The holes 7-7 and 8-8 and the pins 9-9 are preferably squared to give better bearing surfaces.

The arrangement of holes 7-7 and 8-8 and pins 9-9 may be used in connection with the fasteners with which the rails intermediate of their ends are secured to the cross-ties or other supports.

It is evident that my device is a perfect splice-bar mechanism securely attaching the rail ends together and to the tie without the use of bolts and nuts or other expensive elements which are likely to loosen accidentally. I therefore combine in one device the splice bar and rail fastener, and also obtain a positive anti-rail-creeper, as the rails 2-2 are capable of no longitudinal movement except that involved in the expansion and contraction of the metal.

The pin 9 is preferably provided with a head widened in one direction and the edge thereof beveled as at 10^a, so that in changing the track gage a wedge member 4 with its holes 7-7 a greater distance from the splice-bar portion 6 may be substituted. In such case the two members 3 and 4, when in operative position, are located on the tie inside of the position shown in the drawings, and the beveled edge 10^a of the pin 9 bears against and is locked by the beveled edge 11 of the member 3.

Although, for the sake of clearness, I have minutely described the accompanying drawings, I do not wish to limit myself thereby, but claim broadly—

1. A splice-bar device composed of a sleeve member adapted to be slidably mounted on the tie and having a splice-bar portion adapted to engage one side of the bases and webs of the abutting rails, and a wedge member adapted to be driven in between said sleeve member and the top of the tie and having a splice-bar portion adapted to engage the other side of the bases and webs of said rails.

2. A splice-bar device composed of a sleeve member adapted to be slidably mounted on the tie and having a splice-bar portion adapted to engage one side of the bases and webs of the abutting rails, a wedge member adapted to be driven in between said sleeve member and the top of the tie and having a splice-bar portion adapted to engage the other side of the bases and webs of said rails, and pins seated in registering holes in said rails and in said members.

3. A splice-bar device composed of a sleeve member adapted to be slidably mounted on the tie and having a splice-bar portion adapted to engage one side of the bases and webs of the abutting rails, a wedge member adapted to be driven in between said sleeve member and the top of the tie and having a splice-bar portion adapted to engage the other side of the bases and webs of said rails, and pins having enlarged central portions adapted to be seated in holes in the webs of said rails and reduced end portions adapted to be seated in smaller holes in said members.

4. Means for attaching railway rails to the ties which consists in a sleeve member adapted to be slidably mounted on the tie and engage one side of the rail, a wedge member adapted to be driven in between said sleeve member and the top of the tie and engage the other side of the rail, and a wedge pin adapted to be driven into holes in said wedge member and in the tie to wedge said members tightly together and prevent loosening of the same.

5. Means for attaching railway rails to the ties which consists in a sleeve member adapted to be slidably mounted on the tie and engage one side of the rail, a wedge member adapted to be driven in between said sleeve member and the top of the tie and engage the other side of the rail, and a pin adapted to be seated in holes in said wedge member and in the tie, said pin having a wedge portion adapted to wedge said members tightly together.

6. Means for attaching railway rails to the ties which consists in a sleeve member adapted to be slidably mounted on the tie and engage one side of the rail, a wedge member adapted to be driven in between said sleeve member and the top of the tie and engage the other side of the rail, a wedge pin adapted to be driven into holes in said wedge

member and in the tie to wedge said members tightly together, and means for holding said pin in said holes.

7 Means for attaching railway rails to the
5 ties which consists in a sleeve member adapted to be slidably mounted on the tie and engage one side of the rail, a wedge member adapted to be driven in between said sleeve member and the top of the tie and en-
10 gage the other side of the rail, a wedge pin

adapted to be driven into holes in said wedge member and in the tie to wedge said members tightly together, and means whereby said sleeve member locks said pin in place.

Signed at Pittsburg, Pennsylvania, this 15
25th day of March, 1911.

WILLIAM J. McDERMOTT.

Witnesses:

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