J. P. BERGERON.

RAIL FASTENING DEVICE.

APPLICATION FILED NOV. 8, 1916.

1,237,996.

Patented Aug. 21, 1917.

Fig. 1.

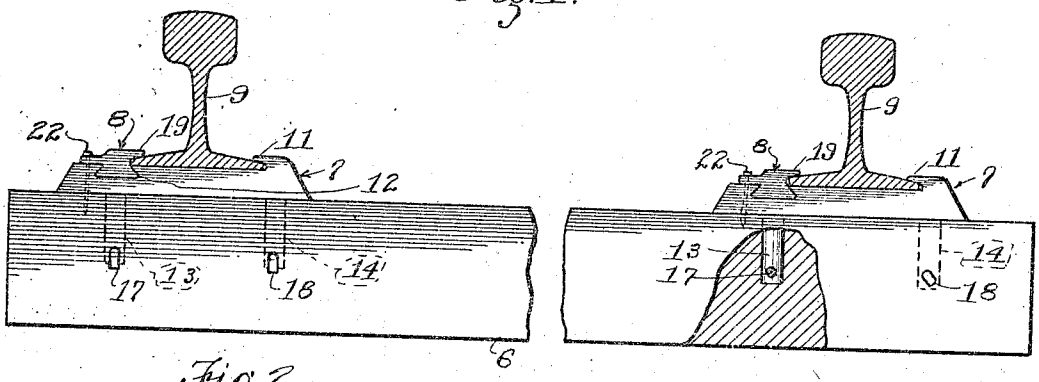


Fig. 2.

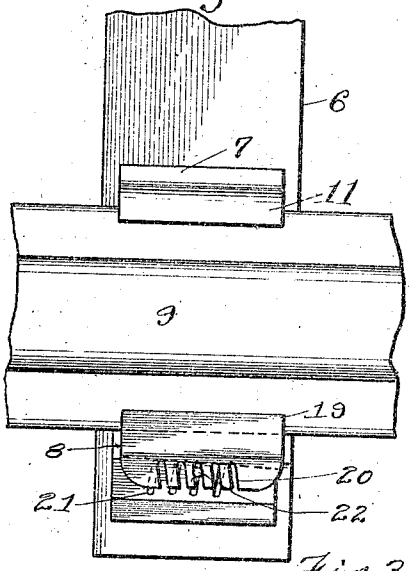


Fig. 4.

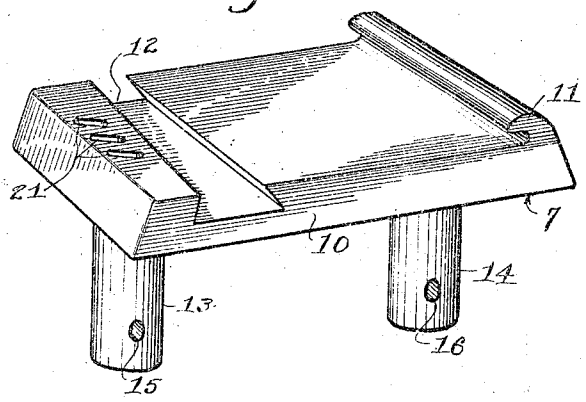


Fig. 3.

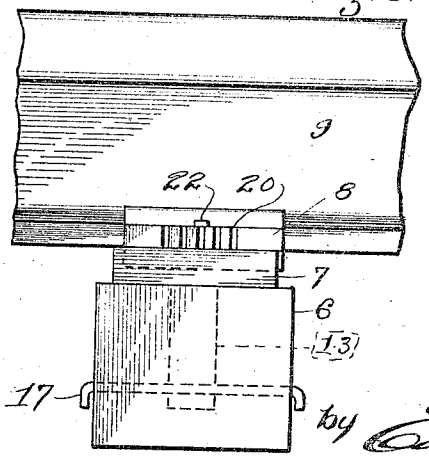
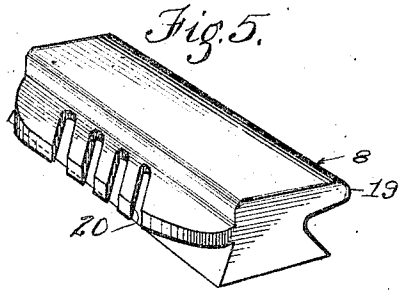


Fig. 5.



Inventor

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by Edmund C. Stanwood Atty.

UNITED STATES PATENT OFFICE.

JASMIN P. BERGERON, OF PASADENA, CALIFORNIA, ASSIGNOR OF ONE-HALF TO HENRY C. SHIPPEE, OF LOS ANGELES, CALIFORNIA.

RAIL-FASTENING DEVICE.

1,237,996. Specification of Letters Patent. Patented Aug. 21, 1917.

Application filed November 8, 1916. Serial No. 130,166.

To all whom it may concern:

Be it known that I, JASMIN P. BERGERON, a citizen of the United States of America, residing at Pasadena, in the county of Los Angeles, State of California, have invented new and useful Improvements in Rail-Fastening Devices, of which the following is a specification.

This invention relates to an improvement in a rail fastening device, and especially to a device having a rail anchoring support which is interposed between the rail and tie.

The objects of my invention are to provide a rail fastening device, which will firmly anchor the rail to the tie, is simple, durable, and enhances safety by preventing spreading of the rails.

To these ends, I employ a rail support or chair which is secured to the tie and has means for receiving the bottom flange of the rail, and a removable locking wedge, which may be inserted in place, tightened and removed without complicated means or the need of expert labor.

I accomplish these objects by means of the embodiment of my invention illustrated in the accompanying drawings, in which:

Figure 1 is an elevation of a tie having my improved rail fastening device applied thereto.

Fig. 2 is a fragmentary plan view.

Fig. 3 is a side elevation.

Fig. 4 is a perspective view of the rail support or chair.

Fig. 5 is a perspective view of the locking wedge.

Referring more particularly to the drawings, 6 indicates an ordinary wooden tie, upon which a chair 7, preferably of metal, is mounted. A locking wedge 8 is inserted in the chair and overlying one edge of the rail 9.

The chair 7 comprises a flat base 10 having an under cut rib 11 formed at one side thereof, in which one edge of the flange of the rail is adapted to be disposed. At the opposite edge of the chair a groove 12 is formed in the base for the reception of a locking wedge, which is preferably of metal. The side walls of the groove are undercut to securely hold the wedge in place. Depending from the bottom of the base are posts 13 and 14, which are provided with transverse bores 15 and 16. It is a well known fact that the destruction and deterioration of the wood ties, as used at present, are due principally to the use of the ordinary spike, for, as these spikes are driven into ties there occurs a broken and splintered effect on the fiber of the wood which allows of a rapid disintegration through the elements and through the vibration imparted by the train traffic. Eventually a loosening of the spike hold is caused. After several replacements of the spike in the tie the limit of holding space is exhausted and the tie becomes useless. By the use of my post, I overcome these objections by boring shallow openings in the tie, in which the posts 13 and 14 are disposed. Suitably formed pieces of metal 17 and 18 are driven through the tie and bores and clenched at the outer end, thereby firmly securing the chairs to the tie.

The rails 9 are now placed in position with one edge of the flange disposed under rib 11. Wedge 8 is now inserted in groove 12. Wedge 8 is provided with a tenon which has walls to conform with the undercut walls of the groove and rim 19 to overhang the flange of the rail. Wedge 8 and groove 12 are tapered from front to rear. By forcing the wedge into the groove, pressure between the rail and chair is increased, firmly securing same. A lateral pressure is also exerted, which pushes the rail positively and firmly into the permanent holding portion of the support on the opposite side of the rail. The space of the holding support being many times that of a spike head, the resistance to shearing strain, which is especially large at curves, is greatly increased. The frictional binding of the wedges also decreases the liability of loosening due to vibration. However, to avoid tampering and to insure against loosening, I have provided the outer edge of the wedge with toothed openings 20 and corresponding openings 21 in the chair. A pin 22 is inserted through registering openings securely fixing the wedge to the base.

By placing the chair with the rib on corresponding sides of the rail, the tie may be removed by sliding the latter from beneath the rail. The pins 22 are removed and wedges 8 are then forced from position. With the wedges removed, ties may be slid from under the rail, as will be noted by reference to Fig. 1.

What I claim is:

1. A rail fastening device, comprising a base, said base provided with means for engaging one edge of the flange of a rail and a locking wedge having means for engaging the opposite edge of the flange of the rail, said base provided with means for slidably receiving the locking wedge and provided with depending posts having transverse bores, and pins for said bores.

2. A rail fastening device comprising a base, said base provided with means for engaging one edge of the flange of a rail and a wedge receiving groove, a wedge slidably disposed in said groove, said wedge having means for engaging the opposite edge of the flange of said rail, said base provided with depending posts having transverse bores, and pins for said bores.

3. A rail fastening device comprising a base, said base provided with a rib for engaging one edge of the flange of a rail and a groove spaced therefrom, a wedge slidably disposed in said groove, said wedge having a rib for engaging the opposite edge of the flange of said rail, said base provided with depending posts having transverse bores and pins for said bores.

4. A rail fastening device, comprising a base, said base provided with a rib for engaging one edge of the flange of a rail and a longitudinally tapering groove spaced therefrom, a wedge having a tapering tenon for disposal in said groove, said wedge provided with a rib for engaging the opposite edge of the flange of said rail, said base provided with depending posts having transverse bores, and pins for said bores.

5. A rail fastening device, comprising a base, said base provided with a rib for engaging one edge of the flange of a rail and a groove spaced therefrom, a wedge slidably disposed in said groove, said wedge having a rib for engaging the opposite edge of the flange of said rail, said base provided with depending posts having transverse bores, and pins for said bores.

6. In combination with a tie having openings; a rail fastening device comprising a base plate provided with means for securing a rail in place thereon, and anchoring posts formed on said base plate fitted in said openings and detachably secured to said tie.

7. In combination with a tie having openings; a rail fastening device comprising a base plate provided with means for securing a rail in place thereon, anchoring posts formed on said base plate fitted in said openings, and removable keys for locking said posts in said tie.

In witness that I claim the foregoing I have hereunto subscribed my name this 25th day of October, 1916.

JASMIN P. BERGERON.