

J. W. KENDRICK.
TIE PLATE.
APPLICATION FILED MAY 2, 1910.

1,011,208.

Patented Dec. 12, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

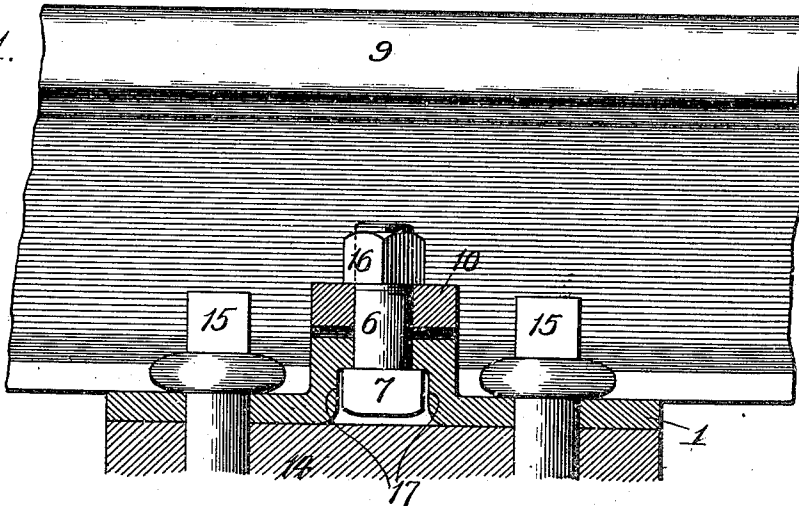


Fig. 2.

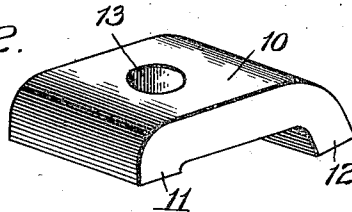


Fig. 3.

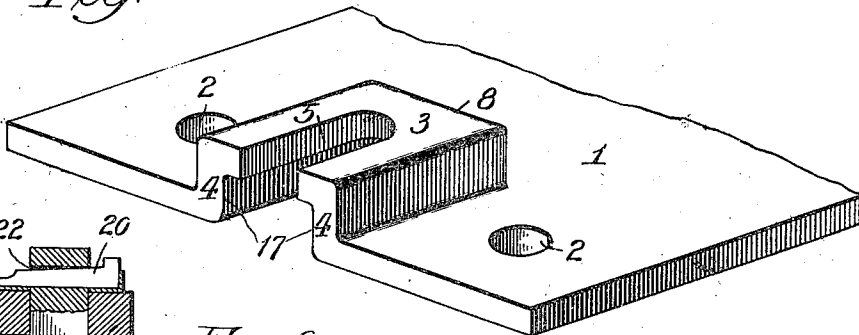
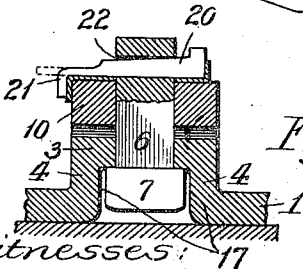


Fig. 6.



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2 SHEETS-SHEET 2.

Fig. 4.

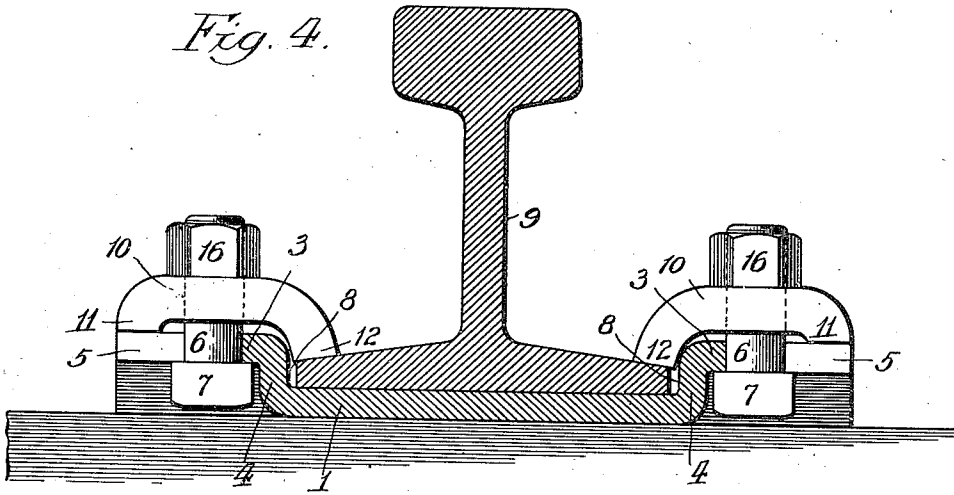
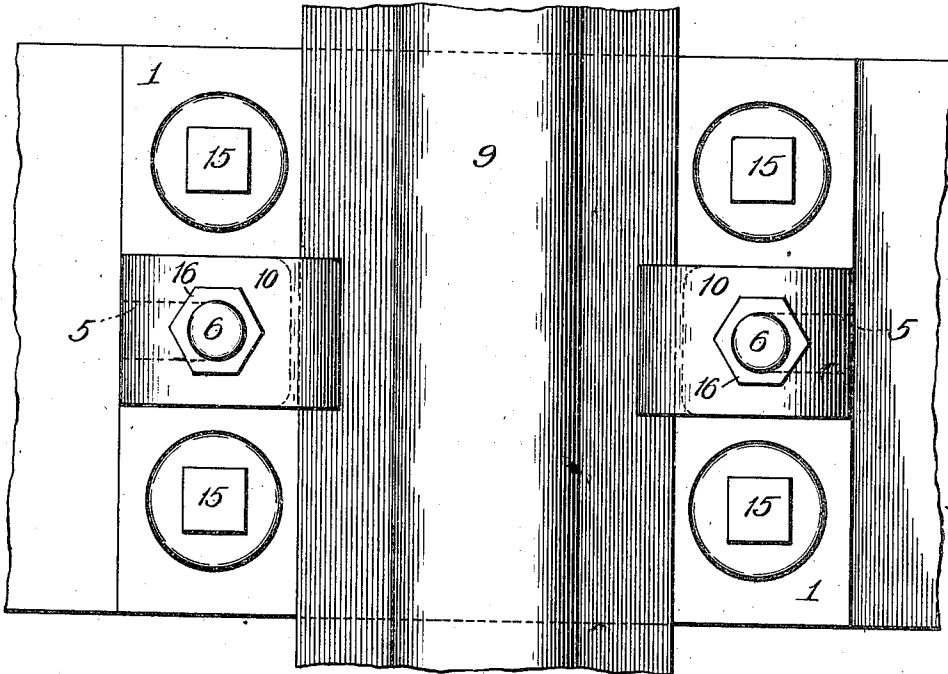


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN W. KENDRICK, OF CHICAGO, ILLINOIS.

TIE-PLATE.

1,011,208.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed May 2, 1910. Serial No. 558,818.

To all whom it may concern:

Be it known that I, JOHN W. KENDRICK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Tie-Plates, of which the following is a specification.

The object of my invention is to provide means for fastening railway track rails to the ties in such a manner that the larger part of the work may be performed in the preparation of the ties and before the ties are shipped to the location where the track is to be laid. In the preliminary preparation of the ties according to my invention, the parts attached to the ties are adjusted to the gage of the track, thus further decreasing the work to be performed at the place where the track is laid.

Other and further objects of my invention will appear from the following description and claims, taken in connection with the accompanying drawings, in which—

Figure 1 is a sectional view through the fastening devices and tie plate, the section lying in line parallel to the track rail. Fig. 2 is a perspective view of a clip forming part of the fastening device. Fig. 3 is a fragmentary view in perspective, showing one end of the tie plate. Fig. 4 is a view of the entire device assembled, the view showing a section transverse to the track rail. Fig. 5 is a plan view of the entire device assembled, and showing its relation to a track rail. Fig. 6 is a sectional view of a modification.

In the application of my improved device, separate means are provided for attaching the tie plate to the tie, and for attaching the rail to the tie plate, the former operation being preferably performed at the time the tie is prepared for use, leaving only the operation of attaching the rail to the tie plate to be performed at the place where the track is being laid. The tie plate 1 is adapted, as usual, to lie upon the upper surface of the tie beneath the track rail. Adjacent the ends, the tie plate is provided with spike holes 2, whereby the tie plate may be secured to the tie before the latter is shipped to the place where the track is being laid. It will be obvious, however, that this operation may, if desired, be performed after the shipment of the ties.

Adjacent each end the tie plate is provided with an upwardly projecting boss 3,

said boss forming a recess in the bottom of the tie plate. These bosses may be considered as being formed by deflecting the body of the tie plate 1 upwardly vertically at 4, thus raising the upper horizontal wall of the boss 3 above the remainder of the base of the tie plate. The boss 3 extends inwardly from the end of the tie plate, and its upper wall is provided with a slot 5 which extends inwardly from the end of the tie plate. The height of the boss 3 and the width of the slot 5 are sufficient to permit a bolt 6 to be adjusted, as shown in Figs. 1, 4 and 5, the head 7 of the bolt lying between the upper wall of the boss and the tie, and the stem of the bolt passing through the slot 5. The inner ends 8 of the bosses 3 are spaced apart sufficiently to afford a bearing for the base of the rail 9, and the two tie plates affixed to the ends of the tie are spaced apart a distance equal to the gage of the track.

In order to secure the rails in place, clips 10 are provided. The form of these clips is clearly shown in Figs. 2 and 4, each of them being provided with downturned ends 11 and 12, the end 11 being designed to rest upon the top of the boss upon the tie plate, and the end 12 to rest upon the upper surface of the base of the rail. The projections 11 and 12 are so arranged that the central part of the clip is spaced from the upper surface of the boss 3. Each of the clips 10 is provided with a bolt hole 13.

In the operation of track laying, the ties 14, with the tie plates 1 secured to them, preferably by means of screw spikes 15, are laid upon the road-bed, and the rails laid in position upon tie plates. The tie plates having been properly positioned upon the ties, the correct gage will be secured merely by placing the rails in the spaces provided for them between the bosses on the tie plates. The clips 10, with the bolts 6 already in place, and held in place by their nuts 16, are then used for the purpose of holding the rails in position. The clips 10, with their bolts 6 and nuts 16 assembled, may be placed in position, as illustrated in Figs. 1, 4 and 5, without removing the nuts 16 from the bolts 6. If the nut be turned up adjacent the upper end of the bolt, thus permitting the bolt to project a considerable distance below the clips 10, the stem of the bolt 6 can be slipped into the slot 5 in the upper wall of the boss 3 with the head 7 of the bolt lying

beneath said wall. After the clip with its bolt is slipped in position in this manner, the nut 16 may be tightened, this completing the operation of securing the rail to the tie plate and tie.

Non-rotative engagement between the bolts 6 and the tie plates may be secured by providing the bolts with square or other non-circular heads which engage the inner surface 17 of the side walls of the bosses. If the bolt heads 7 be made square, as indicated upon the drawing, they may be slipped into place with their shortest dimension crosswise of the groove formed by the interior of the boss. Their longer dimension, the diagonal of the square head of the bolt, being greater than the distance between the side walls 17, rotation of the bolts, when the nuts 16 are turned will be prevented.

In the modified form of construction which I have illustrated in Fig. 6, instead of using a nut with the bolt 6, I have made it with a slot 22 and a tapered key 20 may be driven into this slot to fasten the parts together. In this case the bolt is made with a square section and the key 20 is made malleable so that its end 21 can be hammered down as shown in the drawings to keep it from loosening or becoming withdrawn.

I claim:

1. In a device of the class described, a tie plate, a tie, spikes securing said tie plate to said tie, said tie plate having a slot extending in from the edge thereof adapted to receive an anchoring bolt after the said tie plate has been secured to the tie, and the edges of said tie plate being struck up so as to afford space for the bolt head above the plane of the lower face of the tie plate.

2. In a device of the class described, a tie plate provided with apertures to receive spikes for securing the same to a tie, the base of said tie plate being provided with an apertured boss, the upper wall of said boss being raised sufficiently to afford space for the head of a bolt between said wall and the upper surface of the tie.

3. In a device of the class described, a tie plate provided with spike holes and also provided at each end with a boss, the upper walls of each boss having slots extending inwardly from the end of the tie plate, the inner ends of said bosses being separated by a distance approximately equal to the width of a railroad rail base.

4. In a device of the class described, a tie, a tie plate secured at each end thereof, each end of said tie plates being provided with an upwardly extending boss, the upper wall of each of said bosses being slotted inwardly from the end of the tie plate, the space between the inner ends of the bosses on each tie plate being equal to the width of a railroad rail base, and said spaces upon

the tie plates at the opposite ends of each tie being separated by a distance equal to the gage of the railroad track.

5. In a device of the class described, a tie, a tie plate secured thereto, said tie plate being provided with an upwardly extending boss, the upper wall of said boss being provided with an aperture to receive the stem of a bolt, a rail, a clip overlying said boss and the base of said rail, a bolt passing through the aperture in said boss and through an aperture in said clip, the head of said bolt lying between the upper surface of the tie and the inner surface of said boss, and a nut on the upper end of said bolt.

6. In a device of the class described, a tie, a tie plate secured thereto, said tie plate being provided with an upwardly extending boss, the upper wall of said boss being slotted inwardly from the end of said tie plate, a clip, a rail, said clip overlying said boss and the base of said rail, and a bolt having its head seated beneath the upper wall of said boss and having its stem passing through the slot in said boss and through an aperture in said clip.

7. In a device of the class described, a tie plate, means for securing said tie plate to a tie, a bolt anchored in said tie plate, a clip having an aperture through which said bolt passes, and a rail, the ends of said clip engaging the base of said rail and said tie plate and the central part of said clip adjacent said bolt being spaced from said tie plate.

8. In a device of the class described, a tie plate, an upwardly extending boss therein, the upper wall of said boss being provided with an aperture, a bolt passing through said aperture and having its head in non-rotative engagement with the interior of said boss.

9. In a device of the class described, a tie plate, an upwardly extending boss therein, the interior of said boss having a non-circular form, and the upper wall of said boss being provided with an aperture, and a bolt passing through said aperture, said bolt having a non-circular head engaging the non-circular interior of said boss.

10. In a device of the class described, a tie, a tie plate, an upwardly extending apertured boss in said tie plate, means securing said tie plate to said tie, a bolt extending through the aperture in said boss and having its head seated in the interior of said boss and between said boss and said tie, and means to secure said bolt against rotation.

11. In a device of the class described, a tie plate having a groove in its under surface extending inwardly from the end thereof, said tie plate being slotted inwardly from the end thereof along the base of said groove, and a bolt passing through said slot

and having its head in non-rotative engagement with the side walls of said groove.

12. In a device of the class described, a tie plate, a tie, spikes securing said tie plate to said tie, opposed lips struck up from the tie plate and extending from the edge thereof toward the rail base, and a bolt adapted to engage said lips and secure the rail base to the tie plate.

13. In a device of the class described, a tie plate, a tie, spikes securing said tie plate to said tie, said tie plate having a slot extending in from the edge thereof adapted to receive an anchoring bolt after the said tie plate has been secured to the tie, and an arching member adapted to engage the tie plate and the rail base at its respective ends and be engaged at an intermediate place by the bolt.

14. In a device of the class described a tie plate provided with apertures to receive spikes for securing the same to a tie, the base of said tie plate being provided with an apertured boss, the upper wall of said boss being raised sufficiently to afford space for the head of a bolt between said wall and the upper surface of the tie, in combination with an arched member to go over said boss and be engaged by said bolt, the ends of said arched member resting respectively on the tie plate and on the rail base.

In testimony whereof, I have subscribed my name.

JOHN W. KENDRICK.

Witnesses:

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