Nov. 2, 1926.

1,605,129

G. K. MEADE

RAIL FASTENER

Original Filed June 1, 1925

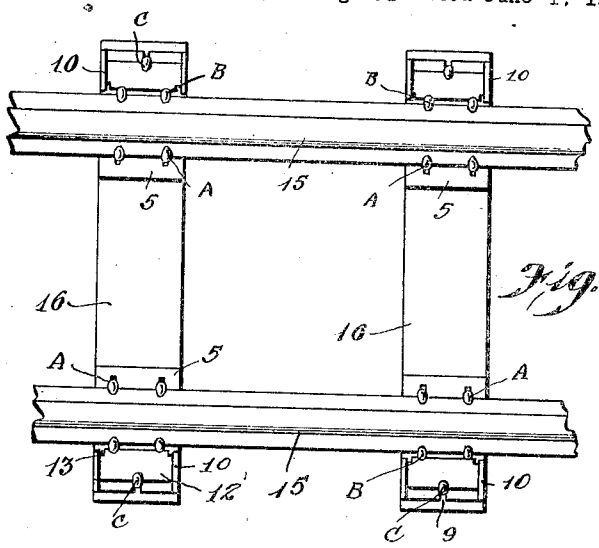


Fig. 1.

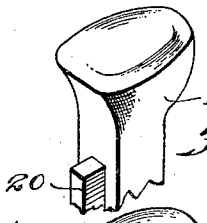


Fig. 6.

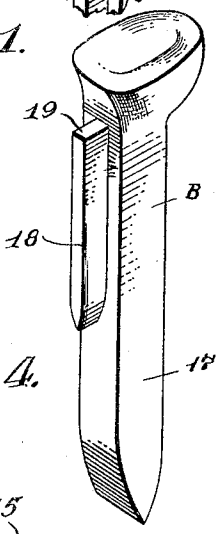


Fig. 4.

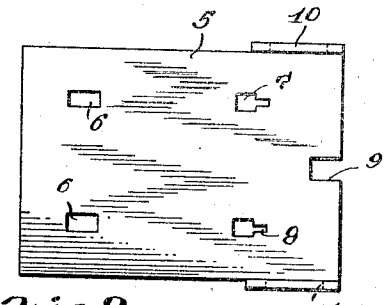


Fig. 2.

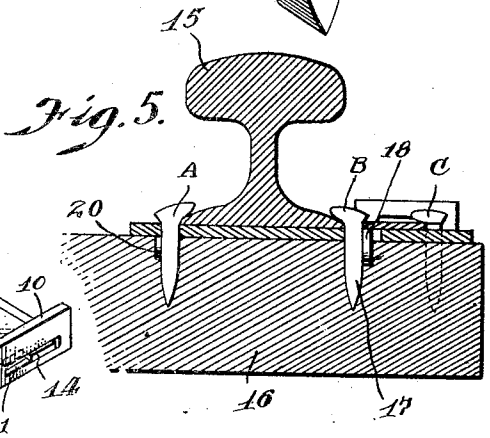


Fig. 5.

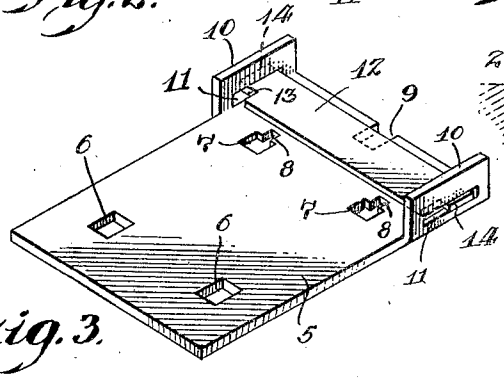


Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE KENNETH MEADE, OF KIMBERLEY, BRITISH COLUMBIA, CANADA, ASSIGNOR OF ONE-HALF TO ROBERT ELY CRERAR, OF KIMBERLEY, CANADA.

RAIL FASTENER.

Application filed June 1, 1925, Serial No. 34,240, and in Canada August 25, 1924. Renewed September 13, 1926.

My invention is an improvement in rail fastening devices.

An important object of my invention is to provide a device of the above named character which will prevent the spreading of the rails to which they are secured.

Another object of the invention is to provide a tie plate to be secured to its support by spikes or the like and in such a manner that the plate may be easily removed or replaced, and yet while locked in place prevent accidental or other removal of certain of the spikes after they have been driven.

A further object of the invention is to provide a strong and durable tie plate for carrying railroad rails or the like upon cross ties or similar supports.

A further object of the invention is to provide a device of the above character which is inexpensive to manufacture, simple and easily operated.

In the drawings forming a part of this specification and in which like numerals are employed to designate like characters throughout the same,

Figure 1 is a plan view showing my invention as in use.

Figure 2 is a plan view of the tie plate.

Figure 3 is a perspective view of the tie plate showing the locking plate in place.

Figure 4 is a view of the shouldered spike for use with my invention.

Figure 5 is a transverse section showing a rail locked to a cross tie by means of my invention.

Figure 6 is a portion of a spike having a relatively short shoulder.

In the drawings. Figure 3, the tie plate 5 is provided with rectangular openings 6 and openings 7, the latter being extended rearwardly as shown at 8. The plate is also cut away at 9 for a purpose which will be hereinafter described.

Ears 10 are formed at one end of the tie plate and are provided with slots 11. A locking plate 12 having its two forward corners cut away as at 13 is provided to slide either laterally or longitudinally within the openings 11, while projections 14 serve as handles for adjusting the lock plate in its proper position for locking, or for disengaging the same.

In Figure 4 I have shown in detail a special type of lock spike 17 which is inserted in the openings 6 and 7 for holding the rail 15 to the rail tie 16.

The spike 17 is provided with a longitudinal shoulder 18, the upper face 19 of the shoulder engaging the lock plate. In the present invention it will be necessary to employ four of such spikes for each tie plate used, the spikes which are inserted into the openings 6 having a relatively shorter shoulder as shown at 20.

A fifth spike of the usual type is driven into the rail tie through opening 9 after the other spikes have been placed.

The invention is used as follows:

The tie plate 5 is first placed at the proper position on the end of the tie 16 and a rail 15 is then placed upon the plate so that the inner edge of the base flange of the rail is in line with the inner edges of the openings 6. Two spikes A of the type having the relatively short shoulder, as described above, are inserted into the openings 6 as shown in Figure 5 with the shoulders opposite the rail flange. After these spikes are driven home it will be found that the upper faces of the shoulders 20 will be flush with the upper surface of the tie. The tie plate 5 is now driven outwardly so that the outer edges of the openings 6 engage the head of the spike and at the same time overlap the upper surfaces of the shoulders 20, thus locking spikes A in place.

It will be seen that when the plate 5 is driven outwardly the openings 7 will be exposed in a line with the outer edge of the base flange of the rail. Spikes B having relatively longer shoulders than spikes A are now driven home through openings 7, the shoulders of the spikes passing through the small portions of the openings as at 8. The relatively long shoulders 18 of spikes B will have their upper faces 19 flush with the tops of plate 5.

A lock plate 12 is now easily inserted into the openings 11 in the ears 10 by virtue of its cut away corners 13. This allows free movement of the plate before the same is locked.

In continuing the locking operation the plate 12 is now driven forwardly so that its inner edge overlaps the upper faces 19 of the shoulders 18. This plate may be driven until its inner edge abuts the spike heads.

When the plate 12 has been driven into place, locking spikes B, a fifth spike C of the usual type is driven into the tie through an opening 9, its head engaging the plate 12 thus firmly holding it against lateral movement. It will be seen that when plate 12 is in locked position it is prevented from longitudinal movement by virtue of the edges of the cut away portions engaging the ears 10. In order to disengage the rail from the tie the operation is reversed.

It is to be understood that various changes may be made in the size, shape and arrangement of parts of my invention without departing from the spirit of the invention or the scope of the subjoined claims.

I claim:

1. In a rail fastening device, a tie plate having upturned apertured ears on one end thereof, a lock plate movable within the apertures, means for securing said plate and a rail to the tie and means for locking the plate in abutting position against the first named means to prevent displacement thereof.

2. In a rail fastening device, an apertured tie plate adapted to be shifted longitudinally of a tie, shouldered spike adapted to pass through the plate apertures for engagement with the rail flanges, a lock plate associated with the tie plate and engaging certain of the spikes when in locked position, and a locking spike for said lock plate.

3. The combination in a rail fastening device, of a tie plate arranged in conjunction with a rail and a tie, and held against displacement by a spike having a shank, a head at one end of the shank projecting outwardly from the shank, and a shoulder formed on the shank, said shoulder running longitudinally of the shank and terminating at a point near the head of the spike.

4. The combination in a rail fastening device, of a tie plate arranged in conjunction with a rail and a tie, and held against displacement by a spike having a shank, a head at one end of the shank projecting outwardly from the shank, and a shoulder formed on the shank, said shoulder running longitudinally of the shank on the face opposite the outwardly projecting head portion, and terminating at a point near the head of the spike.

5. In a rail fastener, the combination with a rail and a tie of a shiftable tie plate provided with elongated openings and a slot, shouldered spikes adapted to pass through the openings, a lock plate associated with the tie plate, some of said spikes having their shoulders engage the under surface of the tie plate when in locked position, and a lock spike within the said slot as and for the purposes described.

6. In a rail fastener, the combination with a rail and a tie of a shiftable tie plate provided with elongated openings and a slot, shouldered spikes adapted to pass through the openings, a lock plate associated with the tie plate, some of said spikes having their shoulders engage the under surface of the lock plate when the same is in locked position, and a lock spike within the said slot as and for the purposes described.

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