

F. G. MILLIKEN.  
RAIL SECURING DEVICE.  
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1,377,424.

Patented May 10, 1921.

Fig. 1.

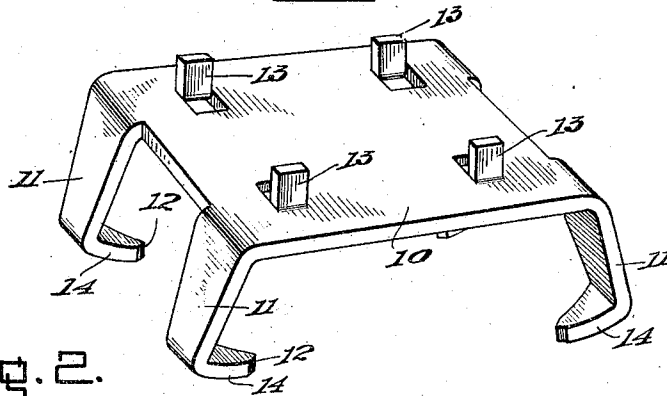


Fig. 2.

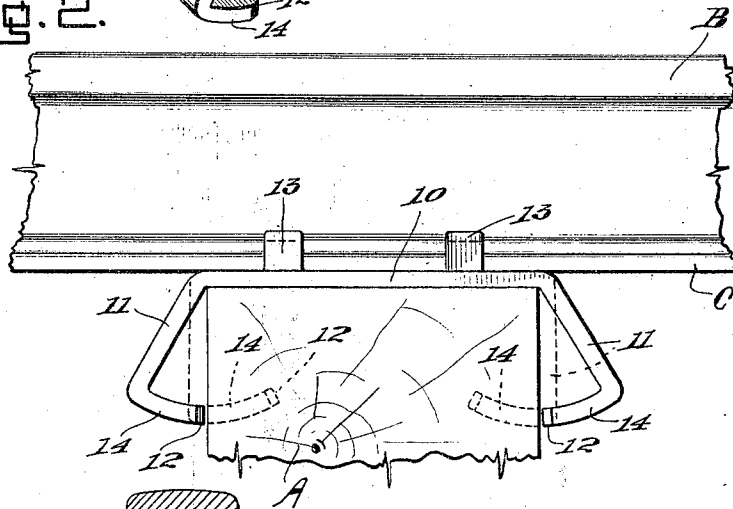


Fig. 3.

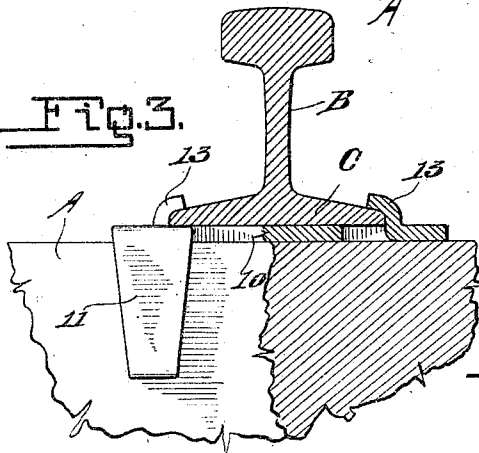
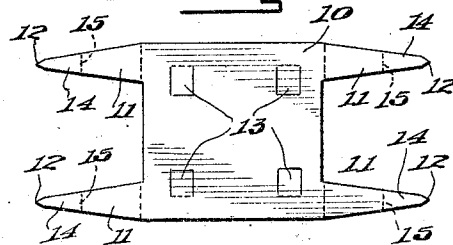


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## RAIL-SECURING DEVICE.

1,377,424.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, FRANK G. MILLIKEN, a citizen of the United States, residing at Enumclaw, in the county of King and State of Washington, have invented certain new and useful Improvements in Rail-Securing Devices, of which the following is a specification.

This invention relates to a device designed for securing the T-railway rails to the cross ties, and an object of the invention is to provide a device of this nature which will prevent the loosening of the rails, and eliminate liability of the rails turning or tilting, especially on sharp curves, consequently eliminating the liability of accidents due to this tilting or turning of the rails, which tilting is permitted by the working loose of the spike in the ties, and consequently rendering insecure the fastening of the rails to the ties.

In use, the constant jar administered to the track of the railway by the travel of heavy trains thereover loosens the spikes, causing them to work upwardly and consequently rendering insecure the attachment or connection of the T-rails to the cross ties, frequently resulting in wrecks or accidents, especially on sharp curves.

It is an object of this invention to provide means for attaching the rails to the ties which cannot work loose by the jarring of the track structure and which will maintain firm connection between the T-rails and ties at all times, and also to provide a device of this nature which will eliminate the use of the usual railroad spikes, resulting in considerable savings to the builders of the railroads, the said attaching device also replacing the usual wear plates which are positioned between the bases of the rails and the ties.

Other objects of this invention will appear in the following detailed description, taken in connection with the accompanying drawings, forming a part of this specification, and in which drawing:

Figure 1 is a perspective view of the improved rail securing device.

Fig. 2 is a side elevation of the rail securing device showing it associated with a T-rail and cross tie.

Fig. 3 is a view partly in section, and partly in end elevation, of the rail securing device showing it applied, and

Fig. 4 is a plan of the blank of which this improved rail securing device is formed.

Referring more particularly to the drawings, the improved rail securing device is preferably stamped from a sheet of malleable steel and it comprises a substantially rectangular portion 10 having a plurality of prongs 11 projecting laterally from its edges at each corner of its opposite sides, and these prongs have their terminals sharpened as shown at 12, to form inserting points, which are adapted to enter a cross tie A as illustrated in dotted lines in Fig. 2 of the drawings, when the device is applied. Tongues, four in number, are struck from the flat rectangular body 10 of the device, and these tongues 13 are bent upwardly from the flat body as shown in Fig. 1 of the drawings, while the prongs 11 are bent downwardly and outwardly from the edges of the body 10, having their end portions 14 outwardly of the dotted lines 15 as shown in Fig. 4, curved inwardly, forming substantially transversely extending arcuate inserting prongs.

In applying the improved rail securing device, if the rail B has previously been placed, it is jacked up sufficient distance to permit the insertion of a flat rectangular body or plate 10 of the device, beneath the face C of the rail, and bent so that a pair of the upstanding tongues 13 will engage upon each edge of the base C of the rail B as shown in Fig. 3 of the drawings. The body 10 thus forms a wear plate for the rail B when it is lowered, eliminating the necessity of the employment of the usual wear plate, placed between the rails and ties, to prevent wear upon the ties by the rails. After the rail B has been lowered upon the body 10 of the securing device, the tongues 13 are clenched over the upper surface of the base C of the rail, as shown in Fig. 3, securely connecting the rail B to the securing device 10. This clenching of the tongues may be done with an ordinary spike maul. When the securing device is first placed upon the tie A, the prongs or tongues 11 extend outwardly at oblique angles to the vertical sides of the tie, and the pointed ends 12 thereof are spaced shortly from the opposite sides of the ties. However, after the rail B has been secured to the body of the securing device, these tongues are driven by means of a spike maul, or analogous tool, so that the arcuate transverse inserting points 14 are driven into the tie A as indicated in dotted lines in Fig. 2 of the drawings, bringing

the portions of the prongs between the arcuate portions 14 of the plate 10 in facial abutment with the sides of the tie A, thereby securely attaching the rail B to the tie A, in  
5 such manner that the connection will remain firm and secure under the jarring action caused by the travel of heavy trains over the rail B.

Changes in details may be made without departing from the spirit of this invention; but,

I claim:

1. In a rail securing device, the combination of a flat body plate, having a plurality  
15 of upstanding rail attaching members formed thereon adapted to be clenched over the base of a rail, for securely attaching the rail to a body, and a plurality of prongs carried at opposite edges of said body plate  
20 and having arcuate inserting ends adapted to be driven into a cross tie.

2. In a rail securing device, the combination, with a rail cross tie, of a flat body plate adapted to be placed intermediate the  
25 rail and cross tie, said plate having a plurality of square upstanding rail attaching members formed thereon, adapted to be clenched over the base of the rail for secur-

ing the rail to a cross tie, and prongs extending laterally from the edges of said  
30 body plate having arcuate inserting ends adapted to be driven into a tie, said prongs being so positioned that they lie outwardly from the longitudinal edges of the rail base to facilitate fastening of the rail securing  
35 device to a cross tie without altering the position of the rail.

3. As an article of manufacture, a rail securing device comprising a flat body having  
40 upwardly extending square portions stamped therefrom, and prongs projecting from the lateral edges of said body plate.

4. In a rail securing device, the combination, with a rail cross tie, of a plate having  
45 a flat body adapted to be placed intermediate a rail and cross tie, and upon which the rails rest, said flat body provided with prongs extending laterally from the edges of said body plate, and having inserting  
50 ends adapted to be driven into the tie, said prongs being so positioned that they lie outwardly of the longitudinal edges of the rail base to facilitate fastening of the rail securing device to a cross tie without complete  
55 removal of the rail with respect to the tie.

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