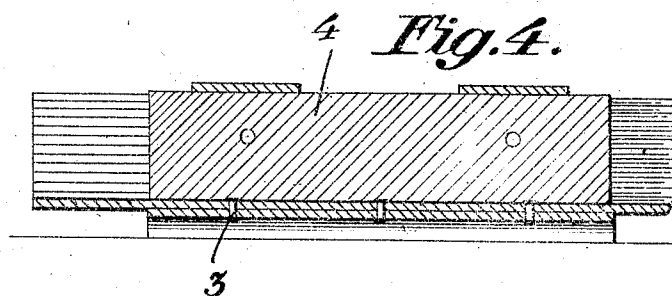
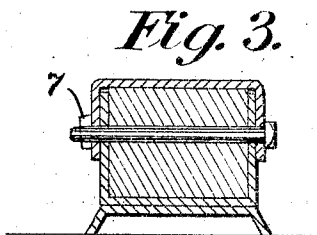
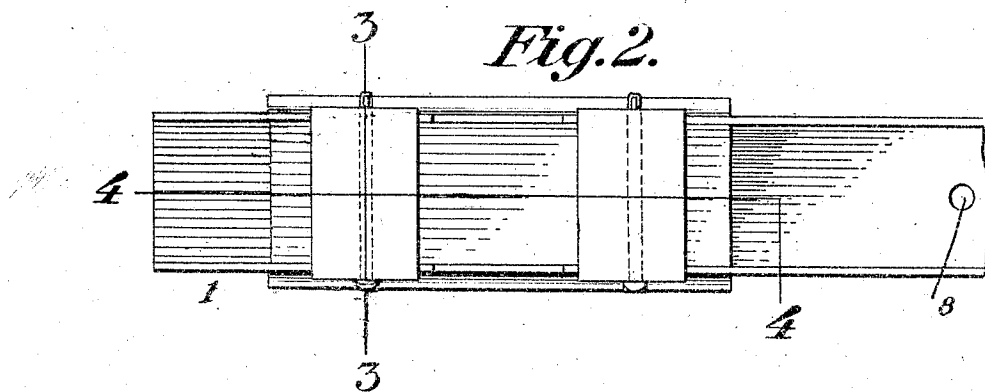
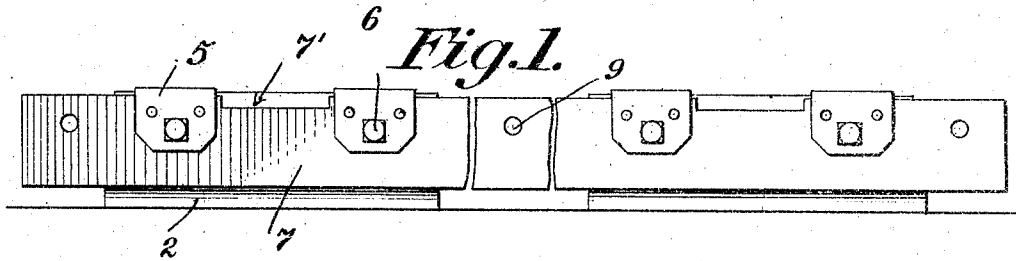


J. C. EVANS.  
RAIL TIE.  
APPLICATION FILED SEPT. 8, 1909.

1,015,671.

Patented Jan. 23, 1912.



Witnesses

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# UNITED STATES PATENT OFFICE.

JACOB C. EVANS, OF BELLWOOD, PENNSYLVANIA

## RAIL-TIE.

1,015,671.

Specification of Letters Patent.

Patented Jan. 23, 1912.

Application filed September 8, 1909. Serial No. 516,873.

### *To all whom it may concern:*

Be it known that I, JACOB C. EVANS, a citizen of the United States, residing at Bellwood, in the county of Blair and State of Pennsylvania, have invented new and useful Improvements in Rail-Ties, of which the following is a specification.

This invention relates to railroad ties, and the object of the invention is to construct a metallic tie provided with wooden cushions for the base flanges of the rails and being also provided with offset flanges upon its lower face whereby the same will be effectively secured within the road bed and accidental lateral movement thereof effectively obviated.

Another object of the invention is to provide a device of this character comprising a substantially U-shaped member having wooden or partially yieldable cushions adapted for the reception of the rail flanges, and the said cushions being positioned adjacent the ends of the metallic member so as to provide spaces whereby the ballast may be readily positioned within the body of the tie and the said tie being also provided directly beneath the cushions with offset flanged members whereby the same may be effectively secured within the road bed of the railway.

A still further object of the invention is to provide a device of this character comprising a substantially cross sectionally U-shaped member adapted for the reception of the rails, with means for readily and easily removing the said cushions from the ties and replacing the same when the latter have become worn.

With the above and other objects in view, which will appear as the description progresses, the invention resides in the novel construction of elements and their arrangement in operable combination so as to produce a rail tie providing a cushion for the rail so that the pounding of the wheels upon the track is greatly obviated, the details of construction being described in the specification connected herewith.

In the accompanying drawing there has been illustrated a simple and preferred embodiment of the improvement, and in which, Figure 1 is a side elevation of the device. Fig. 2 is a top plan view of one end of the same. Fig. 3 is a sectional view upon the line 3—3 of Fig. 2. Fig. 4 is a longitudinal sectional view upon the line 4—4 of Fig. 2.

In the accompanying drawing the numeral 1 designates the tie proper. This tie 1 is constructed of a cross-sectionally U-shaped metallic member, having its base portion, adjacent its ends provided with removably connected offset angular members 2. In the drawing these offset members 2 are illustrated as separate elements from the tie proper and are of a substantially cross-sectionally U-shaped construction, the upper or body portion of which being of a width equaling that of the width of the U-shaped tie 1 and having their edges arranged at suitable angles as clearly shown in Fig. 3 of the drawing. The bodies of the members 2 may be connected with the lower face of the tie 1 through the medium of suitable removable securing elements 3, as illustrated in Fig. 4 of the drawing, but it is to be understood that said offset members 2 may be integrally formed with the lower face of the tie 1, as heretofore described.

The U-shaped tie 1 is adapted for the reception of a pair of cushion members 4 each of which being positioned directly above the offset flanges 2 and being tightly engaged between the vertical walls of the cross-sectionally U-shaped metallic tie. The cushions 4 are preferably constructed of wood or other partially yieldable material and the said cushions are effectively secured within the U-shaped tie through the medium of spaced bracket members 5 which are preferably rigidly connected with the sides of the tie 1. The sides of the brackets 5 as well as the sides of the tie 1 are each provided with alining openings and these openings are adapted for the reception of suitable bolts or other securing members 6 which are adapted to pass through openings provided within the cushions 4 and to be effectively retained upon the sides of the tie through the medium of nuts or wedge-shaped members 7. By this arrangement, it will be noted that the cushions 4 may be readily removed from the ties 1 by simply withdrawing the bolts 6 and forcing the said cushions from between the sides of the ties 1.

By reference to Fig. 1 of the drawings, it will be noted that the sides of the tie 1, between the brackets 5 are longitudinally cut away for a suitable distance so as to provide suitable depressions, as designated by the numeral 7' and these depressions are adapted to serve as a means for allowing for the wear of the rail upon the cushions 4

without causing the said rails to contact with the sides of the tie 1. It will be noted, by reference to the figures of the drawings, that the cushions 4 are arranged a suitable distance away from each other and from the ends of the ties, so as to provide spaces whereby the ballast of the road bed may be inserted, thus effectively reinforcing the said ties. The central portion of the tie between the cushions 4 has its bottom portion provided with a suitable opening 8, and this opening is adapted to serve as a drain opening for the water which may accumulate within the compartment between the cushions. The sides of the ties are also provided with a plurality of suitable openings 9, which also serve as drain openings for the ballast.

Having thus described the invention, what is claimed as new is: -

The herein described rail tie comprising a substantially U-shaped member, the base or connecting portion of the member being provided with openings, the sides of the member being also provided with openings,

a cushion member comprising rectangular blocks having all of their faces smooth and adapted to be positioned within the U-shaped member adjacent the ends thereof, U-shaped brackets overlying the ends of the cushion members and straddling the sides of the U-shaped members, the sides of the U-shaped member, the off-set arms of the brackets and the cushion member being all provided with a registering opening, a headed member for these openings, the said member having one of its ends provided with an elongated slot, a wedge for the slot, reinforcing members removably connected with the base of the U-shaped member directly below the cushions, and each of said reinforcing members having its longitudinal end bent downwardly to provide feet, all substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB C. EVANS.

Witnesses:

W. E. BALSACH,  
J. K. HOOVER.