# United States Patent [19]

**Bruner**

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[54] **CROSSTIE FOR RAILROAD TRACK**


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[52] **U.S. Cl.** ..... **238/83**; 238/91; 238/264; 238/372

[51] **Int. Cl.** ..... **E01b 3/00**

[58] **Field of Search** ..... 238/83, 84, 90, 91, 29, 238/10 R, 10 B, 107, 106, 264, 372



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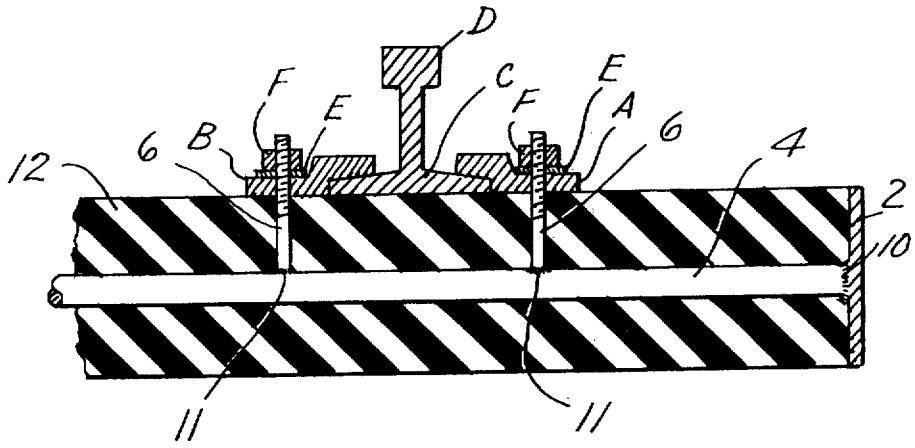
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[57] **ABSTRACT**

A railroad track crosstie of an elongated block of rubber with rigid end plates connected by cross-rods extending through said block to prevent longitudinal stretching of said block and bolts attached to said cross-rods and extending laterally of said block to prevent the lateral movement of said block under pressure and also for the attachment of rail tie plates on said block.


**3 Claims, 4 Drawing Figures**



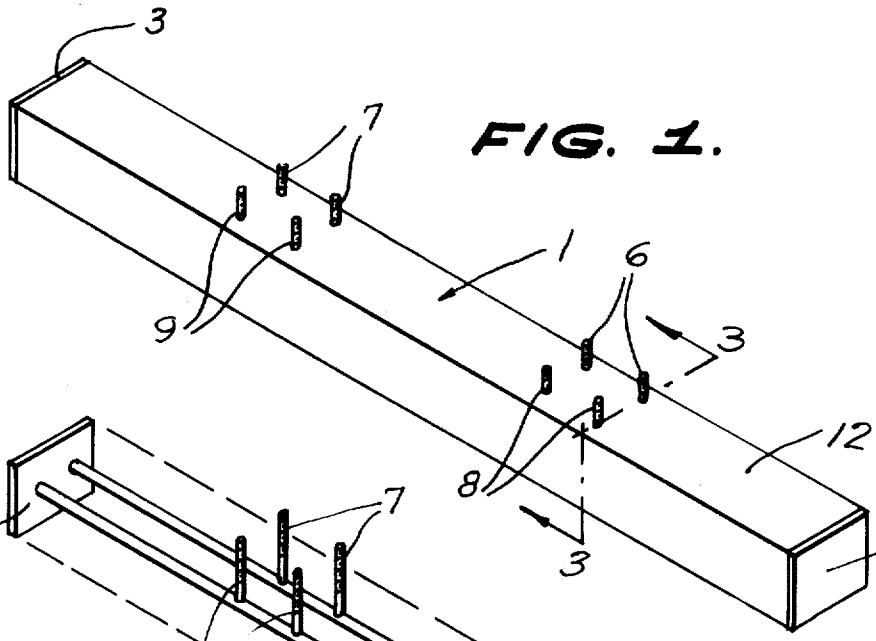



FIG. 1.

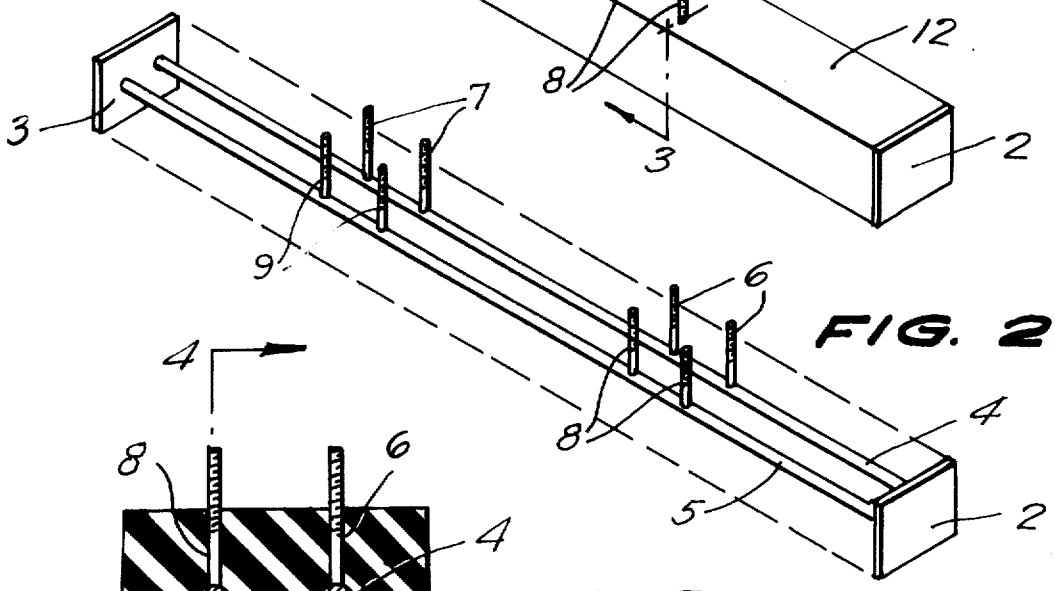
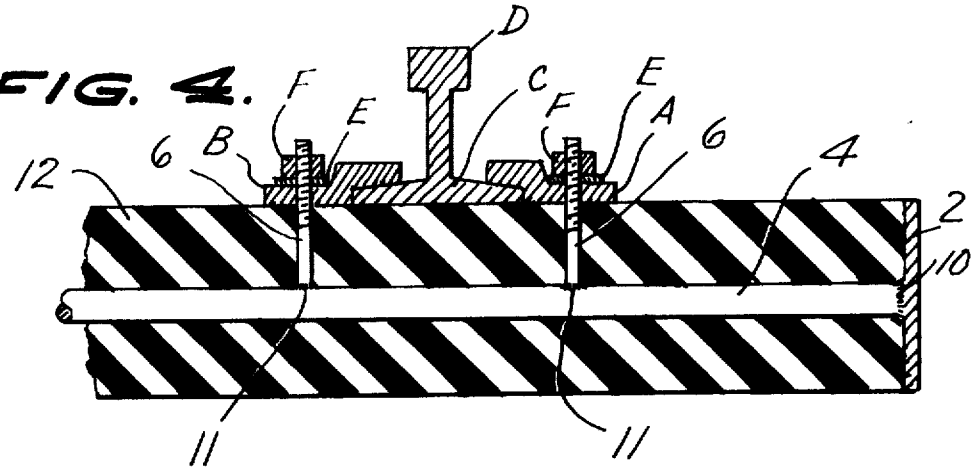



FIG. 2.




FIG. 3.

FIG. 4.



# CROSSTIE FOR RAILROAD TRACK

The present invention is concerned with crossties for railroad tracks.

The crossties as previously known are principally made of wood resulting in large scale cutting of trees reducing a natural resource which prevents soil erosion and provides oxygen for the atmosphere.

On the other hand their is an abundance of used tire casings and other rubber products which are generally destroyed by burning causing a polution of the atmosphere or dumping into rivers, streams or the ocean polluting the water.

It is therefore a principal object of the present invention to provide crossties for railroad track which are principally formed of rubber obtained from used tires and other rubber articles and which crossties dampen the vibrations of trains running at high speeds on tracks supported on the present crossties.

A further and important object of the invention if to provide a resilient crosstie that will not stretch longitudinally or move sideways under pressure of trains moving thereover.

Also it is an object of the invention to provide a crosstie principally of rubber which can be recycled when the rubber shows weathering or wear. Further objects of the invention will be in part obvious and in part pointed out in the following description of the accompanying drawing, in which,

FIG. 1 is a perspective view of a crosstie according to the present invention,

FIG. 2 is a perspective view similar to FIG. 1, but with the rubber block thereof removed,

FIG. 3 is an enlarged cross-sectional view taken on line 1—3 of FIG. 1, and

FIG. 4 is a longitudinal section of the crosstie with a rail and tie plates mounted on said crosstie shown in cross-section.

Referring now more particularly to the drawing in which like and corresponding parts are designated by the same reference characters, 1 generally indicates an elongated resilient block having rigid end plates 2 and 3 at the opposite ends thereof and cross-rods 4 and 5 extending longitudinally of block 1 and attached at their ends to plates 2 and 3 retaining block 1 between said plates.

Bolts 6 and 7 are attached to cross-rod 4, while bolts 8 and 9 are attached to cross-rod 5. Said bolts extend normal to their respective cross-rod through and above block 1 for preventing the lateral movement of block



1.

As an example of a preferred form of the present crosstie, block 1 is formed of an elastomeric material such as material from recycled used tires and other rubber goods, while plates 2 and 3 are each a quarter inch metallic plate and of a shape to match the ends of block 1 as shown. Likewise cross-rods 4 and 5 are of one-half inch diameter or larger metal rods or bars and bolts 6–9 are of a suitable metal and of a diameter and positioned for insertion through the holes provided therefore in commercially available tie plates A and B. The top surfaces 12 of block 1 can be flat with tie plates A and B mounted thereon on opposite sides of rail D whose base C is also positioned on block surface 12, Washers E are mounted on said bolts with retaining nuts F. The size of the crosstie and position of the bolts would vary with the guage and arrangement of the track and type of tie plates with which the crosstie is to be used. Bolts 6–9 can be welded as at 11 to or have eyes around cross-rods 4 and 5. Said cross-rods could be welded as at 10 or riveted to plates 2 and 3.

As indicated in FIG. 4 each crosstie 1-12 is used by being placed on a road-bed, rails D placed on top surface 12 and held thereon by nuts F on bolts 6–9 retaining tie plates A and B on the opposite sides of base C.

I claim:

1. A crosstie for railroad tie plates and tracks comprising an elongated block of elastomeric material having a flat top and opposite flat ends, a pair of plates each positioned on a different one of said flat ends of said blocks, at least on cross-rod attached to and extending laterally of and between said plates and longitudinally through said block and rods attached to said cross-rod and extending therefrom laterally of and from said cross-rod and said block.

2. A cross-tie for railroad tie plates and tracks as claimed in claim 1 including a plurality of said cross-rods attached to said plates and said rods being attached to said cross-rods at positions thereon whereby track tie plates on said crosstie flat top can receive said rods therethrough.

3. A crosstie for railroad tie plates and tracks as claimed in claim 1 wherein said rods have threaded outer end portions extending outwardly of said crosstie flat top and nuts detachably mounted on said rod threaded portions capable of retaining the track tie plates on said rods.

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