

F. C. MELLINGER.
RAILWAY TIE.
APPLICATION FILED JUNE 29, 1912.

1,037,506.

Patented Sept. 3, 1912.

Fig. 1.

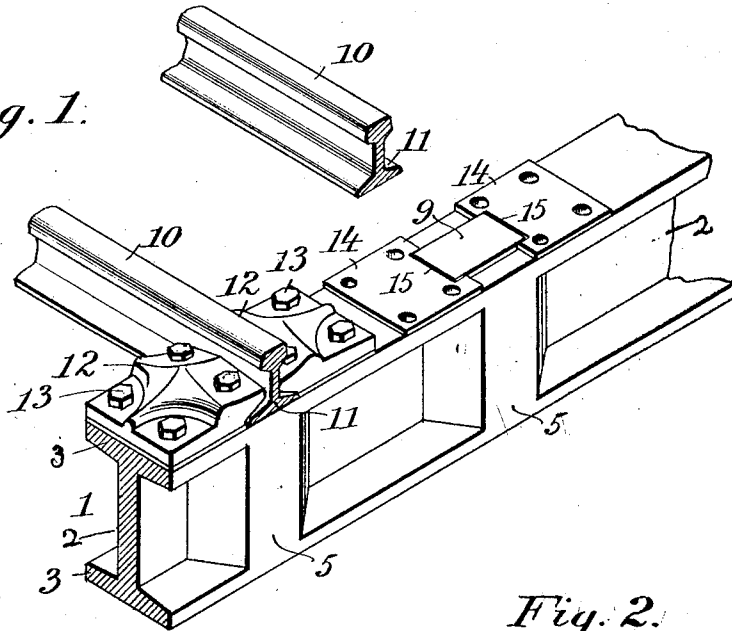


Fig. 2.

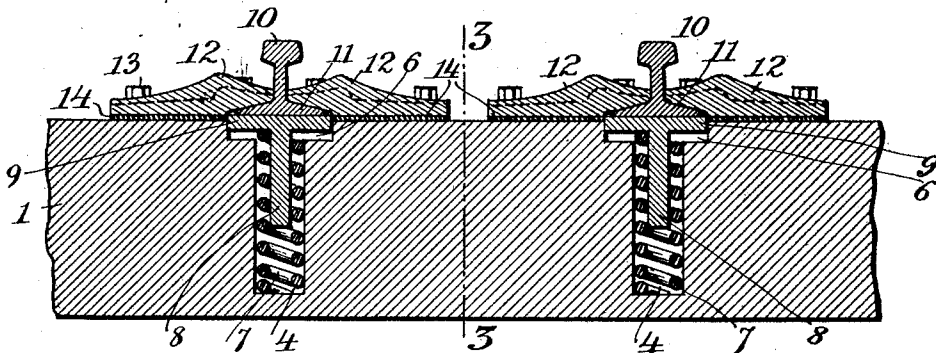
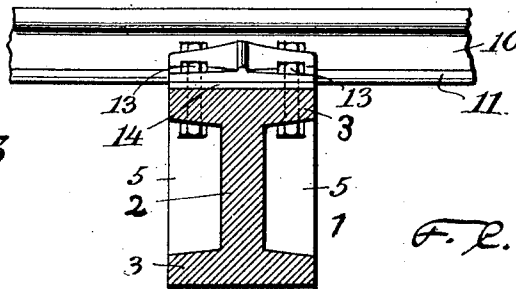


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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RAILWAY-TIE.

1,037,506.

Specification of Letters Patent.

Patented Sept. 3, 1912.

Application filed June 29, 1912.—Serial No. 706,599.

To all whom it may concern:

Be it known that I, FRANKLIN C. MELLINGER, a citizen of the United States, residing at Avon, in the county of Lebanon and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to railway ties, and has for its object certain improvements whereby the tie is securely embedded in the road-bed, the rail cushioned or yieldingly supported on the ties, and the loosening of the bolts, due to the jar on the ties minimized.

The invention consists in certain features of construction, which will be fully disclosed in the following specification and claims.

In the accompanying drawings, which form part of this specification:—Figure 1 is a perspective view of my improved tie showing a rail secured in position at one end of the tie and the rail, and the clamping-plates removed from the tie at the opposite end. Fig. 2 is a vertical longitudinal section and Fig. 3 is a vertical transverse section on line 3—3 Fig. 2.

Reference being had to the drawings and the designating characters thereon, the numeral 1 indicates the tie which in vertical transverse section through its longitudinal center and at its ends beyond the pockets for the springs represents an I-beam in which 2 is the web and 3, 3, the flanges which extend laterally beyond the web and the space between them affords space for tamping the ballast against the tie and securely fastening it in the road bed.

The tie rests upon the base at its lower edge and the rails are secured to the upper edge thereof as shown.

4, 4 indicate vertical pockets or spring-chambers in the tie, and the tie is reinforced by cheek-pieces 5, 5, cast integral therewith on both sides of the tie opposite or adjacent to the pockets 4, and form the side walls thereof.

6 indicates a recess formed in the upper end of each pocket.

7 is a helically coiled spring of sufficient strength to sustain the weight of an engine, car or train passing over the tie and is seated in each pocket.

Extending down into the interior of the spring is a rod or pin 8 which in conjunction with the wall of the pocket prevents buckling of the spring under the weight of a passing train; and at the upper end of said pin 8 is a bearing-plate 9, which rests upon the spring 7 and engages the walls of the recess 6 and moves vertically therein as the spring is compressed by the weight upon it and recedes to its normal position when the weight is removed.

10 indicates the rail, whose flange 11 rests upon the bearing-plate 9 and is secured in position on the tie 1 by clamping-plates 12, one on each side of the rail, and the clamping-plates are secured to the upper flange 3 of the tie by bolts 13 of conventional form.

The inner ends of the clamping-plates engage the web of the rail and prevent any lateral movement of the rail, while it is free to move vertically between the ends of said plates.

14, indicates liners of yielding material, such as felt or its equivalent inserted between the upper surface of the tie and the clamping-plates 12, to minimize the jar on the bolts and prevent their becoming loose.

15 indicates an opening in the liner 14, opposite the recess 6 in the pocket 4 to allow the bearing-plate 9 to rise under the recoil of the spring and also serves to guide the bearing-plate in its upward movement.

The operation of the device is obvious; when a train passes over the tie the rails are forced down upon the springs 7 which takes the jar off the tie and the liner 14 minimizes the jar on the bolts 13, thus rendering the road smooth and free from the annoyance of jolts and jars and their destructive effect upon rolling stock.

Having thus fully described my invention, what I claim is:—

1. A railway-tie whose body or major portion is approximately I-shaped having laterally extending flanges at its upper and lower edges and on both sides thereof, and vertical pockets or chambers having reinforces on both sides thereof, springs in said pockets, separate bearing-plates for each rail, and clamping-plates for securing the rails to the tie.

2. A railway-tie having pockets in the body thereof, recesses in the upper ends of said pockets, springs in the pockets, a rail bearing-plate engaging said recesses in each

pocket and having a rod or pin extending into the spring, and clamping-plates engaging the web of the rail.

3. A railway-tie whose body or major
5 portion is approximately I-shaped, provided with vertical pockets on both sides of the longitudinal center of the tie, helically coiled springs in said pockets, separate bearing-plates for each rail resting on said
10 springs, separate clamping-plates on each

side the rails, and liners of yielding material interposed between the tie and the clamping-plates to minimize the jar.

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

FRANKLIN C. MELLINGER.

Witnesses:

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