

G. D. McLEAN.
RAILWAY TIE.
APPLICATION FILED JAN. 5, 1912.

1,040,371.

Patented Oct. 8, 1912.

Fig. 1.

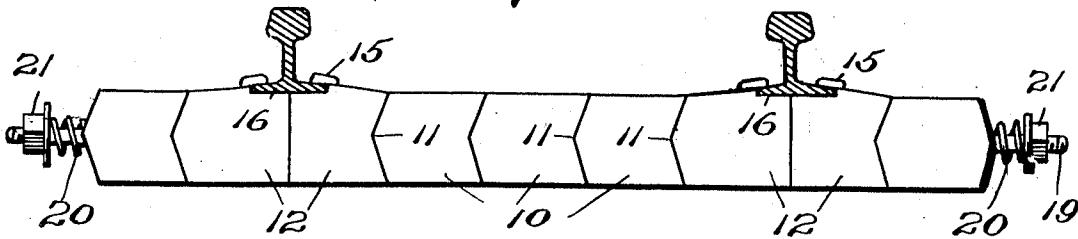


Fig. 2.

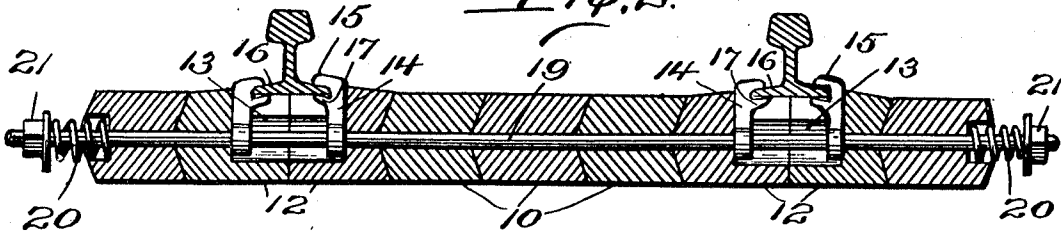


Fig. 3.

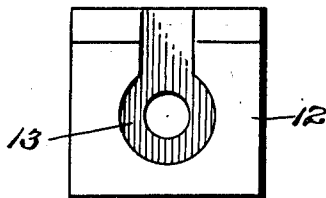


Fig. 4.

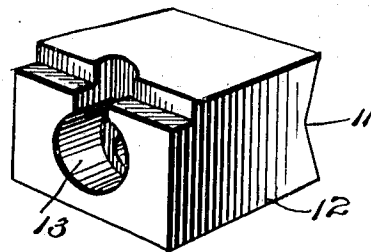
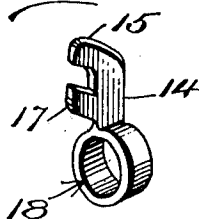


Fig. 5.



Witnesses

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RAILWAY-TIE.

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To all whom it may concern:

Be it known that I, GREGORY D. McLEAN, a citizen of the United States, residing at Newtown, in the county of Sullivan and State of Missouri, 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.

This invention relates to railway ties and has for an object to provide a tie which may be constructed of a great variety of materials with improved means for holding the rail upon such tie without the employment of the ordinary spikes or other fastening means independently of the tie.

A further object of the invention is to provide a railroad tie built up of a plurality of blocks some of which are interchangeable, with means for clamping the blocks to form a continuous tie, such clamping means also providing the means for clamping the rail upon the tie.

A further object of the invention is to provide a railroad tie made up of short block sections with means for preventing the block sections from rotating relative to each other with a binding rod extending longitudinally through the entire tie with rail clamping members carried upon the rod and extending upwardly through some of the blocks and hooked over the flanges of the rail.

With these and other objects in view the invention comprises certain novel constructions, combinations and arrangements of parts as will be hereinafter more fully described and claimed.

In the drawing:—Figure 1 is a view of the improved tie in side elevation showing two conventional rails in transverse section secured thereon. Fig. 2 is a view in longitudinal section of the improved tie. Fig. 3 is a view in end elevation of one of the constituent blocks which form the means for clamping the rails. Fig. 4 is a perspective view of one of the rail clamping blocks. Fig. 5 is a perspective view of one of the clamping members.

Like characters of reference indicate corresponding parts throughout the several views.

The tie which forms the subject matter of the present application is made up of a plurality of blocks 10 substantially in accord-

ance with the blocks disclosed in Patent No. 849,917 issued April 9th, 1907. The blocks are preferably formed with angles as indicated at 11 and as disclosed in said prior patent, to prevent the several blocks from turning relative to each other. In addition to the interchangeable blocks 10, other blocks 12 are employed having recesses 13 formed therein to receive clamping members 14. The clamping members 14 comprise each a hook 15 adapted to hook over the flange 16 of a rail, as indicated at Figs. 1 and 2, and with noses 17 positioned to support the rail to some extent. The clamping members 14 are provided with openings 18 through which the longitudinal rod 19 extends, such rod extending through all of the blocks, as indicated at Figs. 1 and 2, and preferably provided with springs 20 upon the opposite ends, the tension of which springs may be adjusted by nuts 21.

The position and formation of the clamping members 14, especially the noses 17 is such that when held in engagement with the rails as indicated at Fig. 2 by the blocks 12 the weight of the rail and of passing trains exerted upon the noses 17 tends to clamp the clamping members more firmly upon the rails and hold such rails more firmly against any movement, lateral or longitudinal, and especially during the time when the rails are subjected to the greater strain, that is at the time of the passage of trains thereover. It will be apparent that the clamping members are normally held clamped upon the rails by the forcing together of the blocks 12 of the springs 20 but that the clamping and gripping action of such clamping members is augmented by the very strain which serves to misplace the rails and the greater the stress applied to the rails the greater the clamping effect of the clamping members upon the rails, such clamping effect being in direct ratio to the stress applied.

I claim:—

1. In a railway tie, a plurality of blocks some of which are separated at a point immediately beneath the rails and are provided with registering sockets, clamping members located within the sockets and provided with hooks adapted to hook over the flange of a rail and with noses positioned to support a rail and a clamping rod extending longitudinally through the tie and through the clamping members.

2. In a railway tie, a plurality of blocks,

5 rail engaging means interposed between some of said blocks and adapted to grasp a rail by tension applied to the blocks and position the rail directly over the plane of separation between some of said blocks.

10 3. In a railway tie, a plurality of blocks, means for binding the blocks together to form a continuous tie member, sockets formed in the adjacent faces of some of said blocks, rail clamping means disposed in the sockets and adapted to be clamped together by the means for clamping the blocks, and means carried upon the clamping members for augmenting the gripping action upon
15 the rail in proportion to weight exerted thereon.

4. In a railway tie, a plurality of blocks, a rod extending longitudinally through to clamp the blocks in a continuous tie structure, sockets formed in the adjacent faces 20 of some of said blocks, rail clamping means carried upon the rod and hooks formed upon the rail clamping means adapted to engage the flange of a rail and to be clamped thereon by the clamping action of the rod forcing 25 the blocks together.

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

GREGORY D. McLEAN.*

Witnesses:

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