

UNITED STATES PATENT OFFICE.

SAMUEL McELFATRICK, OF PRINCETON, KENTUCKY.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 626,081, dated May 30, 1899.

Application filed December 6, 1898. Serial No. 698,437. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL McELFATRICK, of Princeton, in the county of Caldwell and State of Kentucky, have invented a new and Improved Railroad-Tie, of which the following is a full, clear, and exact description.

The invention relates to railroad-ties, such as shown and described in the Letters Patent of the United States No. 497,678, granted to me on May 16, 1893.

The object of the invention is to provide a new and improved metallic railroad-tie which is simple and durable in construction and arranged to securely fasten the rails in place without the use of spikes or like fastening devices.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improvement as applied and with the rails partly in section. Fig. 2 is a cross-section of the same on the line 2 2 in Fig. 1. Fig. 3 is a plan view of the improvement with parts in position for receiving the rails. Fig. 4 is a perspective view of the tie-sections detached, and Fig. 5 is a plan view of a modified form of the improvement.

The improved metallic railroad-tie is provided with two parts A and B, alike in construction and made T-shaped in cross-section and having horizontal members A' B' and vertical members A² B², respectively. The vertical members A² B² are fitted upon one another, each with the lower portion extending below the horizontal members A' B' and the upper portions extending above the same, as is plainly indicated in Fig. 4. The upper portions of the vertical members A² and B² are formed with recesses A³ A⁴ and B³ B⁴, respectively, of which the recesses A³ B³ are adapted to register with each other to receive the rail C, and the recesses A⁴ B⁴ are adapted to register with each other to receive the other rail C'. The upper portion of the vertical member A² is further provided with an overhanging lug A⁵, adapted to engage the

outer flange of the rail C, and a similar lug A⁶ at the recess A⁴ is adapted to engage the inner flange of the other rail C'. The upper portion of the vertical member B² is formed at the recess B³ with an overhanging lug B⁵, adapted to engage the inner flange of the rail C, and a lug B⁶ at the recess B⁴ is adapted to engage the outer flange of the rail C'. The upper portions of the vertical members A² B² are further formed at or near their middle with elongated slots A⁷ B⁷ for receiving a bolt D, which when loosened permits of sliding the parts A B upon one another from the position shown in Fig. 3 to the position shown in Figs. 1 and 2. The outer ends of the upper portions of the members A² B² are provided with registering apertures A⁸ B⁸ for receiving bolts E for securely and finally fastening the parts A and B together after they have received the rails and have been shifted from the position shown in Fig. 3 to the position shown in Fig. 2 to bring the apertures in register with each other.

In using the railroad-tie the parts A and B, with the bolts E removed and with the nut of the bolt D loosened, are shifted upon one another to bring the recesses A³ B³ and A⁴ B⁴ in register with each other, as is plainly indicated in Fig. 3, to permit of conveniently placing the rails C C' in position, the bases of said rails resting on the top of the horizontal members A' B'. The members A² B² are now shifted upon one another to cause the overhanging lugs A⁵ A⁶ and B⁵ B⁶ to pass over the flanges of the rails C C', as previously explained, so as to securely clamp the rails in place on the tie and bring the apertures A⁸ B⁸ in register with each other to permit of inserting the bolts E to securely fasten the members A² B² together. The nut on the bolt D is likewise screwed up after the rails are fastened in place to prevent the middle portions of said members from spreading apart.

It will be seen by reference to Figs. 1 and 2 that the two lugs A⁵ and B⁵ of the members A² and B² engage the flanges of the rail C at opposite sides to securely lock the rail in position, and in a similar manner the lugs A⁶ and B⁶ engage the inner and outer flanges of the rail C' to securely fasten the latter in place on the tie.

If desired, the inner faces of the vertical members A⁹ B⁹ of the tie may be provided with corrugations A¹⁰ B¹⁰, as illustrated in Fig. 5, the corrugations fitting upon each other, but leaving slight openings, as shown, so that when the nuts of the bolts D' and E' are screwed up the two sections shift upon one another and cause the lugs A⁵ A⁶ and B⁵ B⁶ to closely clamp or snugly fit upon the flanges of the rails and securely fasten the same in place on the tie.

It will be seen that by the construction described the ties and rails can be readily placed in position and the rails securely fastened in place, and in case a rail is broken the two sections can be readily slid apart after removing the bolts E and loosening the bolt D to permit of withdrawing the broken rail and allowing the insertion of a new rail. The two sections are then again moved back to their former position and fastened together by the bolts D and E, as previously explained.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A railroad-tie, comprising two similar sections having vertical members arranged

to abut and formed with recesses to receive the rails and overhanging lugs for engagement with the rail-flanges, the said vertical members being further provided with elongated slots between the rail-receiving recesses, the said slots being adapted to receive a bolt whereby one section may be slidably held upon the other section when the tie is being adjusted to the rails, as and for the purpose set forth.

2. A railroad-tie, comprising the two sections formed with vertical members arranged to abut and provided with means for receiving and retaining the rails, the said vertical members being further provided with apertures adapted to be brought into register for the reception of locking-bolts and corrugated adjacent faces which have their corrugations slightly out of alinement, whereby the tightening of the locking-bolts will move one section on the other to tightly bind the rails as and for the purpose set forth.

SAML. McELFATRICK.

Witnesses:

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R. M. POOL.