Apr. 3, 1923. 1,450,280

G. B. CUTTING

PROTECTOR FOR RAIL TIES

Filed May 12, 1919

Fig. 2.

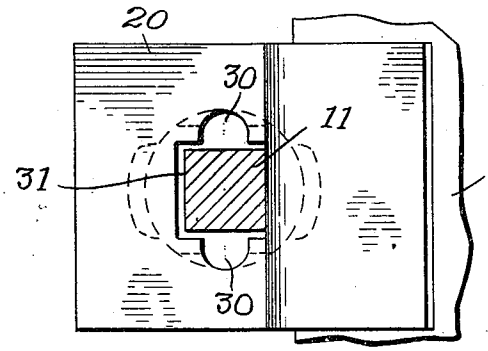


Fig. 1.

Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE B. CUTTING, OF WORCESTER, MASSACHUSETTS.

PROTECTOR FOR RAIL TIES.

Application filed May 12, 1919. Serial No. 296,502.

To all whom it may concern:

Be it known that I, GEORGE B. CUTTING, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Protector for Rail Ties, of which the following is a specification.

The principal object of this invention is to provide for adequately protecting railway ties from the settling of moisture therein and therefore greatly prolonging their life. The invention also is designed for securing this result in a simple and inexpensive way that will not interfere with the gripping qualities of the device to which it is applied. The invention is designed partially as an improvement over my Patent No. 1,294,778, issued Feb. 18, 1919. It is to be understood that the invention is not limited however to that particular form of spike retainer or to the use of any retainer.

The usual driven spikes are faulty because the rail thrust forces them out of plumb and this enlarges the hole in the tie. Water therefore is ordinarily able to enter and having entered there is no way for it to dry out quickly. It causes quick decay, because it penetrates to the very heart of the tie.

By using this invention either in combination with my previous invention with which it is illustrated, or without that, the penetration of water into the tie is prevented. If it is used with that invention the necessary spaces in the hole at the sides of the spike are prevented from allowing the penetration of water into the tie.

Reference is to be had to the accompanying drawings, in which—

Fig. 1 is a sectional view of a rail, the tie on which it rests, and a preferred embodiment of this invention applied thereto, the line of section coming on the line 1—1 of Fig. 3;

Fig. 2 is a plan of the retainer showing the spike in section under the head, and

Fig. 3 is a sectional view on the line 3—3 of Fig. 1.

In order to prevent access of moisture to the interior of the tie I provide the cover plate 20 with two perforations 30 at opposite sides of the spike 11 and I also, in accordance with the preferred form, provide a recess 31 all around three sides of the spike and communicating with the two perforations 30. These recesses extend all the way through the plate. Underneath this plate 20 in accordance with my above mentioned patent there are shown two spaces at 12 on opposite sides of the spike which are present on account of the fact that the channelled spike retainers 13 are preferably placed in a round hole bored in the tie 9 which supports the rail 10. These spaces left after the spike is driven afford a convenient way, without adding any complications to the form of the retainer shown in my above mentioned patent, for protecting the tie. This I do by pouring these spaces full of hot pitch or other water proof material through the openings 30 which I provide in the retaining plate 20. The pitch flows through to the bottom of the hole in the tie, fills both sides, surrounds the opposite edges 34 of the retainers 13 and also substantially surrounds the spike itself. At the top the pitch extends over the tops of the retaining plates 13 as shown at 35 in Fig. 1, and thus seals the entire exposed surfaces of these plates against access of moisture. Therefore a water tight device is secured that prevents moisture from reaching the heart of the tie through the bored hole 12. This greatly prolongs the life of the tie. Excessive rusting of retaining plates and spikes is also prevented.

It will be seen therefore that by this invention another fault of the ordinary rail spike is avoided and the retaining device which is the subject of my above mentioned patent is further improved.

Although I have illustrated and described the invention as applied to a particular type of spike retainer and shown it in a specific form I am aware of the fact that modifications can be made therein and that it can be applied to other types of retainers without departing from the scope of my invention as expressed in the claims. Therefore I do not wish to be limited in either of these respects, but what I do claim is:—

1. A protecting device for a rail tie comprising a plate located vertically in stationary position in a vertical round hole in the tie and provided with a channel extending longitudinally along its inner surface for the reception of a spike, and a body of pitch poured into the hole extending to the bottom thereof on two sides of the spike and

extending over the top of said plate so as to seal the hole, plate and spike against the entrance of moisture.

2. A protecting device for a rail tie comprising a plate located in a hole in the tie for the reception of a spike, and a body of pitch poured into the hole extending to the bottom thereof on two sides of the spike and extending over the top of said plate so as to seal the hole, plate and spike.

In testimony whereof I have hereunto affixed my signature.

GEORGE B. CUTTING.