J. C. BRANHAM.

RAILROAD TIE.

APPLICATION FILED JULY 24, 1911.

1,012,058.

Patented Dec. 19, 1911.

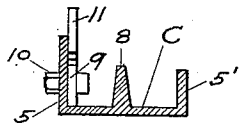

Fig. 3.

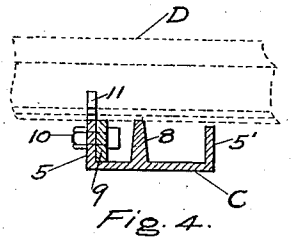

Fig. 4.

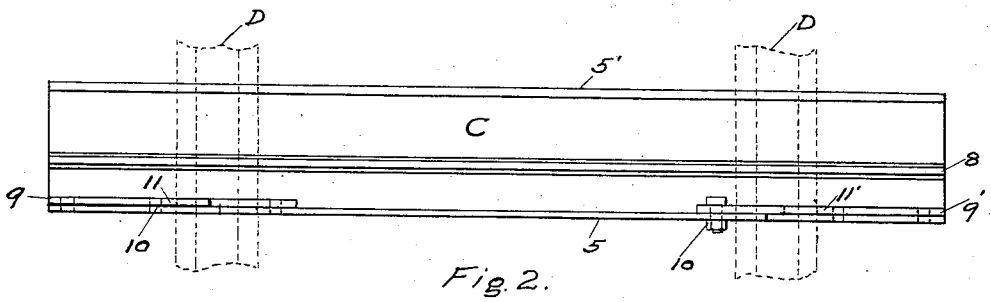

Fig. 2.

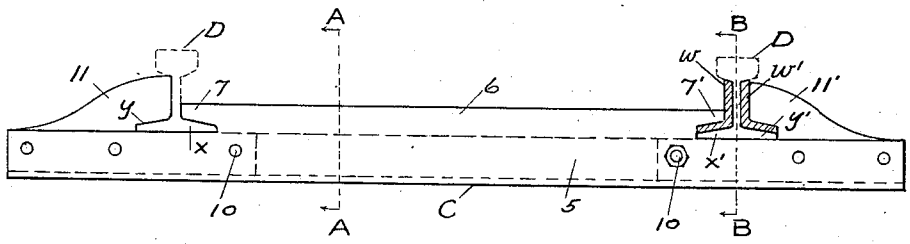

Fig. 1.

Witnesses.

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UNITED STATES PATENT OFFICE.

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RAILROAD-TIE.

1,012,058. Specification of Letters Patent. Patented Dec. 19, 1911.

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To all whom it may concern:

Be it known that I, JAMES C. BRANHAM, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Improvement in Railroad-Ties, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to a class of devices appertaining to railway tracks and for the purpose of holding the rails in place.

The object of my invention is to provide a railroad tie preferably of metal construction, and particularly to provide a tie which will not only hold the rails securely in place and prevent their spreading, but with supports so arranged that the weight upon the rail will cause the tie to be depressed in such manner as to hold the rail with an increasing grip upon it.

Owing to the constant scarcity of timber with which to make ties of the kind heretofore in use and the destructibility of wooden ties, thereby rendering the track unsafe, there is ever a greater necessity for a metallic tie which can be cheaply made and easily arranged in the roadbed. Also a tie which will be safe for travel over it when placed. This want I believe my device will successfully supply. I contend that in it I have attained these objects as well as other advantages, by the construction, combination, and arrangement of parts illustrated in the accompanying drawings which form a part hereof.

Figure 1 is a side elevation of my tie showing sections of the rails in place therein. Fig. 2 is a plan view of the tie showing parts of rails over the same in dotted lines. Fig. 3 is a cross-sectional view of the tie on the line A—A of Fig. 1. Fig. 4 is a cross-sectional view of the tie and the rail thereon on the line B—B of Fig. 1.

Like numerals and letters refer to like parts in all views.

C is the tie trough having vertical sides 5—5′. The trough may be made of suitable length and width to form a proper base for the weight it is to carry.

D are rails of T type.

The side 5 has a higher central part 6 which terminates at either end in lugs 7—7′ extending longitudinally of the tie, and transversely over the rail flange x in the first instance, and over the angle bar w securing the joint on the opposite side of the flange x' in the second instance, both being formed to coincide with the outlines of the flange and angle bar respectively and to perfectly engage them when the rails are in place.

Within the trough C is an integral vertical member 8 formed of the same height as the outer ends of the side 5, and in a suitable position at a distance from the center of the trough and nearer the side 5 than the side 5′. The ends of the side 5 and the member 8 together form the seat of the rails. The member 8 is shown extending the full length of the trough but it may be differently arranged. The side 5′ of the trough is formed of a suitable height and slightly less than the parts which form the rail seats just mentioned.

The rails are secured in place by holding devices 9—9′, being bars of suitable length and height extending along the inner surface of the tie side 5 and beneath the rail seats. The bars 9—9′ are secured to the side 5 by means of bolts 10 extending through both. These bars are also provided with integral lugs 11—11′ on their upper edges the lug 11 extending over the rail flange y and the lug 11′ over the angle bar w' securing the rail joint on the opposite side over the flange y' both being formed to coincide with the outlines of the flange and angle bar respectively and to perfectly engage them when the rails are seated and in engagement with the lugs 7—7′. It will now be seen that the tie trough being placed in the road bed, the rails are laid upon it over the seat made by the side 5 and member 8, the rails being adjusted to close engagement with the lugs 7—7′ of the tie side 5. The holding bars 9—9′ are then secured in place by the bolts 10 and the lugs 11—11′ engage the rails securely holding them in proper alinement. It will also be noted that when the rails are depressed by the weight of a train, the position of the member 8 at one side of the center of the rail trough causes this member and the side 5 to receive more weight and the side 5′ is thereby pressed upwardly. This causes the lugs 7—7′ and 11—11′ to engage the rail flanges with increasing pressure and thus to hold the rail in stronger grip.

Different arrangements or forms of the parts of this tie may be made to suit the convenience or taste of those manufacturing

them, without departing from the principles of my invention, as can be readily understood from the description herein. It will also be seen that my form of tie permits the packing of ballast therein if desired, and when so done the ends being open, permit the free passage of surface water.

Having thus completely described my invention I claim:

1. A railroad tie comprising a rectangular trough base having a rail seat composed of a side 5 of the trough and a vertical, integral member 8 of the same height extending longitudinally within the trough between its center and the side 5, also an opposite side 5′ slightly lower than the rail seat, and means to retain the rail in place when seated, substantially as described.

2. A railroad tie comprising a rectangular trough base having a rail seat composed of a side 5 of the trough and a vertical, integral member 8 of the same height extending longitudinally within the trough between its center and the side 5, an opposite side 5′ slightly lower than the rail seat, means to retain the rails an equal distance apart, rail securing bars having integral lugs 11—11′ formed to extend upward into engagement with the rail webs and means to secure said bars to the side 5 of the trough, substantially as described.

Witness my hand hereto.

JAMES C. BRANHAM.

Witnesses:

JOHN R. TURNER,

FRANK BOLLAM.