

F. C. ANGLUS.
RAILROAD TIE.
APPLICATION FILED AUG. 22, 1911.

1,047,367.

Patented Dec. 17, 1912.

Fig 1

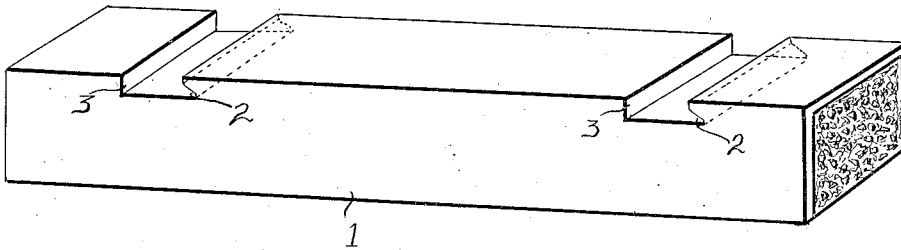


Fig 2

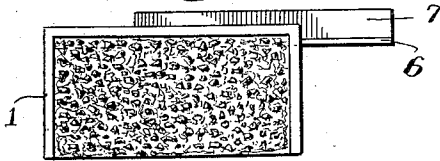


Fig 3

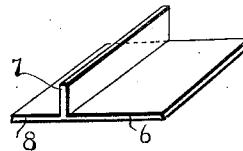
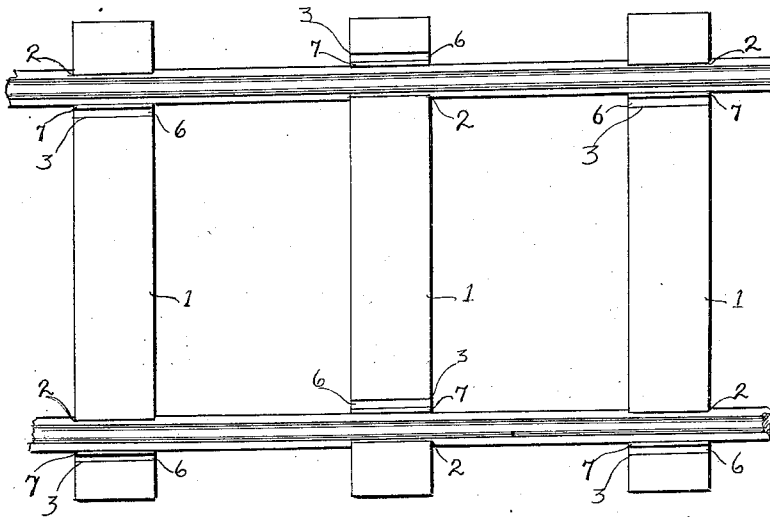


Fig 4



WITNESSES
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FRANK CLAYTON ANGLUS, OF CENTERVILLE, CALIFORNIA, ASSIGNOR OF ONE-FOURTH TO FRANK T. HAWES AND ONE-FOURTH TO FRANK S. FRANCIS, BOTH OF CENTERVILLE, CALIFORNIA.

RAILROAD-TIE.

1,047,367.

Specification of Letters Patent.

Patented Dec. 17, 1912.

Application filed August 22, 1911. Serial No. 645,419.

To all whom it may concern:

Be it known that I, FRANK C. ANGLUS, citizen of the United States, residing at Centerville, in the county of Alameda and State of California, have invented a new and useful Railroad-Tie, of which the following is a specification in such full and clear terms as will enable those skilled in the art to construct and use the same.

This invention relates to a combined steel and concrete mass railroad tie, its object being to produce a tie which will be cheaply constructed and which will dispense with the use of spikes for securing the rails thereto.

Another object of the invention is to produce a railroad tie which will always carry the proper gage thereon so as to enable the track layers to dispense with gaging the rails when laying the track.

Another object of the invention is to produce a tie which will have considerable resiliency and which will be substantially indestructible.

In the drawings in which the same numeral of reference is applied to the same portion throughout the several views, Figure 1 is a perspective view of one of the complete ties, Fig. 2 is an end view of one of the ties, Fig. 3 is a view of a plate used to secure the rail and tie together, and Fig. 4 is a plan view of a portion of completed track illustrating the application thereto of the ties.

The numeral 1 represents the ties, which are constructed of suitable channel steel in which there is produced a reëntrant groove 2 near each end, said reëntrant groove facing the same direction on each end of the tie. Adjacent this reëntrant groove is a straight shoulder 3, the shoulder and groove 2 having the space between them depressed below the top surface of the tie a sufficient amount to seat the lower rail flange therein. The space between the two grooves 2 is of the exact distance the rails are intended to be spaced apart, so that a measure is never required in laying the track.

To hold the rails in place on the ties, a plate 6 is used, said plate having a doubled-up portion 7 and heel portion 8 to abut against the shoulder 3. This plate 6 is slid

under the rail, as indicated on one end of the perspective view, and holds the rail tightly against the groove 2.

In laying the track, one tie is placed with the groove 2 on one side of the rail, while the next adjacent ties are placed with the groove 2 on the opposite side of the rail, the ties simply being turned end for end, all of them being identical in form. The space between the shoulder 3 and the overhanging portion of the groove 2 is just sufficiently wide to admit the rail into its seat, and when so admitted, the ties are forced longitudinally until they contact with the rail, whereupon the soil is tamped tightly around them and the plate 6 is inserted to hold the rail and tie firmly together, no spikes being necessary.

Inasmuch as steel alone does not form sufficient body and is too easily bent to make a complete tie, the underside of the channel is completely filled with asphalt and concrete, that is, a mixture containing about ten per cent. of hard asphalt and ninety per cent. of broken stone, this mixture being very tough and withstanding the heaviest kind of wear without cracking. This concrete is forced into the channel when hot, and on cooling, it adheres thereto very strongly and forms sufficient body to give the track the necessary support on soft ground.

Having thus described my invention what I claim as new and desire to secure by Letters Patent of the United States, modifications within the scope of the claims being expressly reserved, is as follows:—

1. In a composite railroad tie, a steel channel having two rail seats on its upper side each having a projecting lip facing in the same direction and having a shoulder at the other side thereof, and a plate substantially the same in width as the width of said rail seat, and having a rib projecting therefrom at substantially the same distance from one edge thereof as the width of the base of the rail, substantially as described.

2. In a composite railroad tie, a steel channel having two rail seats on its upper side, each rail seat having a lip projecting thereover and facing in the same direction and having a right angle shoulder at the

other side thereof and a plate substantially
the same in width as the rail seat, said plate
having a rib adjacent one edge and at sub-
stantially the same distance as the width of
5 the bottom of the rail from the other edge,
said rib being wider than the depth of the
bottom flange of the rail.

In testimony whereof I have hereunto set
my hand.

FRANK CLAYTON ANGLUS.

Witnesses:

FRANK T. HAWES,
FRANK S. FRANCIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
