

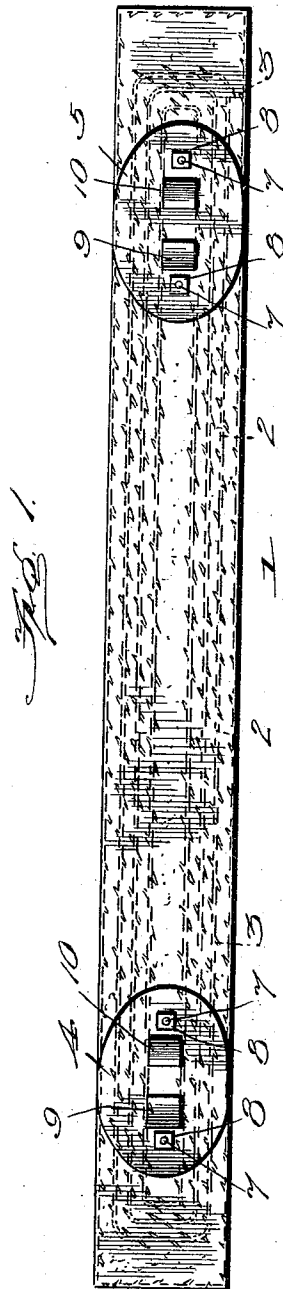
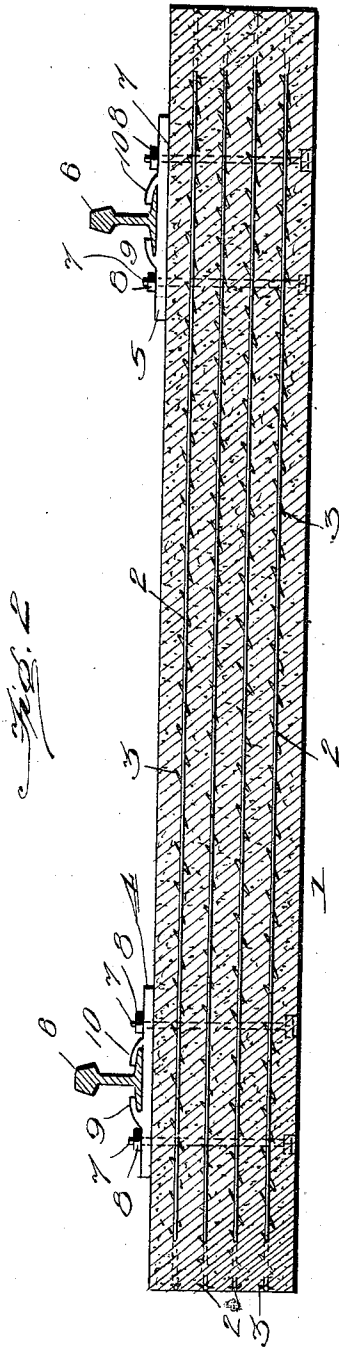
No. 685,048.

Patented Oct. 22, 1901.

D. L. JOYNT.  
RAILWAY TIE.

(Application filed Jan. 28, 1901.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

DUDLEY LAYNG JOYNT, OF GONZALES, TEXAS.

## RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 685,048, dated October 22, 1901.

Application filed January 26, 1901. Serial No. 44,901. (No model.)

*To all whom it may concern:*

Be it known that I, DUDLEY LAYNG JOYNT, a citizen of the United States, residing at Gonzales, in the county of Gonzales and State of Texas, have invented new and useful Improvements in Railway-Ties, of which the following is a specification.

My invention relates to railway-ties, the object being to provide an inexpensive and durable substitute for the ordinary wooden tie in common use.

The invention consists of a railway-tie made of a composition of which sand and cement form the base and having embedded therein strips or strands of barbed wire, which serve to strengthen and brace the tie.

The invention further consists in a composition railway-tie having barbed binding-wires embedded therein in such manner as to reinforce and brace the tie both longitudinally and transversely.

The construction of the improvement will be fully described hereinafter in connection with the accompanying drawings, which form a part of this specification, and its novel features will be defined in the appended claims.

In the drawings, Figure 1 is a plan view of a tie constructed in accordance with my invention, and Fig. 2 is a longitudinal vertical section of the same.

The reference-numeral 1 designates the tie, which is of rectangular form and of the required dimensions to serve as a substitute for an ordinary wooden tie. It is molded from a composition consisting of sand, cement, and any suitable binder. Embedded in the tie are a number of strands of wire (designated by the reference-numeral 2) arranged in parallel horizontal layers. Each layer comprises a plurality of endless wires, as shown in Fig. 1 by dotted lines, said wires being preferably bent to rectangular form and arranged one within the other. I provide the wires 2 with barbs 3, which serve to securely anchor the wires to the composition. As clearly shown in Fig. 2, the horizontal layers are arranged

one above the other in parallel relation and preferably at equal distances apart to reinforce and brace the tie equally throughout its area.

The reference-numerals 4 and 5 designate malleable castings upon which the rails 6 are supported upon the tie. Each of these castings is formed with bolt-openings, which register with parallel openings formed in the tie, to receive bolts 7, held in position by nuts 8. The malleable castings 4 and 5 are also formed with oppositely-disposed lugs 9 and 10, adapted to embrace the base of the rail and securely support the rails upon the ties.

An important advantage in my improvement is that the composition of which the tie is made is impervious to water and unaffected by frost and snow, and is therefore much more durable than the wooden ties, which soon rot, and thus become useless.

I claim—

1. A railway-tie formed of a composition and having binding barbed wires embedded therein.

2. A composition railway-tie of which sand and cement form the base having strands of wire embedded therein, said strands being arranged in parallel relation and provided with barbs.

3. A railway-tie formed of a composition and having embedded therein parallel layers of barbed wire, each of said layers consisting of a plurality of independent barbed wires.

4. A railway-tie formed of a composition and having embedded therein parallel layers of barbed wire, each of said layers comprising a plurality of endless wires bent to substantially rectangular form and located one within the other.

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

DUDLEY LAYNG JOYNT.

Witnesses:

A. R. HOWARD,  
B. H. GOOCHE.