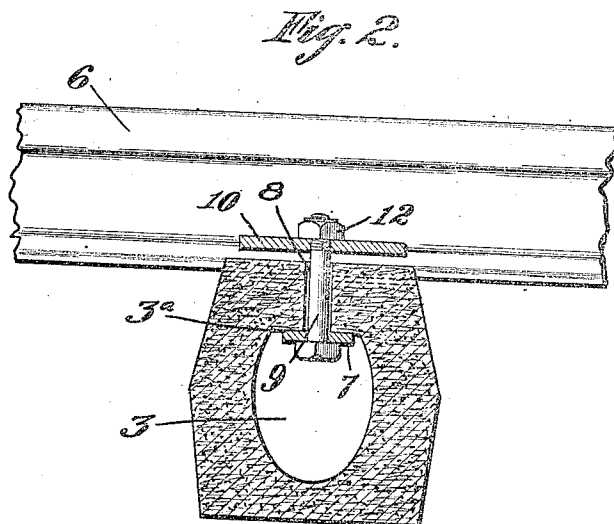
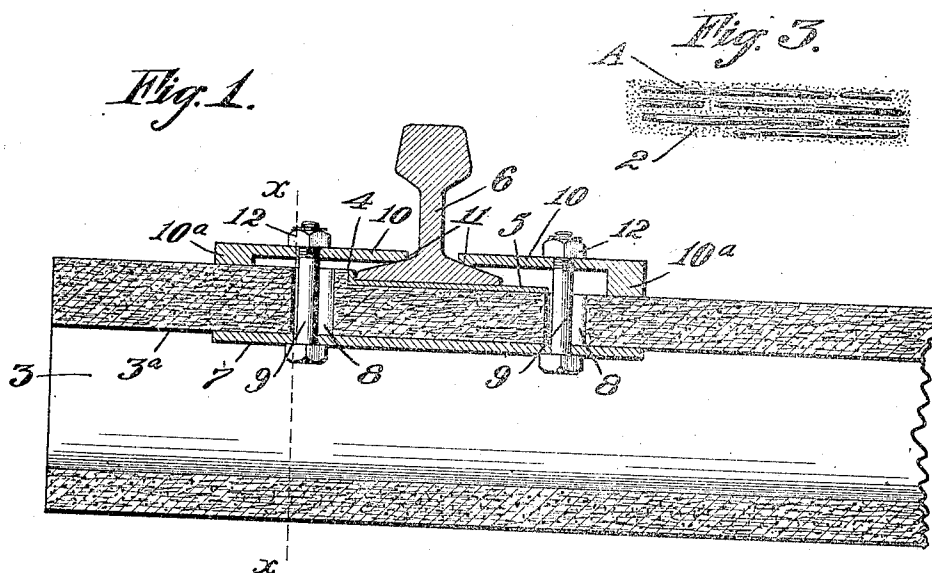


958,226.

J. M. CLEARY.
RAILWAY TIE.
APPLICATION FILED JULY 26, 1909.

Patented May 17, 1910.



WITNESSES;

Chas. S. Briggs

H. C. Maynard

INVENTOR

JOSEPH M. CLEARY

BY *Geo. H. Strong*
HIS ATTORNEY

UNITED STATES PATENT OFFICE.

JOSEPH M. CLEARY, OF SAN FRANCISCO, CALIFORNIA.

RAILWAY-TIE.

958,226.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed July 26, 1909. Serial No. 509,485.

To all whom it may concern:

Be it known that I, JOSEPH M. CLEARY, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Railway-Ties, of which the following is a specification.

My invention relates to improvements in railway ties and like structures, and in the means of securing the rails thereto.

It consists of a novel composition fabric from which a substantially tubular tie is made, and in means by which the rails may be readily secured to or removed from the ties.

Referring to the accompanying drawings for a more complete explanation of my invention,—Figure 1 is a longitudinal section of one end of the tie showing the rail in position. Fig. 2 is a transverse section taken through $x-x$ of Fig. 1. Fig. 3 is a detail of the tie construction.

In the construction of my tie, I first form a mass of splintered wood A, which is cut into short lengths like matchwood, and then crushed so as to form a broken and irregular fiber of lengths equal to the length into which the material is cut. This crushed and broken fiber is mixed with concrete or suitable plastic material 2 within which it is embedded; at the same time the ends of the fibers overlap in such a manner as to make a substantially continuous mass of interlaced fiber extending the full length of the tie.

The tie is preferably molded as shown, and having a central opening 3 which may extend the entire length of the interior of the tie, or may extend to such a distance from the ends, which are open, as to pass beyond the position which the rails will occupy upon the outside of the tie. The surface of the tie thus completed is formed with a shoulder or offset 4 near each end, and upon this is placed an iron angle plate 5, the surface of which serves to receive the base flange of a rail 6, and the upturned edge or angle abutting against the angle 4, serves to prevent the spreading of the rails. The interior opening 3 is preferably made oval in shape, and the upper surface 3^a is flat-

tened and adapted to receive a metal plate 7. Through the top of the tie are made slotted openings 8 having the longest diameter in the direction of the length of the tie. These openings serve to receive bolts 9 which pass through holes in the interior plate 7 with the heads abutting against these plates.

In order to secure the rail in position, I have shown the lock plates 10 which have holes made through them to receive the bolts. The outer ends of these plates have flanges or thickened portions 10^a which rest upon the surface of the tie or plates which may be placed thereon, and the inner ends are beveled off as shown at 11, at such an angle that they rest upon the top of the bottom flange of the rail. The bolts thus pass through these plates at points intermediate between their ends, and when the nuts 12 are screwed down upon the ends of the bolts, the plates 10 act as elastic levers, the elasticity depending on their thickness, to firmly lock the rails upon the tie, and against the angles of the plates 4, which thus prevent their spreading. Any suitable lock nut arrangement may be used to retain the nuts 12 in position.

It will be seen that with a tie of this construction, and means for laying the rails thereon, the rails may be readily laid and secured in place, or removed when desired without disturbing the ties.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. The combination of a tubular railway tie formed of plastic material and splintered overlapped wood fiber, said tie having the interior top of the tubular surface flattened, an offset or shoulder upon the exterior and a metal angle plate fitting said shoulder to receive a rail, bolts passing through the tie having heads abutting against the inner flattened portion of the tube, and locking plates resting upon the rail flanges, and through which the bolts pass.

2. The combination of a tubular concrete and wood fiber tie having a shoulder on the upper surface, and an angle plate fitting thereon, an interior flattened slotted surface

to the tube, slots passing through the tie,
plates having lugs or extensions at the outer
ends, having the inner ends beveled and
adapted to press upon the rail flanges, and
5 having openings intermediate of the ends
through which the bolts pass to secure the
plates by elastic pressure.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing
witnesses.

JOSEPH M. CLEARY.

Witnesses:

JOHN S. WELBANK,
A. K. DAGGETT.