

J. F. O'NEILL.
RAILROAD TIE.
APPLICATION FILED MAY 6, 1911.

1,009,555.

Patented Nov. 21, 1911.

Fig. 1.

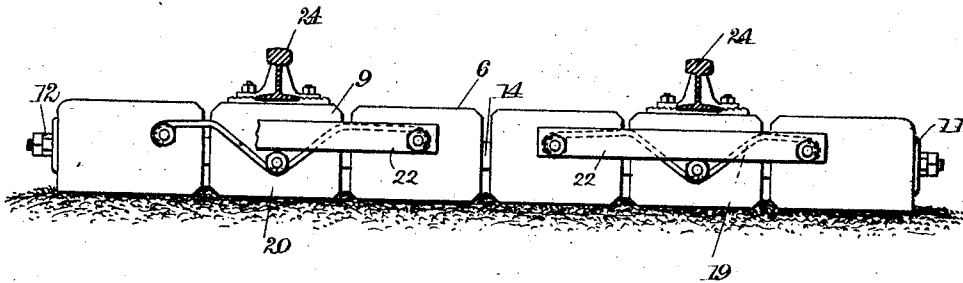


Fig. 2.

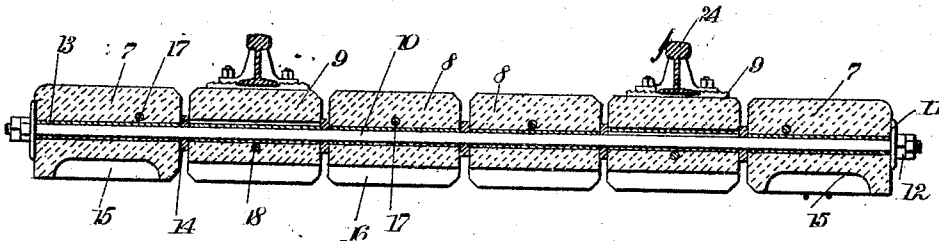
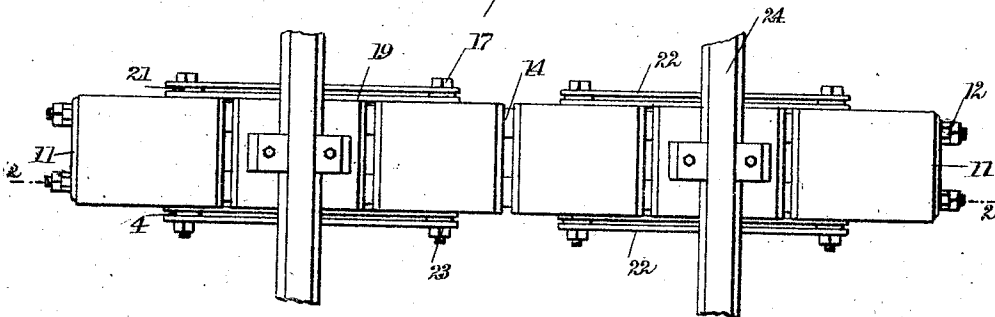


Fig. 3.



WITNESSES
H. J. Walker
W. S. Orton

INVENTOR
James Frank O'Neill
BY Mummles.
ATTORNEYS

UNITED STATES PATENT OFFICE.

JAMES FRANK O'NEILL, OF TRENTON, NEW JERSEY.

RAILROAD-TIE.

1,009,555.

Specification of Letters Patent. Patented Nov. 21, 1911.

Application filed May 6, 1911. Serial No. 625,458.

To all whom it may concern:

Be it known that I, JAMES FRANK O'NEILL, a citizen of the United States, and a resident of Trenton, in the county of Mercer and State of New Jersey, have invented a new and Improved Railroad-Tie, of which the following is a full, clear, and exact description.

My invention relates to a new and improved form of railroad tie.

An object of my invention is to provide a tie preferably made of concrete, which tie is composed of a series of parts flexibly fastened together, two of said parts carrying the pair of rails, and so disposed that these parts will give slightly as the wheels of the train pass over the rails.

With the above and other objects in view, as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a side elevation of a preferred embodiment of my invention showing the rails in section; Fig. 2 is a transverse sectional view taken longitudinally through the tie, and on the line 2—2 of Fig. 3; and Fig. 3 is a plan view looking down upon the tie as shown in Figs. 1 and 2.

The tie 6 is preferably constructed of a series of separate sections, as shown herewith being six equal sections, comprising two outer sections 7, two middle sections 8 and two rail-carrying sections 9. In the further description, but one-half of the rail will be described in detail, that is, either the right-hand or the left-hand half, it being understood that this detailed description pertains equally to both halves.

Each of the sections has a pair of longitudinally-extending apertures therethrough, the apertures in each pair being in alignment with the corresponding apertures in the next adjacent section, thereby forming a pair of alined openings extending throughout the tie. Disposed within each of said alined openings is a reinforced binding rod 10, which binding rod has disposed on oppo-

site ends thereof, face plates 11, held firmly against the end section 7 by means of jam nuts 12. Disposed within each of the sections and surrounding the rod 10, is a sleeve 13. The several sections are spaced apart by flexible fabric washers 14. It will be seen by this construction that the several sections form a unitary flexible tie, so that there will be some vertical play between the rail-bearing section 9 and the sections 7 and 8 disposed in each side thereof. The under side of each of the end sections is recessed to form a pocket 15, and the intermediate sections are recessed longitudinally, as shown at 16, to afford a gripping action between the tie and the ballast in the road-bed. The sections 7, 8 and 9 on each side of the rail are resiliently bound together by plates and rods disposed on opposite longitudinal sides. Transversely disposed across the sections 7 and 8, above the sleeve 13, is a bolt 17, and disposed transversely of the rail-carrying section 9, is a bolt 18 disposed centrally therein and beneath the sleeve 13. Abutting each side of the sections 7, 8 and 9, is a resilient rod 19, the center portion of which is bent downward into a V 20, to fit under the bolt 18 as it extends out from the side of the section 9. Each end of the rod 19 is bent upon itself to form an eye embracing the rod 17 in each of the sections 7 and 8. Disposed in parallel alinement with the rod 19 and spaced apart from said rod by washers 21, are facing plates 22 carried by the bolts 17 and firmly pressed into position by means of nuts 23. It will be seen that by this construction the downward movement of the rail-supporting section relative to the sections 7 and 8, will cause a spring action to take place in the rod 19, which will tend to restore the section 9 into horizontal alinement with the sections 7 and 8 as soon as the weight has been removed from the section 9.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A railroad tie, comprising six sections, a rail disposed on the section adjacent the end section from each end of the tie, a pair of binding rods passing longitudinally through said tie, washers carried by each of said rods disposed between adjacent sections, sleeves within each of said sections surrounding said rods, bolts disposed in each section transversely of the same and project-

ing beyond each side of said section, and resilient means on each side of the tie carried by the bolts in the sections on each side of the rail-carrying section, said resilient means
5 supporting the rail-carrying section by bearing on the under side of the bolt in said rail-carrying section.

2. A railroad tie, comprising a plurality of sections, bolts passing transversely
10 through three adjacent sections of said tie, and a rod disposed on each longitudinal side of said three sections, attached to the outer two of said bolts and passing beneath the middle bolt, whereby the middle section is
15 resiliently supported by its two adjacent sections.

3. A railroad tie, comprising a plurality

of sections, bolts passing transversely through three adjacent sections of said tie, a rod disposed on each longitudinal side of
20 said three sections, attached to the outer two of said bolts and passing beneath the middle bolt, whereby the middle section is resiliently supported by its two adjacent sections, and facing plates carried by said bolts, hold-
25 ing said rods in position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES FRANK O'NEILL.

Witnesses:

AUGUSTUS KELLUM FORMAN,
THOMAS McEVoy.