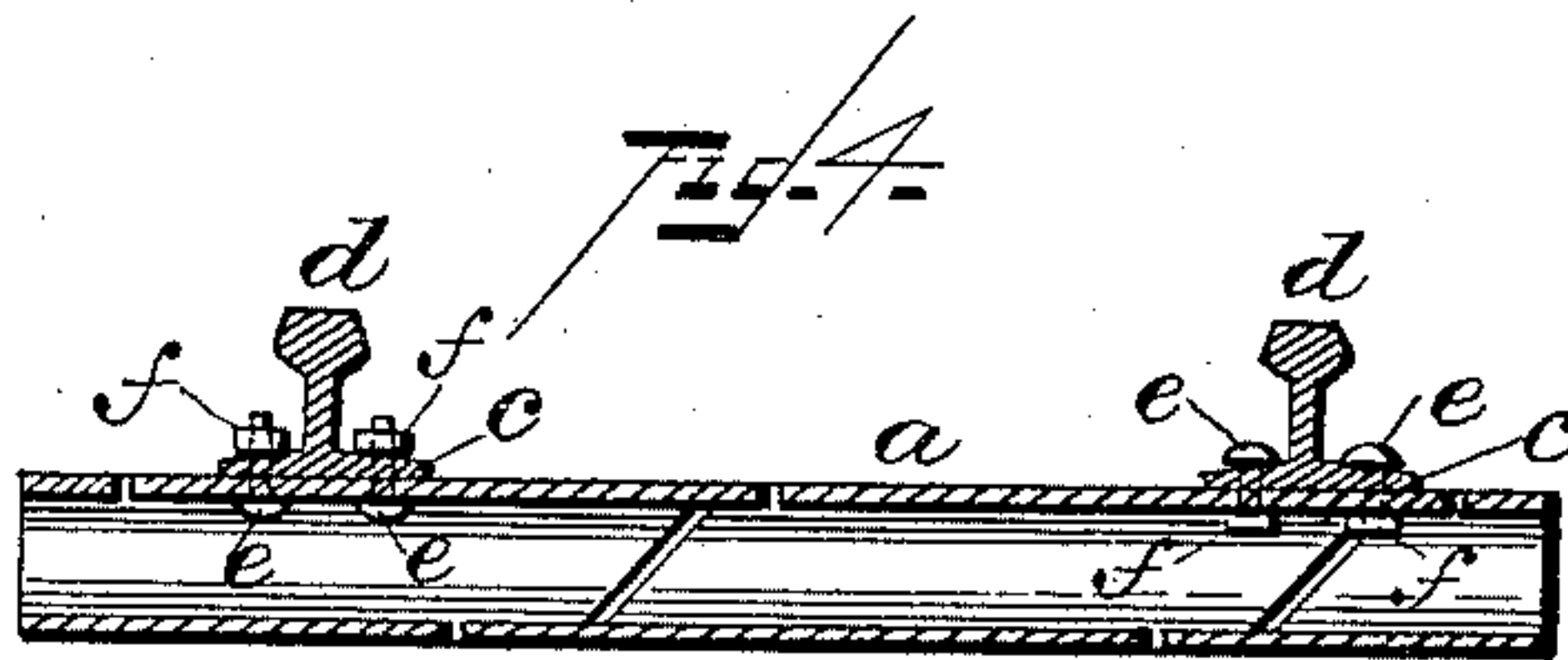
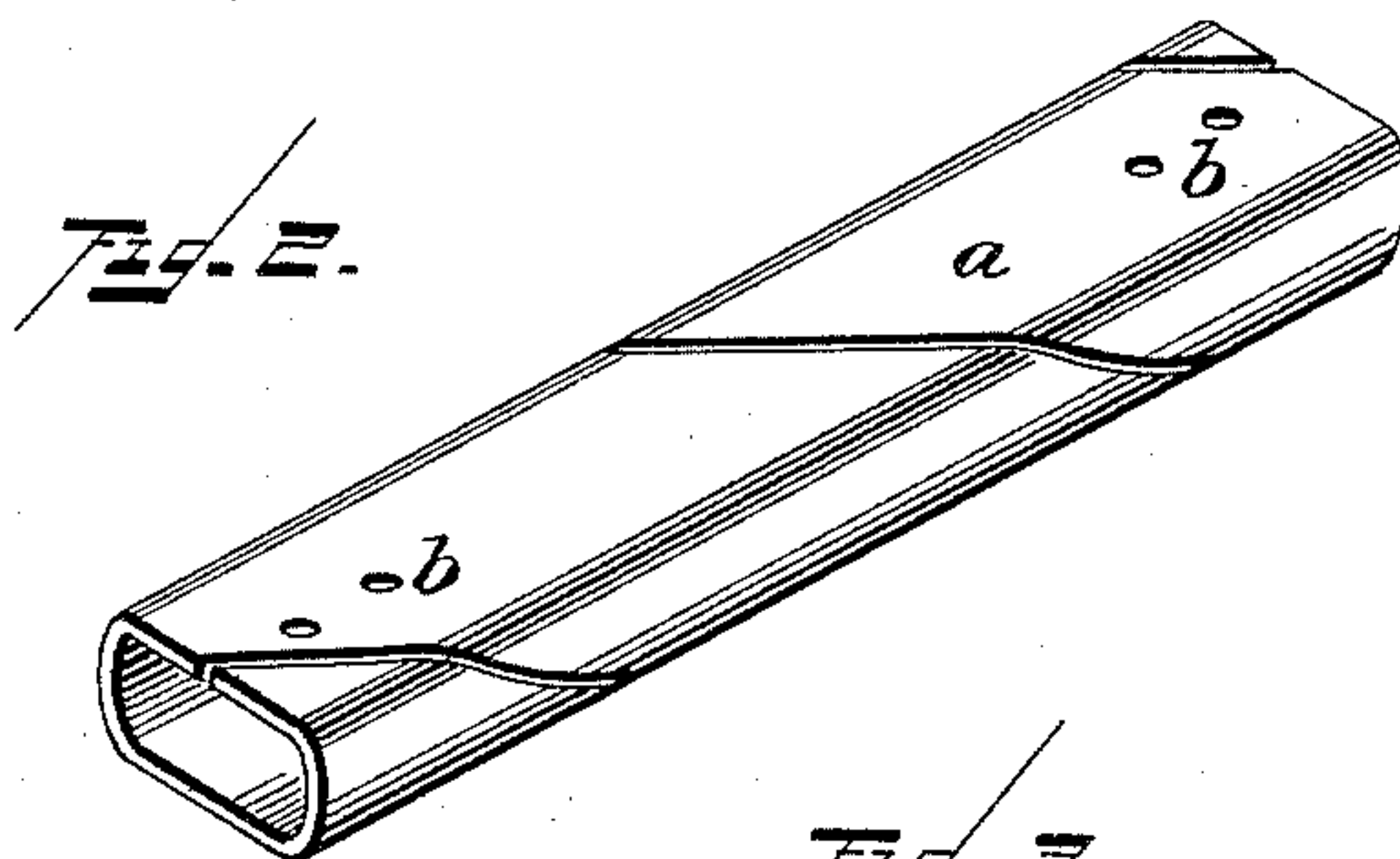
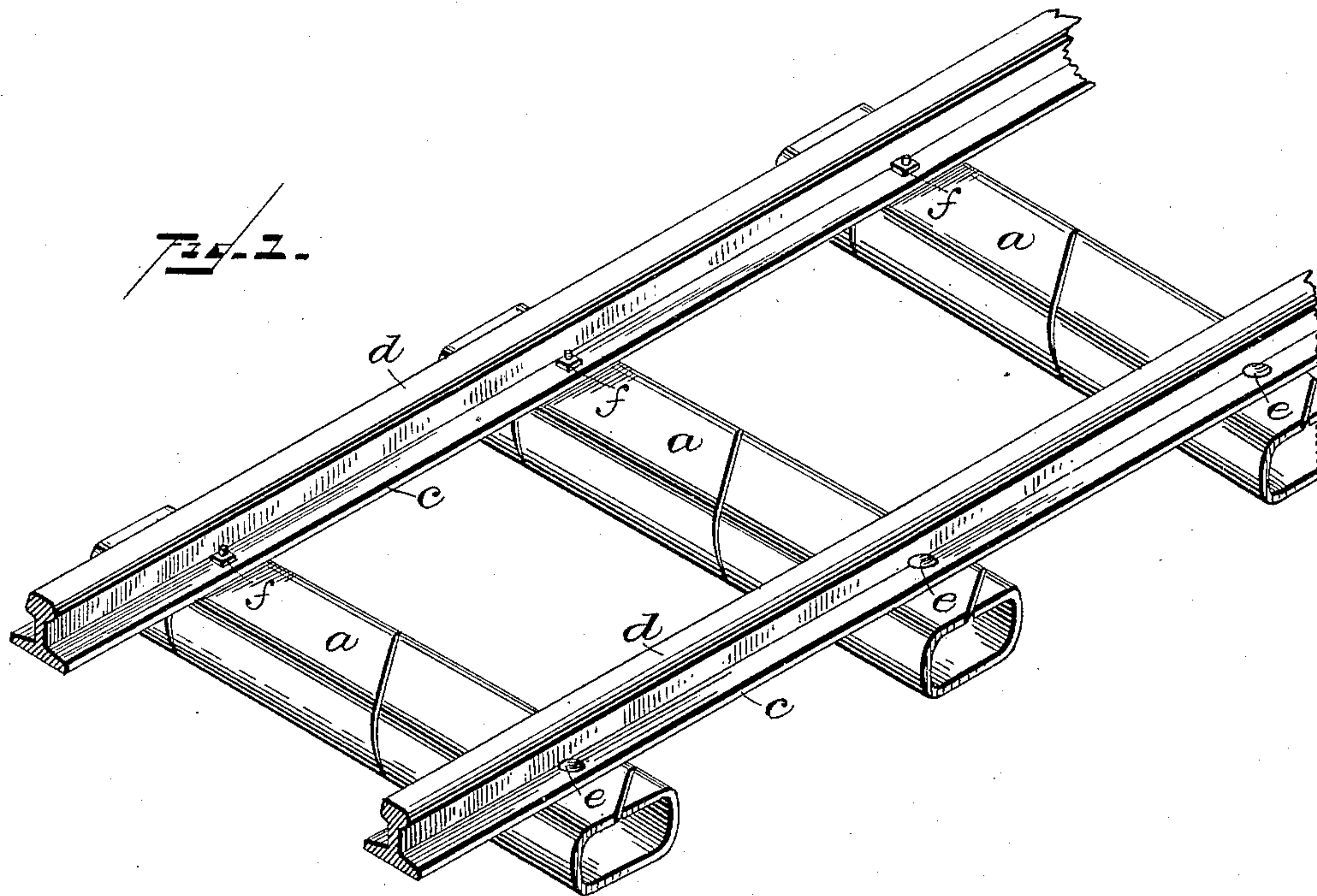


(No Model.)

A. C. NICKLOY.
RAILROAD TIE.

No. 409,860.

Patented Aug. 27, 1889.



Witnesses
F. L. Ourand.
Edwin A. Finckel.

Inventor
Alden C. Nickloy.
by Wm. H. Finckel.
his Attorney.

UNITED STATES PATENT OFFICE.

ALDEN C. NICKLOY, OF GLOVERSVILLE, NEW YORK, ASSIGNOR OF ONE-HALF TO WILLIAM W. WHITAKER, OF SAME PLACE.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 409,860, dated August 27, 1889.

Application filed December 11, 1888. Serial No. 293,268. (No model.)

To all whom it may concern:

Be it known that I, ALDEN C. NICKLOY, a citizen of the United States, residing at Gloversville, in the county of Fulton and State of New York, have invented a certain new and useful Improvement in Railroad-Ties, of which the following is a full, clear, and exact description.

The object of this invention is to provide what, for want of a better name, may be called an "indestructible railroad-tie."

The invention relates to metallic ties, in which a certain amount of elasticity exists or is provided for.

The invention consists of a railway-tie constructed, by preference, of steel, though other metal may be employed, and substantially in the form of a flattened coil, so as to possess transverse and longitudinal elasticity.

In the accompanying drawings, illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a perspective view of a section of track. Fig. 2 is a perspective view of one of the ties detached. Fig. 3 is a cross-section of a tie, and Fig. 4 is a longitudinal section of a tie with the rails attached.

The tie *a*, in the preferred form, is constructed of plate-steel wound helically about a mandrel and flattened to substantially the shape shown in the drawings; but any process of manufacture may be adopted in order to obtain a metallic tie split or divided spirally throughout its length. The divided edges may stand away from each other, or they may be in close contact. In any event a tie so constructed will yield in the direction of its length to a very slight extent, but insufficiently to spread the rails, and will also yield transversely in order to afford the desirable cushioning effect in that direction. In this latter respect the tie has all the advantages so highly prized in wood ties, but the tie is superior to a wood tie in its durability. The tie, being practically an arch, is not liable to be crushed under superposed weight.

The form of the tie shown in the drawings—viz., a flattened tube—is believed to be the most desirable and practicable on the score of strength, durability, necessary rigidity, and as affording the largest possible bearing-surface for the rails.

Many different mediums may be employed for securing the rails to my tie. I have shown the tie as provided at each end with pairs of holes *b*, and the bases *c* of the rails *d* are provided with corresponding holes through which bolts *e* may be passed; and if bolts be used their heads may rest on the upper surfaces of the bases of the rails and the nuts *f* be arranged within the ties, as shown at the right-hand side of the drawings, or the reverse arrangement may be employed, as shown at the left-hand side of the drawings. Of course other forms of fastenings may be employed.

I do not claim, broadly, a metallic tie for railroads; neither do I claim an elastic metallic tie, for such ties, I am aware, are old.

What I claim is—

1. A metallic tie for railroads slitted spirally in the direction of its length, substantially as and for the purpose described.

2. A metallic tie for railroads constructed of a tubular helix, substantially as and for the purpose described.

3. A metallic tie for railroads constructed of a tube slitted spirally in the direction of its length, and thereby adapted to yield longitudinally and transversely, substantially as and for the purpose described.

4. A tubular metallic tie for railroads slitted spirally in a longitudinal direction and having a flattened rail-receiving surface, substantially as and for the purpose described.

In testimony whereof I have hereunto set my hand this 10th day of December, A. D. 1888.

ALDEN C. NICKLOY.

Witnesses:

AUGUST PIEPER,
NELSON H. ANIBAL.