

O. L. ROBERTS.
STEEL TIE.

APPLICATION FILED MAR. 29, 1909.

933,392.

Patented Sept. 7, 1909.
2 SHEETS—SHEET 1.

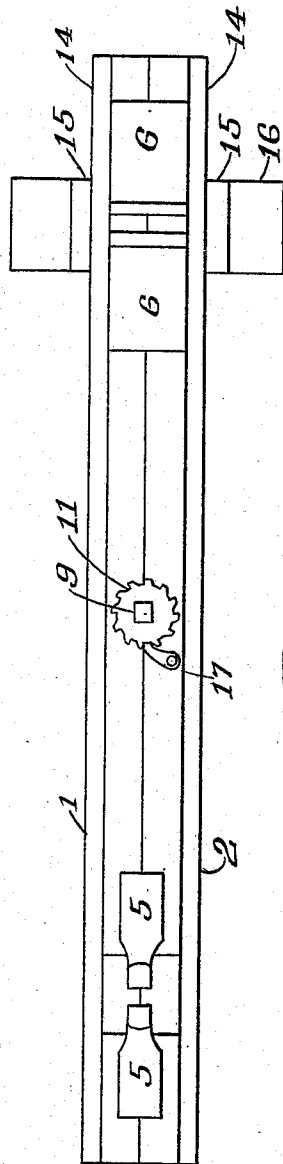


Fig. 1

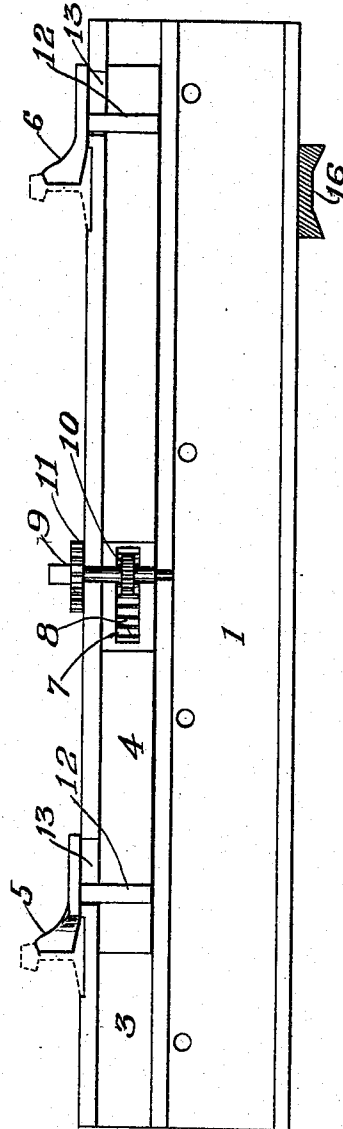


Fig. 2

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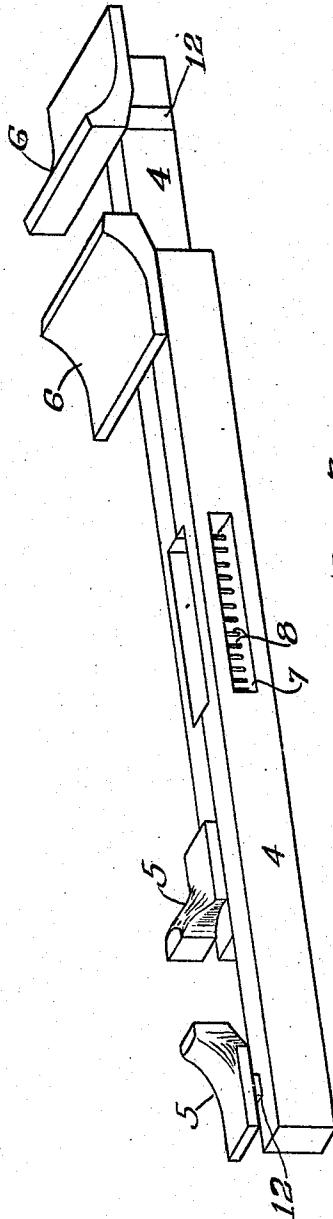


Fig. 3

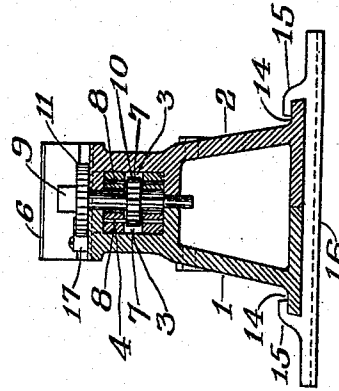


Fig. 4

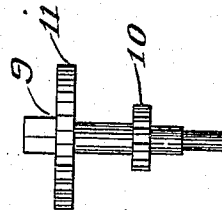


Fig. 5

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UNITED STATES PATENT OFFICE.

OMER L. ROBERTS, OF DEEDSVILLE, INDIANA.

STEEL TIE.

933,392.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed March 29, 1909. Serial No. 486,505.

To all whom it may concern:

Be it known that I, OMER L. ROBERTS, a citizen of the United States, residing at Deedsville, in the county of Miami and State of Indiana, have invented a new and useful Steel Tie; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to a steel tie, and has for its object to provide a simple, efficient and durable device of this character adapted to support the rails of a railroad or car line.

It is well known that the enormous demand made by the railroad on lumber for the supplying of ties has rapidly diminished our lumber supply until necessity has demanded a substitute.

The present invention is produced for the purpose of supplying a metallic tie to take the place of the wooden ones.

One of the objects of this invention is to provide a metallic tie so constructed as to afford a maximum strength out of a minimum quantity of metal.

Another object of the invention is to provide a tie of this class having means for tightening the jaws that grip the rails, in a simple and easy manner.

Another object of the invention is to provide a device of this character in which the same action will tighten the jaws on both of the rails simultaneously.

With these and other objects in view, the invention consists in the novel construction and arrangement of parts hereinafter described and shown, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a plan view of a steel tie constructed in accordance with this invention. Fig. 2 is a side elevation of one of the sections of the tie, showing the movable bar mounted therein. Fig. 3 is a perspective view showing the two slidable bars on which the jaws are mounted. Fig. 4 is a transverse sectional view through said tie. Fig. 5 is a side elevation of the bar having the two wheels mounted thereon.

Referring to the drawings, 1 and 2 designate the two members or sections constituting my tie. Each section is provided with

a longitudinal groove 3, which extends throughout the entire length of said tie and in which is mounted an adjustable bar 4. On these adjustable bars are mounted two jaws 5 and 6 which both face the same way. Each of these bars is provided with a longitudinal slot 7 having a plurality of pins 8 mounted in said adjustable bar, and vertically disposed.

Mounted between the two sections 1 and 2 in the center thereof is a vertical bar 9 on which is mounted a toothed wheel, which wheel is arranged below the surface of the tie and adapted to engage the vertical pins 8. The bar 9 is also provided with a ratchet wheel 11, which wheel is designed for the purpose of preventing rotation of said bar. The wheels 10 and 11 are both rigidly connected with said bar 9 and when the wheel 10 is rotated, it will be seen that one of the bars 4 is moved in one direction, and the other bar 4 is moved in the opposite direction, thereby pressing the jaws 5 and 6 firmly against the rails which they engage. Each of the jaws 5 and 6 is provided with a shank 12, which operates in an elongated recess 13 formed in said sections 1 and 2. When the various parts of the tie are assembled, it will be seen that the completed structure is provided with outwardly projecting flanges 14 which are engaged by rigid jaws 15 of a sliding plate 16. The jaws 6 are much larger than the jaws 5 which larger jaws are intended to engage the rails where a joint is formed. It is well known that the tie which lies beneath the joint soon becomes more depressed than the other ties, and the plate 16 is designed to prevent said depression. The upper end of the bar 9 is squared for the reception of a wrench for rotating the same. The wheel 11 is held against rotation by a dog 17.

As shown in Fig. 2 the tie is provided with apertures adapted to be engaged by the ordinary bolts and nuts for securing the two sections together.

What is claimed is:—

1. A metallic tie consisting of two sections having longitudinal grooves, an adjustable bar mounted in each groove and having a pair of jaws, and means for moving said bars in opposite directions simultaneously.
2. A metallic tie consisting of two sec-

tions having longitudinal grooves, an adjustable bar mounted in each groove and having a pair of jaws, each bar being provided with a longitudinal slot, pins extending
5 through said slot, and a toothed wheel adapted to engage the pins of both bars for moving the same in opposite directions.

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

OMER L. ROBERTS.

Witnesses:

W. I. LEFFEL,
LUCY E. LEFFEL.