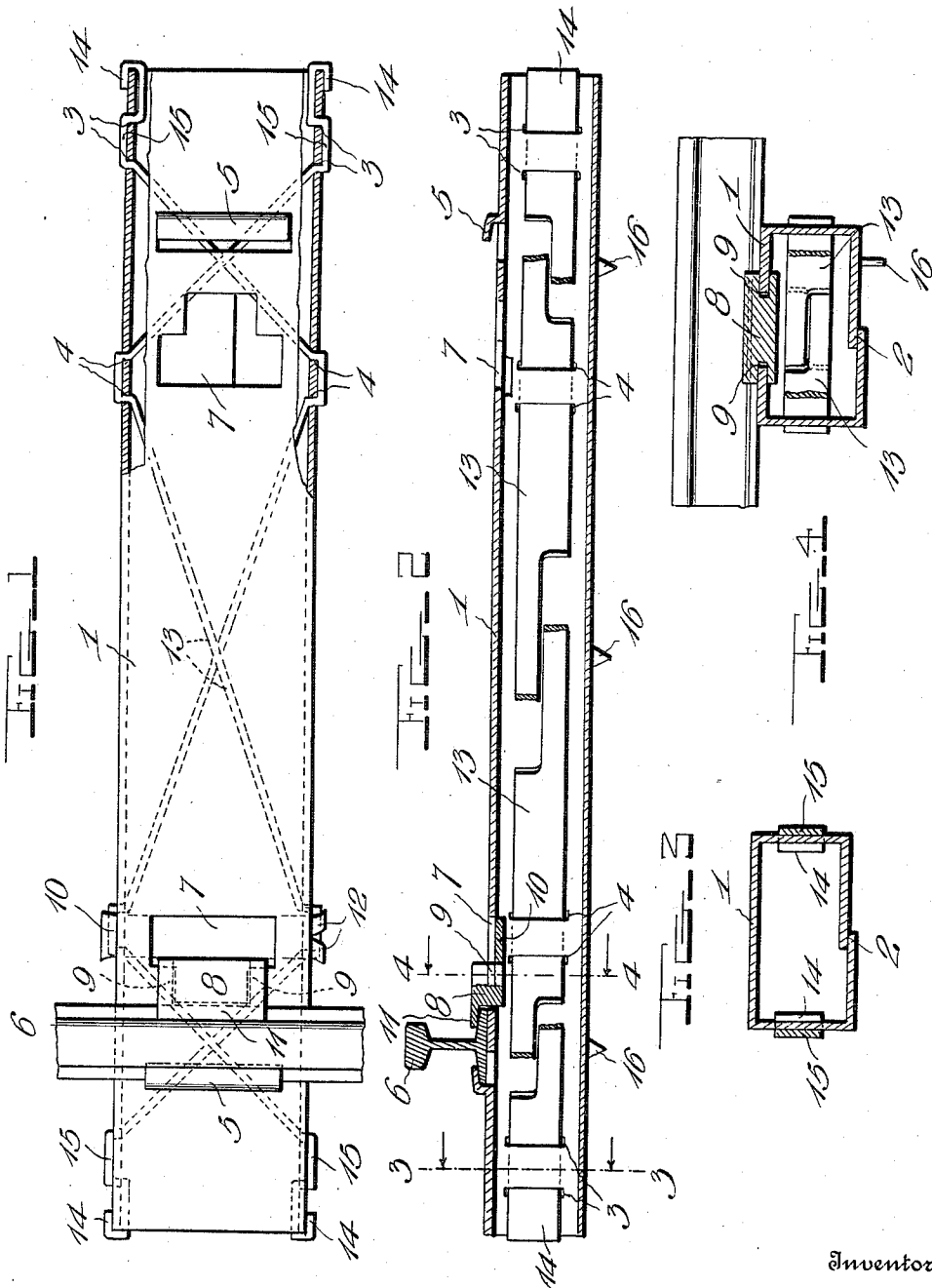


1,018,801.

Patented Feb. 27, 1912.



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RAILROAD-TIE.

1,018,801.

Specification of Letters Patent.

Patented Feb. 27, 1912.

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To all whom it may concern:

Be it known that I, ARTEMUS WILHELM YOCUM, citizen of the United States, residing at Manheim, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Railroad-Ties, of which the following is a specification.

This invention relates to railroad ties, and has for its object to provide a tie the parts of which are capable of quick and easy removal without interfering with the traffic and at the same time to produce a tie which will lessen the liability of spreading due to the imperfections usually found in wooden and similar ties.

The primary object of the invention is to provide an especially designed tie to be made of sheet metal in the form of an elongated box with binding and reinforcing strips of peculiar configuration and disposition, so placed within the box as to effectually hold the side portions of the same in proper relation to each other against the strains to which such a structure is usually subjected, and also to brace the top of the tie against the weight that it must sustain in consequence of rolling stock passing over the same.

A further object of the invention is the provision of a tie which overcomes all center binding and which will not break or crack in the center in consequence of use and strain.

A further object of the invention is to provide a tie which is devoid of rivets and bolts and thereby reduce the possibility of accident due to such securing devices becoming displaced or loosened.

With the foregoing objects in view, my invention consists in certain novel features of construction and combinations of parts which will be hereinafter described and pointed out in the appended claims.

For a full understanding of the invention reference is to be had to the following description and accompanying drawing, in which:—

Figure 1 is a top plan view of the tie; Fig. 2 is a longitudinal sectional view of the same; Fig. 3 is a transverse sectional view of the same cut on the line 3—3 of Fig. 2; and Fig. 4 is a transverse sectional view of the same cut on the line 4—4 of Fig. 2.

Corresponding and like parts are referred to in the following description and indi-

cated in all the views of the accompanying drawing by the same reference characters.

As illustrated in the accompanying drawing the tie consists of a strip of sheet metal which is bent approximately into parallelepiped configuration, the body portion of the tie being indicated at 1 and the edge portions of the tie overlapping each other longitudinally of the tie as at 2. In its vertical sides the tie is provided with openings 3 and 4. These openings are arranged in pairs and one pair is located adjacent each end of the tie and at the opposite vertical edges of the tie. The openings 3 at one side of the tie are directly opposite the openings 3 at the opposite side thereof and the same relation prevails with respect to the openings 4. As stated the body portion of the tie 1 is formed from sheet metal and in its top flanges 5 are cut and are bent up and are adapted to pass over the outer portions of the base flanges of track rails, indicated at 6. Openings 7 are provided in the top of the tie 1 within the track rails 6 and blocks 8 are slidably mounted in the said openings. The said blocks are provided in their sides with recesses 9 which receive the top portion of the tie 1 about the edges of the openings 7, and wedges 10 are driven transversely through the tie 1 and the outer edges of the wedges 10 bear against the inner sides of the blocks 8 and serve to force the flanges 11 thereof over the inner portions of the base flanges of the track rails 6. The wedges 10 are provided at one end with split extremities 12 the members of which are adapted to be spread after the wedges are positioned thereby holding the said wedges in position and firmly securing the base flanges of the rails 6 between the flanges 11 of the said blocks and the flanges 5 upon the top portion of the body of the tie 1.

The vertical side portions of the tie 1 are held in proper relation by means of braces of peculiar configuration and arrangement and the said braces also serve as means for effectually supporting the top of the tie 1 against the strain to which it is subject in consequence of the travel of rolling stock along the track rails 6. These braces consist of metallic strips 13. The end of each strip is bent around the end of one of the vertical sides of the tie 1 as at 14. The strips are then carried toward the intermediate portion of the tie along the inner surfaces of the sides thereof and are passed

through the outermost openings 3, thence along the outermost surfaces of the vertical sides of the tie as at 15 and are then passed through the innermost openings 3 and carried diagonally across the tie and across each other and passed through the outermost openings 4. The strips are then passed along the outer surfaces of the vertical sides of the tie 1 to the innermost openings 4, thence through the said innermost openings and diagonally across the innermost portion of the tie 1 and across each other, and the said strips are threaded through the openings at the opposite end of the tie in the same manner as that hereinbefore described. By this arrangement the strips are sustained vertically in edgewise positions and extend from one end of the tie to the other and across each other three times throughout the length of the tie. These crossings occur immediately under the points where the track rails 6 are supported and also under that part of the tie which is midway between the ends thereof. Thus portions of the strips which cross each other are reduced in vertical breadth so that the upper and lower edges of the major portions of the strips are in the same horizontal planes respectively. Therefore it will be seen that the strips hold the side portions of the tie in proper relation to each other without the use of bolts or rivets for securing the overlapping edges of the body portion of the tie together. Also the said strips serve to hold the top of the tie in proper position and brace the same against the weight which it is compelled to sustain when the rolling stock passes along the track rails 6.

The body of the tie 1 is provided upon its under side and at a point approximately midway between its ends with a downwardly disposed spur 16 which is adapted to enter the bed of the road and prevent the tie from moving endwise in consequence of the jar and vibration to which it is subjected.

Having thus described the invention, what is claimed as new is:

1. A tie consisting of a strip of metal

formed in approximately parallelepiped configuration with its edges overlapping each other longitudinally of the tie, and strips located within the tie and connecting the side edges thereof together and extending continuously throughout the length of the tie, having their ends clenched around the ends of the tie, said strips being in cruciform relation to each other.

2. A tie of sheet metal formed approximately in parallelepiped configuration having overlapping edges extending longitudinally thereof, strips extending continuously throughout the length and across the interior of the tie in cruciform relation and passed at intervals through perforations provided at opposite sides of the edges of the tie and clenched at their ends around the end of the tie.

3. A tie made of sheet metal formed in approximately parallelepiped configuration having overlapping edges extending longitudinally thereof, said tie being provided in its sides with openings, strips passing through said openings and clenched at their ends around the ends of the tie, said strips being in cruciform relation within the tie under the rail seating portions thereof and within the intermediate portion thereof.

4. A tie of sheet metal formed in approximately parallelepiped configuration with overlapping edges and having at its under side and at a point approximately midway between its ends a downwardly disposed spur, said tie having in its vertical sides openings, metallic strips threaded through said openings and clenched at their ends about the ends of the sides of the tie, said strips being in cruciform relation under the rail bearing portions of the top of the tie and at a point approximately midway between the ends of the tie.

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

ARTEMUS WILHELM YOCUM. [L. S.]

Witnesses:

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