

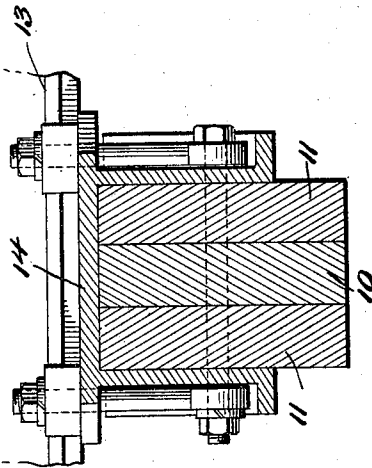
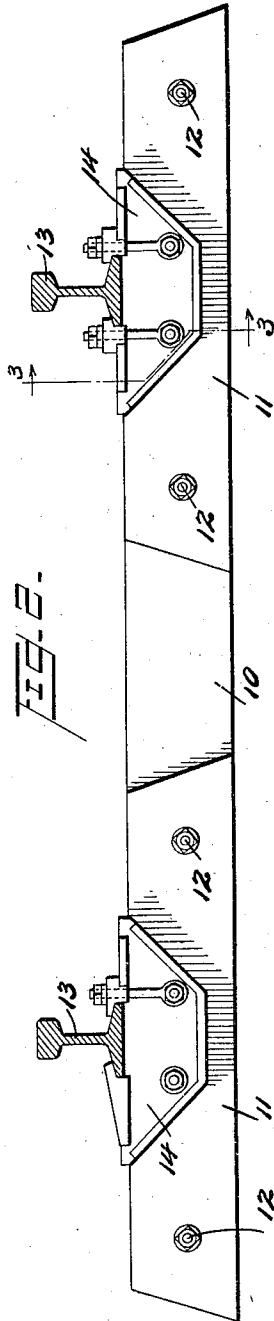
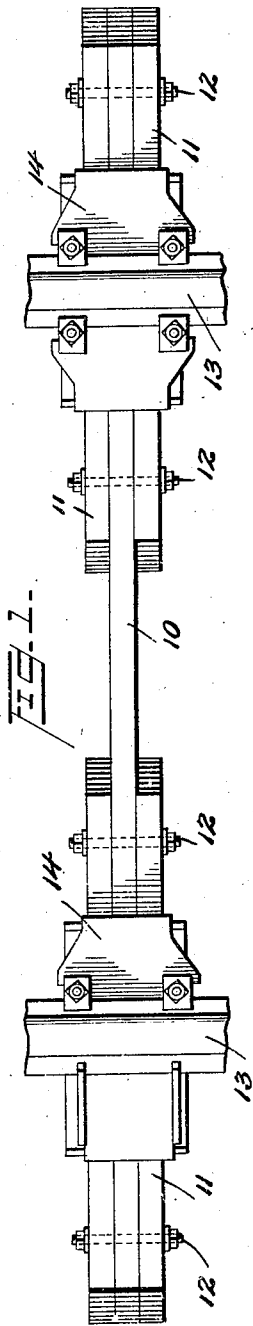
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1,475,429

W. G. COUGHLIN

BUILT-UP TIE

Original Filed Aug. 14, 1918



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# UNITED STATES PATENT OFFICE.

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## BUILT-UP TIE.

Original application filed August 14, 1918, Serial No. 249,882. Patent No. 1,441,401, dated January 9, 1923. Divided and this application filed September 25, 1922. Serial No. 590,411.

*To all whom it may concern:*

Be it known that I, WILLIAM G. COUGHLIN, a citizen of the United States, and residing at Philadelphia, Philadelphia County, State of Pennsylvania, have invented certain new and useful Improvements in Built-Up Ties, of which the following is a specification.

This invention relates to ties for supporting the rails in a railway and its object is to provide a built-up tie which may be made of waste lumber or of timber heretofore considered unsuitable for this purpose or more specifically to provide a tie having a central portion in the form of a board or plank to the ends of which blocks or short pieces of board are secured to form suitable bearing surfaces for the rails and to make the ends of the tie of sufficient width to have adequate bearing surface on the road bed.

This application is a division of my prior application 249,882 filed Aug. 14, 1918, which issued in Patent 1,441,401, Jan. 9, 1923.

Referring to the accompanying drawings forming a part of this specification:

Fig. 1 is a top plan view of a built-up tie involving my invention;

Fig. 2 is a side view of the same, the rails being shown in section; and

Fig. 3 is a vertical section substantially on the line 3—3 of Figure 2.

As illustrated in the drawings my improved tie comprises a central portion 10 which preferably is made up of a single plank or board which is of sufficient length to extend under both rails of the track. In other words, the board 10 is of greater length than the gauge of the railway. At each end of this board or plank 10 and on each side of the same I secure short pieces 11 of plank or board, such short pieces being fastened to the board 10 in any suitable manner as by means of a plurality of transverse bolts 12. If desired the rails 13 may rest directly on the tie but I prefer to employ chairs 14 which are suitably secured to the built-up tie and upon which the rails rest and are suitably secured.

A construction of this kind possesses several advantages. The central member or

board 10 being much narrower than the ordinary tie may be made from waste lumber or from timber which would not be suitable in making an ordinary tie. Likewise the short pieces or blocks 11 may be cut from waste lumber or material which could not be utilized for ordinary ties. The ends of my built-up tie may, of course, be made as wide as desired to form adequate bearing surface for the rails. The built-up ends of my improved tie furnish all the support needed for the railway and while the central portion of such tie is not as solid as the end portions, it is a well known fact that it is desirable not to have a solid bearing at the middle portion of railway ties for the reason that such solid bearing produces a condition known in railway construction as "tie-bound", which causes trains to roll. While, therefore, my improved tie has the advantage that it may be constructed of material generally considered unsuitable for such purpose, it also has the further advantage of providing a support for the rails which will obviate the "tie-bound" condition above referred to. Furthermore my improved construction provides an arrangement by which the tie adjacent its ends may be made as wide as desired so that ample bearing area of the tie on the roadbed may be secured immediately beneath the rail where it is required, and this can be done without having the central portion of the tie of such size as to produce the "tie-bound" condition above mentioned. In other words, by this improved construction, the bearing area between the tie and roadbed may be provided under the rails where it is desired and not in the center of the track where it is unnecessary and tends to produce the objectionable condition mentioned.

Having thus described my invention what I claim as new and desire to be secured by Letters Patent is:

1. A composite wooden railway tie consisting of a central board or plank of greater length than the gauge of the track and a plurality of comparatively short lengths of board secured to each end of said first named board, each of said short lengths of board

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being secured to said central board in position to lie beneath the rails of the track when the tie is in use.

2. A composite wooden railway tie consisting of a single central board or plank of greater length than the gauge of the track, a short length of board secured on

each side of said central board at each end thereof, and arranged in position to lie beneath the rails of the track when the tie is in use. 10

In testimony whereof I hereunto affix my signature.

WILLIAM G. COUGHLIN.