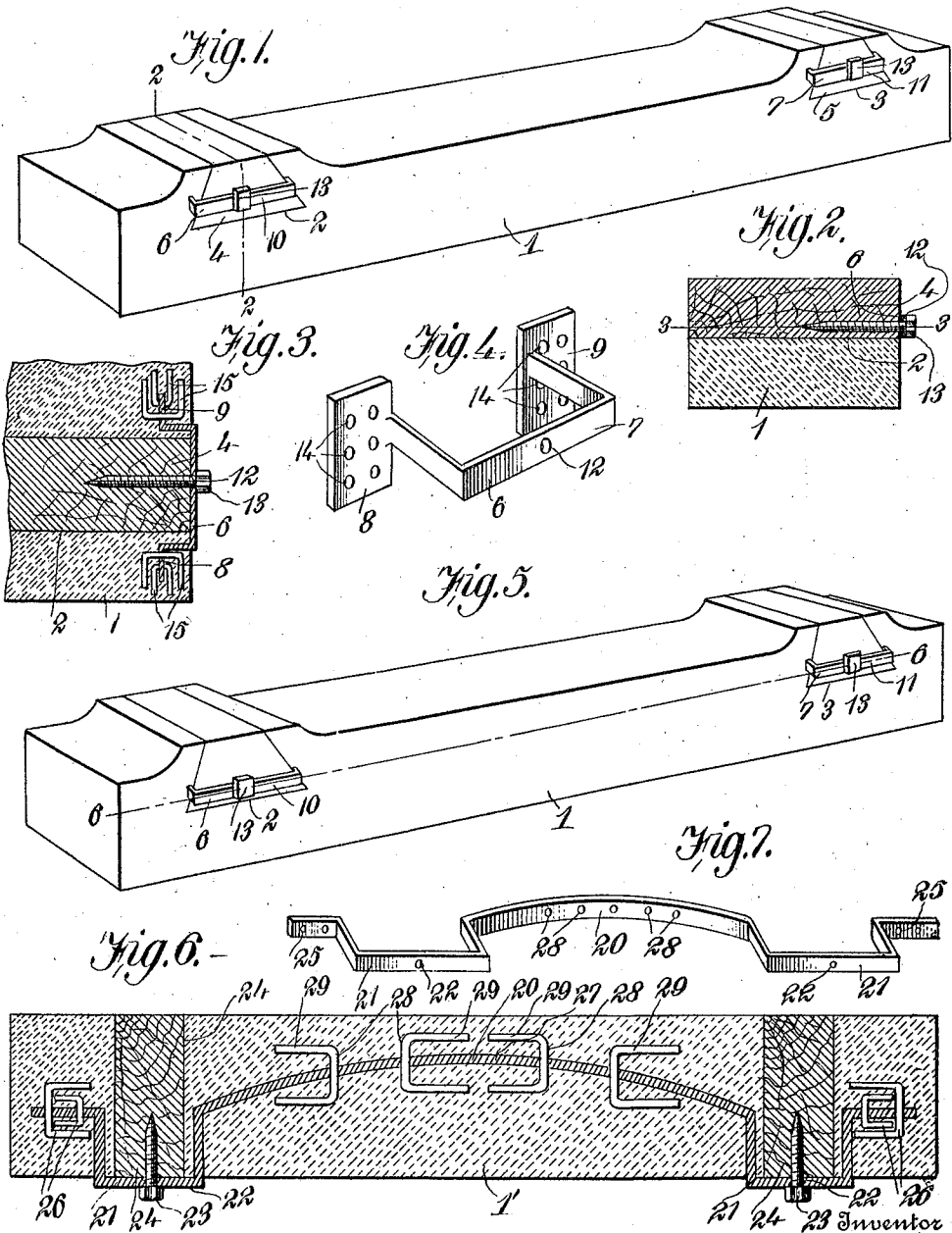


H. E. BURGESS.
CONCRETE RAILROAD TIE.
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1,062,436.

Patented May 20, 1913.



Witnesses

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CONCRETE RAILROAD-TIE.

1,062,436.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY E. BURGESS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Concrete Railroad-Ties, of which the following is a specification.

The present invention relates to improvements in railroad ties, and primarily to detachable rail cushions and fastenings for plastic ties.

In carrying out my invention it is my purpose to provide a plastic railroad tie with dove-tailed passages arranged at the proper track gage and adapted to receive and to be frictionally contacted by rail supporting cushions, the plastic tie being further provided with substantially U-shaped yokes having their ends formed with angularly arranged flattened plates, the said plates as well as the arms of the yokes adapted to be embedded within the tie, while the connecting portions of the yokes are adapted to lie flush with one of the faces of the tie and to straddle the openings provided by the passages, the said connecting portions of the yokes being provided with suitable openings for the reception of headed securing elements and whereby the cushions are effectively but removably retained within the passages and upon the tie.

With the above recited objects in view and others which will be disclosed as the nature of the invention is more fully described the improvement resides in the construction, combination and operative arrangement of parts set forth in and falling within the scope of the appended claims.

In the drawings, Figure 1 is a perspective view of a tie constructed in accordance with the present invention. Fig. 2 is an enlarged sectional view taken upon the line 2-2 of Fig. 1. Fig. 3 is a sectional view taken upon the line 3-3 of Fig. 2. Fig. 4 is a perspective view of the yoke. Fig. 5 is a perspective view of a modification. Fig. 6 is a horizontal sectional view approximately upon the line 6-6 of Fig. 5. Fig. 7 is a perspective view of the reinforcing cushion sustaining member.

The tie comprises a substantially rectangular bottom 1 constructed preferably of reinforced concrete and the said tie is provided adjacent its opposite transverse ends with passages 2 and 3, the lower wall of which being horizontally straight, while the

side walls incline toward each other. These passages are adapted for the reception of cushion blocks 4 and 5, the said blocks having their opposite longitudinal sides beveled to correspond with the beveled side walls provided by the passages, while the lower face of each of the cushions is flat to lie snugly against the straight lower wall of the passage.

The numerals 6 and 7 designate metallic members which are in the form of substantially U-shaped yokes. The side arms of each of the members 6 and 7 are integrally formed with angularly arranged substantially rectangular plates 8 and 9. These plates project both above and below the yoke proper and the said plates as well as the side arms of the yokes are adapted to be embedded within the concrete tie 1 while the connecting member of each of the yokes, is adapted to lie flush with one of the faces of the said tie 1. These connecting members, which may be designated by the numerals 10 and 11 respectively are each centrally provided with an opening 12 through which is adapted to pass a headed screw or bolt 13 which engages with one of the faces of each of the cushions and sustains the said cushion properly within the ways provided by the tie.

Each of the plates 8 and 9 is formed with a plurality of openings 14, the said openings being adapted to receive retaining elements, such as U-shaped bolts or wires 15, as clearly illustrated in Fig. 3 of the drawing, and the said U-shaped elements 15 also serve as reinforcements for the plastic tie. It is, of course, to be understood that the cushions 4 and 5 are disposed upon the tie at the proper track gage, and the rails are retained upon the cushions through the medium of the ordinary spikes. It will be further apparent that by providing the yoke members, having the central openings, for the reception of the bolts or screws 13, the said cushions may be removed from the passages when worn or otherwise damaged without interfering with the tie proper and a new cushion readily substituted therefor.

In Figs. 5 to 7, inclusive, I have illustrated a different form of the reinforcing and cushion sustaining member. In these figures the tie 1' is substantially similar to that above described. The tie is provided with the dove-tailed openings for the reception of dove-tailed cushion blocks. The

cushion blocks sustaining member, as well as the reinforcing element for the tie, which, in this instance, is designated by the numeral 20 comprises a single member constructed of flat metal. The member 20 has its ends substantially rectangular, as at 21, to provide what may be termed the U-shaped yokes. The inside of each of the yokes 21 is adapted to lie flush with one of the faces of the tie 1' and is provided with an opening 22 for the reception of a securing element 23 and which sustains the cushion 24 upon the tie. The outer arms of each of the substantially U-shaped yokes 21 are extended in opposite directions to provide what may be termed plates 25. These plates are formed with a plurality of openings for the reception of substantially U-shaped sustaining members 26, the said members being similar to the members 15 above referred to. The yokes 21 are connected through the medium of a curved body portion 27 which, of course, is embedded in the tie during the process of construction of the tie and which, together with the end plates 25 and their U-shaped retaining members 26 materially strengthens the tie. The bowed connecting member 27 may be and preferably is provided with a plurality of spaced openings 28, each of the said openings being adapted to receive U-shaped reinforcing and sustaining elements 29.

From the above description, taken in connection with the accompanying drawings, the simplicity of the device, as well as the advantages thereof, will, it is thought be perfectly apparent to those skilled in the art to which the invention appertains, without further detail description.

What I claim is:—

1. A plastic tie being provided with passages arranged adjacent its opposite transverse ends, substantially U-shaped yokes having their arms formed with rectangular plates embedded within the tie, the connecting member of each of the yokes partially closing the passage upon one of the faces of the tie, a cushion for each of the passages, and means for removably connecting the cushions to the yokes.

2. A plastic tie having transverse dove-tailed passages, spaced suitable to the track gage, of a pair of cushion rail bearing members fitted within and frictionally engaging the walls provided by the passages, substantially U-shaped yoke members hav-

ing their opposite arms provided with angular rectangular plates, the said plates and side arms of the yoke being embedded within the tie, and the connecting member of each of the yokes straddling the passage upon one of the faces of the tie, and removable elements passing through the said connecting members of the yokes and engaging with the cushion members of the tie.

3. The combination with a plastic tie having transverse dove-tailed passages spaced suitable to the track gage, of substantially U-shaped metallic yokes, each of the said yokes having its side arms provided with substantially rectangular angularly arranged plates which project both above and below the yoke, the side arms as well as the plates of the yoke adapted to be embedded within the tie, retaining elements passing through the plates and within the plastic body of the tie, the connecting member of each of the yokes being provided with an opening and being arranged flush with one of the faces of the tie, a pair of cushion rail bearings arranged within the passages to frictionally engage therewith and to contact with the connecting members of the yokes and headed threaded members passing through the openings in the said connecting members of the yokes and engaging the cushion bearings.

4. A plastic tie having its upper face enlarged adjacent its ends and said enlarged portions being provided with dove-tailed depressions, dove-tailed cushions within the depressions and lying flush with the upper face of the tie, a tie reinforcing and cushion sustaining member, said member having its ends provided with substantially U-shaped yokes, the outer members of which being flush with one of the faces of the tie, removable means for securing this member to the cushions, the ends of the yokes having extensions provided with openings, U-shaped sustaining members arranged within the tie, a bowed connecting member for the yokes, said member being provided with openings, and sustaining members passing through the openings and embedded within the tie.

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

HENRY E. BURGESS.

Witnesses:

EMIL WM. VESTER,
JOSEPH A. BURGESS.