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ELEVATED RAILROAD TRACK.

APPLICATION FILED FEB. 20, 1917.

1,316,732,

Patented Sept. 23, 1919.

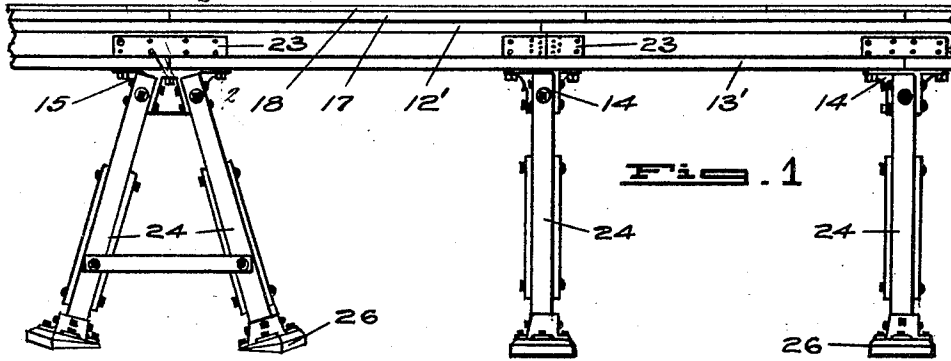


Fig. 1

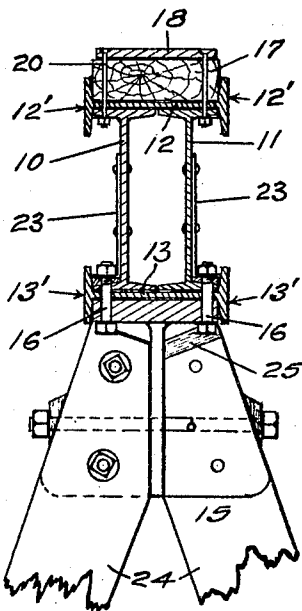


Fig. 2

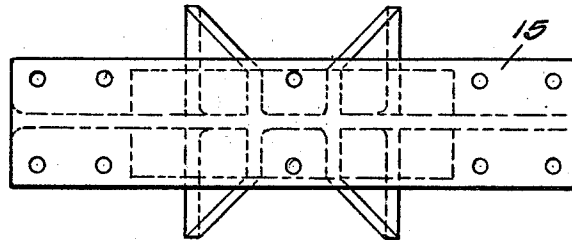


Fig. 4

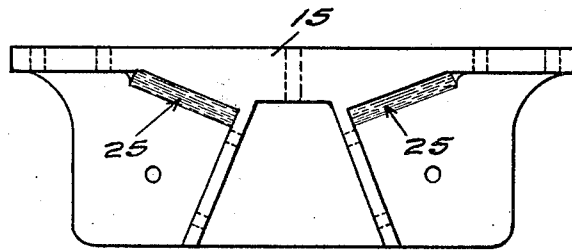


Fig. 5

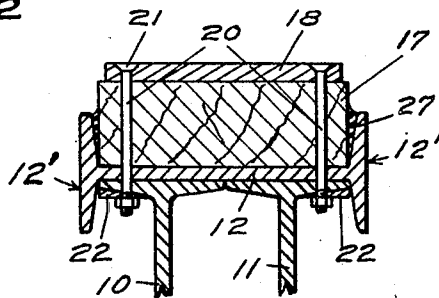


Fig. 3

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UNITED STATES PATENT OFFICE.

ROYAL A. McCLURE, CARL H. REEVES, AND WILLIAM W. BOULTON, OF SEATTLE, WASHINGTON, ASSIGNORS, BY MESNE ASSIGNMENTS, TO UNIVERSAL ELEVATED RAILWAY COMPANY, INCORPORATED, OF SEATTLE, WASHINGTON.

ELEVATED-RAILROAD TRACK.

1,316,732.

Specification of Letters Patent.

Patented Sept. 23, 1919.

Application filed February 20, 1917. Serial No. 149,969.

To all whom it may concern:

Be it known that we, ROYAL A. McCLURE, CARL H. REEVES, and WILLIAM W. BOULTON, citizens of the United States, residing at Seattle, in the county of King and State of Washington, have invented a new and useful Improvement in Elevated-Railroad Tracks, of which the following is a specification.

This invention relates to improvements in elevated railroad tracks of the one-rail type, and the object of this improvement is to provide a strong, simple, and durable track of this class that may be built up of standard sections, that is not expensive to construct and maintain, and one that possesses a desired amount of elasticity due to the fact that the top rail rests on a longitudinally extending piece of timber.

Further objects are to provide suitable means for rigidly supporting the track at varying distances above the ground, thereby obviating the necessity of grading the road-bed.

This track is constructed to meet the especial requirements of the one rail truck illustrated and described in co-pending application of Royal A. McClure, H. R. Stevens and W. W. Boulton, filed February 20, 1917, trucks for elevated railways, Serial Number 149,966.

The invention consists in the novel construction, adaptation, and combination of parts, as will be more clearly hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a view in side elevation of a section of track constructed in accordance with this invention; Fig. 2 is an enlarged view in cross section on broken line 2, 2 of Fig. 1; Fig. 3 is an enlarged fragmentary view in cross section illustrating means used for preventing the entrance of water around the sides of the wooden rail support; Fig. 4 is a plan view of a track supporting bracket; and Fig. 5 is a view in side elevation of the device shown in Fig. 4.

Referring to the drawings, throughout which like reference numerals designate like parts, it will be seen that this track is built up of four I beams, two of which are disposed in vertical planes side by side and designated by the numerals 10 and 11, and the other two of which are disposed in hori-

zontal planes at the top and bottom of the I beams 10 and 11 respectively and designated by the numerals 12 and 13.

The beam 13 rests upon supports 14 and 15, and the bottom flanges of the beams 10 and 11 rest side by side upon the web of the beam 13 and are secured thereto and the supports 14 and 15 by bolts 16 that extend through such supports, through the webs of the beam 13, and through the outside base flange portions of the beams 10 and 11.

The web of the beam 12 rests upon the top flanges of the beams 10 and 11, which are just wide enough to snugly fit between the two end flanges of the beam 12.

17 is a rail-supporting timber that lies on the web of the I beam 12 between the end flanges thereof, and has a flat metal rail or tread 18 secured on the top side thereof.

20 are bolts that extend downwardly through the rail 18, timber 17, web of the I beam 12, and outer top flange portions of the I beams 10 and 11, and secure these several parts together to form a rigid structure.

The heads of the bolts 20 are countersunk into the rail 18 as indicated at 21 so that they will be flush with the top side of such rail and will leave a smooth surface for the truck wheels to run on, and the bottom ends of the bolts 20 are preferably provided with wedge-shaped washers 22 to compensate for the angular inside surface of the flanges of the I beams 10 and 11. The outer surfaces 12' and 13' of the flanges of the I beams 12 and 13 form smooth trackways upon which guide wheels or guide rollers of a truck may run, as more clearly explained in the co-pending application hereinbefore referred to.

23 are angle plates that are riveted to the webs of the I beams 10 and 11 at the joints thereof, and are held at their bottom edges by the bolts 16, thereby serving to strengthen the rail structure at the joints.

The brackets 14 are adapted for the reception of two divergent supporting posts 24 and the brackets 15 (see Figs. 4 and 5) are adapted for the reception of four divergent supporting posts 24, it being desirable in the construction of a track to insert a four post support at frequent intervals to give

stability to the track in an endwise, as well as a crosswise, direction.

The brackets 15 are suitably webbed for the reception of square posts 24 of uniform size and are provided with beveled under surfaces 25 against which the square top ends of the posts may abut.

The brackets 14 are designed to receive posts of the same size and shape as the brackets 15.

26 are footings for the reception of the square bottom ends of the posts 24, such footings being adapted to rest upon, and be secured to, any suitable form of rigid abutments.

In the science of railroad construction, it is a well recognized fact that wooden cross ties afford an elasticity which prevents breaking of the rails and rapid deterioration of the rolling stock, and that non-elastic cross ties are not practical. In this track the timber 17 performs the same function as the wooden cross ties and forms a cushion between the rail 18 and the web of the I beam 12, thus giving the elasticity to the rail 18 that is necessary to prevent injury to the rail and to the rolling stock.

When the rectangularly shaped timber 17 is placed between the two flanges of the I beam 12, a small triangular space that is open at the top will be left between each side of the timber 17 and the adjacent inner beveled surface of I beam flange, and to exclude moisture from this space and prevent rotting of the timber, this space is poured full of hot tar or pitch, as more clearly illustrated at 27 in Fig. 3.

It is obvious that this track may be constructed of various sizes to meet different requirements, and that changes in its form of construction may be resorted to within the scope of the following claims.

What we claim and desire to protect by Letters Patent is:

1. The combination with a rigid track that is built up of beams of a timber extending lengthwise on the top of one of said beams between the upper side flange thereof and a metal rail on the top of said timber.

2. The combination with upright supports of a track on said supports, said track being constructed of I beams, a timber on the top of said I beams, with the upper sides thereof engaged by the side flanges of said I beams, and a metallic tread on the top of said timber.

3. A track of the class described, comprising two I beams disposed side by side

in vertical planes, two other I beams disposed on the tops and bottoms respectively of said two first named I beams, a timber extending lengthwise on the top of said track, and a metallic tread on said timber.

4. A track of the class described, comprising two I beams disposed side by side in vertical planes, two other I beams disposed in horizontal planes on the top and bottom sides respectively of said first-named I beams, a timber adapted to lie between the flanges of said uppermost I beam, a metallic tread on the top of said timber, means securing all of said I beams and said tread and said timber together to form a track and upright supports for said track.

5. A track of the class described, comprising two I beams disposed side by side in vertical planes, two other I beams disposed in horizontal planes on the top and bottom sides respectively of said two first-named I beams, the outer sides of the flanges of said two last-named I beams forming track surfaces that lie in vertical planes, means for securing all of said I beams together, a timber secured lengthwise on the top of the uppermost I beam, a rail on the top of said timber, and means supporting said track.

6. The combination with a rigid track structure of the one rail type of two track surfaces provided on each side of said track structure and disposed one above another in vertical planes, a timber having a metal tread extending lengthwise on the top of said track structure and means whereby the top of said track structure serves to prevent lateral displacement of said timber extending lengthwise on the top of said track structure, and a metal rail on said timber.

7. The combination with longitudinally extending supporting members of an I beam adapted to lie in a horizontal plane on the tops of said supporting members, a timber extending lengthwise on top of said I beam and disposed to lie between the flanges thereof and a metal rail on the top of said timber.

Signed by us at Seattle, Washington, this 10th day of February, 1917.

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Witnesses:

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