

No. 691,086.

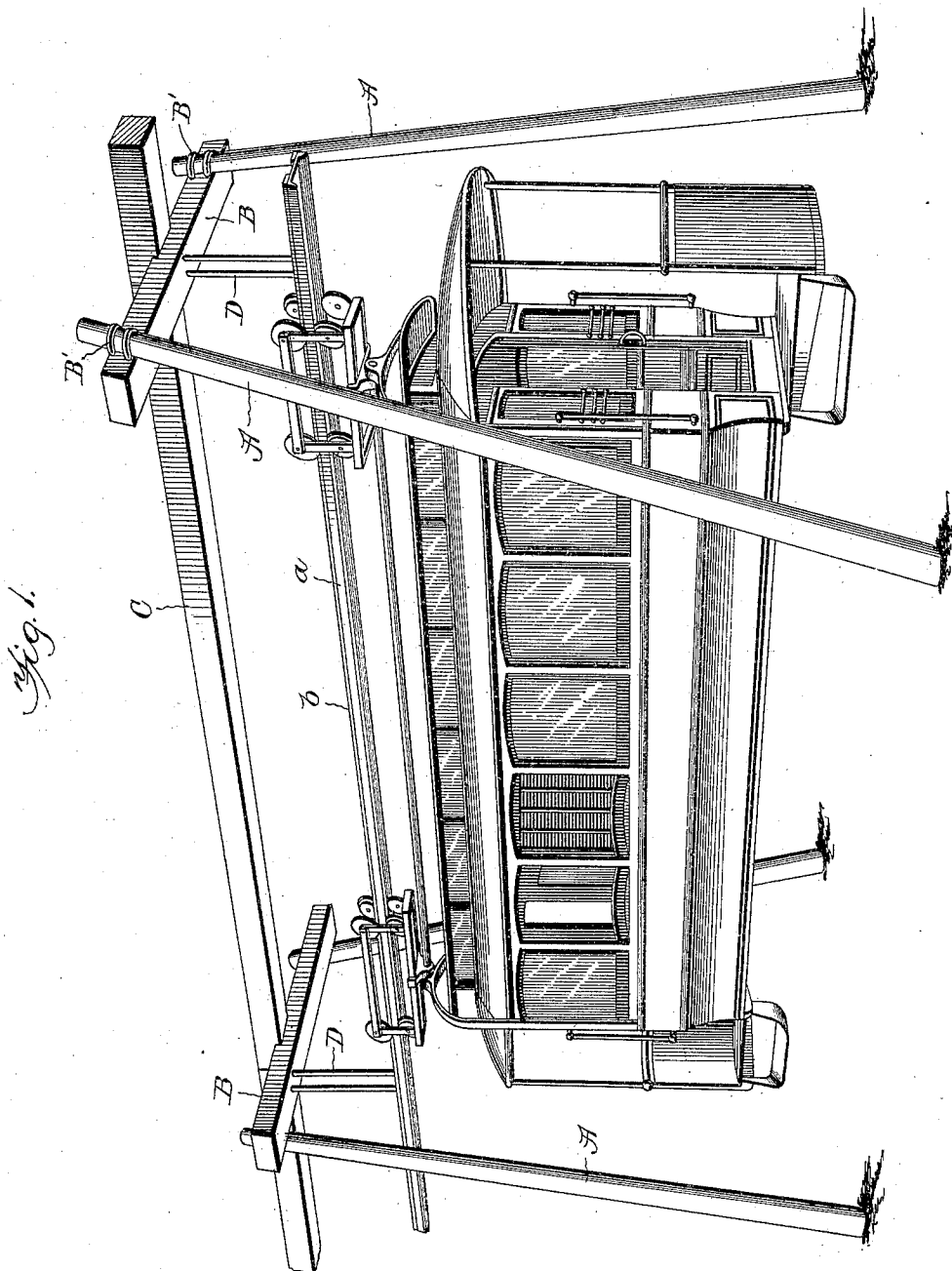
Patented Jan. 14, 1902.

J. N. VALLEY.
ELEVATED RAILROAD.

(Application filed Apr. 3, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
D. L. Mockham
L. S. Black.

Inventor
John N. Valley.
by *Schmiedt & Dalton*
Attorneys

No. 691,086.

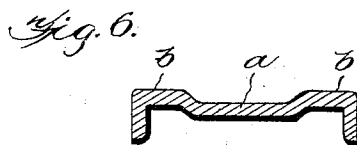
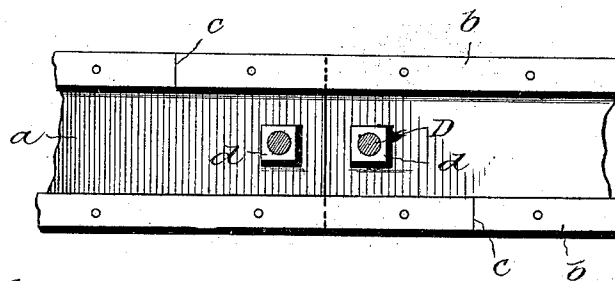
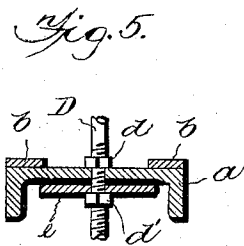
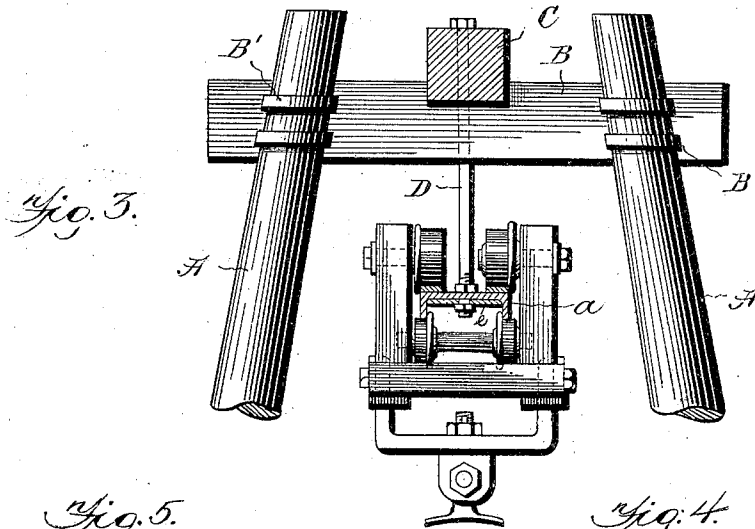
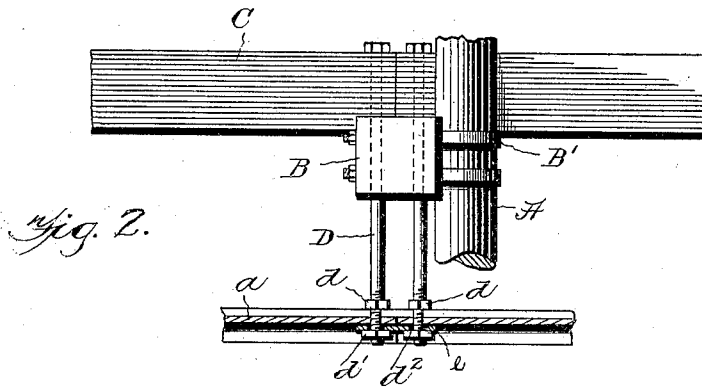
Patented Jan. 14, 1902.

J. N. VALLEY.
ELEVATED RAILROAD.

(Application filed Apr. 3, 1901.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses
J. L. Noedlow
L. S. Black.

Inventor
John N. Valley,
by Lehman & Dalton
Attorneys

UNITED STATES PATENT OFFICE.

JOHN N. VALLEY, OF JERSEY CITY, NEW JERSEY.

ELEVATED RAILROAD.

SPECIFICATION forming part of Letters Patent No. 691,086, dated January 14, 1902.

Application filed April 3, 1901. Serial No. 54,154. (No model.)

To all whom it may concern:

Be it known that I, JOHN N. VALLEY, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Elevated Railroads; 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.

My invention relates to elevated railways of that class in which the track is suspended from longitudinal stringers supported by posts; and its object is to provide an improved track and a substantial structure for suspending the same.

My invention consists of a track made from a channel-iron or an inverted-U-shaped bar provided with supplemental tread-rails secured to the side edges thereof, the ends of the supplemental rails overlapping the joints of the channel-iron on opposite sides thereof.

The invention further consists in suspending the rail by bolts which pass through stringers and the girders beneath the stringers, and thereby form a substantial structure and prevent injurious strains on the track and its supports.

For a full understanding of the merits and advantages of my invention reference is to be had to the accompanying drawings and the following description.

In the drawings, Figure 1 is a perspective view of an elevated-railway structure, showing a car thereon and embodying all the features of my invention. Fig. 2 is a detail side view showing the track in longitudinal section. Fig. 3 is a transverse section showing the carriage mounted on the track. Fig. 4 is a top plan view of my improved rail. Fig. 5 is a cross-section of Fig. 4. Fig. 6 is a transverse section illustrating a modified form of track.

Like characters of reference indicate corresponding parts throughout the several views.

The supporting-posts A are inclined, as shown, and connected near their upper ends to the transverse girders B by means of the U-bolts B', which embrace the posts and pass

through the girders. Supported upon the top and within the recesses formed in the girders is the longitudinal stringer C.

In Fig. 2 the joint of the girder and track is shown, and the hanger-bolts D pass through both the stringer and the girder and suspend the track. Two bolts are preferably used, each inserted near the meeting ends of the stringer and each in engagement with the opening near the end of the track *a*, and the bolts, having little or no lateral play, form a substantial suspending structure for the track. The ends of the bolts are screw-threaded to receive the nut *d*, which engages the top of the track and prevents upward movement of the same, while the nut *d'* engages the plate *e* beneath the track, and by screwing the nuts up or down the track may be vertically adjusted. The plate *e* is provided with a longitudinal slot *d''*, through which the bolts pass to allow for contraction and expansion of the track.

In Figs. 4 and 5 is illustrated an improved form of track, which consists of a channel-iron or inverted-U-shaped bar *a*, which may be either in the form shown in Fig. 5 or rolled with the raised tread *b*, as shown in Fig. 6; but I prefer to attach the supplemental tread-rail by rivets to the top of the track, having their ends overlap the joints of the channel-iron on opposite sides thereof, as shown at *c* in Fig. 4. By this arrangement the gap or opening in the track caused by the expansion of the same will not affect the tread-surfaces to any marked degree and the tread may be replaced by a new one when it has become worn. By forming the rail from a channel-iron the downward right-angular flanges provide a suitable guide for the lower wheels of the carriage, as shown in Fig. 3, and thus derailment of the carriage is almost impossible.

In Fig. 6 a transverse section of a modified form of rail is shown in which I dispense with the detachable tread-surface, but form the raised longitudinal side edges on the top when the rail is rolled.

My invention is applicable for all purposes where an elevated railway is desired and is adapted for use in timber-lands for getting

out logs or in mines for transporting coal and the like, as well as for conveying passenger-cars, and changes in the form, proportions, and minor details of construction may be resorted to without departing from the principle of my invention or sacrificing any of the advantages thereof.

What I claim, and desire to secure by Letters Patent, is—

- 10 1. An elevated-railway structure comprising supporting-posts, girders held thereto, longitudinal stringers supported above the girders and held in place upon the latter by depending track-hangers.
- 15 2. In an elevated-railway structure, the combination with supporting-posts, of girders held thereto, longitudinal stringers mounted on top of the girders, depending hangers suspended from the stringers and passing through the girders and adapted to support a track and hold the stringers and girders together.
- 20 3. In an elevated railway, a track formed from an inverted-U-shaped bar, provided with a detachable tread.
- 25 4. In an elevated railroad, the combination with the supporting-posts, of girders held thereto, stringers mounted on the girders, hangers suspended from the stringers and
- 30 5. In an elevated railroad, the combination with the supporting-posts, of girders held thereto, stringers mounted on the girders, hangers suspended from the stringers and girders, said hangers consisting of two bolts which pass through both stringers and girders and suspend a channel-iron track provided

with a raised tread, substantially as described.

5. An elevated railroad having a channel angle-iron track provided with a detachable tread, substantially as shown. 35

6. An elevated railroad having a channel-iron track provided with a detachable raised tread, substantially as shown. 40

7. An elevated railroad having an angle-iron track provided with a raised tread, the ends of which overlap the joint of the track on opposite sides thereof, substantially as described. 45

8. In an elevated railroad, the combination with supporting-posts, of girders held thereto, stringers mounted on the girders, hanger-bolts passing through both stringers and girders and suspending an angle-iron track, each bolt adapted to engage the track near their meeting ends, and thereby prevent injurious strains on the track and its supports substantially as described. 50

9. In an elevated railway, a track formed from an inverted-U-shaped bar, having a portion of its horizontal face provided with a detachable tread. 55

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

JOHN N. VALLEY.

Witnesses:

J. H. VALLEY,

T. S. MALONEY.