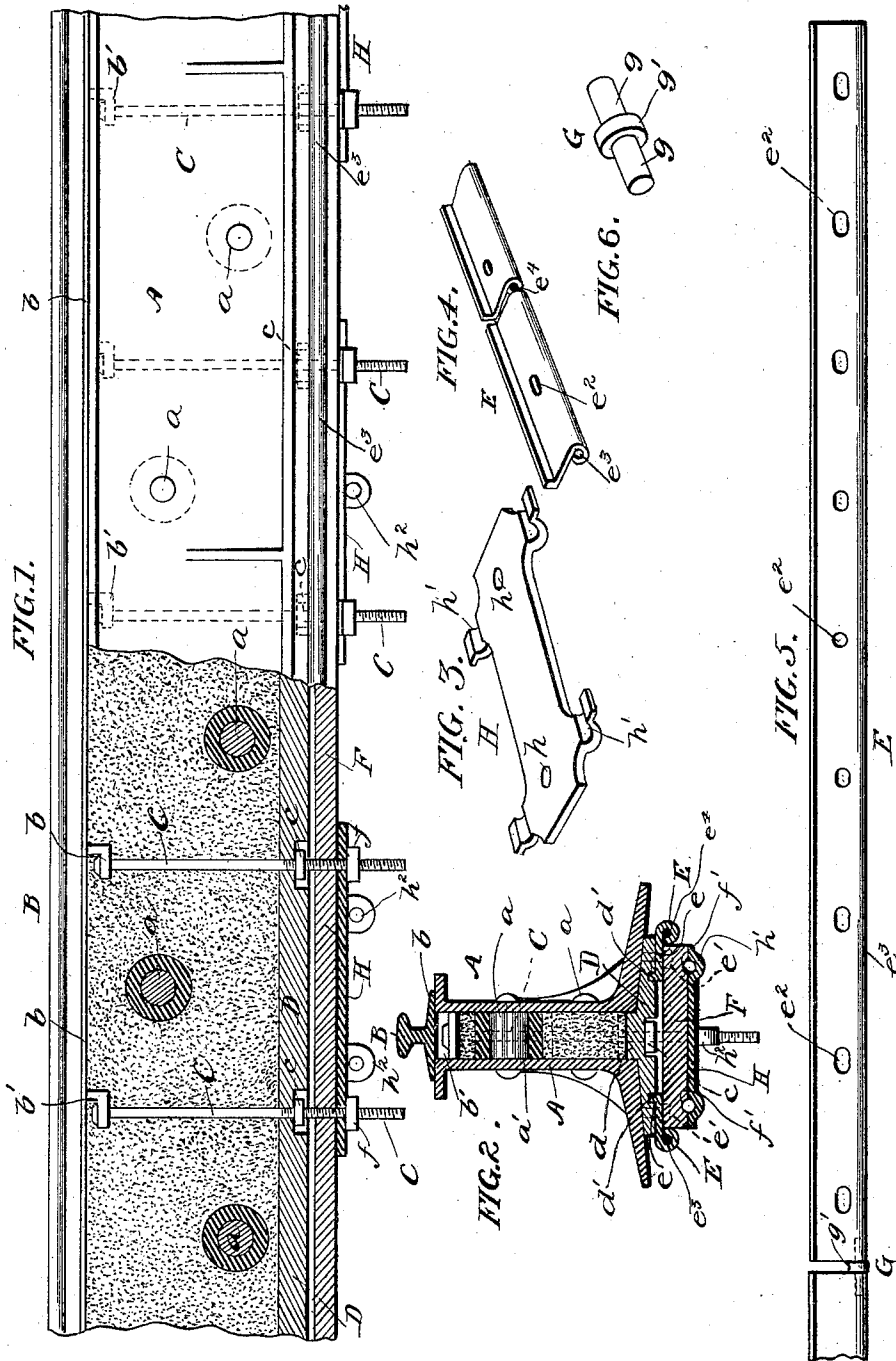


(No Model.)

H. S. PRUYN.
ELECTRIC RAILWAY.

No. 465,886.

Patented Dec. 29, 1891.



WITNESSES:

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ELECTRIC RAILWAY.

SPECIFICATION forming part of Letters Patent No. 465,886, dated December 29, 1891.

Application filed June 25, 1890. Serial No. 356,636. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. PRUYN, a citizen of the United States, residing in Hoosick Falls, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Elevated-Railroad Tracks, of which the following is a specification.

My invention relates to the construction of an elevated-railroad track, which, although in some of its particulars adapted for railways using any kind of motive power, is especially adapted to elevated systems of electric locomotion.

The object of my present invention is to produce a strong but light—preferably single rail—elevated structure, and one which will deaden the sound of passing cars or trains.

My invention consists in the construction and combination of parts, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of my structure, parts being broken out. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a detail perspective of the holding-clips. Fig. 4 is a detail perspective of the conductor and guide-rail. Fig. 5 is a detail plan of the same, and Fig. 6 is a detail perspective of the connector for two sections of the conductor.

The two L-shaped wrought-iron girders A are bolted or riveted together, as shown in Fig. 2, the bolts or rivets *a* being enlarged at the central portions to form shoulders *a'*, against which the girders abut, and whereby they are spaced or held apart to form a space between them. Around each rivet is a spool of wood, rubber, or other more or less elastic material, for the purpose hereinafter described.

The flanges *b* of the rail B rest upon the upper edges of the girders, and at suitable intervals the rails are provided with the bracket-shaped lugs *b'*, depending therefrom and entering the space between the girders. These lugs serve to firmly center the rails on the structure, and the horizontal portions of the lugs are bored out and receive the bolts C, the heads of which rest on the top of said horizontal portion.

A plank or beam D, preferably of wood,

has a longitudinal tongue *d* entering the bottom of the space between the girders, and is bored and countersunk at suitable intervals to receive the bolts C and their upper nuts *c*. As shown in Fig. 2, the flanges of *a*² of the girders A are inclined outwardly and downwardly and project beyond the edges of beam D, which has its upper surface doubly inclined to fit said flanges. The object of this construction is to shed water entirely beyond the wooden parts of the structure and the conductors, whereby said parts are kept free from moisture, since none can enter between the girders. The beam D is also provided with two longitudinal grooves or rabbets *d'* to receive the upturned edges *e* of the conductors and guide-rails E, which are secured to said beam by pins *e'*. The holes *e*² of each rail through which pins *e'* pass are graduated in size—that is, while the one nearest the center may be round the other holes, as they are located nearer the ends, are elongated in increasing degree, to allow for expansion and contraction of the conductors under the changes in temperature. These conductors are firmly clamped in place by the clamping strip or plank F, also preferably of wood, and the outer projecting edges of the conductors are bent downward and inward, the inturned portions resting against the edges of the clamping-strip Y. The tubular space formed by the rolled portion *e*³ of the conductor receives at each end one of the pins *g* of the connector G, which is provided with a central circular enlargement or ring *g'* to fit between the adjacent ends of the two conductors and prevent the slipping of the conductor entirely into one conductor. These connectors serve to prevent any breaking of the circuit passing through the sectional conductors. The entire tubular space of the roll *e*³, except that left for the pins *g*, may be filled with a rod or wire *e*⁴, or cement or other material, to strengthen it and prevent it from being flattened out by the pressure on a guide-rail of a car such as that shown in my application, Serial No. 379,635, filed January 30, 1891.

The clamping-strip F is secured in place by the lower nuts *f*, which fits the lower ends of the bolts C, and these bolts are made of suf-

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 5 sufficient length, so that the nuts f may be loosened without being removed to allow the strip F to be loosened on either side for access to the pins of the conductors—as, for instance, if one section of conductor is to be removed and a new one take its place.

The under side of the strip F is longitudinally grooved at f' to receive electric wires for any purpose, which wires are secured in place by holding-clips H, which are secured to the said strip by means of bolts or screws passing through holes h , and these clips are grooved at h' to fit said wires and hold them in place. These clips are secured at any suitable intervals, and each is provided with one or more depending perforated lugs h^2 , to which a ladder having hooks at its upper end may be temporarily secured to enable repairer or other person to ascend to the structure.

20 The entire space between the girders not occupied by the rivets, their spools, and their bolts is filled with cement, asphaltum, or artificial stone, which can be introduced in a liquid or plastic state, and will then harden. This serves to deaden the noise of passing cars or trains, and the elastic spools surrounding the rivets serve to prevent the fracture of the rivets by the said cement or stone. Papier-maché, asbestos, or other suitable material might be used for the filling, or even, in some cases, wood in the form of sawdust or planks might be used.

30 The conductor E, as shown, is a broad flat strip secured in a horizontal plane, and the entire structure is strengthened thereby against horizontal deflection. The upturned edges e of the conductor may in some cases be omitted; but by means of such edges the conductor is more firmly secured in position and the structure rendered stronger against vertical deflection.

40 The conductor E and connectors G are not claimed herein, the same forming the subject-matter of my application, Serial No. 356,635, filed June 25, 1890; but in so far as said conductors form strengthening-strips for the structure I do claim them herein.

Having thus described my invention, I claim—

50 1. In a railroad-track, the combination, with the rail, of two supporting-girders therefor, the bolts or rivets for uniting the girders, said bolts or rivets having enlarged central portion for spacing said girders, substantially as described.

60 2. In a railroad-track, the combination, with the rail, of two supporting-girders therefor, united by spacing bolts or rivets, and a filling of sound-deadening material between said girders, substantially as described.

3. In a railroad-track, the combination, with the rail, of two supporting-girders therefor, united by spacing bolts or rivets, the space between said girders being filled with plastic material which afterward hardens, substantially as described.

4. In a railroad-track, the combination, with the rail, of two supporting-girders therefor, united by spacing bolts or rivets, and spools of plastic material on the rivets between the girders, as described.

5. In a railroad-track, the combination, with the rail, of two supporting-girders therefor, united by spacing bolts or rivets, elastic spools on the rivets, and a filling of hard material between the girders and around the spools, substantially as described.

6. In a railroad-track, the combination, with the girders A, of the rail B, having lugs b' entering the space between the girders and the bolts C passing through holes in said lugs, and fastening means for the lower ends of the bolts, substantially as described.

7. In a railroad-track, the combination, with the girder and the rail, of the beam D, having tongue d , fitting the space between the girders, and means for fastening said beam to the structure, substantially as described.

8. In a railroad-track, the combination, with the rail and the means for supporting it, of the beam D, having longitudinal grooves, flat metallic strips having their edges entering said grooves, and means for securing said strips in position, substantially as described.

9. The combination, with the strips F, having longitudinal grooves f , of clips H, having grooves h' , and means for securing them to the strips, substantially as described.

10. The combination, with the elevated-railroad structure, of the clips H, secured to the under side thereof and having perforated lugs h' , substantially as described.

11. In an elevated track for electric railways, the combination, with two girders supporting a rail and having outwardly and downwardly inclined flanges, of electric conductors secured below said flanges and inside their outer edges, substantially as described.

12. The combination, with the girders A, having inclined flanges a^2 , of the beam D, of less width than the riveted girders and their flanges, and electric conductors secured to said beam, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY S. PRUYN.

Witnesses:

NATHAN W. HERRINGTON,
 CHARLES H. BOYNTON.