

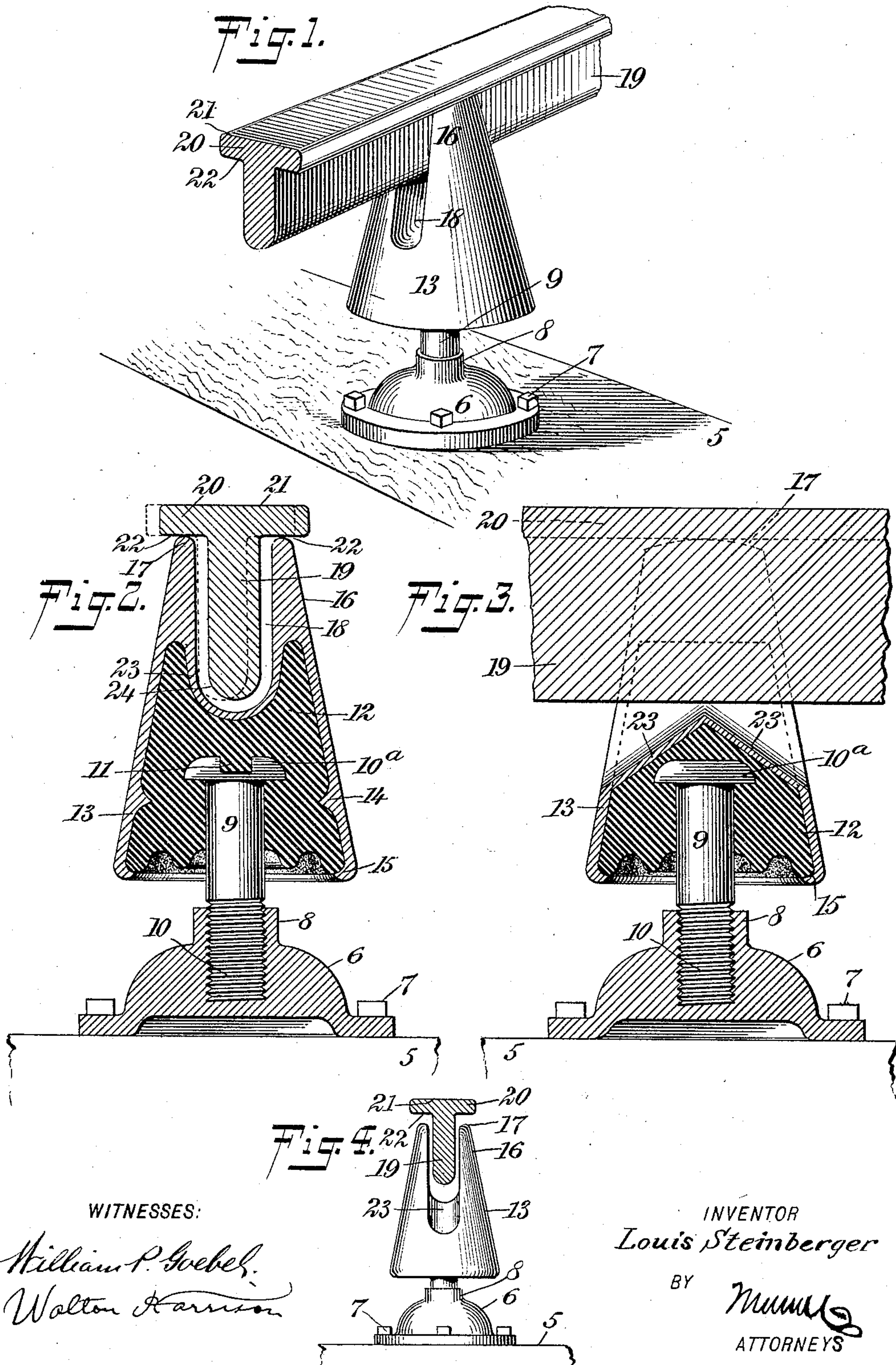
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PATENTED NOV. 1, 1904.

L. STEINBERGER.
TRACK STRUCTURE.

APPLICATION FILED MAR. 15, 1904.

NO MODEL.



UNITED STATES PATENT OFFICE.

LOUIS STEINBERGER, OF NEW YORK, N. Y.

TRACK STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 774,001, dated November 1, 1904.

Application filed March 15, 1904. Serial No. 198,206. (No model.)

To all whom it may concern:

Be it known that I, LOUIS STEINBERGER, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Track Structure, of which the following is a full, clear, and exact description.

My invention relates to track structure and admits of general use, but is peculiarly applicable where it is desired to have a rail mounted movably upon its support.

My invention is of special value in connection with electric railways, and especially as third rails used for the purpose of distributing electric currents to movable vehicles.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my improved support with the movable rail mounted thereon. Fig. 2 is a vertical central cross-section through the same. Fig. 3 is a vertical longitudinal section through the support with the rail mounted thereon; and Fig. 4 is a front view of the support, showing the rail in section and also showing the support as lowered slightly in relation to the rail.

Upon a cross-tie 5 is mounted a pedestal 6, secured to the tie by means of bolts 7, and provided with a collar 8. A bolt 9, provided with a thread 10, is screwed into the pedestal and is provided at its upper end with a head 10^a, having therein a slot 11. A body of insulating material 12 partially envelops the bolt, as shown, and a portion of this insulating material engages the slot 11 for the purpose of preventing relative movement as between the bolt and the insulating material. A shell or casing 13 is provided internally with an annular bead 14, disposed above the lower edge thereof, and with an intumed bead 15 of annular form coincident with the lower edge of the shell. The general form of the shell 13 is that of a fork, the members 16 of which are separated by a space 18. Each member 16 is preferably made solid, as indicated in Fig. 2, and is provided with a rotund portion 17, which acts as a mechanical

bearing-surface. The rail-body 19 is provided with a flat or slab like portion 20 integral therewith, this portion being provided with an electric contact-surface 21 and with a mechanical bearing-surface 22, which rests directly upon the preferably-rotund surface 17, as indicated in Fig. 2. The shell 13 is provided with portions 23 of the shape shown, these portions sloping downwardly and outwardly, as indicated in Fig. 3, for the purpose of enabling the support to shed rain, snow, &c., should any happen to lodge within the space 18.

As is well known in railroading, the cross-ties supporting a rail are often moved abruptly downward with relation to each other. This tends to cause a separation as between the rail and its support. The construction above described allows for this movement, for the reason that any given support is free to move vertically in either direction with relation to the rail. The bearing-surfaces 17, being rounded, are of suitable conformity for the free movement of the rail with the least possible friction and will stand rough usage when struck against the under faces of each bearing-surface 22 of the rails by the rebounding action of the depressed ties.

As is well known to persons skilled in this art, it is necessary to have the rail movable relatively to its support in order to compensate for the depressing of the ties, the swaying of the cars, and for the creep of the rails, due to expansion and contraction by heat and cold. As will be seen from Fig. 2, the rail is quite free to move laterally with relation to its support, as indicated by dotted lines. Referring to Figs. 1 and 3, it will be seen that the rail is also readily movable in the general direction of its length.

The pounding action caused by the sudden rising and falling of each cross-tie is quite destructive both upon a rail and an insulator. To provide against the evil effects of this pounding, I make the members 16 of solid metal, as above stated, and also make each member preferably of a general rotund conformity, so as to strike "end on" as it rises against the rail. The bolt 9 being thoroughly anchored within the insulation 12 and the an-

nular beads 14 15 serving to prevent relative movement as between the shell and the body of insulating material the pounding is rendered ineffectual for the purpose of breaking or misplacing the body 12 of insulating material or any part thereof. The cross-section of the rail is substantially T-shaped, the bottom of the central web or body portion 19 being rounded throughout the entire length of the rail, as indicated at 24.

I do not limit myself to the particular manner of connecting the insulating material with the supporting member nor to the particular form of stem nor to the manner of connecting it to the insulating material nor to the base portion. Neither do I limit myself to rotund bearing-surfaces nor to supporting the rail on only the under side of the electrical contact portion nor to the particular form of rail herein shown, as modifications from the above may be made without departing from the scope and the spirit of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A support for rails, comprising a body portion provided with oppositely-disposed members projecting upwardly therefrom and separated by a moisture-shedding surface, said members having bearing-surfaces upon their extreme upper ends, for the purpose of engaging a rail resting thereupon.

2. A support for rails, comprising a metallic shell provided internally with beads integral therewith, and also provided with bearing-surfaces for engaging the under side of the contact portion of a rail, a mass of insulating material engaged by said shell and said beads for the purpose of holding said mass of insulating material and said shell rigidly together, and means for supporting said mass of insulating material.

3. A support for rails, comprising a pedestal provided with a metallic member projecting upwardly therefrom and provided with an anchorage, a mass of insulating material partially enveloping said member and engaging said anchorage, and a metallic member engaging said mass of insulating material and provided with upwardly-projecting portions having bearing-surfaces upon their respective tops, for the purpose of engaging mechanical bearing-surfaces upon the under side of the contact portion of a conductor-rail.

4. A support for rails, comprising a pedestal provided with a metallic member projecting upwardly therefrom, and also provided with a slot, a mass of insulating material partially enveloping said member and completely filling said slot, and a metallic shell encircling said mass of insulating material and supported thereby, said shell being provided with upwardly-projecting members having rounded bearing-surfaces for engaging the under side of the contact portion of a conductor-rail.

5. A support for rails, comprising upwardly-projecting members provided with mechanical bearing-surfaces for engaging the under side of the contact portion of a rail, said upwardly-projecting members being spaced apart for the purpose of admitting a portion of said rail to depend therebetween, said upwardly-projecting members being made of solid metal for the purpose of resisting the pounding action of the same against said rail, and means for supporting said members.

6. A support for rails, comprising a body portion provided with a mutilation and with surfaces disposed within said mutilation and inclined so as to shed water or the like, said body portion being provided with mechanical contact-surfaces for engaging the under side of the contact portion of a rail and thereby supporting the same.

7. In a support for rails, the combination of a supporting member provided with means for engaging the under side of the contact portion of a rail, and a rail resting thereupon and movable relatively thereto in a lateral direction at right angles to the general length of said rail.

8. A support for rails, comprising a supporting portion with a pair of upright members spaced apart and provided with rotund bearing-surfaces, and a rail member provided with bearing-surfaces engaging said bearing-surfaces of said upright members, said rail member being further provided with a portion depending in the space between said upright members.

9. A track structure, comprising a supporting member provided with portions separated by a space, and a rail member resting loosely upon said portions and provided with a portion projecting into said space.

10. A track-support, comprising a body portion provided with a central channel, and with rotund bearing-surfaces disposed upon opposite sides of said channel, and a rail member loosely engaging said body portion and resting upon said rotund bearing-surfaces so as to be movable relatively thereto.

11. A track structure, comprising a supporting member, and a rail member resting thereupon and slidable relatively thereto, said rail member being provided with a central portion depending therefrom for engaging said supporting member and limiting the sliding movements of said rail.

12. A track structure, comprising a supporting member provided with bearing-surfaces, and a rail member provided with bearing-surfaces engaging those of said support so as to allow said rail to slide relatively thereto, said rail member being further provided with a centrally-disposed member for engaging said support and thereby preventing excess of sliding movement as between said rail member and said support.

13. A track structure, comprising a supporting member provided with bearing-surfaces for engaging the under side of a rail at a point adjacent to the contact surface thereof, and spaced apart, and a rail slidable relatively upon said bearing-surfaces and provided with a depending portion projecting below said bearing-surfaces for limiting the movements of said rail relatively to said supporting member.

14. A track structure, comprising a supporting member provided with a plurality of bearing-surfaces, and a rail member provided with an electrical contact portion and with a plurality of bearing-surfaces underneath and adjacent to said electrical contact portion, said bearing-surfaces loosely engaging said bearing-surfaces of said supporting member, so as to allow freedom of movement at all times as between said rail and said supporting member.

15. A track structure, comprising a body portion provided with supporting members spaced apart and having bearing-surfaces, and a rail provided with bearing-surfaces disposed upon its under side for engaging said bearing-surfaces of said supporting member, said rail being further provided with a comparatively heavy portion depending loosely between said bearing-surfaces and free to move laterally from one of said bearing-surfaces toward the other.

16. In a track structure, the combination of a conductor-support having a plurality of sup-

porting members, and a rail resting slidably upon said members and having a comparatively small but heavy portion depending below its point of support and intermediate of said supporting members, said last-mentioned portion being adapted to move laterally from one of said members toward the others.

17. In a track structure, the combination of a conductor-support having a plurality of supporting members, and a rail resting loosely upon said supporting members and having its center of gravity below its point of support, said conductor-support being provided with means for permitting a free movement of the rail relatively to said supporting members and in a plurality of directions.

18. A track structure, comprising a support provided with upwardly-projecting members, and a rail provided with portions depending between said upwardly-projecting members, said rail being provided with a comparatively wide contact portion resting loosely upon said upwardly-projecting members so as to allow said rail to move laterally in relation thereto.

In testimony whereof I have subscribed my name to this specification in the presence of two subscribing witnesses.

LOUIS STEINBERGER.

Witnesses:

WALTON HARRISON,

EVERARD BOLTON MARSHALL.