

No. 627,544.

Patented June 27, 1899.

P. G. STORMER.  
RAILWAY TRACK STRUCTURE.

(Application filed Mar. 28, 1899.)

(No Model.)

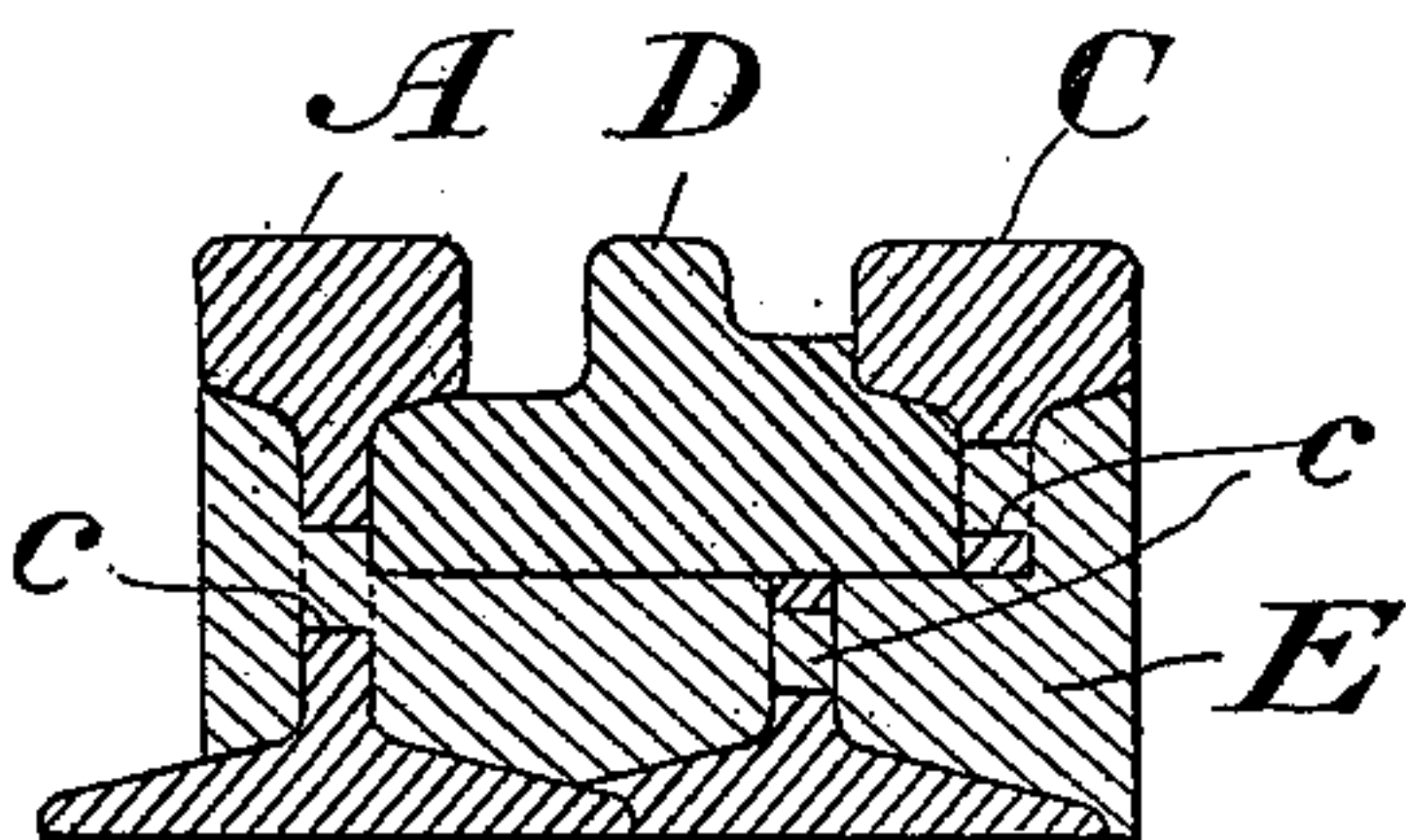
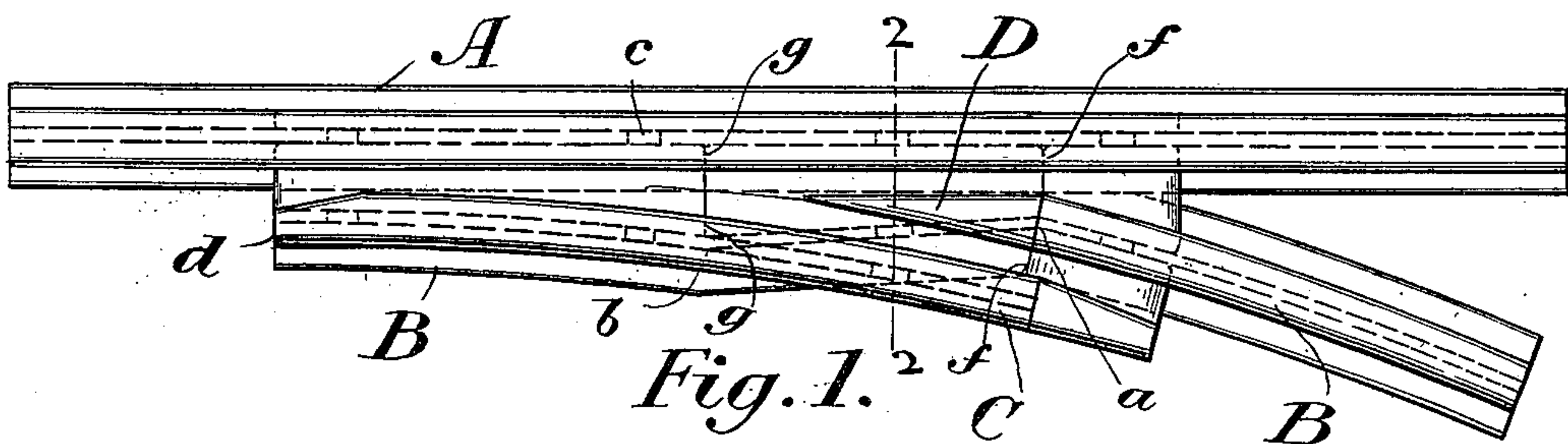


Fig. 2.

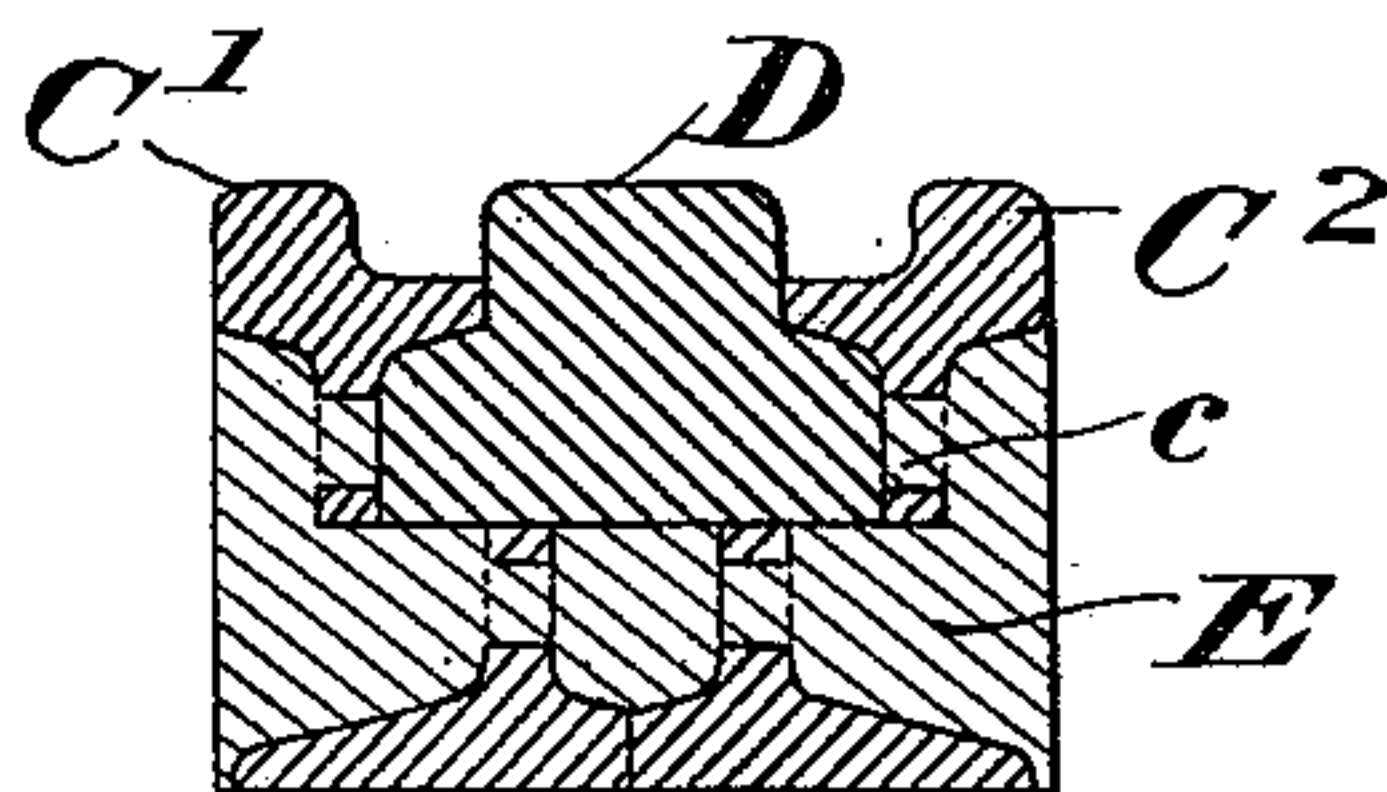


Fig. 3.

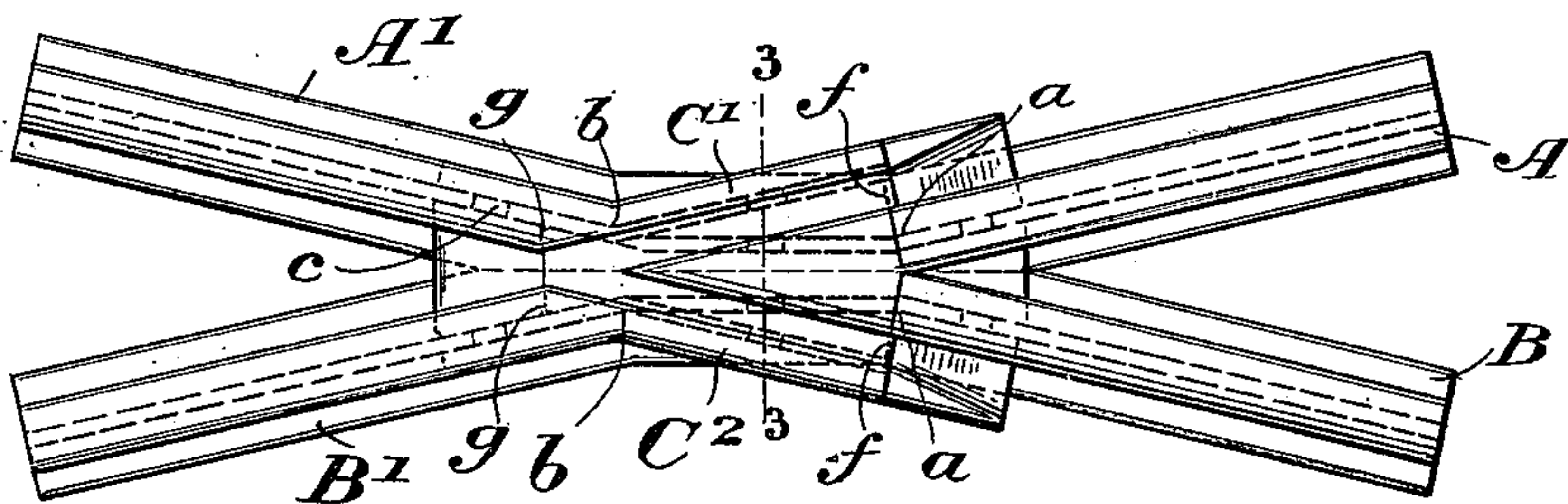


Fig. 4.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## RAILWAY-TRACK STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 627,544, dated June 27, 1899.

Application filed March 28, 1899. Serial No. 710,798. (No model.)

*To all whom it may concern:*

Be it known that I, PETER G. STORMER, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Railway-Track Structures, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to railway-track structures—such as frogs, switch-mates, &c.—and is especially designed for that class of structures in which plates are inserted at the intersection of the two tracks.

My invention resides in the novel means I employ by which I can dispense with one or more of the rails of the structure by displacing laterally the top of a suitable length of the rail from the bottom, so that a single rail may be utilized for the regular track-service and for a guard as well, and, indeed, even be used as a foundation for the inserted plate. The plates and rails I preferably connect together with cast metal; but this is by no means essential to my invention.

The specific means I employ will be better understood from the following description and drawings.

Referring to the accompanying drawings, where like symbols indicate like parts, Figure 1 is a plan view of a switch-mate, illustrating my invention; Fig. 2, a transverse section of the same on line 2 2; Fig. 4, a plan view of a railway-frog, showing my invention applied thereto; and Fig. 3, a transverse section of Fig. 4 on line 3 3.

Referring specifically to the switch-mate of Fig. 1, A is the continuous main rail, and B a combined turnout and guard rail. The head C of the latter is cut vertically at the point *a*, where it adjoins the main rail A. From *a* to *b* the rail B is longitudinally severed through the web. The severed head is swung laterally from the web sufficiently to permit the flange of a car-wheel to ride between it and the point of an inserted plate D, thereby forming a guard. The web and foot of the lower part of the severed portion is in an angularly-disposed position. The severed head of the cut portion of the rail B thus forms a guard for the switch-rail proper, while

the part from *b* to *d* is the guard for the main rail.

In order to rigidly secure all different parts of my track structure together and also to provide a firm seat for the hardened-metal plate or rail D, which extends from lines *ff* to *g g*, cast metal is poured around the rails through a suitable mold in any well-known manner and forms the chock or spacing-block E, perforations in the webs of the different rails being provided, as shown, so as to permit the metal to flow through all the parts and bind them firmly together.

In Fig. 4 my invention is shown as applied to a railway-frog. So far as the specific structure of the frog is concerned I make no claim in this application, because it forms the subject-matter of another application filed on an even date herewith. The rail A is vertically cut at *a* to a point below its head, longitudinally severed to the point *b*, and the severed portions laterally removed from each other until the severed upper portion C' is substantially parallel to the point of the inserted plate D and forms a guard or wing rail therefor. The unsevered portion A' of the rail A is angularly disposed until it is in alinement with the crossing rail B and forms a continuation therefor. Rail B is operated on in a similar manner. At *a* the rail is vertically cut to some point below its head and then longitudinally severed to the point *b*. The severed portions are then laterally removed from each other until the severed upper portion C<sup>2</sup> is substantially parallel to the point of the inserted plate D opposite to the severed portion of rail A. The inserted portion B' of rail B is angularly disposed until it is in alinement with the rail A and forms a continuation therefor. A further advantage of this structure is found in the fact that the lower part of rail B where severed from the head provides a substantial foundation for the inserted plate, which may be of any construction known in the art, but which is preferably of hardened metal.

As the frog illustrated in Figs. 3 and 4 is especially adapted to street-railway traffic, the treadway of a wheel-flange has been shown as planed or grooved out of the heads C of the severed upper rail portions.



It is obvious that modifications of my invention may suggest themselves to those skilled in the art, as my invention is much broader than the specific embodiments thereof which I have shown, and therefore I do not desire to limit myself thereto.

Having thus described my invention, what I claim, and desire to protect by Letters Patent, is—

10 1. In a railway-track structure, a combined rail and guard member, consisting of a rail having a suitable length of its upper portion separated from its lower portion and having said upper portion laterally removed from  
15 said lower portion, substantially as described.

2. In a railway-track structure, the combination of a plate at the intersection of the tracks, and a rail forming a continuation of the tread-surface of said plate, and for a portion of its length separated into upper and lower members, laterally displaced from each other, said upper member forming a guard and said lower member forming a foundation for said plate, substantially as described.

25 3. In a railway-track structure, a rail having a suitable length of its upper portion laterally displaced from its lower portion, in combination with a plate resting on said lower portion, substantially as described.

30 4. A railway-track structure comprising the combination of a rail having a suitable length of its upper portion laterally displaced from its lower portion, said displaced upper portion forming a guard member, a crossing-plate inserted at the intersection of one track with another, and cast metal integrally securing together said rails and inserted cross-  
35 ing-plate.

5. In a railway-track structure a rail which at each end has a base portion adapted to be secured to the road-bed and a head portion adapted to act as a guard or tread member, and intermediate said ends having its upper portion disconnected from one end of the rail and from its lower portion, said lower portion connecting together the said ends, substantially as described.

6. In a railway switch-mate, a rail having one end constituting the usual track-rail of a branching track and the other end constituting a guard-rail at the entrance of the mate, the rail intermediate said ends being divided into a lower portion connecting the said ends, and a laterally-displaced upper portion forming a continuation of the guard end of the rail, substantially as described.

7. In a railway switch-mate, the combination of a continuous main rail, a second rail constituting at one end the usual track-rail of the branching track and at the other end a guard-rail at the entrance of the mate, the said second rail intermediate its ends being divided into a lower portion connecting the said ends and a laterally-displaced upper portion forming a continuation of the guard end of the said second rail, a crossing-plate inserted between the laterally-displaced upper portion and the main rail, and means for securing the plate and rails together.

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

PETER G. STORMER.

Witnesses:

R. M. EVANS,  
JOHN H. KENNEDY.