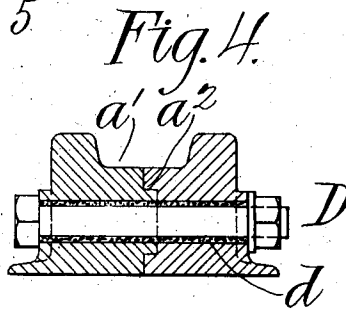
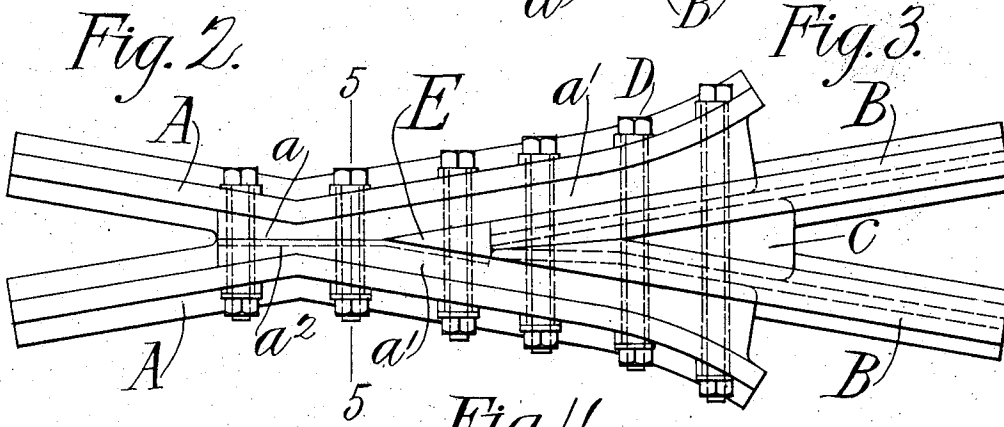
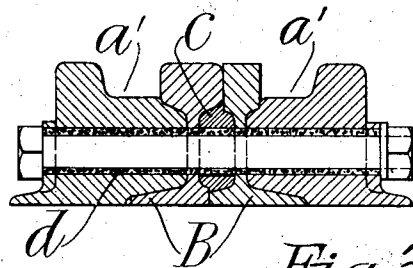
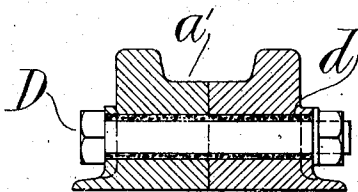
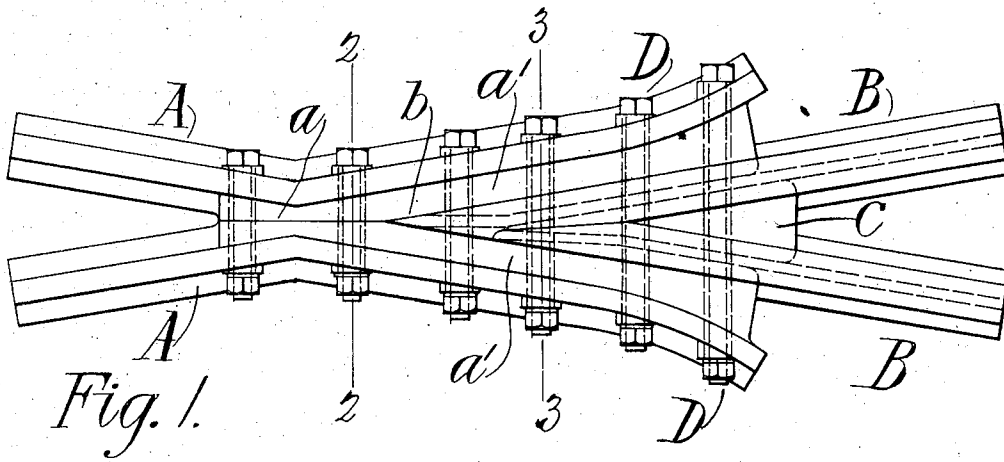


No. 834,278.

PATENTED OCT. 30, 1906.

E. B. ENTWISLE.
RAILWAY FROG.

APPLICATION FILED JUNE 6, 1905.



WITNESSES:

Charles Curran
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Fig. 5.

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UNITED STATES PATENT OFFICE.

EDWARD BRADBURY ENTWISLE, OF JOHNSTOWN, PENNSYLVANIA,
ASSIGNOR TO THE LORAIN STEEL COMPANY, A CORPORATION
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RAILWAY-FROG.

No. 834,278.

Specification of Letters Patent.

Patented Oct. 30, 1906.

Application filed June 6, 1905. Serial No. 263,932.

To all whom it may concern:

Be it known that I, EDWARD BRADBURY ENTWISLE, of Johnstown, in the county of Cambria and State of Pennsylvania, have
5 invented a new and useful Improvement in Railway-Frogs, 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.

10 My invention is designed to provide a railway-frog of simple and durable construction; and it consists in the novel construction and combination of parts, all substantially as hereinafter described; and pointed out in the
15 appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a frog embodying my invention; Figs. 2 and 3, sections taken on the lines 2 2 and 3 3 of Fig. 1, respectively; Fig. 4, a plan view showing a
20 modification, and Fig. 5 a section on the line 5 5 of Fig. 4.

The letters A A designate the wing portions of the frog, formed by two castings
25 fitted together on the line *a* and embracing between them the point *b*, formed in the usual manner by the two rolled rails B B. Each of the castings A has an inward projection *a'*, which joins that of the other casting
30 to form the floor and filling of the structure and which fits the web of one of the rails B.

C is a chock between the rails B B.

The whole structure is secured together by the transverse through-bolts or rivets D. The
35 holes for these bolts are preferably somewhat larger than the bolts themselves to leave surrounding spaces, which are filled by spelter *d* or similar material poured in in a molten state.

40 The castings A A are preferably of steel of an extra hard and durable character, such as manganese steel.

It is found in practice that if the wing-rails are kept from wearing or cutting away
45 there is comparatively little wear on the point. By making the wing portions A of more durable material ordinary rolled rails may be used for the point. I may, however, truncate the point formed by the rails B B
50 and cast a short point E integral with one of the pieces A, as shown in Fig. 4.

Figs 4 and 5 show also the further modification of interfitting the portions *a'*, as at *a''*, in order to prevent relative vertical movement of the two castings.

Another advantage of the construction described is that it obviates the use of loose floor pieces or chocks and provides a floor which is able to withstand the cutting and
60 pounding of the wheel-flanges.

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

1. The herein-described railway-frog, comprising a pair of fitted point-rails, and two
65 wing portions having abutting inward projections which embrace the point-rails and also form the floor and filling of the frog.

2. The herein-described railway-frog, consisting of point-rails or members, and two
70 wing portions consisting each of an integral casting of hard steel, said wing portions having inward projections which abut each other to form the floor and filling of the frog and also embrace the point-rails or members,
75 together with securing bolts or rivets.

3. The herein-described railway-frog, consisting of the point-rails forming a truncated point, and the two wing members having inwardly-extending portions abutting each
80 other to form the floor of the frog, and embracing said point-rails, one of said members having an integral point-forming portion which replaces the truncated point of the point-rails.

4. A railway-frog, having two separate
85 wing portions, formed each of a single casting, and having integral, abutting portions which form the floor and filling of the frog; substantially as described.

5. In a railway-frog, the wing portions formed of castings, and having integral abutted and interfitted portions forming the floor of the frog.

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

EDWARD BRADBURY ENTWISLE.

Witnesses:

LORETTO M. O'CONNELL,
H. W. SMITH.