

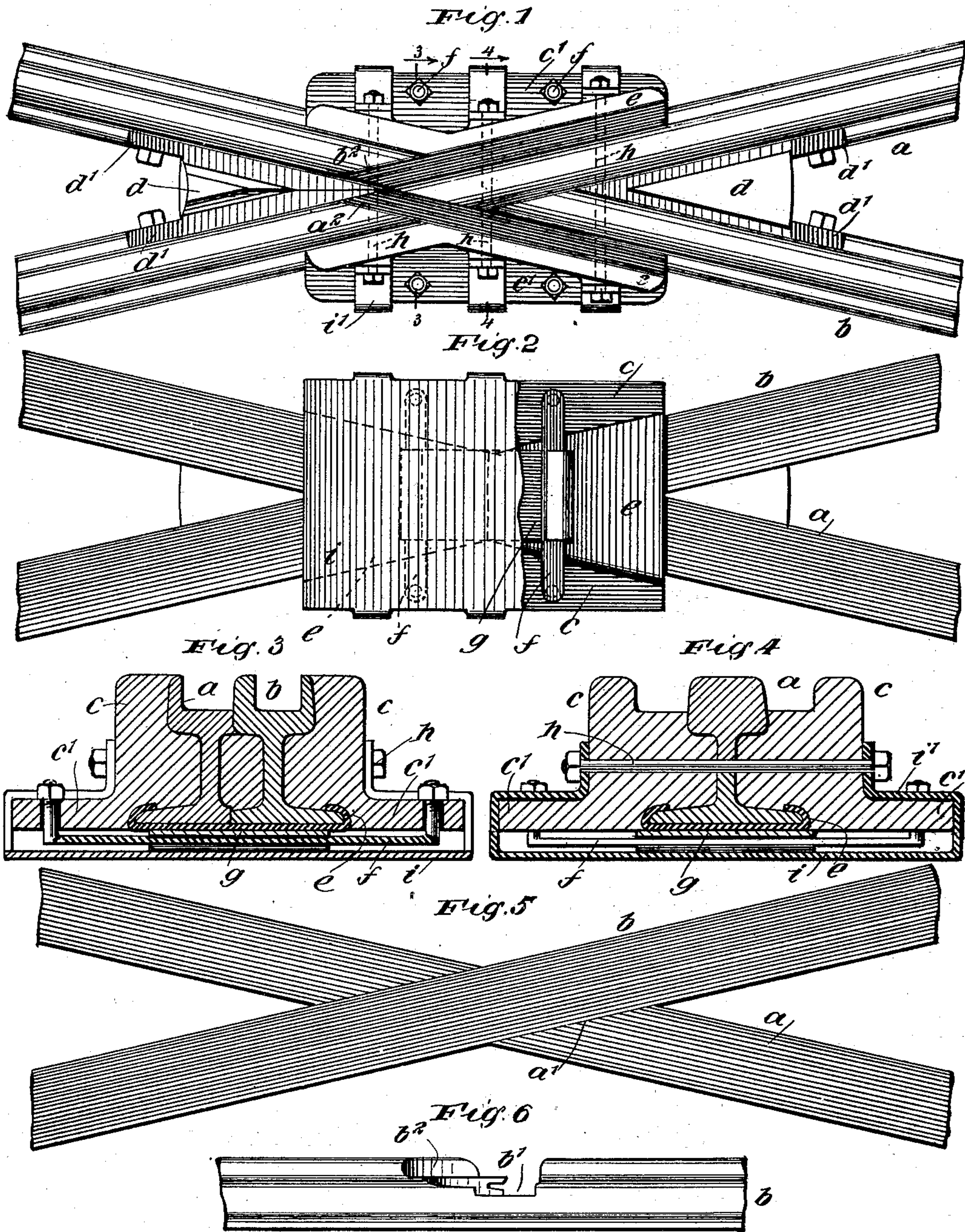
No. 664,617.

Patented Dec. 25, 1900.

J. BARRY.  
RAILWAY FROG.

(Application filed Aug. 3, 1900.)

(No Model.)



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

JAMES BARRY, OF GALVESTON, TEXAS, ASSIGNOR OF ONE-FOURTH TO  
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## RAILWAY-FROG.

SPECIFICATION forming part of Letters Patent No. 664,617, dated December 25, 1900.

Application filed August 3, 1900. Serial No. 25,780. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES BARRY, a citizen of the United States, and a resident of Galveston, in the county of Galveston and State of Texas, have invented a new and Improved Railway-Frog, of which the following is a full, clear, and exact description.

This invention relates to a frog for crossing rails at switches or railway-crossings; and the object is to provide a construction which will be more secure and durable than those previously employed.

This specification is the disclosure of one form of the invention, while the claims define the actual scope thereof.

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 views.

Figure 1 is a plan view of the invention. Fig. 2 is a bottom plan view. Fig. 3 is a section on the line 3 3 of Fig. 1. Fig. 4 is a section on the line 4 4 of Fig. 1. Fig. 5 is an inverted plan view of the rails, showing their connection with each other. Fig. 6 is a side view of one of the rails, and Fig. 7 is a side view of the other rail.

The rails *a* and *b* may be disposed at any angle to each other to form either a railway-crossing or a switch, and these rails are each formed of one integral structure, the rails crossing each other, as shown. For the purpose of permitting the rails to match properly with each other the rail *a* is formed with a recess *a'* in its bottom and the rail *b* with a recess *b'* in its top, the two recesses matching with each other when the rails *a* and *b* are in place, so that the rail *a* crosses the rail *b*, as shown. The rails are thus mortised together, and an accurate connection is thereby made between them. The rail *a* has a groove *a<sup>2</sup>* in its ball for the flanges of the wheels passing over the rail *b*, and the rail *b* has a groove *b<sup>2</sup>* in its ball for the flanges of the wheels passing over the rail *a*.

The frog comprises chairs or braces *c*, which are two in number and located at each side of the rails at the points where they cross, such braces being shaped to conform with the rails and to lie under the balls thereof and against the webs, the chairs projecting in over the

base-flanges of the rails. These chairs have outwardly-disposed flanges *c'* at their bases, which lie on the railway-ties and which may be spiked or otherwise secured thereto, as desired. Frog-blocks *d* are fastened between the rails at opposite sides of their juncture, so as to steady the rails and also to fill the angular point between them, thus preventing persons from lodging their feet in this space. The frog-blocks *d* are provided with lugs *d'*, which are bolted to the rails, as shown.

As shown best in Fig. 2, the rails are provided beneath their base-flanges with two tapering flanged base-plates *e*, the flanges thereof being located at their sides and being turned up over the base-flanges of the rails, so as to be securely joined therewith. U-bolts *f* are fastened to the flanges *c'* of the blocks or chairs *c* and pass under the chairs. These U-bolts are two in number and are disposed transversely of the rails. A connecting-plate *g* has its ends secured to the U-bolts *f*, the plate extending between the U-bolts to hold them rigidly together. The chairs *c* are fastened to the rails and the whole structure securely held together by transversely-disposed bolts *h*, passing through the rails and chairs, as shown.

Beneath the whole structure is arranged a base-plate *i*, which has strips *i'* at its side edges, preferably integral therewith, which strips are bent up over the flanges *c'* of the chairs *c* and fastened to the vertical sides thereof by the bolts *h*, before mentioned.

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

1. A railway, having crossing rails, chairs or brace-blocks situated at the outer sides of the rails, U-bolts extending between the chairs and passing under the rails, and a connecting-plate fastened to the rails beneath the chairs and extending from one U-bolt to the other.

2. A railway-frog, comprising the combination with the crossing rails, of chairs located at the sides of the rails, flanged base-plates situated under the rails and having their flanges engaged with the base-flanges of the rails, U-bolts extending between the chairs and passing under the rails, a connecting-

plate extending between and fastened to the U-bolts, the connecting-plate being located under the rails, and tapering frog-blocks situated and secured between the rails at each side of the crossing-points thereof.

5 3. A railway having crossed rails, chairs or side brace-blocks situated at the outer sides of the rails at the juncture thereof, tapered frog-blocks situated and secured between the  
10 rails at each side of the crossing-points thereof, bolts extending under the rails to connect

the same, a connecting-plate extended between the bolts, and a bed-plate located under the connecting-plate and fastened to the chairs.

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

JAMES BARRY.

Witnesses:

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