(No Model.)

J. GRAY.

RAILROAD FROG.

No. 303,929. Patented Aug. 19, 1884.

Fig. 1

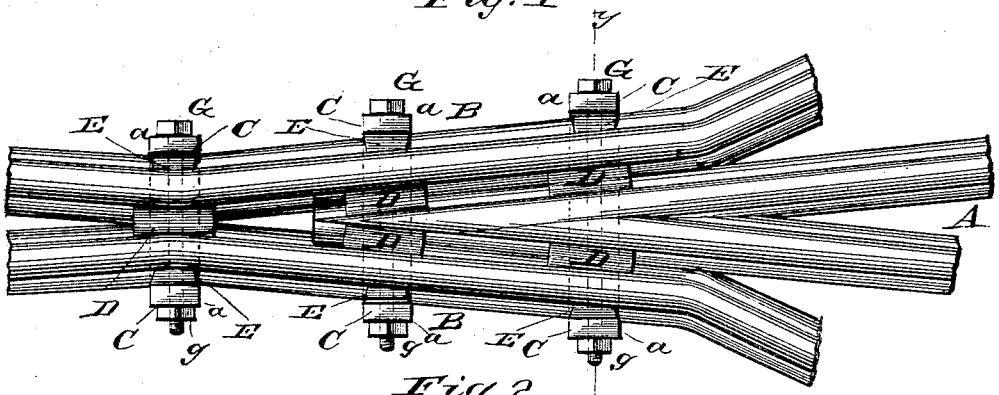


Fig. 2

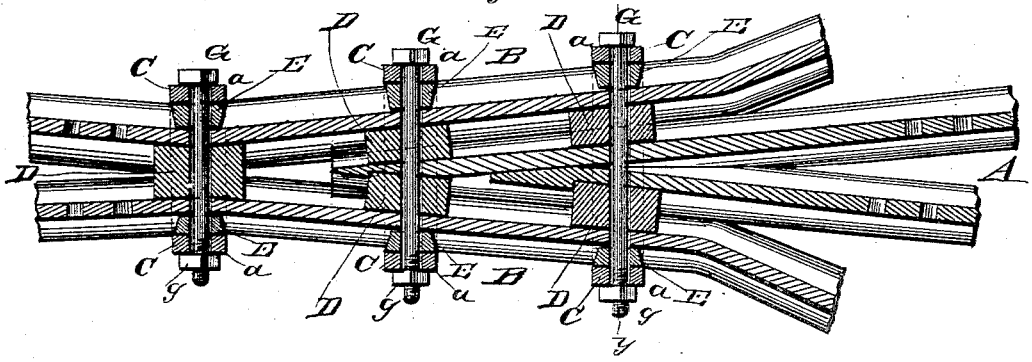
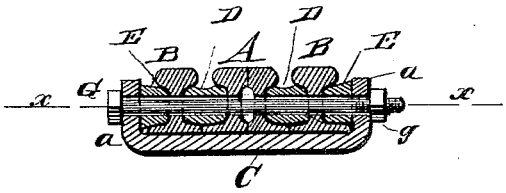


Fig. 3.



WITNESSES

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JOSIAH GRAY, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF, WESLEY HOLLENBACK, CONNELL B. SHEFLER, AND JACOB R. REED, ALL OF SAME PLACE.

RAILROAD-FROG.

SPECIFICATION forming part of Letters Patent No. 303,929, dated August 19, 1884.

Application filed January 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH GRAY, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railroad-Frogs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a top view showing my invention applied in a frog. Fig. 2 is a horizontal section taken through the plane of the rails in the line indicated by *x x* on Fig. 3. Fig. 3 is a vertical transverse section through Figs. 1 and 2, taken in the plane indicated by dotted line *y y*.

This invention relates especially to what are denominated "frogs" where main-track and siding rails are used; and my object is not only to guard against the contraction of the siding or turn-out rails, but to secure the same against spreading; in other words, to keep the frog and the sections of rail which are attached to it intact.

My invention has especial relation to a bridle and its attachments, which were secured to me by Letters Patent numbered 270,544.

The following description, when taken in connection with the annexed drawings, will enable others skilled in the art to fully understand my invention.

A designates the well-known frog which is used with railroad-rails, and B B designate the siding or guide rails, which are rigidly attached to the frog A, in a manner which I will hereinafter explain. I show at the contracted portion in front of the frog that the rails B B are rigidly connected together. Near the point of the frog I show that the rails B B are rigidly connected to it, and at or near the junction of the rail-frog sections I also show that the frog is rigidly secured to the rails B B. It will thus be seen that I employ three independent connections in my frog, which I now describe, each one of which is constructed with a buckle, C. The base of the frog-section proper is recessed into the base-flanges of the side rails, B B, as indicated in the drawings.

D designates an intermediate block, which is preferably grooved on top to prevent interference with the car-wheel, and which is constructed to fit snugly the flange, web, and base of the rails. This block may be made of steel or of other metal. Its sides may be adapted to fit the frog proper at its point, and it may be adapted to fit the rails B B at the angles thereof.

Each buckle C consists of a base portion, with upturned lips *a a*, which are perforated, as shown in Fig. 3, for the purpose of receiving a through-bolt, G, which is also a tie-bolt.

Between the upturned lips of each buckle and the outside faces of the turn-out or switch-rails B B of the frog are blocks E E, which are adapted to fit the outside faces of said rails. These blocks, like the intermediate blocks above described, are perforated, and the rails B B and the webs of the frog are also perforated to receive the bolt G, on one end of which a nut, *g*, is applied for locking the three main points composing my frog together.

It is obvious that the nuts *g* may have applied to them locking devices, which will prevent them from turning loose.

It will be seen from what I have above described that I use binders, ties, or buckles G, with external and internal blocks adapted to fit the different sections composing the frog, and through-bolts which positively prevent the spreading of the rails of the frog. In other words, I solidly connect the three parts A B B together.

It is obvious that I may apply my invention to frogs at any angle to a square crossing or a square-track crossing.

Having described my invention, I claim—

The combination, with a railroad-frog, of the intermediate and external blocks, the buckles having upturned ends, and the bolts passed through said upturned ends, through said blocks, and through the webs of the rails, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOSIAH GRAY.

Witnesses:
FRANK J. LOESCH,
GEO. WILLARD.