

G. S. Griggs.
Railroad Frog.

N^o 337.

Patented Jul. 31, 1837.

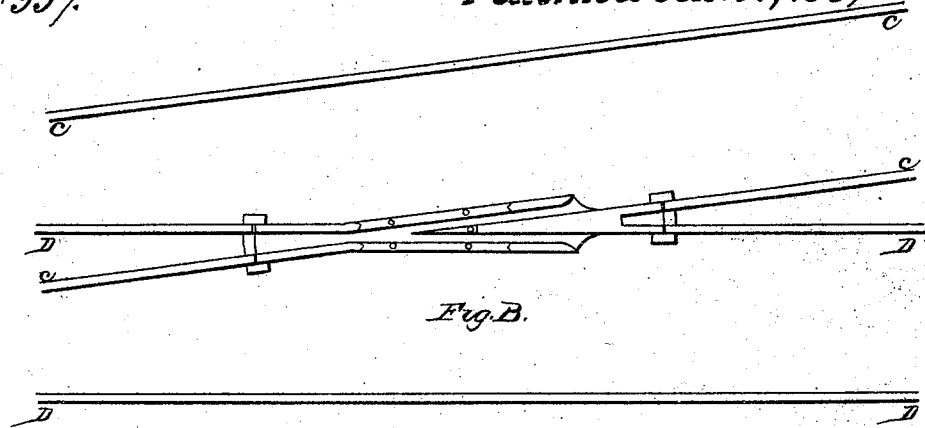


Fig. B.

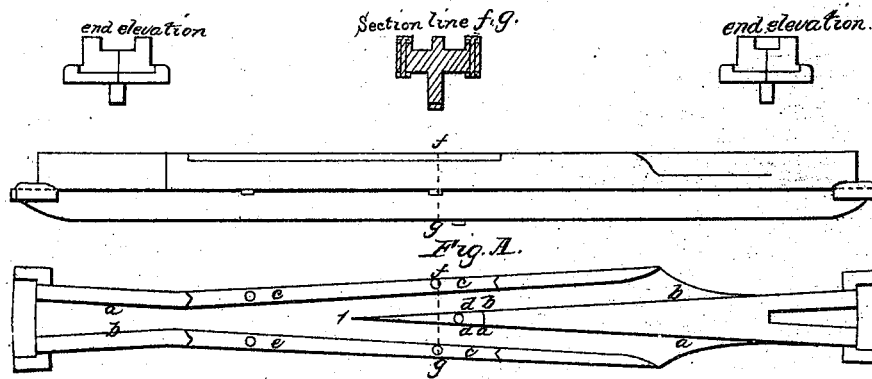


Fig. A.

UNITED STATES PATENT OFFICE.

GEO. S. GRIGGS, OF ROXBURY, MASSACHUSETTS.

MODE OF CONSTRUCTING RAILROAD-FROGS.

Specification of Letters Patent No. 337, dated July 31, 1837.

To all whom it may concern:

Be it known that I, GEORGE S. GRIGGS, of Roxbury, in the county of Norfolk and State of Massachusetts, machinist, and a citizen
5 of the United States, have made a new and useful Improvement in the Construction of Railroad-Frogs, which has not before been known or used, and of which the following is a true, full, and exact description.

10 By the phrase railroad frog is meant the rails at places where two rails cross each other. The frog has heretofore been cast or constructed in one entire piece forming the two crossing rails for the distance of two
15 or three, to seven or eight feet or more. As the rails at the place of intersection are liable to greater wear and more frequent injury than the rails on other parts of the road, and accordingly require more frequent
20 repairs, the frogs in use heretofore are liable to the objection of the great expense of repairs by replacing the entire frog, and also time necessary for the purpose, whereby the cars are interrupted on roads on which fre-
25 quent passages are made. The injury to the frog arising in the ordinary use and wear of the road, is the beating, wearing or breaking away of the angle or surface of the rail on the side toward the flange of the
30 car-wheel and also beating and wearing away the bottom of the channel in the frog for the flanch to run in by the flanch striking upon it as the inner surface of the rail is worn off.

35 My improvement for the remedy in a great degree of the defect above described, consists in so casting or making the frog, or so forming it by cutting or otherwise, as to admit of frog plates of steel, iron, or other
40 suitable material, being let into the rail, and forming a part of the track for two or three feet more or less. The frog plates connect at their ends with the continued rail by a

swallow tailed junction or otherwise as the constructor may choose. The frog plates are
45 fastened to the body of the frog by counter-sunk bolts fastened on the lower side by nuts and screws or by keys, or they may be fastened by being fitted with some exactness to the space left in the frog to receive them
50 and by being driven firmly into such space, or they may be otherwise fastened, the mode of fastening being a matter of ordinary mechanical skill. The frog plates at the
bottom of the channel of the flanch, on
55 which the flanch strikes in passing from one rail to the other are constructed and may be fastened in a similar way. When the frog plates become injured they may be replaced at small expense and in a short time by
60 others that have been previously prepared and are kept in readiness for the purpose. The vertical thickness of the frog-plates I have used is from three quarters to five
65 eighths of an inch. The thickness, form, and dimensions will, however, for any particular road be a matter within the ordinary mechanical skill of the machinists.

The annexed drawings are referred to in explanation and illustration of this specifica-
70 tion.

I claim as my invention—

The frog plates above described, and applied as aforesaid, of whatever materials formed, and however attached to and con-
75 nected with the main body of the frog or the rails.

In witness whereof I hereto subscribe my name at Boston, this twentieth day of March, A. D. eighteen hundred and thirty-
80 seven.

GEORGE S. GRIGGS.

Witnesses:

H. G. GORHAM,
WILLARD PHILLIPS.