(No Model.)

W. C. MEEKER.

RAILWAY FROG.

No. 511,784. Patented Jan. 2, 1894.

Fig. 1.

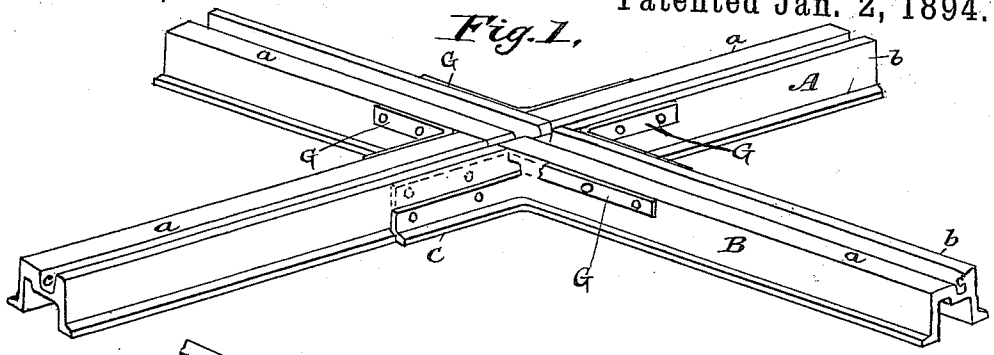


Fig. 2.

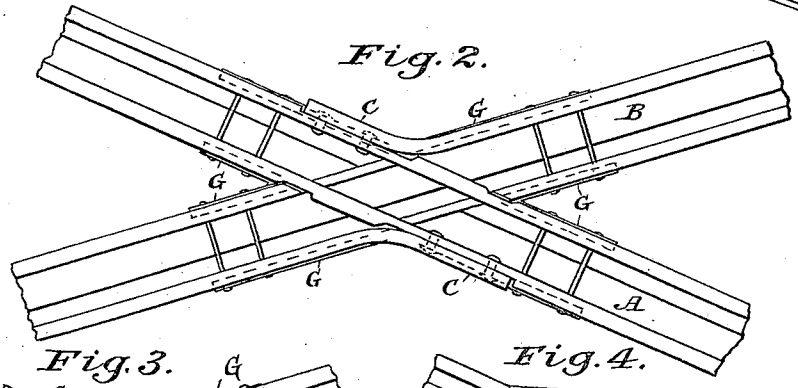


Fig. 3.

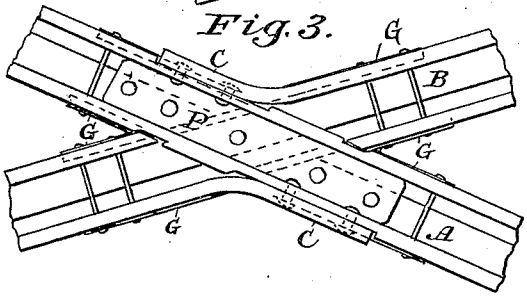


Fig. 4.

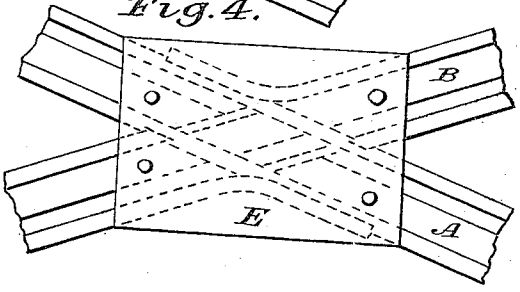


Fig. 5.

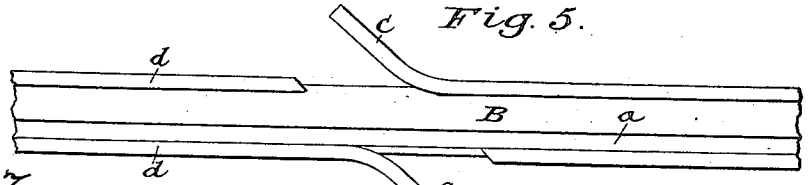


Fig. 7.

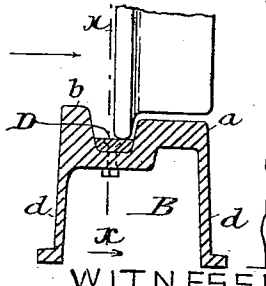


Fig. 8.

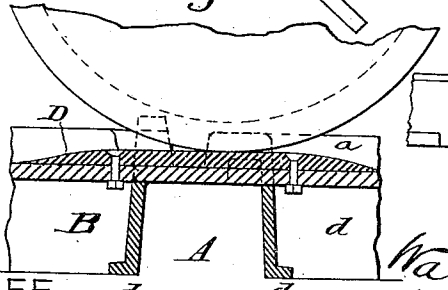
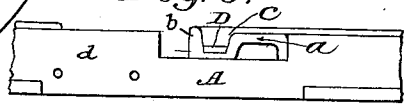


Fig. 6.



WITNESSES

Patrick Nolan

Harry E. Browne.

INVENTOR

Walter C. Meeker

By A. Bell Malcomson

Atty

THE NATIONAL LITHOGRAPHING COMPANY.
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WALTER C. MEEKER, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO THE LEWIS & FOWLER GIRDER-RAIL COMPANY, OF BROOKLYN, NEW YORK.

RAILWAY-FROG.

SPECIFICATION forming part of Letters Patent No. 511,784, dated January 2, 1894.

Application filed November 27, 1891. Serial No. 413,210. (No model.)

To all whom it may concern:

Be it known that I, WALTER C. MEEKER, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Railway Frog or Crossing, not heretofore known or used; and I hereby declare the following to be a full and clear description of the same, reference being had to the accompanying drawings.

My invention relates to that portion of the road-bed of a railway where one rail crosses another. It is more particularly designed for use as a frog or crossing in tracks intended for street cars to run over and to be made from the class of rails known as box girder-rails.

The construction of my frog or crossing will be more readily understood by reference to the accompanying drawings, in which—

Figure 1, is a perspective view of a completed frog, embodying my invention. Fig. 2, is a view from the under side of the same frog. Fig. 3, is same as Fig. 2 with narrow base plate. Fig. 4, is same as Fig. 3 with wide plate shown in position. Fig. 5 is a bottom view of the rail B. Fig. 6 is a side view of the rail A showing how it is cut away. Figs. 7 and 8 are sectional detail views showing a car-wheel above the intersection of the rails.

One object of my invention is to make the frog or crossing with two pieces of rail, one piece being laid on and halved into the other instead of constructing the same of several small pieces of rail joined together.

A and B are the two rails forming the frog, which may preferably be of the peculiar pattern of box girder-rail shown in Fig. 1.

Preferably the frog is constructed by cutting a channel across the head of rail A of the width of the other rail B at the proper angle of the frog desired and cutting the under side of the rail B at the proper angle and of sufficient depth to bring the crowns of the two rails on the same level, in the manner hereinafter described.

Different shapes and styles of rail are adapted to be used in making my frog, but the crown should be even with the supporting web as distinguished from those styles in which the crown extends out over the web on each side as is the case in the T-rail.

In the rails shown in the drawings *a* is the tread or crown of the rail, *b* is the guard and *c* the groove, and *d d* are vertical or substantially vertical webs or girders. The rail B is cut away from the bottom upward at right angles to the line of the under side of the head and at a point where the corresponding sides of the rails intersect, and then at a right angle along the web to a point about two inches beyond where it will intersect the web or girder of the other rail when in position as shown in the drawings, Fig. 2. The portion of the webs or girders of the rail B when thus cut are bent outward to the proper angle to lie along and bear against the webs or sides of the rail A when the two rails are fitted together, and may be either bolted or riveted to the sides of the rail A. These bent portions of the webs or girders of the rail B are designated by the letters C, C, in the drawings. To reinforce the intersection a plate P, Fig. 3, is laid along the under side of the rail A, extending across the part of the rail B which is at that point included in the width of the rail A, and the plate P is riveted or bolted to both rails. The crown and guard of the rail B are cut away as shown in Fig. 1 to allow free passage for the flange of the wheel.

D is a filling piece of metal laid in the groove of the rail for the flange of the wheel to bear on when passing through the frog to prevent it dropping where the crown of the rail is cut away. In some cases I use a plate E, Fig. 4, wide enough to extend under the bottom of both rails, so that they rest upon and are secured to it. If deemed advisable the frog may be further strengthened by bent irons G G to fit either the acute or obtuse angles formed between the rails A and B, or both, secured thereto as shown in Figs. 1, 2 and 3. The bent irons G G are bolted or riveted fast to the girders or webs *d d*, and in case the bent portions C should be broken or cut away said bent irons or angle plates will serve to hold the parts of the frog together.

I do not intend to confine myself to the construction, only when applied to the par-

ticular form of hollow rail shown, as other forms of hollow rail may be used and the essential points of my invention retained.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A railway frog composed of the rails A and B, halved together, the web of one of said rails being cut and bent, instead of being entirely cut away, so as to bear against the outside of the web of the other rail, and secured thereto, substantially as shown and described.

2. In a railway-frog constructed of box girder-rails, the combination of the top rail continuous at top excepting a shallow intersection notch or notches, with an adjoining rail, the two rails being connected at their intersection by means of the web of one of the rails being detached only at the top and at one end on each side of the rail so as to form oppositely projecting flaps, and being attached to the adjoining web of the other rail.

3. In a railway-frog or crossing composed of two box girder-rails halved together, the plate P laid along the under side of said rail A, and beneath the crossing portion of rail B and secured to both rails, substantially as and for the purpose described.

4. In a railway-frog constructed of box girder-rails, the two rails formed with a high guard opposed to the tread of the rail so as to form a deep and well guarded groove, the combination of a rail continuous at top except a shallow intersecting notch or notches with an adjoining rail, the two rails being connected at their intersection, and filling-pieces secured in the channels or grooves of said rails, substantially as shown and described.

5. In a railway frog or crossing two box girder-rails each cut away, or halved together, the webs of one of said rails being cut and bent out and secured to the other rail substantially as shown, in combination with an underlying plate secured to both of said rails and a filling piece D secured in the channel or groove of the rail B, as and for the purposes described.

6. In a railway-frog or crossing two box girder-rails halved together substantially as shown, in combination with bent irons or angle-plates G G secured to the webs or girders of both rails, as and for the purpose described.

WALT. C. MEEKER.

Witnesses:
A. BELL MALCOMSON,
A. A. MEEKER.