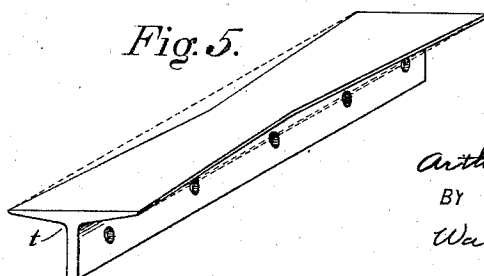
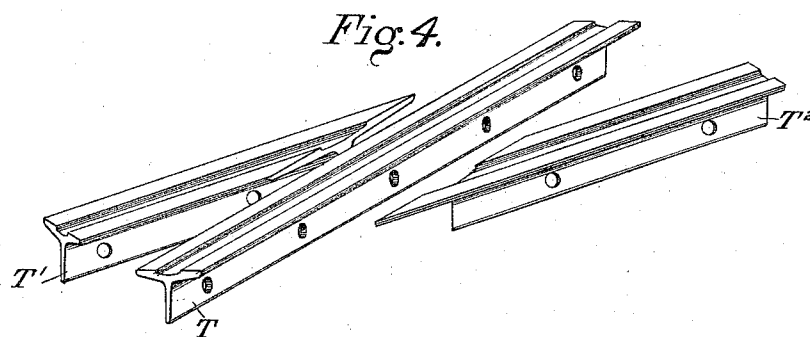
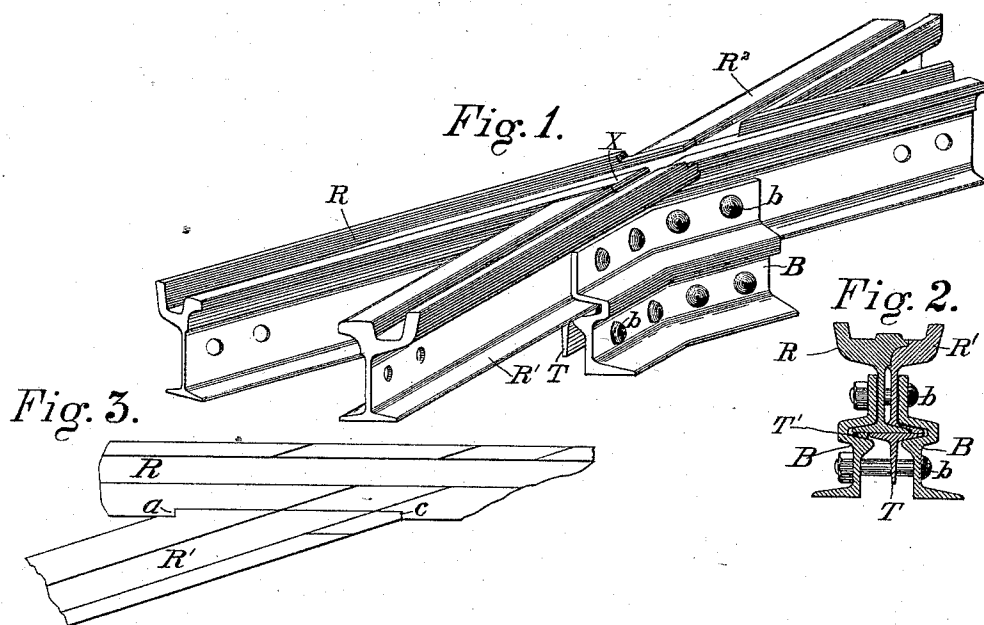


(No Model.)

A. J. MOXHAM.
RAILWAY CROSS.

No. 526,455.

Patented Sept. 25, 1894.



WITNESSES:
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ARTHUR J. MOXHAM, OF JOHNSTOWN, PENNSYLVANIA.

RAILWAY-CROSS.

SPECIFICATION forming part of Letters Patent No. 526,455, dated September 25, 1894.

Application filed May 2, 1893. Serial No. 472,809. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR J. MOXHAM, a subject of the Queen of Great Britain, residing at Johnstown, county of Cambria, State of Pennsylvania, have invented a new and useful Improvement in Railway-Crosses, of which the following is a true and exact description, due reference being had to the accompanying drawings.

My invention relates to an improvement in the construction of switch pieces, crossings or curve crosses for street railway tracks and has for its object to provide a structure more durable than those heretofore constructed and better adapted to meet the increasing requirements of street railway tracks.

In the construction of curve crosses heretofore various methods have been adopted such as cutting out the top half of one rail and the bottom half of the other and thus having both rails continuous, or sometimes one rail has been run through and the other cut and butted on either side of it and secured to it by various means as chucks, splice bars, &c. In all of these constructions, the crossing point of the two rails is more or less weak.

Referring to the drawings in which like letters refer to the same parts, Figure 1 shows a cross embodying my invention. Fig. 2 is a section of Fig. 1 at point X. Fig. 3 shows a certain detail of construction hereinafter described. Figs. 4 and 5 illustrate various members of the structure all as described hereinafter.

The essential feature of my invention is the use of a deep clamping member as shown at B in Fig. 1 in such manner that the through rail R and the abutting rails R' and R² are securely and rigidly clasped together.

In constructing the cross the abutting rails are shaped to fit the side of the through rails, as is shown in Fig. 2 where R is the through rail and R' the abutting one, so that the through rail is securely supported by the abutting rails. Fig. 3 illustrates another feature of this construction. It will be seen that instead of the rail R' coming against the side of rail R the latter has the side of the head cut away from *a* to *c* for a distance in from the edge of about a quarter of an inch. The sharp point of R' being cut off and the notch

made in it as shown at *a*, so as to fit the recess in R a secure lock is formed against any motion endwise of R, and, as it is secured by the fit of the side rails from any vertical motion, it will be seen that it is firmly held in all directions by the abutting rails. The clamping member is constructed as shown in Fig. 2, having the tapering recess into which enters the flange of the rail and also the flange of the supporting T bar T. As shown in Fig. 1 the bar on each side is bent to the angle of the cross and one arm of it is secured to the through rail and the other arm to one of the abutting rails as shown. The supporting plate T may be constructed in one of two ways as shown in Figs. 4 and 5. In Fig. 4 the plate T is to support the rails R' and R² while the abutting pieces T' and T² serve as fillers between the rail R and bars B. Fig. 2 shows the location of the various pieces and it will be seen there that T is directly under rail R' and the rail R is crossing it. But a small portion of T' is seen but it shows how it acts as a filler and support under the rail R. In place of these three pieces it will be seen that the plate *t* Fig. 5 can be substituted. The two sides of this are planed to the proper angle and afford an even more substantial support than the three pieces before described. While these plates are shown and described as having a central vertical web it will be seen that this is not essential and flat plates might be substituted. I prefer the T form however as being stiffer and forming a more substantial support. The great strength of these side bars and their depth below the rail render this construction very rigid and not liable to jar loose. In case of the bars becoming loose, however, it is an easy matter to tighten the bolts *b* and draw every part to a bearing again.

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

1. A railway cross having in combination one through rail and two abutting rails; two clamping members, one on each side extending below the rail and bent at such angle as to fit the through and one abutting rail; and a supporting plate or plates beneath the rail, the edge of said plate or plates entering with

the flange of the rail a recess in the clamping member.

2. In a railway cross, in combination with two of the rails forming the cross, and a side
5 plate having a vertical web adapted to be secured to the webs of the rails, a recess at the base of said web into which the rail flange enters, a vertical web below said recess and an angle foot at the bottom of last mentioned
10 web for bearing on a tie, said side plate being bent to such angle that each end of it may be secured to one of the rails, supporting plates on which the rails rest and which enter with the rail flange the recess in the side

plate, the whole being secured together by 15 means as bolts.

3. In a railway cross a supporting plate extending beneath all the rails forming the cross, said plate having a single depending vertical web and having its edges conforming substantially to the outside edges of the rail flanges resting thereon, all as herein described. 20

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

ARTHUR J. MOXHAM.

Witnesses:

A. J. BRYAN,

D. BRYAN.