(No Model.)

M. D. PRATT.

RAILWAY CROSSING.

No. 538,199. Patented Apr. 23, 1895.

fig. 1

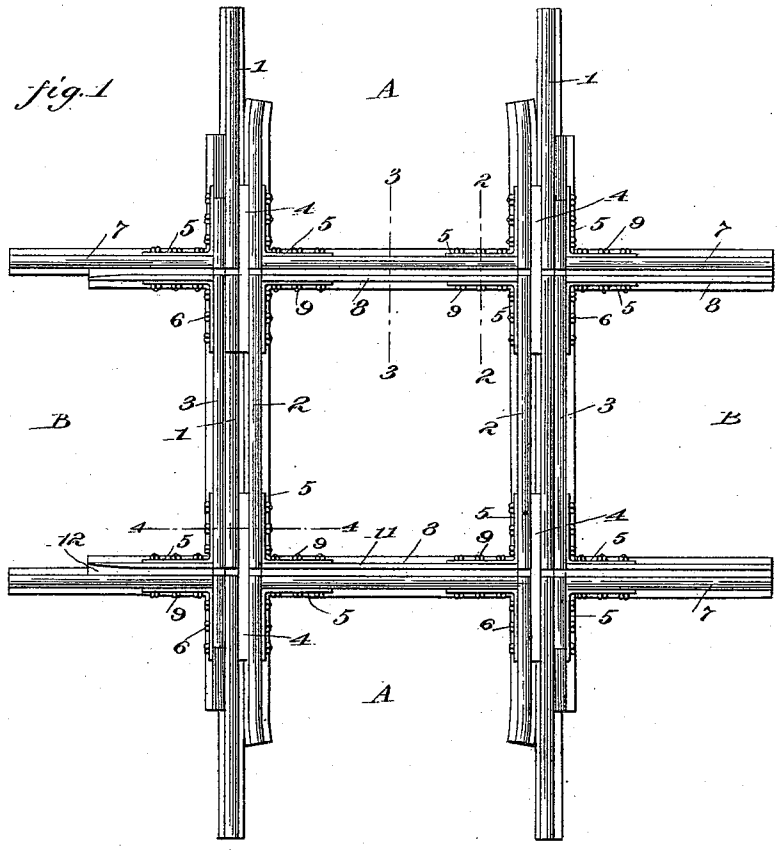


fig. 2

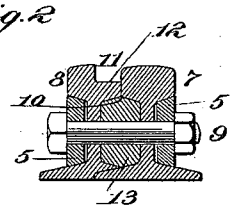


fig. 3

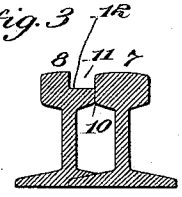


fig. 4

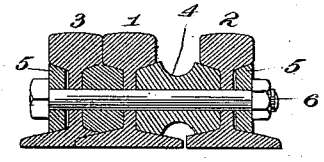


fig. 5.

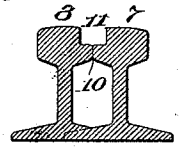


fig. 6

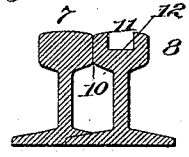


fig. 7

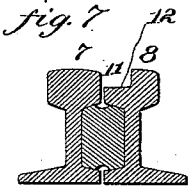
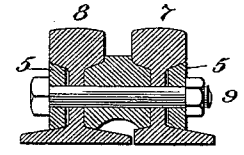


fig. 8



Witnesses;

J. F. Coleman

Will E. Neff

Inventor.

Mason D. Pratt

By J. Watson Atty.

UNITED STATES PATENT OFFICE.

MASON D. PRATT, OF STEELTON, ASSIGNOR OF ONE-HALF TO JOHN F. OSTROM, OF PHILADELPHIA, PENNSYLVANIA.

RAILWAY-CROSSING.

SPECIFICATION forming part of Letters Patent No. 538,199, dated April 23, 1895.

Application filed February 23, 1895. Serial No. 539,400. (No model.)

To all whom it may concern:

Be it known that I, MASON D. PRATT, a citizen of the United States, residing at Steelton, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Crossings, of which the following is a specification.

My invention relates to railway crossings, and more particularly to crossings used in public highways, such as where street railways are crossed by steam railways, or other street railways. In crossings laid in public highways, it is necessary that the space between the main rails and guard rails of the street railway track should be filled, or provided with a floor, at a slight depth below the top of the rail, to prevent the wheels of street vehicles from dropping in between the rails. It has heretofore been customary to separate the heads of the crossing rails and guard rails sufficiently to permit the passage of the car wheel flanges, and to fill in the space between the webs of the rails by "filling blocks" of cast or wrought metal, the upper surfaces of the filling blocks constituting the floor above mentioned. These blocks have necessarily been of considerable width, and as long as the guard rails; and in addition to their first cost they entail additional expense in freight and handling on account of their weight.

The object of my invention is to provide this floor by a peculiar formation of the guard rail, thus enabling it and the main crossing rail to be brought together sufficiently to do away with these heavy filling blocks, and at the same time retain the valuable feature, in this class of work, of a construction employing but one shape or section of rail, so far as those parts into which the angle braces fit are concerned.

I shall now proceed to describe the invention in detail, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view showing a crossing for street and steam railways. Figs. 2, 3 and 4 are cross sections taken respectively on the lines 2—2, 3—3 and 4—4, Fig. 1. Figs. 5, 6 and 7 are sections, corresponding to Fig. 3 showing modified forms of the invention; and Fig. 8 is a similar section showing the old method of uniting the main and guard rails.

Referring to the drawings, A indicates a steam railway track, and B a street railway track, the tracks being shown as crossing at right angles. The parts of the crossing constituting the steam railway track consist of main rails 1, guard rails 2 and bearing rails 3, together with the usual filling pieces 4, knees or angle braces 5 and connecting bolts 6. The rails shown in the drawings are the ordinary railroad rails, commonly called T-rails. These rails are girder-like in cross-section, having a thick upper portion or head, an intermediate web, and a wide lower portion or foot adapted to rest on the cross-ties. My invention relates particularly to crossings composed of rails of this general type and I shall hereinafter designate them as rails having a girder cross-section.

The street railway portion of the crossing consists of main crossing rails 7 and guard rails 8 which are connected to the knee pieces 5 by bolts 9. As illustrated in Figs. 2 and 3, the heads or upper portions of the main and guard rails are brought together as at 10, and in the upper portion of the guard rail adjacent to the main crossing rail is a groove or depression 11 of suitable shape and size to permit the flanges of wheels to pass freely, preferably of the section shown in Figs. 2 and 3, in which the bottom and one side of the groove are bounded by the guard-rail head and the other side by the head of the main rail. This groove may be formed by planing off the upper corner of a rail similar to the main rail, or the guard rail may be rolled or cast with the depression or groove formed in it. The floor 12 of the groove 11 prevents the wheels of street-vehicles from dropping in between the rails as efficiently as the filling blocks formerly used, such as that shown in Fig. 7, and such blocks may therefore be dispensed with. I prefer to use short blocks 13 at the bolts, but they are comparatively light and inexpensive. The bases of the main and guard rails abut against each other, the guard rail being preferably formed to fit the base of the main rail, as shown in Figs. 2 and 3.

In Fig. 5 the groove is shown as formed partially in each of the rails, while in Fig. 6 it is in the head of the guard rail between the slides thereof.

In Fig. 7 the rails are separated slightly by a filling block, which, however need not be used except at the bolts. In a crossing for two street railways, all of the guard rails, when they are used, may be formed according to my invention.

It will be evident that the cross sections of the rails may be varied, and also the outline or cross section of the groove or depression in the guard rail. I prefer, however, to use in each crossing rails of the same size and section of all parts, so that angle braces of uniform section may be used throughout.

Therefore, without limiting myself to the precise construction and arrangement of parts shown and described, I claim—

1. In a railway crossing, the combination with a main rail of girder cross-section, of a guard rail of similar section arranged adjacent to and connected with the main rail, said guard rail having its head formed with a depression or groove throughout its length suitable for the passage of wheel flanges, substantially as described.

2. In a railway crossing, the combination with the main rail of girder cross-section, of a guard rail of similar section having its head adjacent to and parallel with the head of the main rail, said guard rail having its head formed with a depression at the side adjacent to the main rail suitable for the passage of wheel flanges, said depression forming a groove which is bounded on the bottom and one side by the guard rail head and on the other side by the head of the main rail, substantially as described.

3. In a railway crossing, the combination of the rails of one track, with the crossing rails of the other track, and guard rails having their heads arranged parallel and adjacent to the heads of the crossing rails, each of said guard rails having its head formed with a depression or groove, on the side adjacent to the crossing rail, extending throughout its length and suitable for the passage of wheel flanges, substantially as described.

4. In a railway crossing, the combination of the main and guard rails of one track, with the main and guard rails of a crossing track, the rails of both tracks being of like girder cross-section, and the heads of the guard rails of the crossing track being adjacent and parallel to the heads of their respective main rails, and formed with depressions adjacent to the main rails for the passage of wheel flanges, said depressions forming grooves which are bounded on the bottom and one side by the guard rails and on the opposite side by the heads of the main rails, substantially as described.

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

MASON D. PRATT.

Witnesses:
CHAS. A. ALDEN,
GILBERT S. VICKERY.