(No Model.) 2 Sheets—Sheet 1.

E. B. ENTWISLE.

GIRDER SLOT RAIL CROSSING.

No. 367,746. Patented Aug. 2, 1887.

Fig. 1.

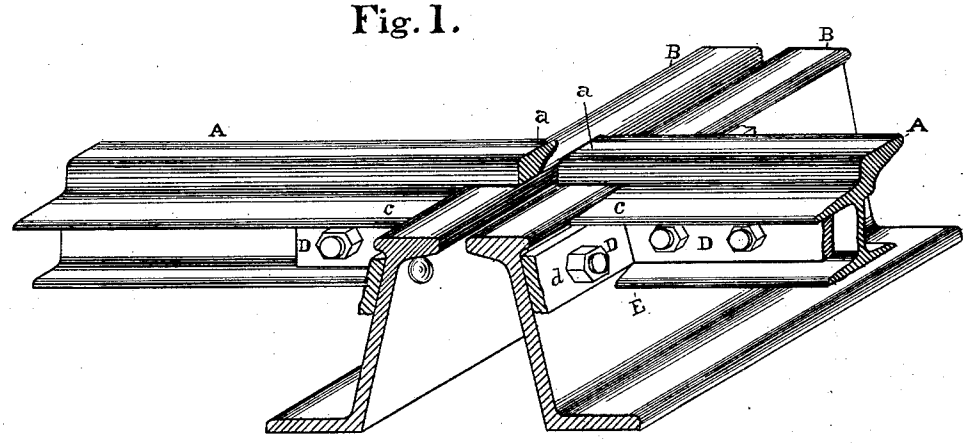
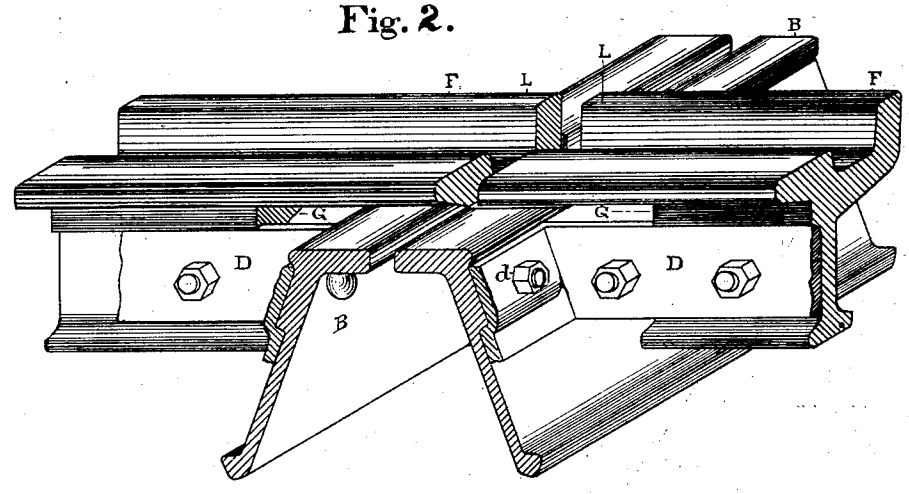


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

E. B. ENTWISLE.

GIRDER SLOT RAIL CROSSING.

No. 367,746. Patented Aug. 2, 1887.

Fig. 4.

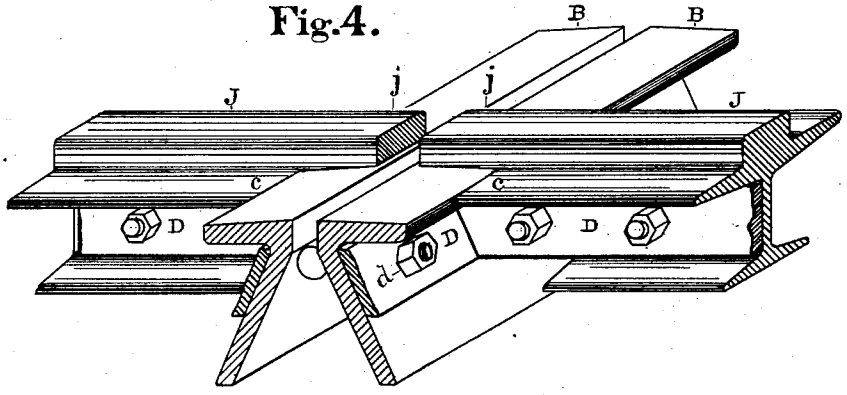
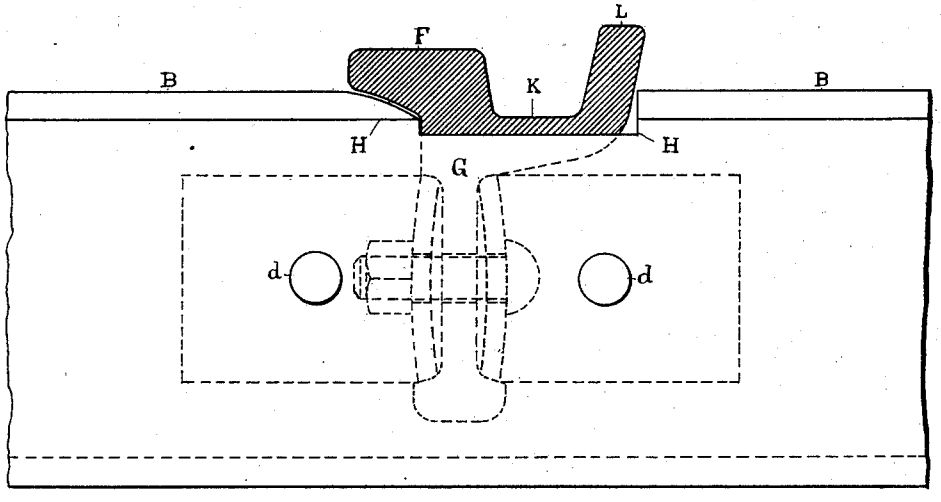


Fig. 3.



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UNITED STATES PATENT OFFICE.

EDWARD B. ENTWISLE, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE JOHNSON STEEL STREET RAIL COMPANY, OF KENTUCKY.

GIRDER-SLOT-RAIL CROSSING.

SPECIFICATION forming part of Letters Patent No. 367,746, dated August 2, 1887.

Application filed May 28, 1887. Serial No. 239,599. (No model.)

To all whom it may concern:

Be it known that I, EDWARD B. ENTWISLE, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Girder-Slot-Rail Crossing, which invention is fully set forth and illustrated in the following specification and accompanying drawings.

The object of this invention is both to obviate the jar occasioned by such crossings as usually constructed to the wheels of crossing cars, as well as to prevent all wear upon the slot-rails crossed by the flanges of the wheels of crossing cars.

The invention will first be fully described, and then particularly set forth in the claims.

In the accompanying drawings, Figure 1 illustrates in perspective a side-bearing girder-rail crossing one form of slot-rail. Fig. 2 illustrates in perspective a girder-rail crossing another form of slot-rail. Fig. 3 illustrates an end view, partly in section, one slot-rail being removed, of Fig. 2. Fig. 4 illustrates in perspective a center-bearing girder-rail crossing a third form of slot-rail.

In said figures the several parts are indicated by letters of reference, by means of which said parts will now be described, as follows:

In all of said figures the letters B illustrate the slot-rail crossed, the exact form of which rail, however, is immaterial, those illustrated in the several figures representing the forms of such rails most used in general practice.

The letters A A indicate side-bearing rails, F F guard-rails, and J J center bearing girder-rails.

The letters D D indicate splice-bars angled to fit against the web of a girder-rail and the side of a slot-rail. As each slot-rail is beveled, the splice-bars D are angled in two directions. Said splice-bars are secured to the slot-rails by the bolts *d d*. Said bolts may be stud-bolts; but they are preferably, as shown in the drawings, bolts with small and non-obstructive heads on the interior of the slot-rails, and their threaded ends are provided with nuts on the outside of the splice-bars.

In Figs. 1 and 4 the side tram and the under part of the head of each crossing rail are cut away so as to let the head of each crossing rail lap over the slot-rail and come flush with its inner edge, as shown at *a a* and *j j*, respectively. The distance between the ends of the lapping heads of said rails, it will thus be seen, is only equal to the width of the slot between the slot-rails. The webs of the crossing rails are also cut away so as to permit their heads to come into close contact with the slot-rails.

In Figs. 2 and 3 the web and a part of the lower portion of the head of the crossing rail is cut away, and a portion of the slot-rail is also cut away. Where the guard-rail is used, it is advisable not to cut the floor K entirely away, as the guard L would then be rendered weak and not well sustained, and as it is at the same time desirable that the head F and guard L be not exposed too much above the slot-rail crossed, the latter is partly cut away, as shown in Fig. 3 at H H. If said parts be too much exposed, the cable-grip is liable to be caught thereon.

The method ordinarily adopted of crossing slot-rails by the main rails of the track is to cut the main rails off square and let the car-wheels jump over the whole width of the slot-rails. As said width is generally from four to five inches, the jar on the car and the wear or abrasion made by the car-wheel flanges upon the slot-rail crossed are very considerable in amount; but by the construction herein shown and described, and forming the subject of this invention, the heads of the street-car rails are caused to overlap the slot-rails, and thus the car-wheel flanges are prevented from wearing away the slot-rails crossed, and no jar or disagreeable noise is perceptible to the occupants of the car as the car-wheels pass the slot-rails.

It is evident that any suitable form of splice-bar can be substituted for the especial form of splice-bar shown, and hereinbefore described.

Having thus fully described my said crossing, as of my invention I claim—

1. A slot-rail and girder-rail crossing consisting of main girder-rails and slot-rails secured together at the proper angle, and with the girder-rails overlapping the heads of the

slot-rails without interfering with the slot between the latter rails, substantially as and for the purposes set forth.

2. A slot-rail and girder-rail crossing consisting of main girder guard-rails and slot-rails secured together at the proper angle, and with the guard-rails overlapping the heads of the slot-rails, the latter rails being partially cut away so as to preserve the floor of the guard-rails intact, substantially as and for the purposes set forth.

EDWARD B. ENTWISLE.

Witnesses:
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