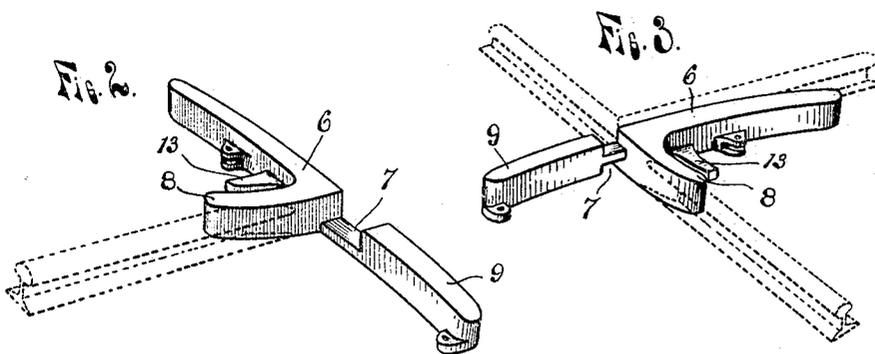
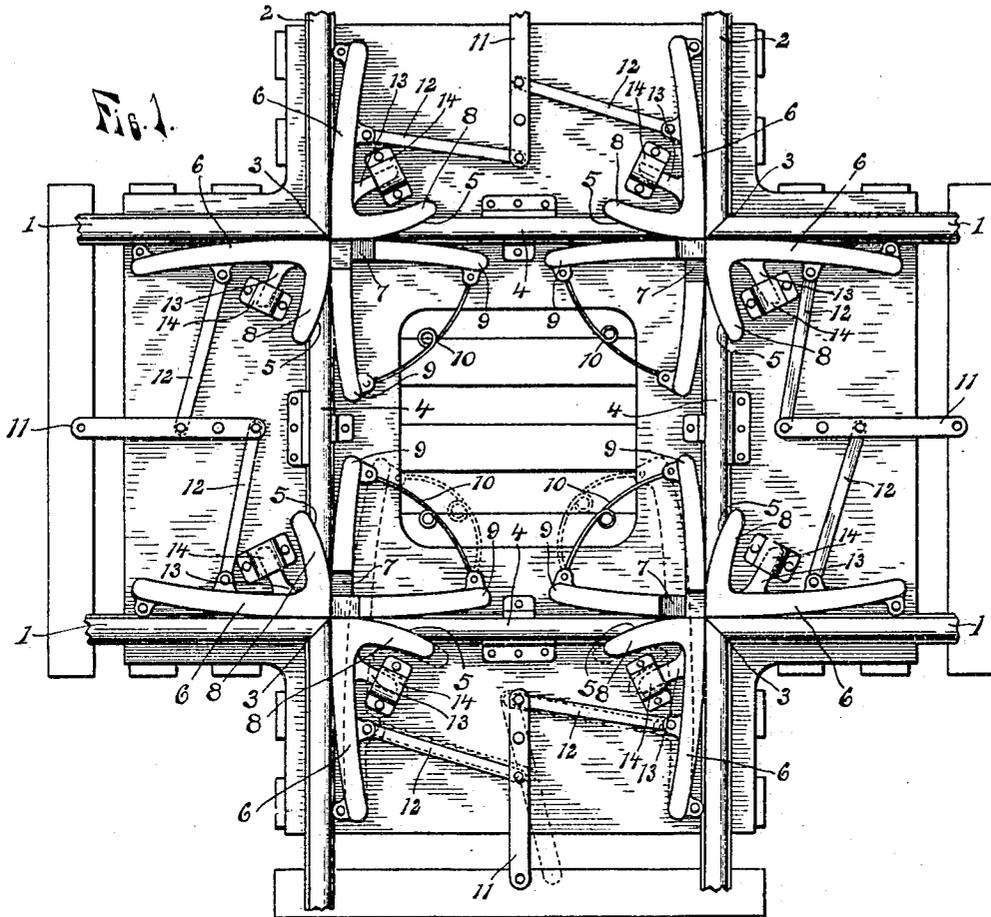


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G. W. WILLEBRANDS & J. W. BENNETT.
RAILWAY CROSSING.

APPLICATION FILED AUG. 26, 1904.



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UNITED STATES PATENT OFFICE.

GEORGE W. WILLEBRANDS, OF DETROIT, AND JOHN W. BENNETT, OF STURGIS, MICHIGAN.

RAILWAY-CROSSING.

SPECIFICATION forming part of Letters Patent No. 787,966, dated April 25, 1905.

Application filed August 25, 1904. Serial No. 222,049.

To all whom it may concern:

Be it known that we, GEORGE W. WILLEBRANDS, residing at Detroit, in the county of Wayne, and JOHN W. BENNETT, residing at Sturgis, in the county of St. Joseph, State of Michigan, citizens of the United States of America, have invented certain new and useful Improvements in Railway-Crossings, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in railway-crossings; and its object is to provide a construction embodying in a simple, cheap, and practical form certain features disclosed in our former patents, No. 640,527, to John W. Bennett, dated January 2, 1900; No. 748,469, to John W. Bennett, dated December 29, 1903, and No. 755,730, to George W. Willebrands, dated March 29, 1904, all for railway-crossings having means forming a continuous bearing-surface for the wheels at the junction of the rails and provided with certain other new and useful features.

A further object of this invention is to provide means for yieldingly holding the movable sections in their normal positions and to provide suitable lever mechanism for positively shifting the same and to provide the particular construction, arrangements, and combination of parts, all as more fully hereinafter described, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a crossing embodying our invention. Fig. 2 is a perspective view of one of the movable members, and Fig. 3 a similar view of the other movable member.

1 1 are the rails of one track, and 2 2 the rails of the track extending at right angles thereto, each rail ending and meeting the rail of the other track in a miter-joint 3, and interposed between the opposing ends of each rail is a short rail-section 4, with a space between each of the beveled ends 5 of said section and the adjacent rail ends or mitered corners.

Extending along the inner sides 5 of the rails of each track and through the gaps or

spaces at each end of the rail-sections 4 are the movable members or supplemental sections 6, which are each cut away at 7, so that they may cross each other and have a limited lateral movement one upon the other, and are pivoted at one end to move laterally inward toward and from the rails. Each movable member is provided with an integral laterally and inwardly extending curved portion or arm 8, adapted to lie close to the beveled end 5 of the adjacent rail-section 4 and fill the gap between said end and the adjacent rail and when said movable member is in its normal position against its rail.

The inwardly-extended and crossed ends 9 of each pair of members 6 at each corner are connected by a spring 10, which exerts a force to hold each member against its rail with its curved arm extending across the gap in the rail of the other track, and thus said members are all normally held in operative position. The ends of each of the members 6 are curved inward away from its rail, so that the flange of the car-wheel moving in either direction along the track will engage between said member and rail and force the former away from the latter against the action of the spring 10, which spring is thereby caused to exert a greater force to hold the other member to which it is attached more firmly against its rail.

Means are provided for moving the supplemental member 6 of either track away from their rails to permit the wheels to pass without contacting the members, consisting of a lever 11, pivoted intermediate its ends between the rails of each track at each side of the crossing and connecting each of these levers with the two adjacent members at that side of the crossing by links 12, pivoted at one end to ears on said members and at their opposite ends to the lever 11, one at each side of and at a distance from its pivot, so that by turning said levers by any suitable means (not shown) the members will be moved inward against the action of the springs and held in that position until the levers are released. The two levers for moving the four members of one track will preferably be operated at the same time, thus giving a clear track.

An arm 13 on each movable member engages a guide 14 to hold said members in place and prevent their becoming detached.

By arranging the movable members so that
 5 they are normally held against the rails snow, ice, and other obstructions are prevented from getting between the rails and said members to prevent their operation, and by firmly
 10 arranging the springs so that the members which are not moved to allow the wheels to pass are firmly held against their rails said members are prevented being moved out of place by the engagement of the wheels and also prevented from becoming jarred loose or
 15 broken.

The levers positively operate and hold the members out of the path of the wheel-flanges, thus preventing the possible derailing of the train should the flange for some reason fail to
 20 move the member and also preventing wear and possible breakage caused by the contact of each wheel of a long train with the members.

What we claim as our invention is—

25 1. In a railway-crossing, the combination with the main-track rails having gaps therein at the junction of said rails, a pair of movable members at each junction each member pivoted at one end adjacent to the inner side of
 30 its rail and having an end extending through one of said gaps and crossing the extended end

of the other member of the pair, springs connecting the extended ends of each pair to hold the members against their rails, and means between the rails of each track attached to 35 one member of each adjacent pair of movable members to move said members against the action of said springs.

2. In a railway-crossing, the combination with the main-track rails having gaps therein 40 at the junction of each of said rails of one track with those of the other track, a pair of movable members at each junction adapted to normally fill the gaps, springs connecting the members of each pair to hold the same in their 45 normal position, a lever pivoted between the rails of each track, and links pivotally attached at one end to said lever and at their opposite ends to one member of each adjacent pair of members to move and hold said mem- 50 bers to allow the flange of the wheel to pass.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE W. WILLEBRANDS.
 JOHN W. BENNETT.

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