

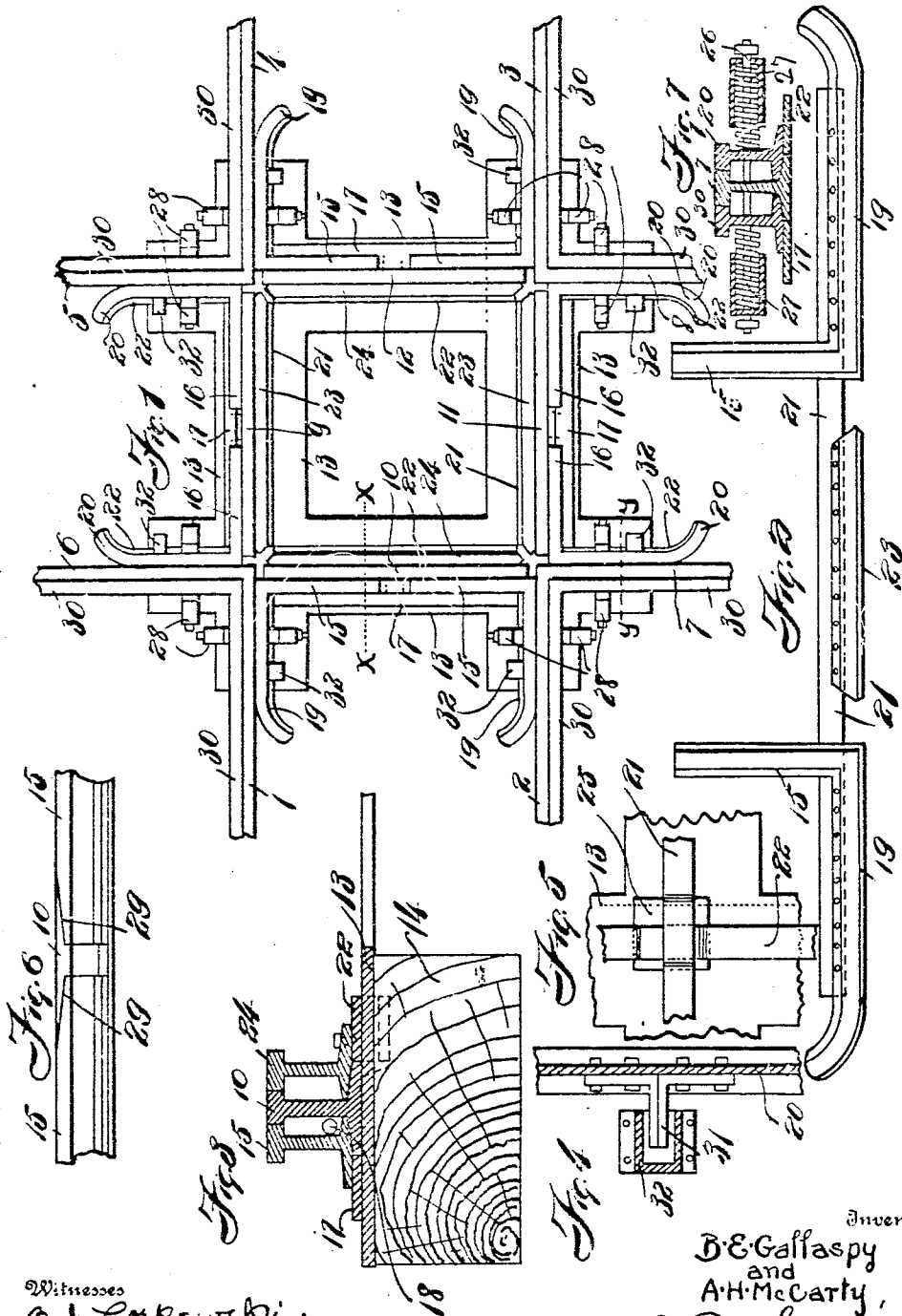
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RAILWAY CROSSING.

APPLICATION FILED JUNE 11, 1909.

962,338.

Patented June 21, 1910.



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RAILWAY-CROSSING.

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Specification of Letters Patent. Patented June 21, 1910.

Application filed June 11, 1909. Serial No. 501,541.

To all whom it may concern:

Be it known that we, BENJAMIN E. GALLASPY and ALEXANDER H. McCARTY, both citizens of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Railway-Crossings, of which the following is a specification.

10 This invention relates to railway crossings and the object is to provide continuous treads for the wheels of cars and locomotive engines.

15 Railway crossings as heretofore provided, particularly in cities where there is almost constant crossing of the tracks, cause severe pounding of the wheels against the ends of the rail sections, the rails being cut away for the passage of the flanges of the wheels.

20 One object is to provide rail sections which stand normally in position to bridge the cut away portions of the main rails so that a continuous tread is provided and also to provide means for opening passages for the wheel flanges, and further to provide means for automatically closing the pas-

25 sages after the passage of the wheels. Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application.

35 Figure 1 is a plan view of a railway crossing constructed in accordance with our invention. Fig. 2 is a plan view of two continuous tread forming elements. Fig. 3 is a vertical cross-section taken along the line 3-3 of Fig. 1. Fig. 4 is a horizontal section of a portion of a rail, showing the guides which prevent the tilting of the movable continuous tread forming members. Fig. 5 is a broken plan view of the movable plates which carry the continuous tread forming members and showing also a portion of the bed plate. Fig. 6 is a broken side elevation of the rails at center of crossing. Fig. 7 shows replacing springs.

50 Similar characters of reference are used to indicate the same parts throughout the several views.

The usual railway rails 1 and 6, 2 and 7, 3 and 8, and 4 and 5 are shown in the drawings. The rail sections 9, 10, 11, and 12

form the track between the rails within the intersection of the tracks. A bed plate 13 supports the meeting rails 1 to 8 inclusive and the rails between or within the intersection of the tracks. The bed plate 13 may be cut away as shown in Fig. 1. The bed plate 13 is supported on suitable timbers 14. The usual cut outs for the passage of the wheel flanges are shown between the ends of the rail sections 9, 10, 11, and 12 and the meeting rails 1 to 8 inclusive. The object of this invention is to bridge these cut outs so that there will be no pounding of the rails by the wheels. The rails 9 to 12 inclusive may be made heavier than the other rails and the balls of these rails are cut away, as shown in Fig. 3. Continuous track forming members 15 and 16 are placed on the outside of the intersection of the tracks and flush with the rail sections 10 and 12 and 9 and 11 respectively so that the tread of the wheels will bear on the members 10 and 15 and 12 and 16 when a train is going in one direction and bear on the members 9 and 16 and 11 and 15 when the train is going in the other or cross direction. The members 15 and 16 are movable longitudinally by the flanges of passing wheels. The members 15 and 16 are mounted on plates 17 and on the flanges of the members 9 to 12 inclusive, the plates 17 being supported on the bed plate 13. Ball bearings 18 may be placed between 15 and 10 and 15 and 12 and also between the members 16 and 9 and 16 and 11 to prevent friction.

Means are provided for moving the continuous tread forming members 15 and 16 automatically. Wings 19 are formed integral with the members 15 or attached to the members 15 rigidly and wings 20 are formed integral with or attached rigidly to the members 16. The members 19 are attached rigidly to movable plates 21 and the members or wings 20 are rigidly attached to movable plates 22. The plates 21 and 22 are movable on the bed plate 13. Within the intersection of the tracks guard members 23 are rigidly attached to the plates 21 and guard members 24 are rigidly attached to plates 22. At the crossings of the plates 21 and 22, one plate must run under the other. For this reason the bed plate 13 is cut away, as shown at 25 in Fig. 5. The members 19 and 20 being flared toward the approach of wheels provide a

way for the entering of the flanges of the wheels, the plates 21 and 22 being yielding. In going east or west, considering Fig. 1, the flanges of the wheels would press the wings 19 toward each or toward the center of the track or road way and thus open a passage way for the flanges of the wheels. In order to prevent the wings 19 from assuming their normal positions before the wheels pass entirely over the crossing, guard members 23 are attached to plates 21 so that the flanges of the wheels will have a continuous bearing to hold the plate 21 toward the center of the road bed until the wheels have passed the crossing. In going north or south the wings 20 and guard members 24 operate in the same manner, as just described. In order to bring the wings 19 and 20 back to their normal positions, bolts 26 are run through these members and the adjacent rail members, as shown in Fig. 7, and strong spiral springs 27 are placed on the bolts. Casings 28 are provided for protecting the springs 27. The ends of the members 15 and 16 are slightly beveled, as shown at 29 in Fig. 6, so that when the rail members 9, 10, 11, and 12 wear, there will be no pounding of the wheels against the ends of the members 15 and 16. The meeting rail members 1 to 8 inclusive are reinforced by the usual reinforcing rails 30. Guides 31 are provided for preventing the tilting of the wings 19 and 20. The guides consist of metallic bars bolted to the wings 19 and 20 and bent at right angles thereto. Casings 32 are provided for the guides 31.

In view of the above description, no description of the operation is necessary. It has been shown that continuous track forming members are provided for both directions and that the continuous track or tread forming members of one track are movable by the wheels of a train passing on the other track. In their normal positions, the continuous tread or track forming members stand closing the usual cut-out for the wheel flanges, being held in such positions by strong springs.

Having fully described our invention, what we claim as new and desire to secure by Letters Patent, is,—

1. In a railway-crossing, the combination with the rails of the railway track having cut-outs for passage of wheel flanges, of continuous track forming members flush with the outside of said rails between each pair of rails and movable by passing wheels and normally closing said cut-outs.

2. In a railway crossing, the combination with the rails of the railway track having cut-outs for passage of wheel flanges, of continuous track-forming members flush with the outside of said rails between each pair of rails and yieldable to the flanges of passing wheels and normally closing said cut-

outs and means for replacing said continuous track forming members automatically after the passage of the wheels.

3. In a railway crossing, the combination with the rails of the railway track having cut-outs for the passage of wheel flanges, of continuous track-forming members flush with the outside of said rails between each pair of rails normally closing said cut-outs but yieldable to the flanges of passing wheels, springs operating to replace said continuous track forming members after the passage of the wheels, and wings integral with said continuous track forming members operable by the flanges of passing wheels.

4. In a railway crossing, the combination with the rails of the railway track having cut-outs for passage of wheel flanges, of continuous track-forming members flush with the outside of said rails between each pair of rails normally closing said cut-outs but yieldable to the flanges of passing wheels, the balls of the rails of the track within the intersection being partly cut away whereby the tread of the wheels will bear on said continuous track forming members.

5. In a railway crossing, the combination with the rails of the railway track having cut-outs for passage of wheel flanges, continuous track forming members cooperating with the intersected portions of said rails and normally closing said cut-outs, and spring-pressed wings and guard members rigid with said continuous track-forming members of the crossing track operable by the flanges of passing wheels.

6. In a railway crossing, the combination with the rails of the railway track having cut-outs for passage of wheel flanges, continuous track forming members cooperating with the intersected portions of said rails and normally closing said cut-outs, wings and guard members rigid with the continuous track-forming members of the crossing track operable by the wheels of a passing train, and springs for replacing said wings and guard members and continuous track-forming members after the passing of the wheels.

7. In a railway crossing, the combination with the rails of the railway tracks having cut-outs for passage of wheel flanges and having the balls between the crossings partly cut away, continuous track-forming members flush with the outsides of said rails between each pair of rails and filling the cut away portions of said rails, and wings and guard members rigid with the continuous track-forming members of the crossing track operable by the wheels of a passing train.

8. In a railway crossing, the combination with the rails of the railway tracks having

cut-outs for the passage of wheel flanges, continuous track-forming members cooperating with the intersected portions of said rails and normally closing said cut-outs, wings moving said continuous track-forming members and movable by the flanges of passing wheels, guard bearings cooperating with said wings, and movable plates carrying said wings and guard members.

9. In a railway crossing, the combination with the rails of the railway tracks having cut-outs for the passage of wheel flanges, continuous track-forming members cooperating with the intersected portions of said rails and normally closing said cut-outs, wings for said continuous track-forming members and movable by the flanges of passing wheels, guard bearings cooperating with said wings, movable plates carrying said wings and guard bearings, and springs for replacing said wings and guard members to their normal positions.

10. In a railway crossing, the combination with the rails of the railway tracks having cut-outs for the passage of wheel flanges, continuous track-forming members cooperating with the intersected portions of said rails and normally closing said cut-outs, wings for moving said continuous track-forming members of the crossing track, guard members cooperating with said wings, plates carrying said wings and guard members, springs for replacing said wings and guard members after the passage of the wheels, and guides for preventing the tilting of said wings.

In testimony whereof, we set our hands in the presence of two witnesses, this 3rd day of June, 1909.

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ALEXANDER H. McCARTY.

Witnesses:

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