No. 832,492. PATENTED OCT. 2, 1906.

B. F. MARTIN.

RAILWAY CROSSING.

APPLICATION FILED JULY 7, 1906.

Fig. 1.

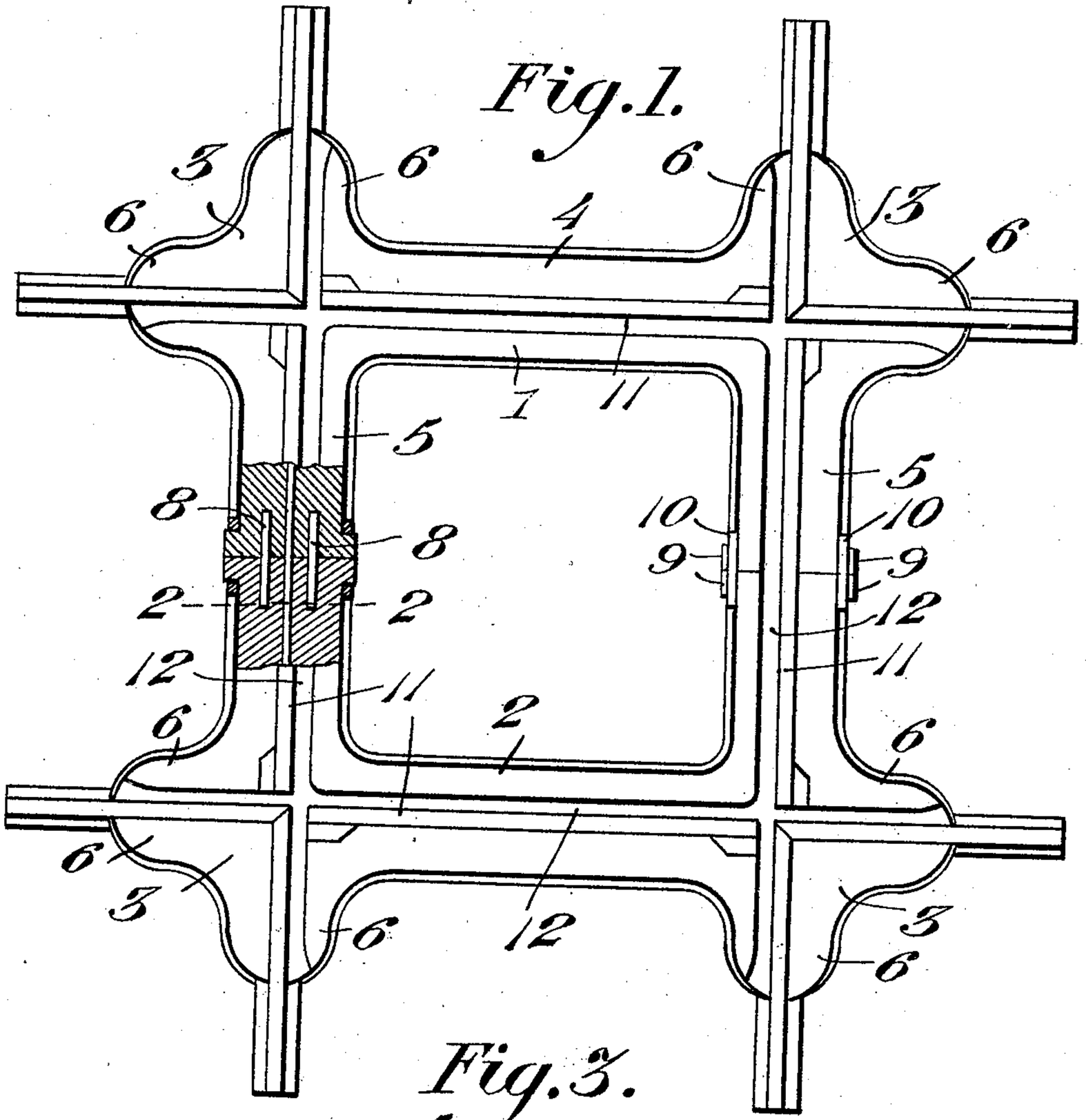


Fig. 3.

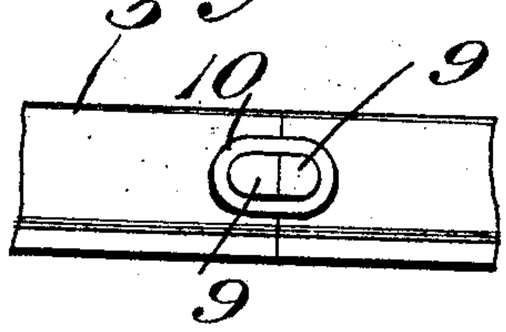
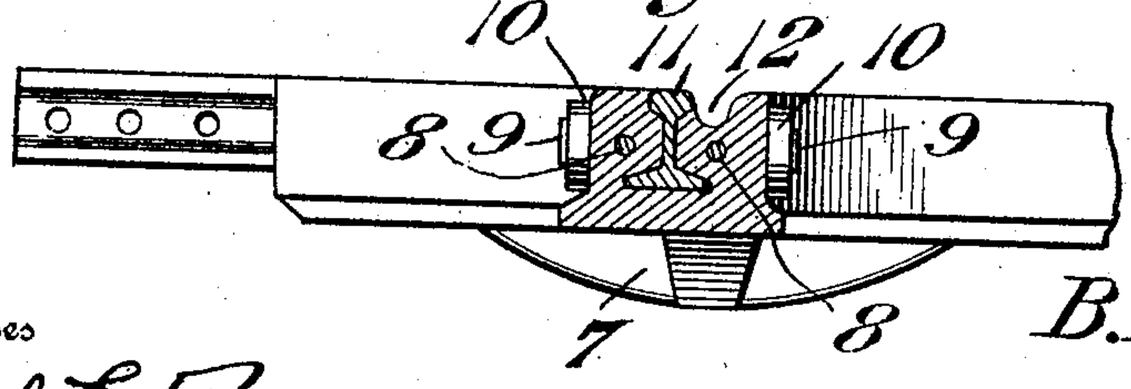


Fig 2.



Witnesses

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BENJIMAN FRANKLIN MARTIN, OF DAYTON, TENNESSEE.

RAILWAY-CROSSING.

No. 832,492. Specification of Letters Patent. Patented Oct. 2, 1906.

Application filed July 7, 1906. Serial No. 325,158.

To all whom it may concern:

Be it known that I, BENJIMAN FRANKLIN MARTIN, a citizen of the United States of America, residing at Dayton, in the county of Rhea and State of Tennessee, have invented new and useful Improvements in Railway-Crossings, of which the following is a specification.

This invention relates to improvements in railway-crossings, the object of the invention being to provide a crossing structure which will be of maximum strength to sustain the wear and strains to which the crossing-rails are subjected under the passage of the rolling-stock, which is adapted to be readily applied in position and removed when worn or injured for the substitution of a new crossing therefor, and which insures the rigid connection of the rails without the use of bolts or the other insecure fastenings commonly employed.

In the accompanying drawings, Figure 1 is a top plan view of a crossing embodying my invention, a portion being broken away to show the connections at one of the joints. Fig. 2 is a vertical transverse section through one of the arms of one of the members of the joints, the plane of section being indicated by the line 2 2 of Fig. 1. Fig. 3 is a detail side elevation showing one of the external joint-fastenings.

In accordance with my invention the crossing is composed of a pair of substantially U-shaped sections 1 and 2, each embodying corner portions 3, a union 4, joining the corner portions, and coupling-arms 5, the coupling-arms of the two members being adapted for connection to provide a crossing-frame of rectangular form, the corner portions of which are provided with extensions 6, forming braces to securely and rigidly support the rails at their crossing-points.

Each member of the crossing structure embodies a solid casting, preferably of steel, the casting being of sufficient weight and thickness to secure the desired degree of strength and rigidity. In practice the crossing block or frame may rest upon and be secured to the ties of the road-bed or laid directly on the ground, in which latter event the frame may be provided with depending anchor members 7 to enter the ground and hold it from shifting in any direction. The coupling portions 5 of the two members abut at their free ends and are provided with seats or recesses for the reception of connecting dowel-pins 8, which secure them against relative lateral or transverse movement. On the sides of the coupling members are formed bosses or projections 9, preferably having an elliptical external contour and adapted to support tie bands or rings 10, which are designed to hold the sections of the crossing in firm engagement and from outward movement relative to each other. These bands or rings receive and surround the bosses and are fitted thereon in a heated state, so that upon their contraction they will shrink about the bosses and hold the members of the crossing firmly connected without the use of bolts and other fastenings, which are liable to become loose and allow the parts to spread. The bands will be held upon the bosses by their gripping energy, but may be cut away when it is desired to disconnect the sections of the crossing in making repairs or to permit of the ready and convenient removal of an old crossing when a new one is to be substituted therefor.

The rails 11 may be of conventional form and in accordance with the invention are embedded and firmly held in the crossing-frame in such a manner as to leave only their heads exposed for the passage of the wheels of the rolling-stock thereon, grooves 12 being provided in the crossing-frame on the inner sides of the heads of the rails for the reception of the flanges of the wheels. In the operation of manufacturing the crossing the rails are laid together at the proper angle in a suitable mold, in which the crossing-frame is cast about the rails in the manner shown, thus tying the rails in a solid mass of steel, so that they cannot have any relative movement under the severest kind of strains.

The projecting ends of the rails may be fastened to the rails of the intersecting tracks in any preferred manner, and the construction of the crossing may be varied to any desired degree within the scope of the invention.

The advantages of the improved construction herein described in providing a crossing of maximum strength will, it is thought, be fully understood without further description and its convenience in use appreciated.

Having thus described the invention, what is claimed as new is—

1. A railway-crossing comprising a cast-metal frame formed of sections having abutting portions, rails embedded in the frame-sections with their heads lying flush with the

surface thereof, said frame-sections being provided with grooves on the inner sides of the heads of the rails, bridging connections between the abutting portions of the frame-sections to hold the same from lateral displacement, and ties connecting said portions to secure them against longitudinal displacement.

2. A railway-crossing comprising a metal frame comprising rails and a body cast with the rails therein, said frame being composed of sections, dowel-pins engaging the meeting ends of the sections and holding them from relative transverse movement, and means connecting the sections to hold them from disconnection.

3. A railway-crossing comprising sections, dowel-pins bridging the meeting ends of the sections, bosses on the meeting ends of the sections, and coupling-bands shrunk about and connecting said bosses.

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

BENJIMAN FRANKLIN MARTIN.

Witnesses:
J. F. DASSON,
P. T. FOUST.