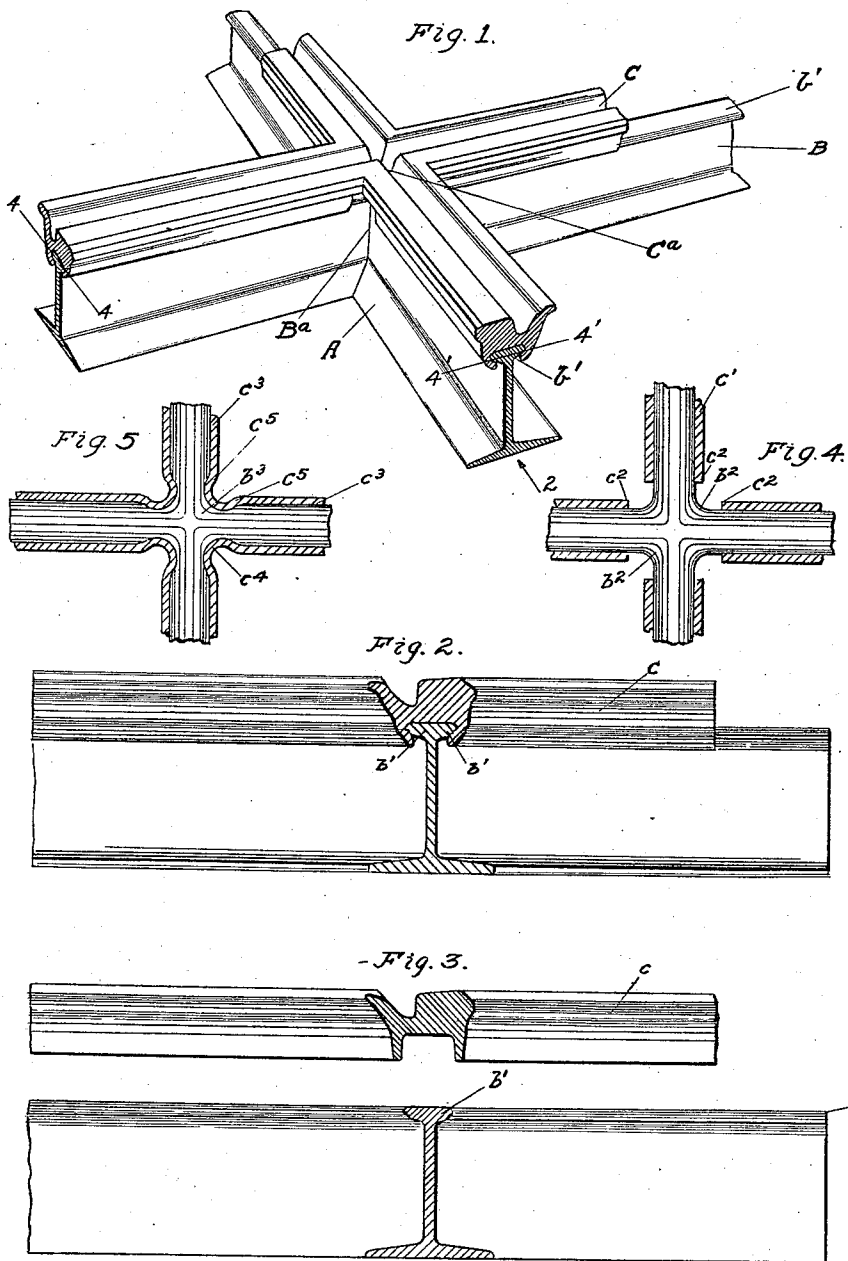


J. NOLL.
 TRACK CONSTRUCTION.
 APPLICATION FILED AUG. 12, 1912.

1,059,752.

Patented Apr. 22, 1913.

3 SHEETS—SHEET 1.



Witnesses:
Edwin A. Packard
Engine Delman

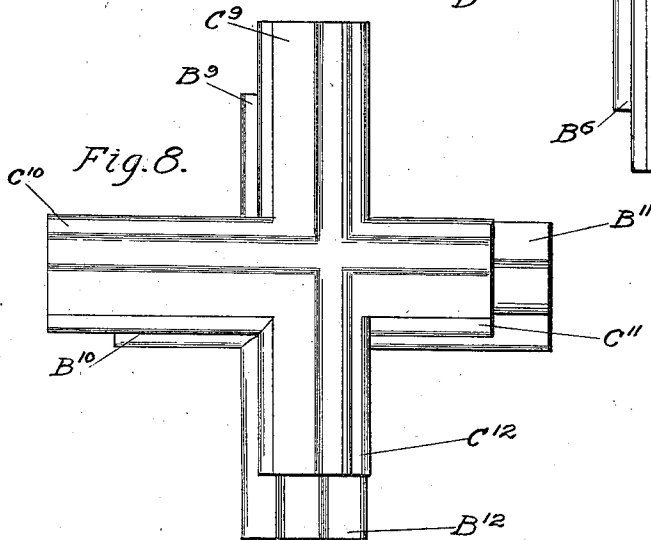
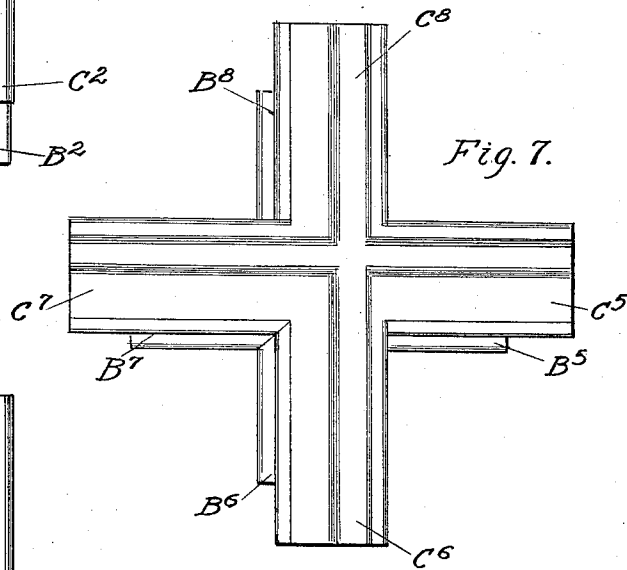
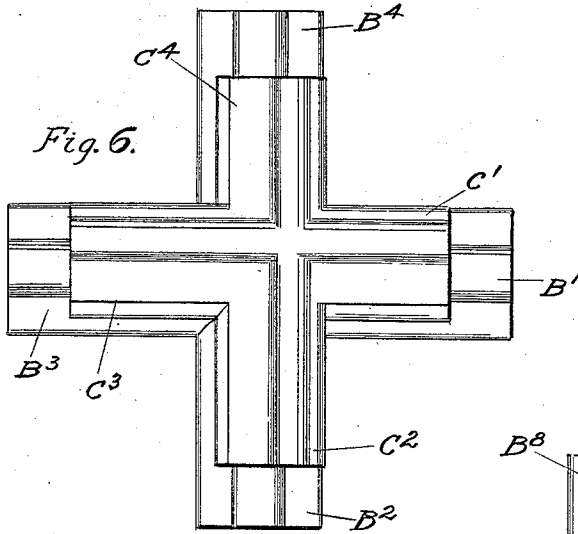
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 By his Attorney
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

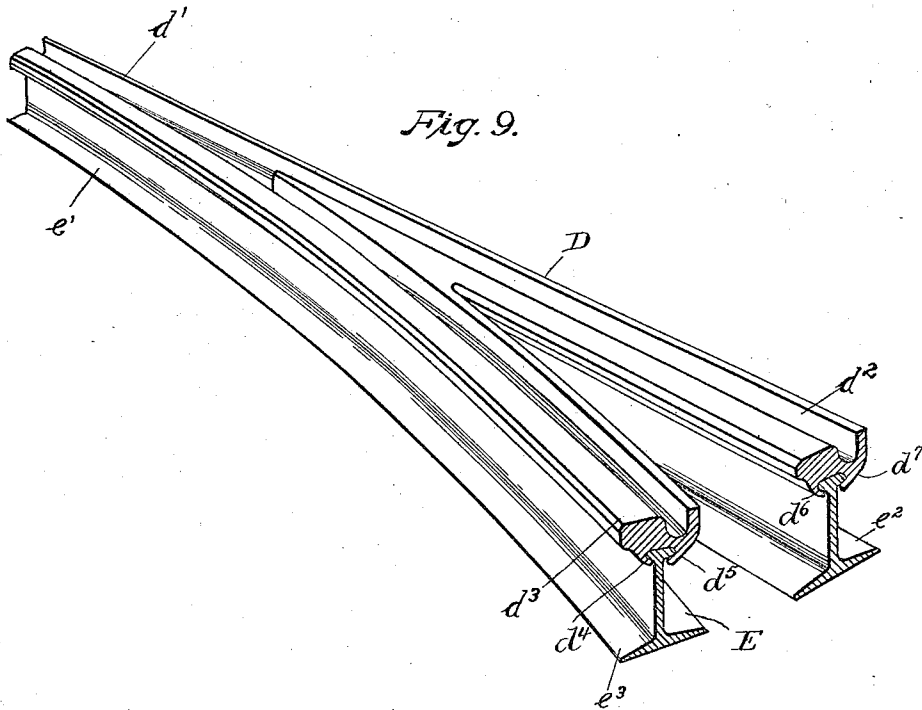
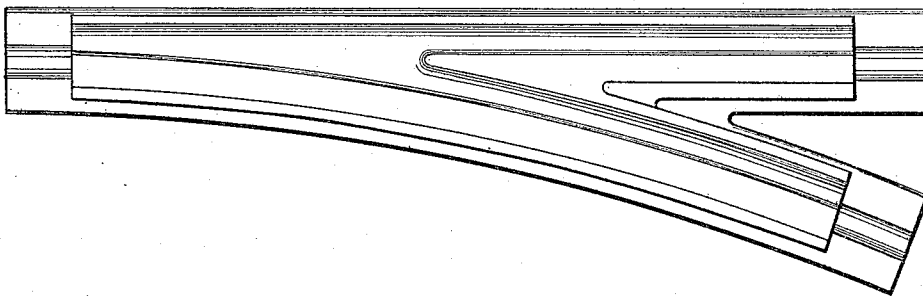


Fig. 10.



Attest:
 Edwin A. Ackard.
 Eugene Delmar

Inventor:
 John Noll
 by Kiddle, Brandegee & Thorgerson
 His Atty's

UNITED STATES PATENT OFFICE.

JOHN NOLL, OF NEW YORK, N. Y., ASSIGNOR TO CONTINUOUS RAIL COMPANY, OF WILMINGTON, DELAWARE, A CORPORATION OF DELAWARE.

TRACK CONSTRUCTION.

1,059,752.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed August 12, 1912. Serial No. 714,509.

To all whom it may concern:

Be it known that I, JOHN NOLL, a citizen of the United States, and a resident of the borough of Brooklyn of the city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Track Construction, of which the following is a specification.

The invention relates to members for use in railroad tracks and particularly to special members having a plurality of diverging portions, such as X shaped members which are located at the place where tracks cross each other or such as Y or V shaped members that are located at the place where one or more tracks lead to or from another track.

One of the objects of the invention is to provide crossing, branch or connecting members that are adapted for use in a compound rail track construction.

Another object of the invention is to construct special members so that any of such members will comprise a base-member having arms extending at an angle to each other and a top member having arms located over and secured to the arms of the base member.

A further object of the invention is to construct special track members having a plurality of diverging portions composed of top and base sections which are held together by bent lips.

As showing a specific embodiment of the invention reference is made to the drawings forming a part of this specification and in which—

Figure 1 is a perspective view of an X shaped crossing member. In this figure the ends of two of the arms have been cut off so that the ends of the arms of the upper and lower members are flush with each other, Fig. 2 is an enlarged end view of a crossing member, Fig. 3 is an enlarged end view of the crossing member illustrated in Fig. 2 showing the top and base members prior to their being assembled, Fig. 4 is a partial sectional view taken on the plane including the lines 4—4, 4'—4' of Fig. 1, Fig. 5 is a partial sectional view, of a modified form, corresponding to Fig. 4, Figs. 6, 7 and 8 are each plan views of X shaped crossing members showing certain possible positions of the free ends of the arms of the upper member relative to the positions of the free ends of the arms of the lower

member. In Fig. 6 it will be observed that the arms in the upper member are shorter than the arms of the lower member, that in Fig. 7 the arms of the upper member are longer than the corresponding arms of the lower member, while in Fig. 8 two of the arms of the upper members are longer than the corresponding arms therebeneath of the lower member, and that two of the arms of the upper member are shorter than the corresponding arms of the lower member. Fig. 9 is a perspective view of a Y or V shaped member which is utilized at the place where one track leads to or from another track, Fig. 10 is a plan view of a Y or V shaped member and shows a form in which the ends of the arms of the top member thereof terminate short of the ends of the arms of the base member thereof.

The structures illustrated in Figs. 1, 2 and 3 are practically all the same, as will be apparent from an inspection of said figures.

An X-shaped crossing member is designated by the reference character A in Fig. 1. This crossing comprises a lower base member B and an upper or top member C. The base member is X-shaped and comprises four outwardly extending arms integrally united at the point of crossing or junction B^a. Each of these arms is flange-shaped in cross section and is provided at the uppermost portion with a flange portion b' that extends the full length of the arm. In the form illustrated in Fig. 4 the arms of the base members are enlarged at the point of crossing or junction as at b² to add strength to the member as a whole. In the form shown in Fig. 5 the flange portion of the base member is restricted as at b³ in order to facilitate the securing of the top member in place on the base member.

The top member C is X-shaped and comprises outwardly extending arms integrally united at the point of crossing or junction C^a, these arms having the same angle of divergence between them that there is between the corresponding arms in the base member. This angle is, of course, dependent upon the angle at which it is desired that one track cross another. In the form illustrated in Figs. 1 and 4 there are provided depending holding lips or flanges c' on each of the arms. These lips are bent into engagement with the upper flange portions of the base member and serve to

hold the top base members in place relative to each other. These lips do not extend the full length of the arms of the X shaped members, but are cut away at the central portion of the members whereby the lips on any one of the arms terminate short of the point where they would intersect the lips on adjacent arms extending angularly thereto. The point where these lips are thus cut away is designated by the reference character c^2 .

It will be observed that in the forms illustrated in both Figs. 4 and 5 the X-shaped top crossing member has outwardly extending arms which have thereupon lip portions that are bent to holding position and that extend in a straight path along the arms. It will furthermore be noted that the straight portions of adjacent holding lips on adjacent arms terminate at the points c^2 or at the points c^5 which is short of the place where the adjacent lips on adjacent arms would merge into each other if continued along the same straight path. The holding lips in both forms are usually bent into engagement with the member adjacent thereto by rolls having vertically extending axes. In order to facilitate the bending of the holding lips to their final position, the base member in the form shown in Fig. 5 is provided with the curved portions b^3 and the holding lips are constructed with the curved portions c^4 which enter the curved portions b^3 . The curved portions c^4 have a sufficient length of metal between the points c^5 c^5 to permit the inward movement of the lips when they are being bent to holding position, and due to the construction just described the rollers or tools can operate to bend the entire straight portion of the lips to holding position.

In order that the joints between the upper or top members and the base members may be broken or staggered when the crossing member is inserted in place, each of the arms of the top member is made having a different length from the corresponding arm in the base member. This structure will be apparent from an inspection of Figs. 6, 7 and 8. In Fig. 6 it will be observed that the arms C^1 , C^2 , C^3 and C^4 are each shorter than the corresponding arms B^1 , B^2 , B^3 and B^4 of the base member. In Fig. 7 the arms C^5 , C^6 , C^7 and C^8 are each longer than the arms B^5 , B^6 , B^7 and B^8 of the base member. In Fig. 8 the arms C^9 and C^{10} are longer than the arms B^9 and B^{10} of the base member, while the arms C^{11} and C^{12} of the top member are shorter than the arms B^{11} and B^{12} of the base member.

In Figs. 9 and 10 there is illustrated a Y or V shaped member which is also particularly adapted for use in compound rail track construction at the place where one track leads to or from another track. In

these figures D indicates the top member having the arm d^1 terminating at one extremity and the arms d^2 and d^3 terminating at the other extremity and E indicates the base member having the arm e^1 terminating at one extremity and the arms e^2 and e^3 terminating at the other extremity. The arms e^1 , e^2 and e^3 on the lower member respectively underlie the corresponding arms d^1 , d^2 and d^3 on the upper member and the latter are shown as provided with the holding lips d^4 , d^5 , d^6 and d^7 which maintain the top and base members together. It will be observed that the arm d^3 makes an angle with the other two arms of the same member, namely arms d^1 and d^2 and that the arms d^2 and d^3 diverge from each other so as to form therebetween an acute angle. It will furthermore be noted in Fig. 10 that the ends of the arms of the upper member terminate short of the ends of the arms of the base member so as to form broken or staggered joints when in place in the track, but it is apparent that any one or all of the arms on the upper member could extend past the ends of its corresponding arm in the lower member and accomplish the same end.

In special work of the class above described the base member is preferably made of cast steel and the top member is preferably made of a steel alloy or of some suitable material which will permit the holding flanges to be rolled or otherwise bent to final holding position. It is apparent, however, that the holding flanges might be carried by the base member instead of the top member, the only requirement being that the composition of the metal in the member be such that the lips can be bent to the desired position. It is also obvious that various forms and modifications may be made without departing from the spirit and scope of the invention.

What I claim is:

1. In a compound rail track construction, the combination of a base member having a plurality of diverging portions and a correspondingly shaped top member held thereupon by holding lips at least part of which are bent to holding position, the lengths of the arms of the upper member being different from the lengths of the corresponding arms of the lower member.

2. In a compound rail track construction, the combination of a base member having a plurality of diverging portions and a correspondingly shaped wearing member held on the base member by bent depending holding flanges, the arms of the top member each being of a different length from the arm of the base member directly thereunder.

3. A rail crossing comprising top and bottom members each having integral arms that extend in different directions, the arms in the top member each having depending

flanges which are bent to holding position, the depending flanges on each arm terminating short of the point of intersection with the other depending flanges which extend angularly thereto.

4. The combination of an X-shaped base member formed of integral arms having upper flanged portions which are enlarged at the point of crossing of the arms, whereby the same is strengthened and an X-shaped top member having depending holding lips on the arms thereof.

5. The combination of an X-shaped base member formed of integral arms having upper flanged portions which are enlarged at the point of junction whereby the same is strengthened and an X-shaped top member having depending holding lips on the arms thereof, the holding lips on each arm terminating short of a holding lip on an arm extending angularly relative thereto.

6. In a structure of the class described, a base member having sections or arms which extend at an angle to and are integral with each other and a top member having wearing sections or arms which also extend at an angle to and are integral with each other, the top member being held on the base member by means comprising bent holding lips on one of the members engaging the other member.

7. A top member for use in compound rail track construction, said member being of X-shape having intersecting wheel receiving grooved portions on the upper surface thereof and depending holding flanges on the lower portion thereof.

8. A rail crossing having compound rail base members comprising base sections extending at an angle to and integral with each other and a top wearing member having sections which are integral with each other and which rest on the base sections above referred to and are held in place thereupon by lips that are bent into holding position.

9. An X-shaped member having on the arms thereof holding lip portions that are bent to holding position and that extend in a straight path along the arms, the straight portions of adjacent holding lips on adjacent arms terminating short of the point where said adjacent straight lip portions would merge into each other if continued toward each other along the same straight path.

10. A track member for use in compound rail track construction, said member having at least three ends and comprising base and top sections which are held together by bent holding lips on the top section that engaged the base section.

11. A special member for rail track construction consisting of a base section and a wearing section, each section having a plurality of diverging arms held together by bent holding lips.

This specification signed and witnessed this 9th day of August A. D. 1912.

JOHN NOLL.

Signed in the presence of—

EUGENE DELMAR,

EDWIN A. PACKARD.