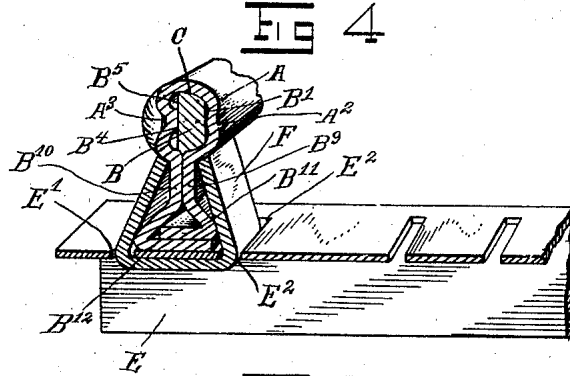
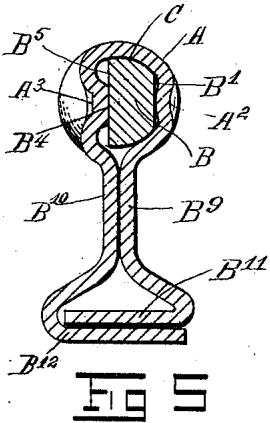
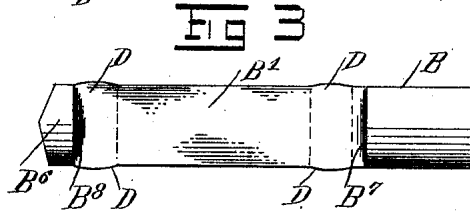
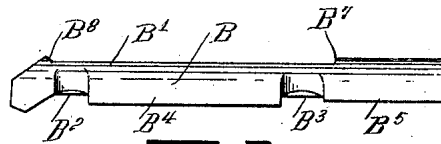
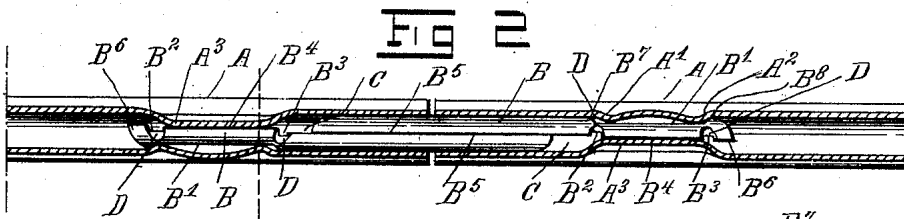
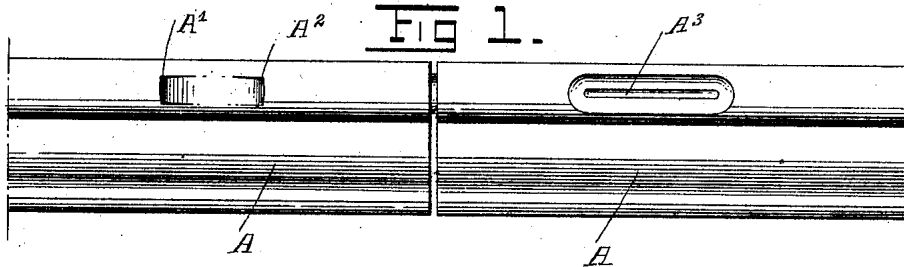


M. CARUSO.
 TOY RAILWAY RAIL.
 APPLICATION FILED DEC. 18, 1909.

976,633.

Patented Nov. 22, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

MARIO CARUSO, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO LIONEL MANUFACTURING COMPANY, A CORPORATION OF CONNECTICUT.

TOY RAILWAY-RAIL.

976,633.

Specification of Letters Patent.

Patented Nov. 22, 1910.

Application filed December 18, 1909. Serial No. 533,842.

To all whom it may concern:

Be it known that I, MARIO CARUSO, a subject of the King of Italy, and a resident of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Toy Railway-Rails, of which the following is a specification.

My invention relates to toy railway rails and means of fastening the ends of abutting rails in alinement with each other.

The object of my invention is to provide a rail having a hollow tread and formed of thin sheet metal, with a half round pin that is fastened in each end of each rail within the hollow tread, so that one end projects beyond the end of the rail to engage the hollow end portion of the abutting rail, and to form the pin in such a manner that it cannot be pulled out.

A further object is to arrange the pins so that the ends of the abutting rails will always present a pin from one rail opposite a socket of the opposite rail, said socket being formed between the half round pin and inner wall of the hollow tread.

A further object is to unite the rails to cross ties and utilize the holding clips which secure the rails and ties together, to prevent the hollow tread of the rails from opening and thereby allowing the pins to become loose in the rails.

Referring to the drawings which form a part of this specification, Figure 1 is a longitudinal side view of the two abutting rails. Fig. 2 is a plan view of the same. Fig. 3 is an enlarged plan view of one of the half round pins as it is formed for use with the rails. Fig. 4 is a view of the side of the semi-circular pin as formed for use with the rails. Fig. 5 is a cross sectional view on the dotted line of Fig. 2. Fig. 6 is a longitudinal sectional view through a cross tie made of sheet metal, and a rail, and a holding clip which unites them together.

A indicates the rails which are connected end to end and in alinement with each other by the pins B. The pins are formed from a half round rod and are stamped in a power press to present a flattened portion at B' and two transverse depressions B² and B³, and at the same time the face B⁴ is offset from the face B⁵ and the end of the pin B⁶ is further offset so that each pin presents a flattened depression at B', presenting two

shoulders B⁷ and B⁸ into which the metal of the rail A is forced at A' and A² as illustrated. While on the opposite side against the face B⁴ the metal of the rail A is forced inward as illustrated at A³ and to a sufficient distance toward the middle of the tread to hold the projecting ends of the pins which extend into the sockets C, in such a position that when the two halves of the pins are placed together, they will form a circle which will aline the open ends of the rails perfectly.

The shoulders B⁷ and B⁸ prevent the pins from being moved longitudinally in the rail and the metal of the rail at A³ being pressed against the flattened portion of the pin B⁴ prevents the pin from being rotated in the rail. The pin is further provided with a slight projection on each side of the grooves B² and B³ as illustrated at D by reason of the metal flowing outward in forming the grooves B² and B³, and these projections assist in preventing a longitudinal movement of the pin in the rail.

The rails are formed of sheet metal and have web members B⁹ and B¹⁰, and the lower ends are turned at right angles to said web members as illustrated at B¹¹ and B¹² to form the base of the rail. A metal cross-tie is used to which the rails are connected by a clip F which extends through slots E' and E² formed in the upper surface of the tie E, and the upper ends of these clips are forced inward against the rail members or webs B⁹ and B¹⁰ directly under the cylindrical portion of the rail and beneath the pins B so as to hold the rails and the ties, and at the same time prevent the spreading of the rail webs, and prevent the sockets C from enlarging and releasing the pins from engagement with the rails. The clips F are made of considerably heavier and stiffer material than that from which the rails are made and after once being set in the press against the rail members are sufficiently stiff to hold the parts firmly together.

In fastening the pins in the rails one half pin should be fastened in one end of the rail so that its rounded surface will be on one side thereof; and in the opposite end of the same rail, so that the rounded surface will be on the opposite side thereof. In other words, if a person were standing in the middle of the rail, when looking toward the ends of the rail, the pins would be

fastened in the right hand side at each end. By this arrangement any two rails can be brought together and present a socket in one rail opposite to the pin in the opposite
 5 rail. By this provision, we are enabled to make a road bed having a plurality of rails laid side by side and any section of the road
 10 bed when the ends are brought opposite the end of another section the pins of one section will always come opposite the sockets
 15 of the opposite section, whereby the sections are interchangeable when assembling the sections together and to form a road bed as will be readily understood.

15 Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. A railway rail formed of sheet metal; a half round pin having shoulders formed
 20 thereon and projecting therefrom, and being clamped in said rail by the metal thereof; one end of said pin projecting from the end of said rail, and the end of said rail being
 25 constructed to receive the end of a similarly shaped pin.

2. A sheet railway rail; a pin clamped in the end of said rail and having a flat surface, a portion of which is offset from the median line of the rail and a portion of

which is fixed in the rail on the median line 30 thereof.

3. A sheet railway rail having a half round pin therein, a portion of the flat surface of which is positioned in alinement with the median line of the rail, and a portion of which is offset therefrom; said offset
 35 portion abutting against the side of the rail; and said rail being forced inward opposite said offset portion to clamp the pin within the rail.

4. A sheet railway rail; a pin clamped in the end of said rail and having a flat surface, a portion of which is offset from the median line of the rail, a portion of which is fixed
 40 in the rail on the median line thereof; a sheet metal tie having slots therein; and a clip which connects said tie to said rail and the upper ends of which contact with said rail directly below the point where the pin
 45 is held in said rail to prevent the loosening of the pin therein.

Signed at New Haven, in the county of New Haven and State of Connecticut, this
 26th day of November, A. D. 1909.

MARIO CARUSO.

Witnesses:

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 B. BENJAMIN.