

(No Model.)

T. H. GIBBON.

CONSTRUCTION OF RAILWAY TRACKS.

No. 317,988.

Patented May 19, 1885.

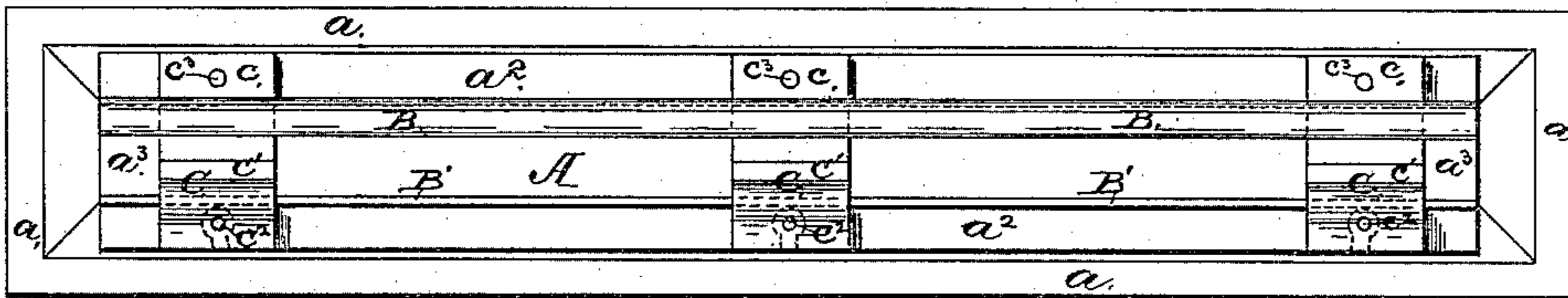
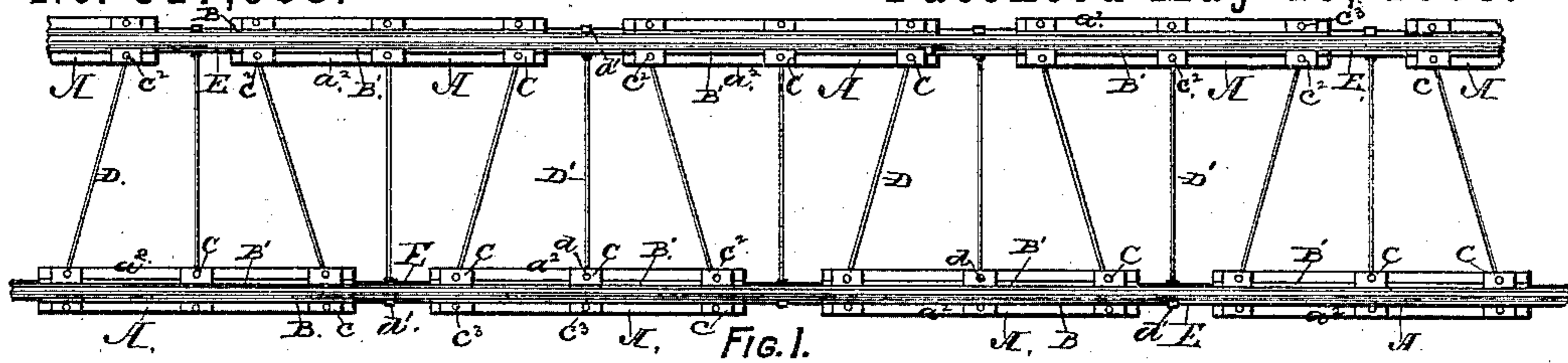


FIG. 2

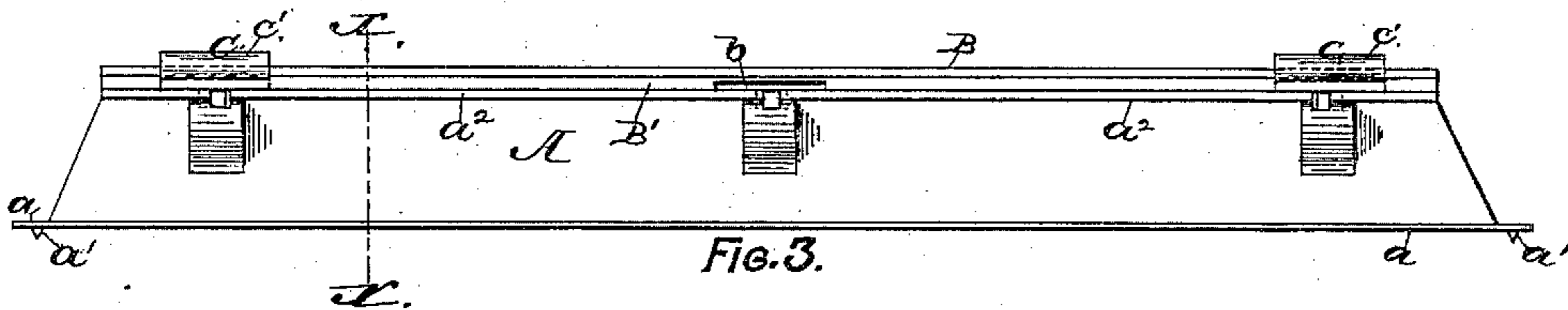


FIG. 3.

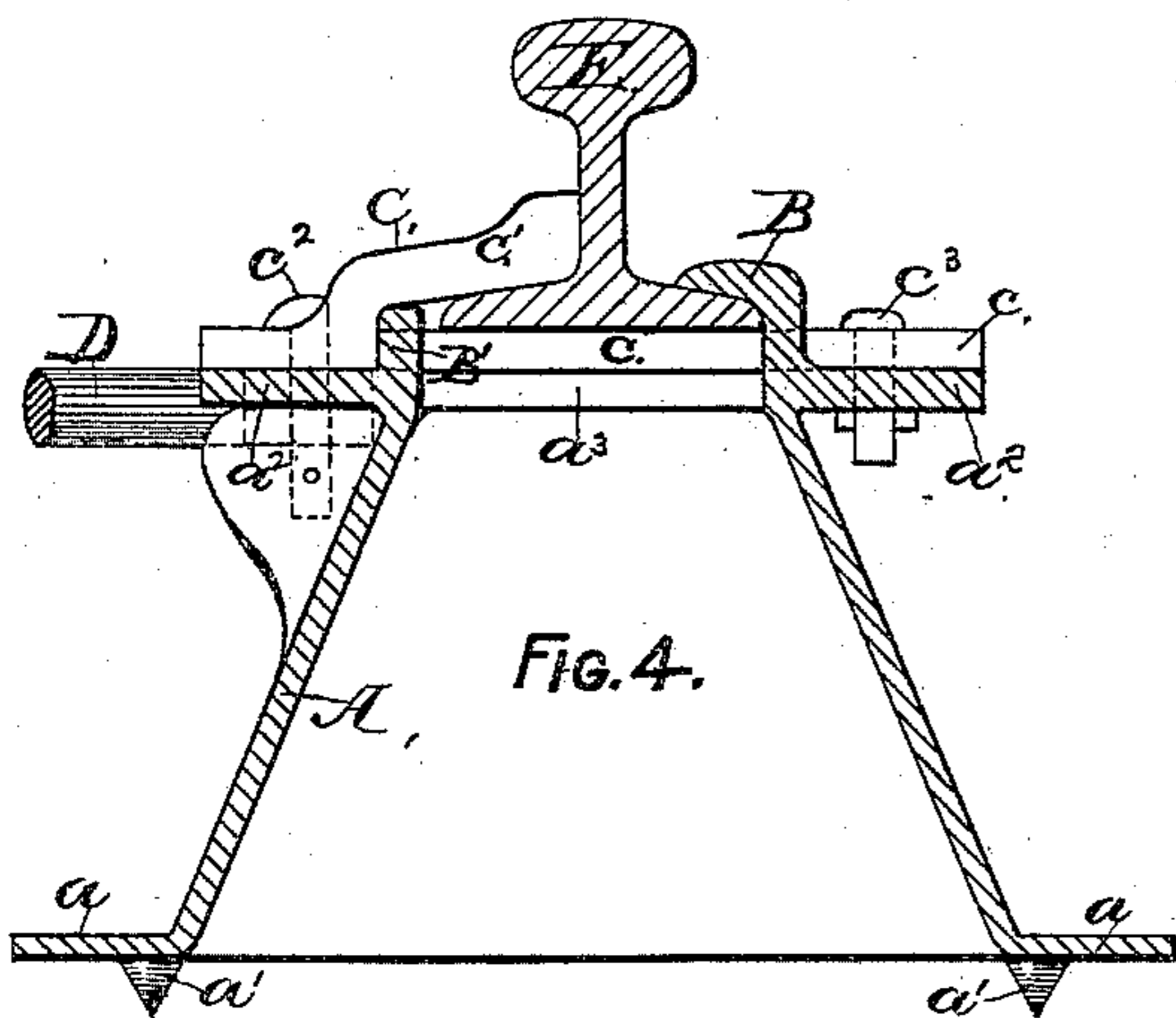


FIG. 4.

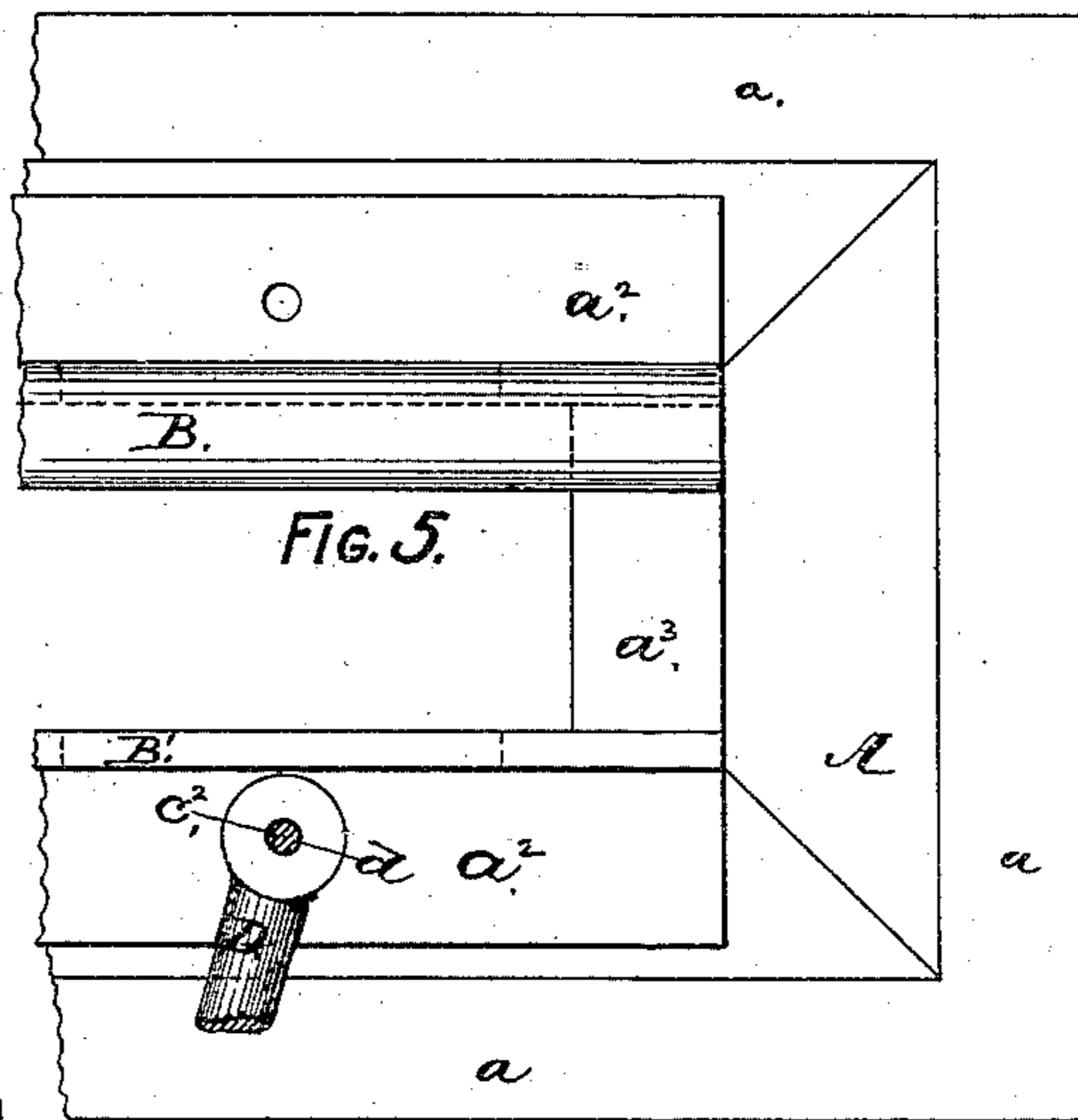


FIG. 5.

Witnesses:

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CONSTRUCTION OF RAILWAY-TRACKS.

SPECIFICATION forming part of Letters Patent No. 317,988, dated May 19, 1885.

Application filed February 19, 1885. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. GIBBON, of the city and county of Albany, in the State of New York, have invented new and useful Improvements in the Construction of Railway-Tracks, of which the following is a full and exact description, reference being had to the accompanying drawings, which form part of this specification, and in which—

Figure 1 is a plan view of a railway-track embodying my invention; Fig. 2, an enlarged plan view of my triple chair; Fig. 3, a side elevation of the same; Fig. 4, a transverse section of the triple chair at the line xx of Fig. 3, on an enlarged scale, and Fig. 5 an enlarged plan view of one end of a triple chair with the rail-fastener removed.

The object of my invention is to provide suitable appliances for building railway-tracks in a durable and substantial manner, to prevent the spreading and creeping of the tracks, and to dispense with the use of wooden ties; and to this end my invention consists of a metallic sleeper or triple chair, a series of which form the bed for the rails, the said chairs being arranged in the track so that the center of each chair will be immediately opposite the space between the ends of two adjacent chairs under the opposite track. A diagonal tie-rod runs from each end of the chair, and each of said rods connects with the nearest end of the oppositely-located chairs in such manner that each of the chairs will be connected with two adjacent chairs of the opposite rail. An intermediate tie-rod is fixed to the middle of each chair so as to extend at a right angle therefrom, and is secured to the opposite rail in the space between two adjacent chairs. By this means the two tracks are connected together by a system of counter-bracing composed of diagonal and direct tie-rods, as illustrated in Fig. 1.

As shown in the drawings, A represents my triple chair, which consists of an oblong metallic box, open at the top and bottom, and having its sides and ends inclined inwardly and upwardly, so as to produce a large bearing-surface for its base. Around the lower edge of said box a laterally-projecting flange, a , is formed, and on the lower face of said flange there are four spurs, a' —one at each corner of the box—for the purpose of obtain-

ing a more secure hold in the road-bed to resist any lateral pressure that may be brought to bear against the triple chair. On each side of the upper edge of said box are externally-projecting flanges a^2 , and at each end of it internally-projecting flanges a^3 are formed. On one side of the upper face of said box a hook-like or inturned longitudinal flange, B, is formed along the entire length of the casting. Said flange is adapted to overlap one side of the bottom flange of the rail E, and affords a most thorough support to the track. At the opposite side of the opening in the top of the box a longitudinal vertical flange, B', is made parallel to the flange B, and extends across the entire length of the box. The flanges B and B' are each provided with three mortises, b , one near each end and one at the middle of each flange, and the mortises in each flange range directly opposite those in the other flange.

In the upper face of the horizontal flange a^2 , which lies at the side of the vertical flange B' and directly in line with the center line of each mortise b , recesses are formed to receive the eye d on the end of each tie-rod D, and said recesses have central holes for receiving the fastening-pins c^2 . The opposite flange a^2 is in like manner provided with holes for receiving the fastening-pins c^3 .

The half-chair or rail-fastener C is provided with a tongue, c , which is fitted to slide through the mortises b , and to form a seat upon which the bottom of the rail E rests, and thereby three bearing-points for the rail are formed on each of the triple chairs A. Said rail-fastener is also provided with a bearing-piece, c' , which extends over the upper edge of the vertical flange B', so as to overlap and bear upon one of the bottom flanges of the rail E, and also to abut against the web of the rail, as shown in Fig. 4. Said rail-fasteners when fixed in the mortises b cover over the eyes d of the tie-rods as they lie in the recesses of the flange a^2 , and thereby the ends of the tie-rods are locked in said recesses and are prevented from rising. Said rail-fasteners are secured at one end by means of pins c^2 , (which also pass through the eyes d of the tie-rods,) and at their opposite ends by pins c^3 , which pass through holes in the flange a^2 on the outer side of the triple chair. The diagonal tie-

rods D are provided at both ends with eyes *d*, which fit into recesses in the triple chair A in the manner hereinbefore described, and said diagonal tie-rods are arranged as shown in Fig. 1—that is to say, so that the tie-rod running from one end of a triple chair will reach the end recess of the nearest triple chair under the opposite rail, and this arrangement of the diagonal tie-rods is maintained throughout the entire track. The transverse tie-rod D' is provided at one end with an eye, *d*, which fits into the recess in the middle of the triple chair A, and its opposite end is provided with a hook, *d'*, which engages over the bottom flanges of the rail which forms the opposite side of the track. The triple chairs A should be arranged in the track in such manner that the distance between the end mortises *b* in two adjacent chairs on the same rail will be spaced at the same distance apart that the successive mortises in the chair-casting are, and under the opposite rails of the track the chairs for one rail will be arranged so that the middle of each chair will lie exactly opposite the space between the ends of two adjacent chairs under the opposite track, as shown in Fig. 1.

By constructing railway-tracks as herein described I am enabled to dispense with a large portion of the gravel commonly required for ballasting, as the only gravel required for my track is a bank of about a foot against each side of the triple chairs and for filling in the spaces between the ends of the successive chairs and the open spaces inside of the chairs. The intermediate spaces between the banks of gravel may be filled with clay, earth, or any refuse dirt, and by so doing a great saving in the cost of construction can be effected.

I claim as my invention—

1. The triple chair A herein described, con-

sisting of an oblong metallic box, open at the top and bottom, and provided with a hook-like longitudinal flange, B, adapted to overlap one edge of the bottom flange of the rail, and a vertical longitudinal flange, B', parallel to the flange B, both of said flanges having three mortises, *b*, spaced equidistantly therein, the said metallic box being also provided on one of its horizontal upper flanges with recesses for receiving the eyes of the tie-rods D in front of the mortises *b*, in combination with the rail-fastener C, provided with a tongue, *c*, adapted to slide in the mortises *b*, to form a support for the rail E, as herein described, and with a bearing-piece, *c'*, which abuts against the web of the rail, said rail-fasteners being also arranged so as to secure the ends of the tie-rods D to the triple chair A, as herein specified.

2. In a railway-track, the combination, with a series of triple chairs, A, provided with three rail-fasteners, C, spaced equidistantly therein, the said chairs being so arranged that the distance between the rail-fasteners in the ends of any two successive chairs shall be the same as that at which the rail-fasteners in the chairs are spaced, and the said triple chairs being also arranged so that the chairs under one rail shall be fixed opposite a space between the ends of two successive chairs under the other rail, as herein described, of the diagonal tie-rods D, secured near the ends of each chair A, and connected with the nearest ends of two chairs under the opposite rail, and a transverse tie-rod, D', secured at the middle of each triple chair and connected to the opposite rail, substantially as specified.

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Witnesses:

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