

J. W. BLOWER.
RAILWAY TRACK CONSTRUCTION.
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960,800.

Patented June 7, 1910.

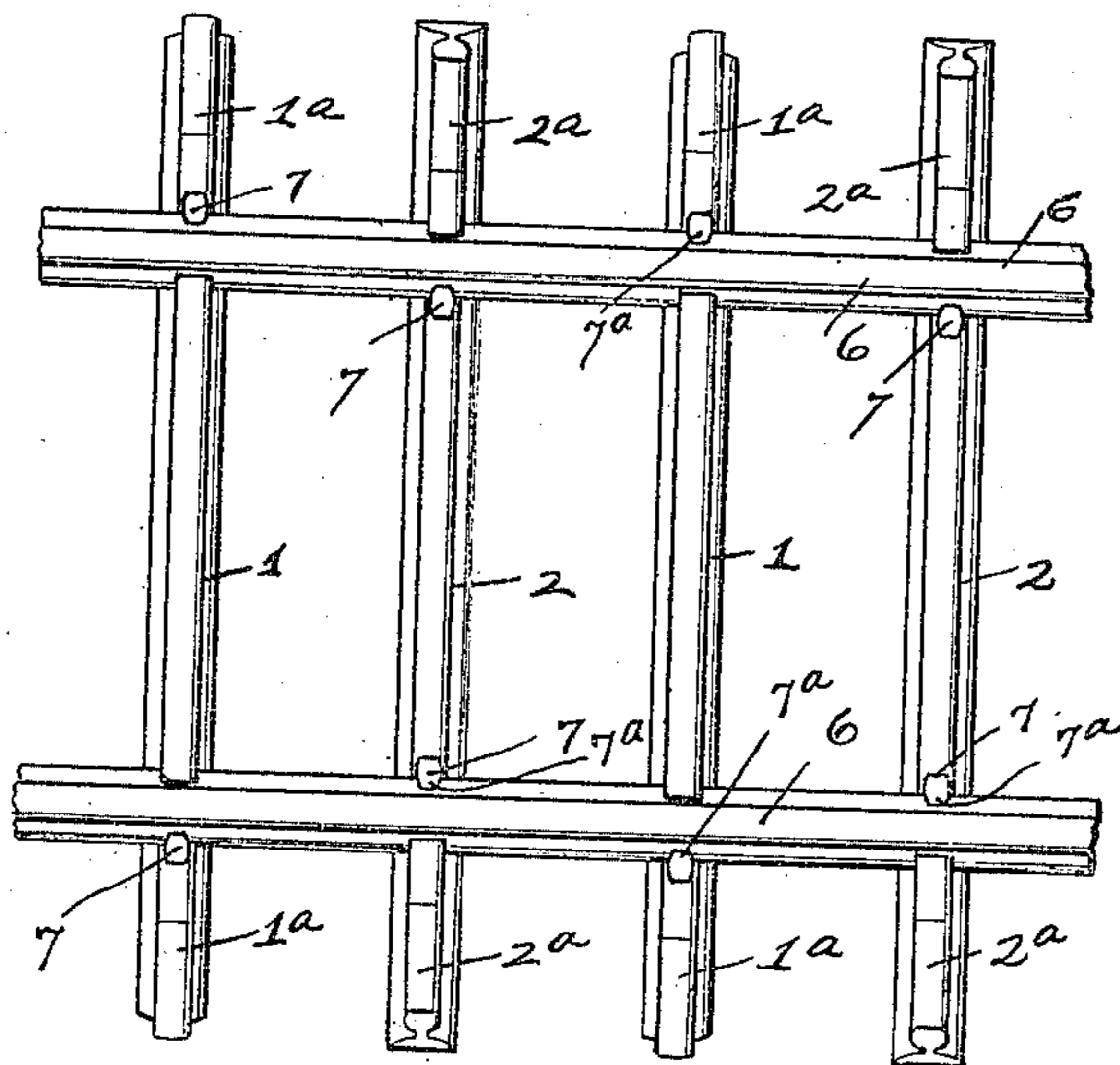


Fig. 1.

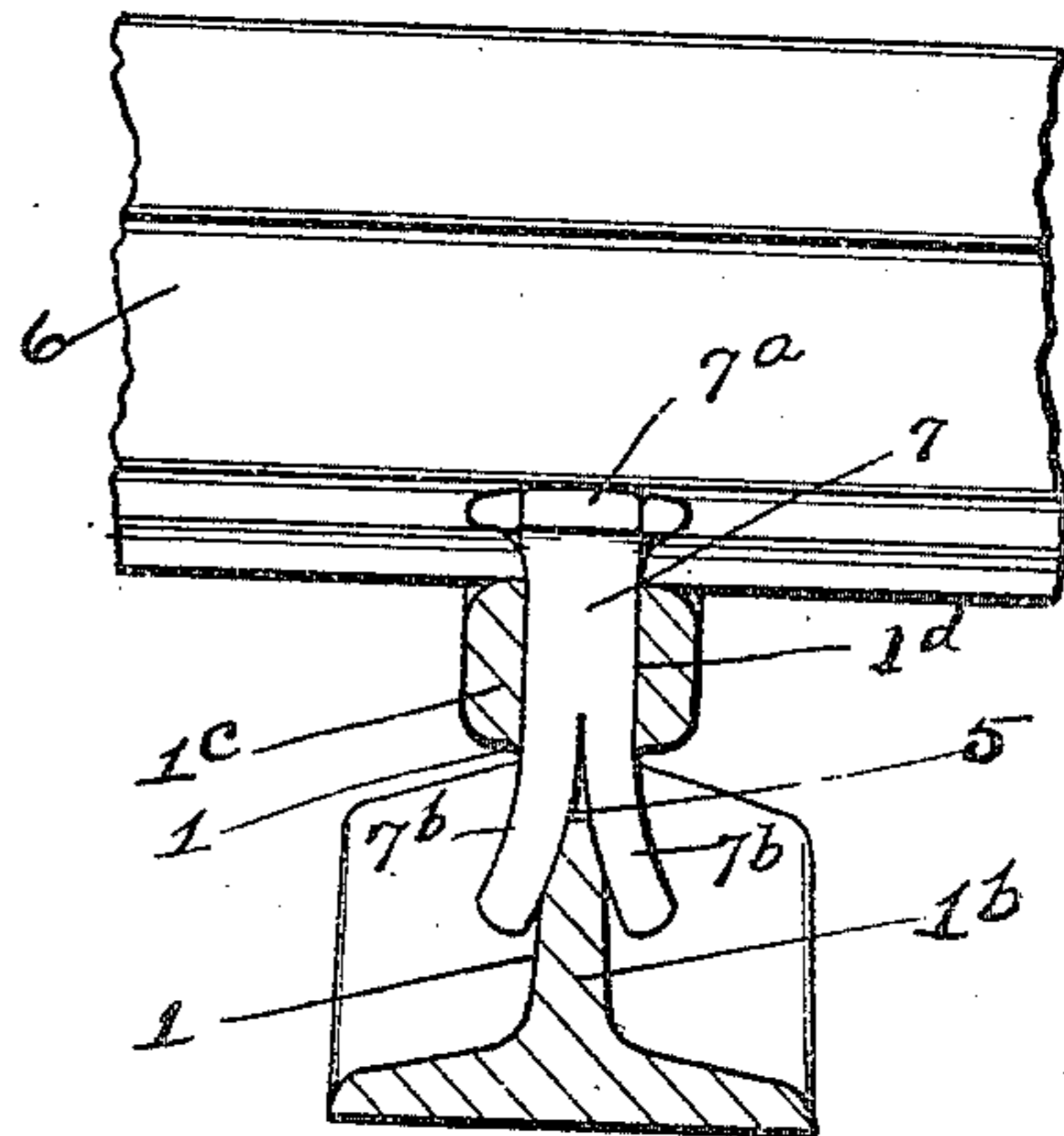


Fig. 2.

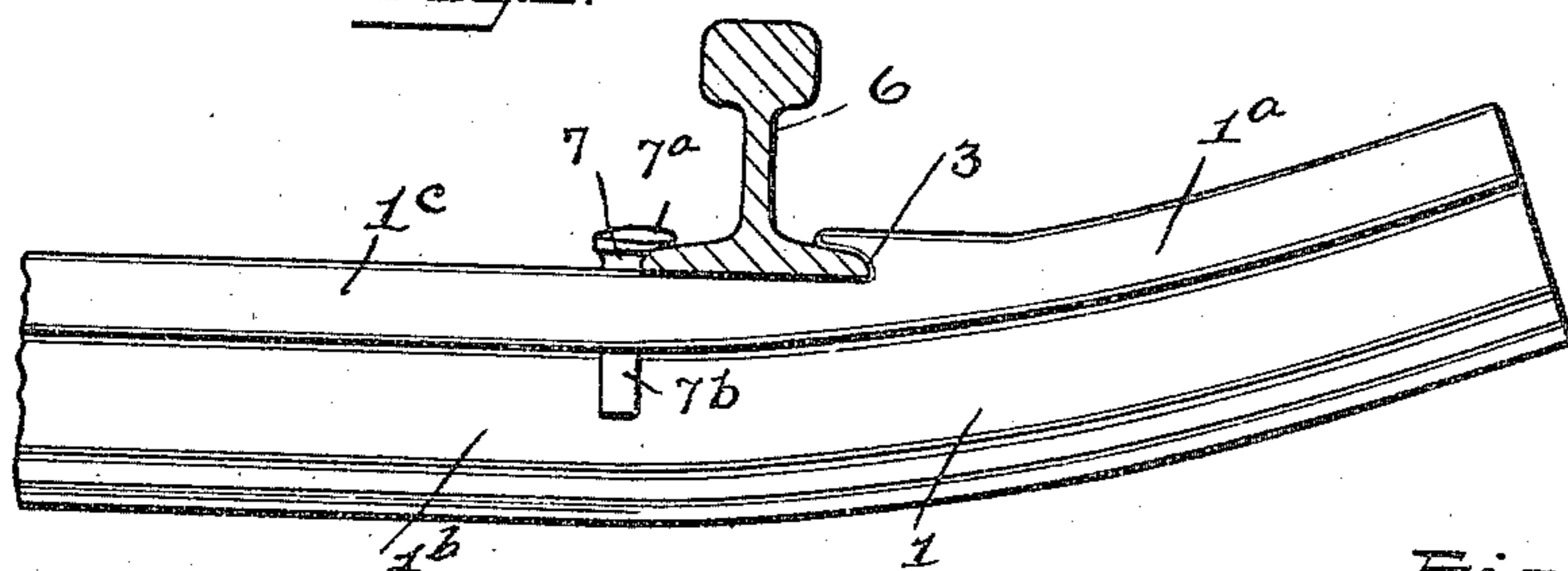


Fig. 3.

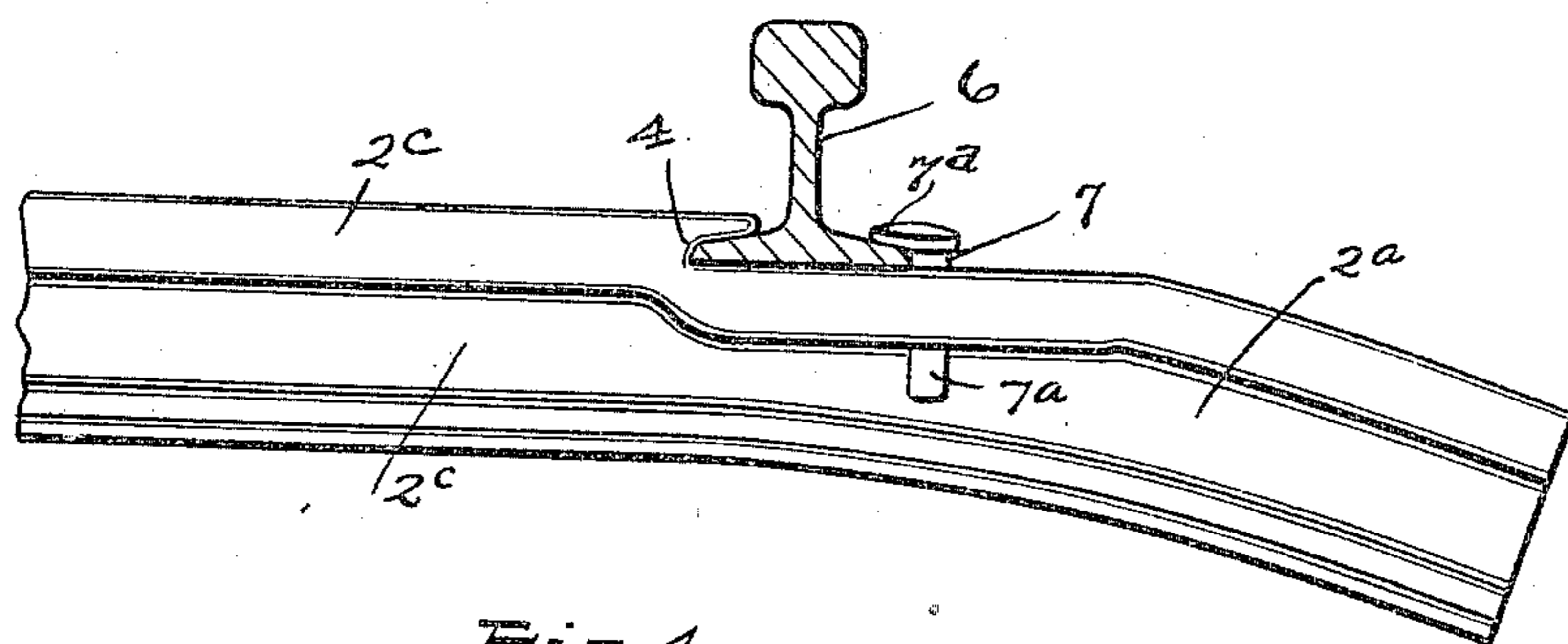


Fig. 4.

Witnesses

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RAILWAY-TRACK CONSTRUCTION.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH W. BLOWER, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Railway-Track Construction, of which the following is a specification.

My invention relates to the improvement of railway track construction and the objects of my invention are to provide an improved railway track embodying means for retaining the track rails against lateral displacement on the ties and means for anchoring the track in connection with the road-bed and preventing the lateral movement of the track and to produce other improvements the details of which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawing, in which—

Figure 1 is a plan view of a portion of a railway track of my improved construction, Fig. 2 is an enlarged sectional view of one of the ties, Fig. 3 is a transverse section of one of the track rails showing a side elevation of a portion of one of the ties, and, Fig. 4 is a similar view of the next succeeding tie.

Similar numerals refer to similar parts throughout the several views.

In carrying out my invention, I preferably form the ties which are laid transversely of the trackway, in the usual manner, of sections of railway track rails. As will be hereinafter shown, every other or the alternate ties 1 of the line, have their end portions bent upwardly as indicated at 1^a, while the remaining or intervening ties 2 have their end portions bent downwardly as shown at 2^a. By thus successively bending the ties of the track upward and downward and filling and tamping the road-bed beneath said tie end portions, it is obvious that the connected ties will be firmly anchored in connection with the bed in such manner as to resist any lateral movement of the track.

In the upper surface or ball of each of the ties 1, at or near the junction of its upwardly bent portion with its straight portion, I form a transverse recess 3 and at a proper distance on the inner side of said recess, I form the ball of the straight portion of the tie with a vertical opening 1^d which communicates with an opening 5 which is formed through the web 1^b of the tie rail

immediately below the ball or head 1^c thereof. In constructing each of the tie bodies 2, I depress the ball or upper portion 2^c of the tie at or near the junction of its straight and downturned portion and form in the end of the straight portion, a recess 3^a which corresponds in form with the outer recesses 3 of the tie 1. At a suitable distance on the outer side of the recess 3^a, I provide the ball of each of the ties 2 with a vertical pin opening corresponding with the openings 1^d of the ties 1.

In laying the track rails 6 and securing the same upon the alternately arranged ties 1 and 2, I cause the outer base flanges of the track rails to bear within the recesses 3 of the ties 1, while the inner base flanges of said rails bear in a like manner in the recesses 3^a of the tie rails 2, thus providing alternately an outer and inner solid bearing for the bases of the track rails. In order to further lock the rails in rigid connection with the ties, I insert vertically through each of the openings 1^d in the rails 1, the shank or stem portion of a locking pin 7, said locking pin having its upper end portion formed with the laterally extended head 7^a and having its lower portion split or divided centrally to form two separated members 7^b. When the lower ends of these members 7^b come into contact with the material forming the web 1^b of the rail, it is obvious that said members will be spread apart in the manner indicated more clearly in Fig. 2 of the drawing, thus securely locking the pin against withdrawal and insuring a proper engagement of the extended head 7^a of the pin with the inner flange of the track rail. In a like manner I insert through the openings in the rails 2 which correspond with the openings 1^d as described, similar locking pins 7, the extended heads of which are adapted to engage the outer base flanges of the track rails in the manner shown.

By the means described, it will be understood that the track rails will be firmly anchored in connection with the ties, in such manner as to obviate any tendency of said track rails to move inwardly or outwardly, thus maintaining at all times the proper gage or distance between the parallel rails of the track. It will also be understood that in case one or more of the locking pins were removed by breakage, accident or likewise, the engagement of the track rail flanges with the recesses 3 and 3^a will be sufficient to re-

tain the rails of the track in their proper relative position, thereby preventing accident as a result of the spreading or separation of the rails and providing in conjunction with
5 the alternately arranged upwardly and downwardly turned tie ends, means for insuring a retention of the track and its parts.

From the foregoing description, it will be seen that simple and efficient means are here-
10 in provided for accomplishing the objects of the invention, but while the elements shown and described are well adapted to serve the purposes for which they are intended, it is to be understood that the invention is not
15 limited to the precise construction set forth, but includes within its purview such changes as may be made within the scope of the appended claims.

What I claim, is—

20 1. In a railway track construction, the combination with a plurality of ties arranged transversely of the road-bed, each alternate tie having its end portions bent upwardly and the remaining ties having their
25 end portions bent downwardly, of track rails mounted upon said ties, and means for retaining the base flanges of said track rails in connection with the ties.

2. In a railway track construction, the
30 combination with a plurality of metallic ties, each alternate tie having its upper side formed with an outwardly extending recess and the remaining ties formed as described with inwardly and downwardly inclined re-
35 cesses, of track rails mounted on said ties and having their inner and outer base flanges alternately engaging said inner and outer tie recesses.

3. In a railway track construction, the
40 combination with a plurality of ties, each alternate tie having formed in its upper side an outwardly and downwardly inclined recess and the remaining ties having formed therein as described inwardly extending re-

cesses, of track rails having their outer base 45 flanges engaging the recesses of said first mentioned ties and their inner base flanges engaging the recesses of said last mentioned ties, and means opposite each of said re-
50 cesses for engaging the opposing rail base flange and locking the same in connection with the tie.

4. In a railway track construction, the combination with a plurality of parallel metallic ties each alternate tie having formed 55 in its upper side an outwardly extending recess and at a point on the inner side of said recess a vertical opening through the head of the tie which communicates with a cross opening in the tie below said vertical open- 60 ing the remaining ties being formed with inwardly and downwardly inclined recesses as described and outer side vertical openings and communicating cross openings as described for said first mentioned ties, of track 65 rails having their base flanges engaging said recesses, and locking pins having enlarged heads and split stem portions, said locking pins adapted to be driven into said tie open-
70 ings as described.

5. In a railway track construction, the combination with a plurality of ties each alternate tie having its end portions bent upward and having an outwardly extending recess formed in its upper side and the re- 75 maining ties having their end portions bent downward and having inwardly and downwardly inclined recesses as described, of track rails supported on said ties and having their base flanges alternately engaged by 80 said inner and outer recesses.

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

JOSEPH W. BLOWER.

Witnesses:

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