

No. 715,329.

Patented Dec. 9, 1902.

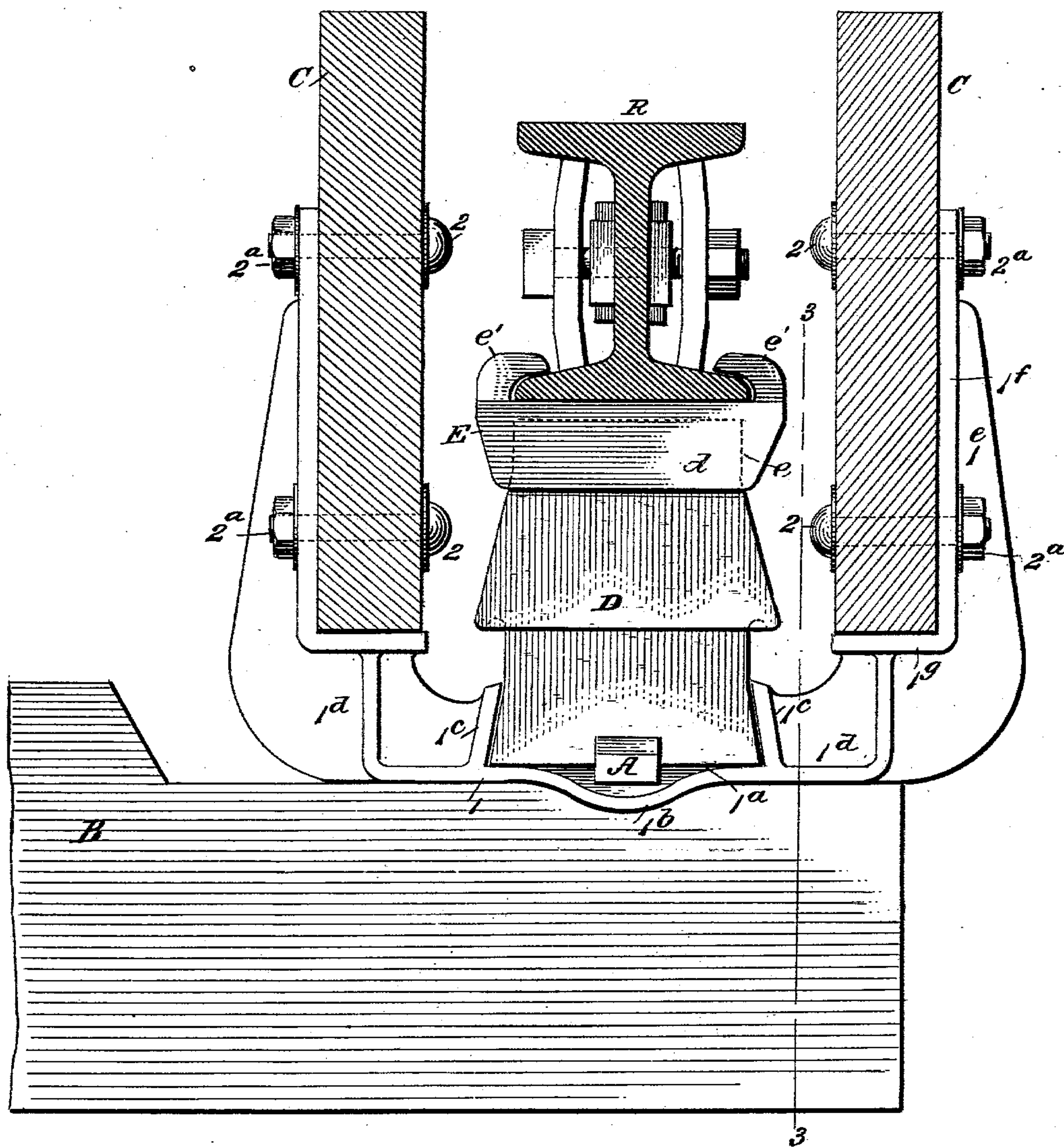
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RAIL CHAIR AND INSULATOR.

(Application filed Oct. 18, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



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2 Sheets—Sheet 2.

Fig. 2.

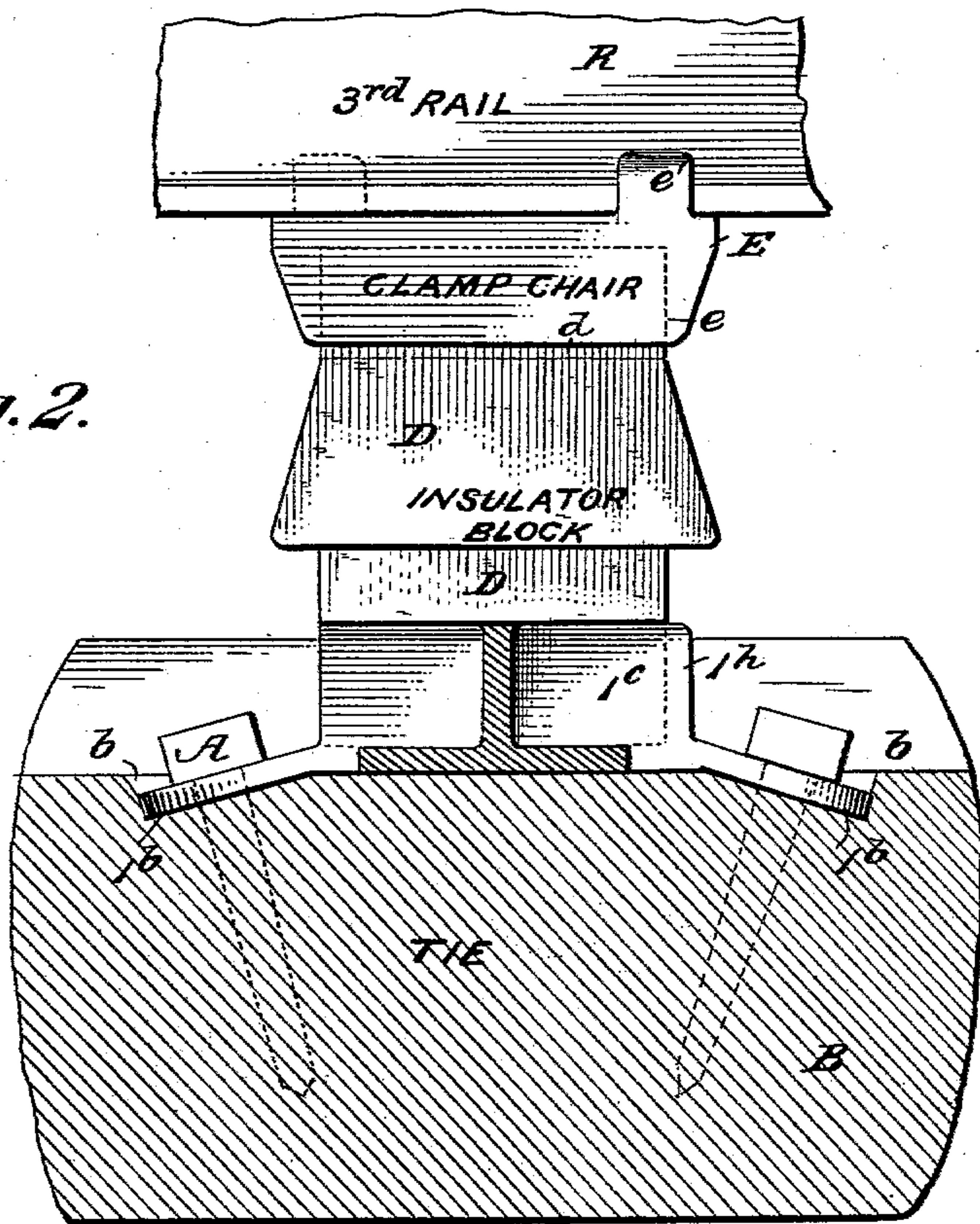
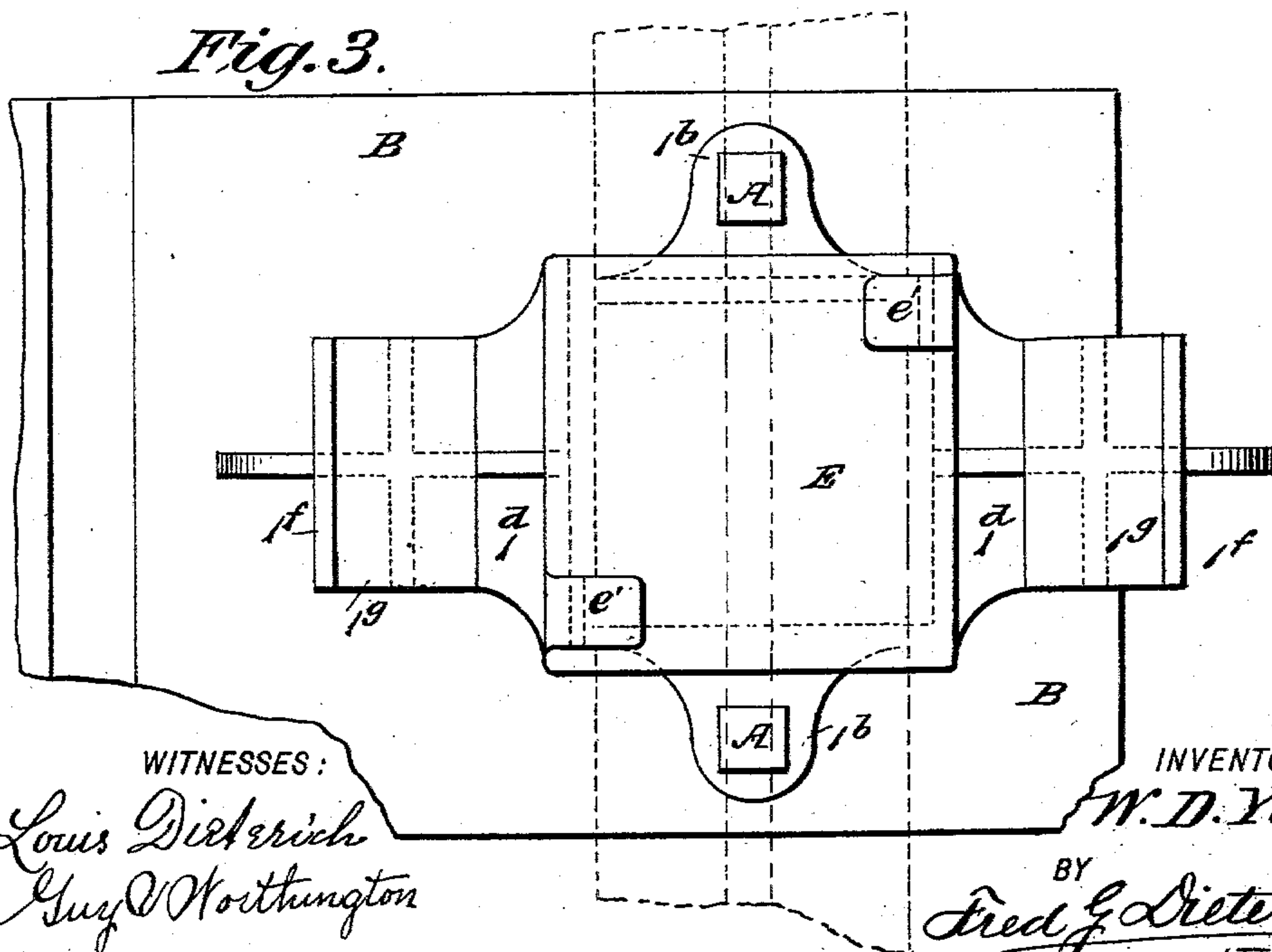


Fig. 3.



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UNITED STATES PATENT OFFICE.

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RAIL-CHAIR AND INSULATOR.

SPECIFICATION forming part of Letters Patent No. 715,329, dated December 9, 1902.

Application filed October 18, 1901. Serial No. 79,119. (No model.)

To all whom it may concern:

Be it known that I, WALTER D. YOUNG, residing at Baltimore city, State of Maryland, have invented a new and Improved Rail-Chair and Insulator, of which the following is a specification.

This invention is in the nature of a combined rail-chair and insulator for third-rail electric-railway systems, adapted to effectively serve for rigidly clamping the third or conductor rail sections in position and insulate the same from the contiguous rails and metal work and also serve for holding the guard members in their proper position alongside the third rail.

In its generic nature my invention comprehends a third-rail insulator having a base portion provided with means for supporting a guard-plank, and in its more subordinate features it embodies certain details of construction and peculiar and novel arrangement of parts, all of which will hereinafter be fully described, and particularly pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is an end elevation of my improved combined insulator and rail-chair, the guard-rails being shown in transverse section. Fig. 2 is a cross-section of the same on the line 3 3 of Fig. 1. Fig. 3 is a plan view of the insulator rail-chair and guard-plank-supporting means, the third or conductor rail being in dotted lines and the guard-rails being omitted.

In the practical construction of my invention the same comprises a casting 1, having a flat base portion 1^a, whose opposite longitudinal ends terminate in ears 1^b, bent down at an angle to engage suitable depressions *b* in the cross-tie B, on which the said casting is securely held by the spikes A A, that pass through the ears 1^b, as shown. The member 1 is also formed with two parallel longitudinally-extending inwardly-inclined flanges 1^c, that extend the full length thereof, and said flanges are integrally joined with the base portion 1^d of the oppositely-disposed vertically-extending bracket-arms or standards 1^e, which have flanges 1^f 1^g to receive the guard-planks C, the lower ends of which rest on the

base-flanges 1^g and the bodies of which are made fast to the flanges 1^f by the bolts and nuts 2 2^a, and said planks C extend up in a plane above the contact-surface of the third or contact rail R, the reason for which will presently appear. The standards or brackets 1^e have strengthening ribs or flanges, as clearly shown in the drawings.

D designates an insulator-block which has its base made dovetailed in longitudinal direction, whereby said base may be conveniently slid endwise into position between the inclined flanges 1^c of the base 1, it being held from endwise movement beyond one end of the base 1 by the stop-flange 1^h, as best shown in Fig. 3. The insulator-block D, which is of granite or other suitable material, is of substantially square shape in plan view, and its upper end terminates in vertical extension *d*, adapted to fit the socket *e* in the under side of the metal chair or cap-plate E, which rests upon the portion *d* of the insulator-block and may be made fast thereto by lead coating or any other suitable cementing material. The upper surface of the chair E is flat to receive the base of the rail R, and said upper surface at diametrically opposite corners has claws *e'* *e'* to fit over and clamp the flanges *a* *a* of the rail A, as clearly shown in Fig. 1.

From the foregoing description, taken in connection with the accompanying drawings, it is thought the operation and advantages of my invention will be readily understood.

In assembling the several parts for use the base or casting 1 is spiked at one end to the tie, after which the insulator-block D is slid endwise between the flanges 1^c 1^c of the member 1 until its inner end engages the stop-flange 1^h, after which the spike is driven to secure the other end of the casting 1, and as the head of the spike is in a plane above the bottom of the insulator-block it follows said block cannot work out from between the flanges 1^c 1^c at that end. After the block D is properly fitted the socketed chair E is fitted upon the insulator-block and made fast in any suitable manner, after which the rail R is seated on the chair E and made to interlock with the claws *e*. The guard-planks C are then secured in position, and the upper

ends being above the top of the conductor-rail a protecting-trough for the conductor-rail is provided and danger of accident by contact with any section of the rail that may
5 be alive is reduced to the minimum.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A third-rail insulator, comprising a base
10 having outwardly and downwardly extending spike-receiving sections, and parallel inwardly-inclined flanges, and an insulator-block having its base formed to slidably enter between said flanges, for the purposes set
15 forth.

2. The combination with the base 1, having parallel flanges 1° 1°, inclined inwardly, spike-ears at the opposite ends, and a stop-flange 1^h, coöperating with flanges 1°, and an insula-
20 tor-block having a dovetailed base to slide

between the base-flanges 1°, for the purposes described.

3. The combination with the base 1, having parallel inwardly-inclined flanges 1° 1°, and lateral extensions terminating in upwardly-
25 projecting standards, guard-planks secured thereto, and projected in a plane above the rail, an insulator-block detachably fitting on the base 1, between the flanges 1° 1°, said block having a vertical extension, the chair mem-
30 ber E having a socket to receive said vertical insulator-block extension, said chair having clamps to engage the rail, all being arranged substantially as shown and for the purposes described.

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Witnesses:

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