

No. 697,930.

Patented Apr. 15, 1902.

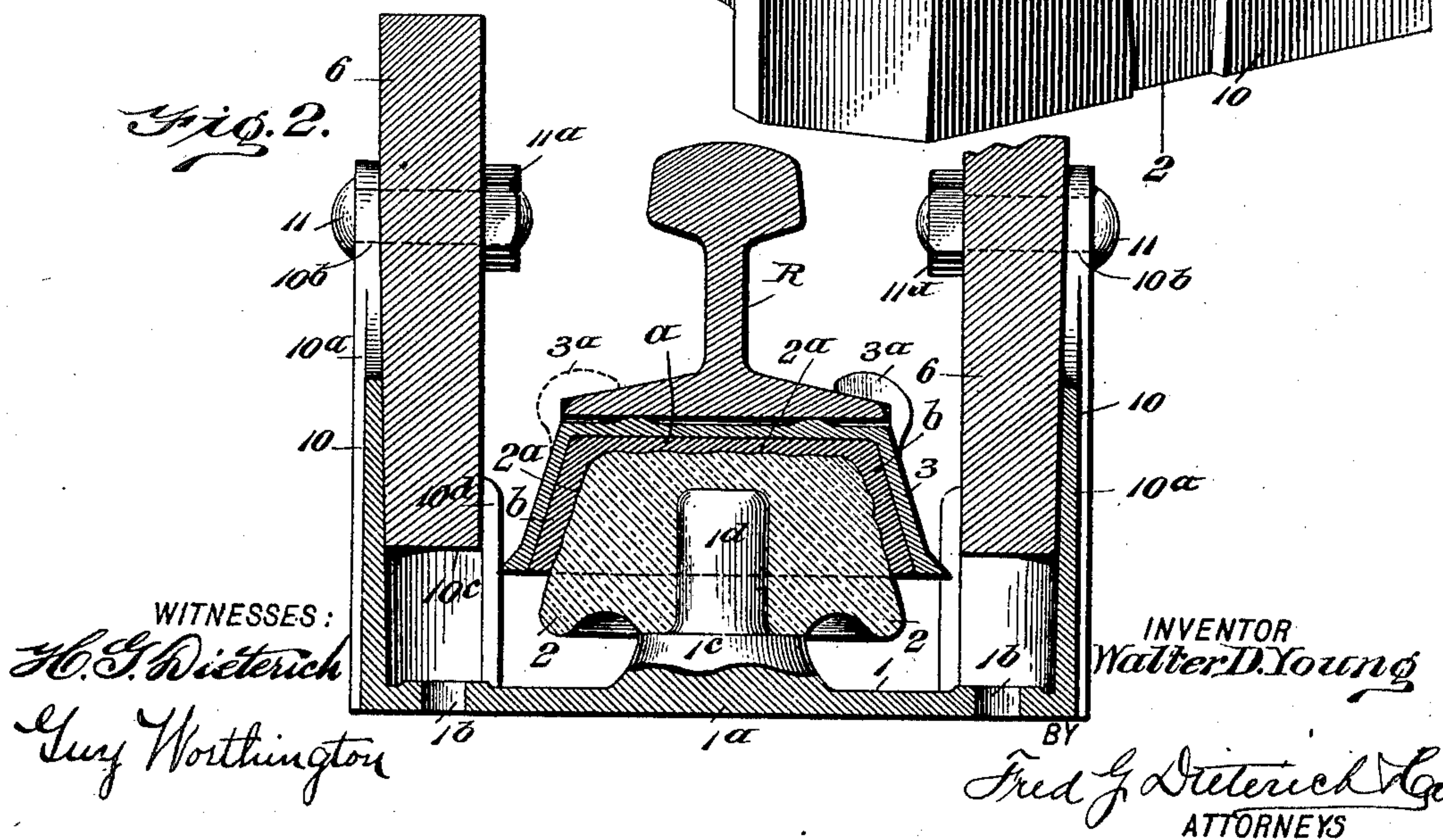
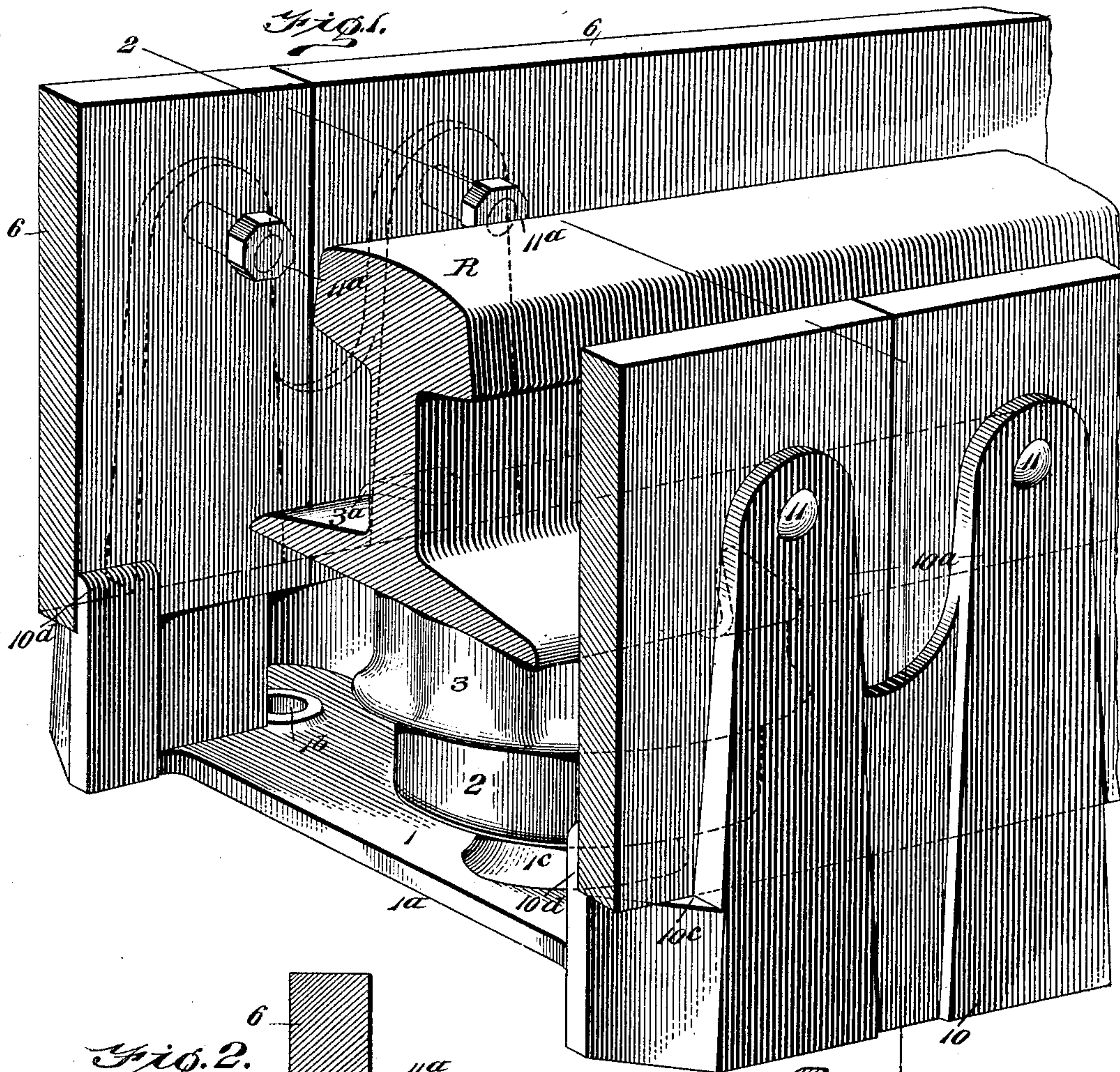
W. D. YOUNG.

RAIL CHAIR AND INSULATOR.

(Application filed Mar. 5, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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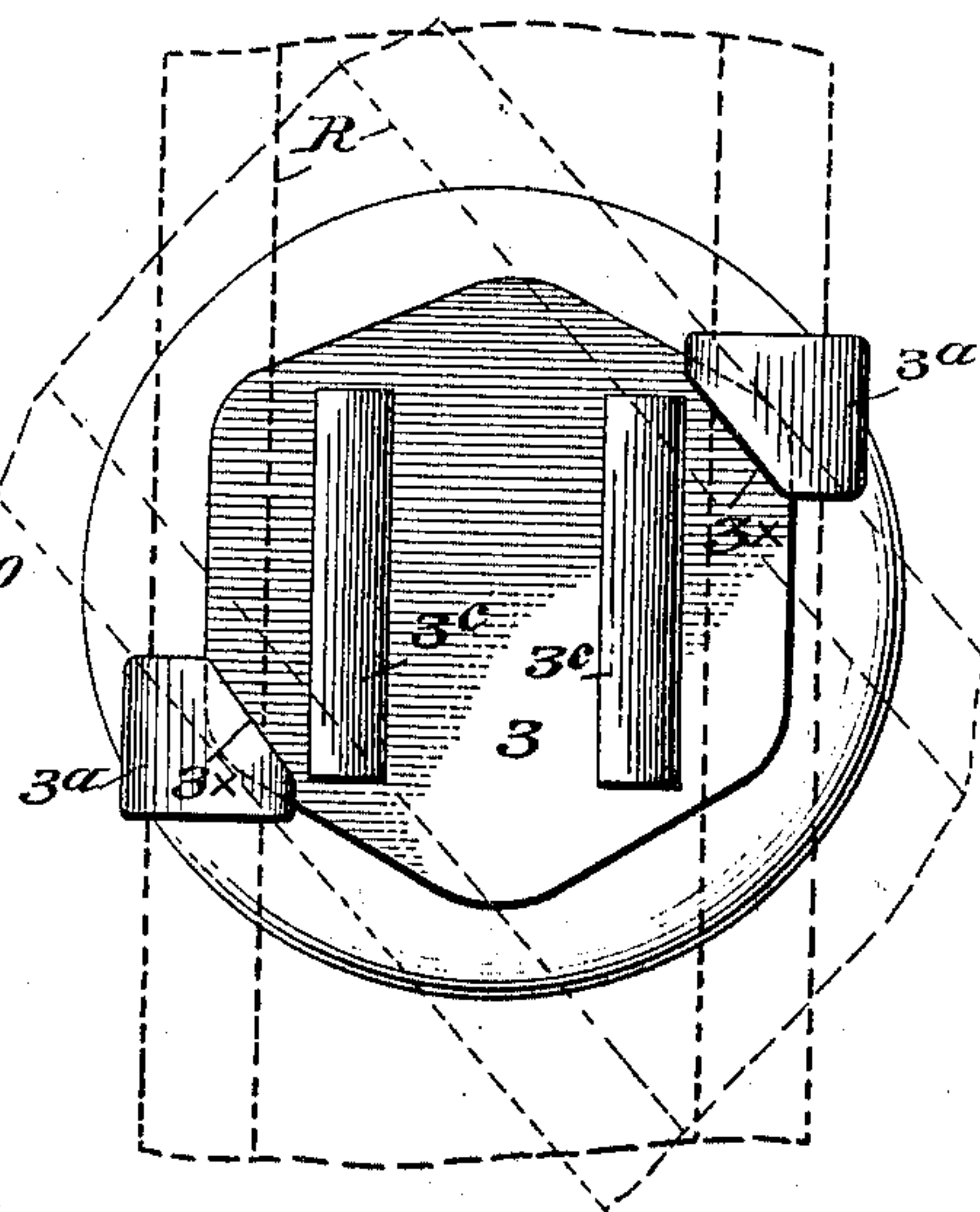
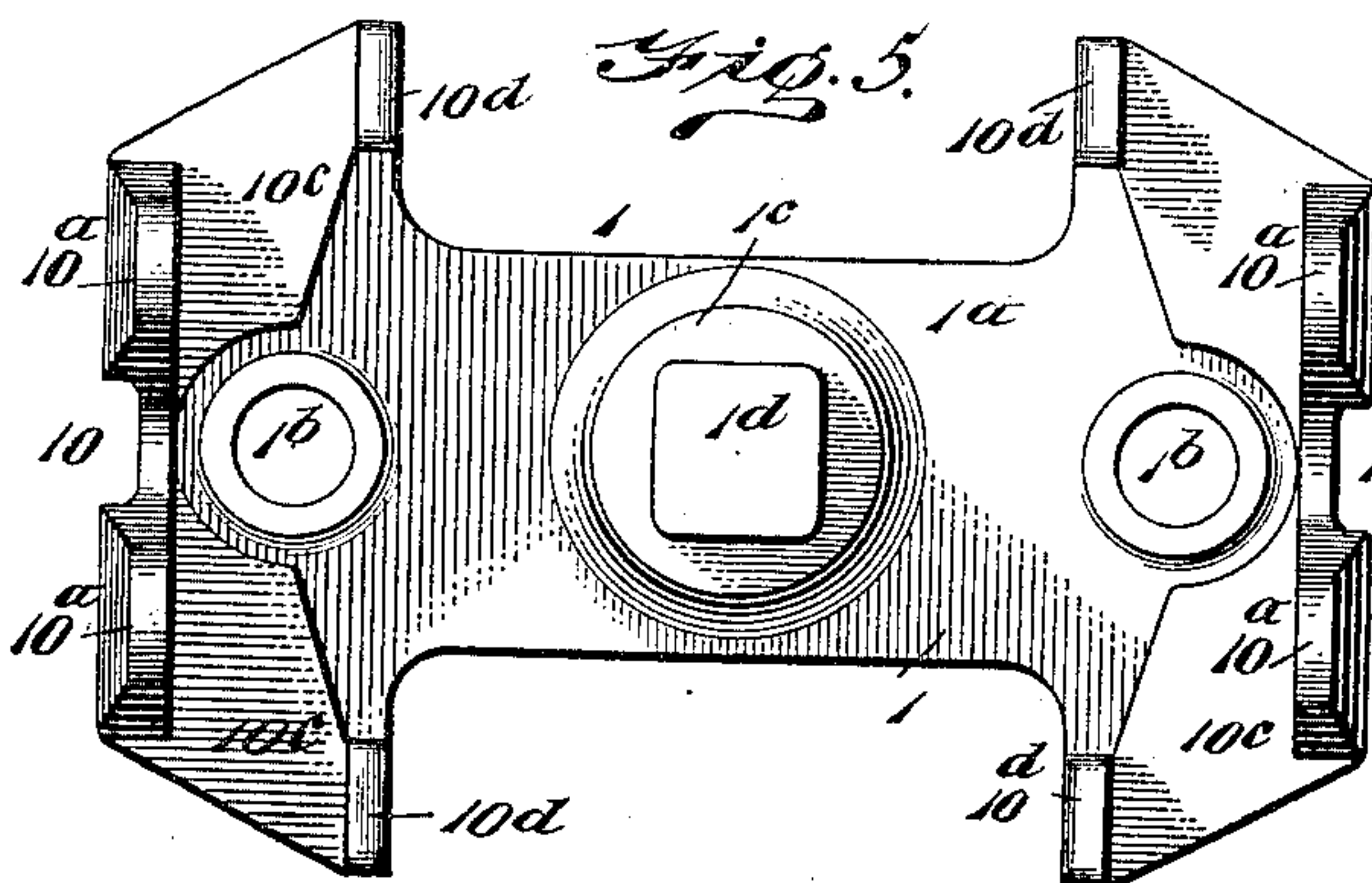
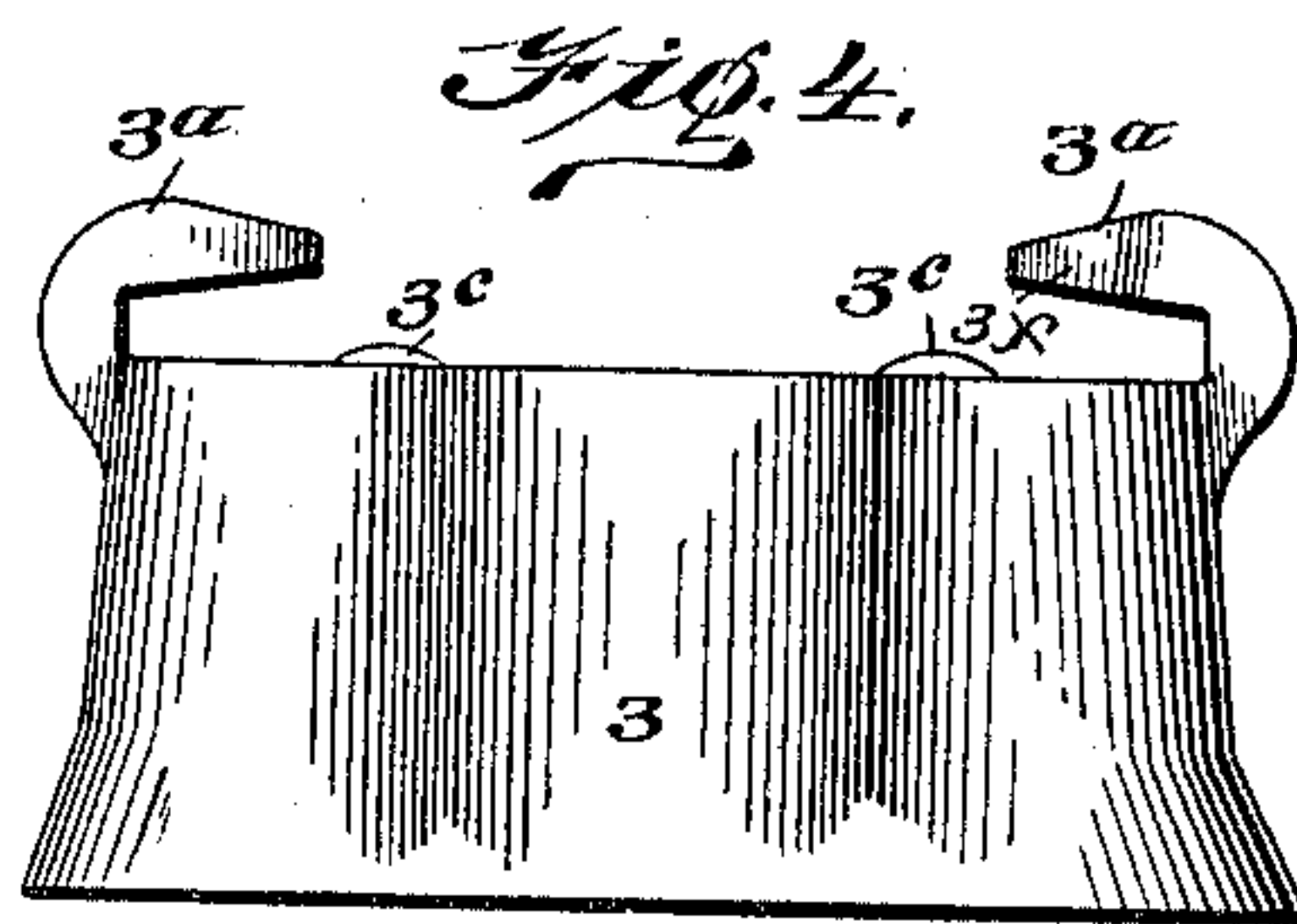
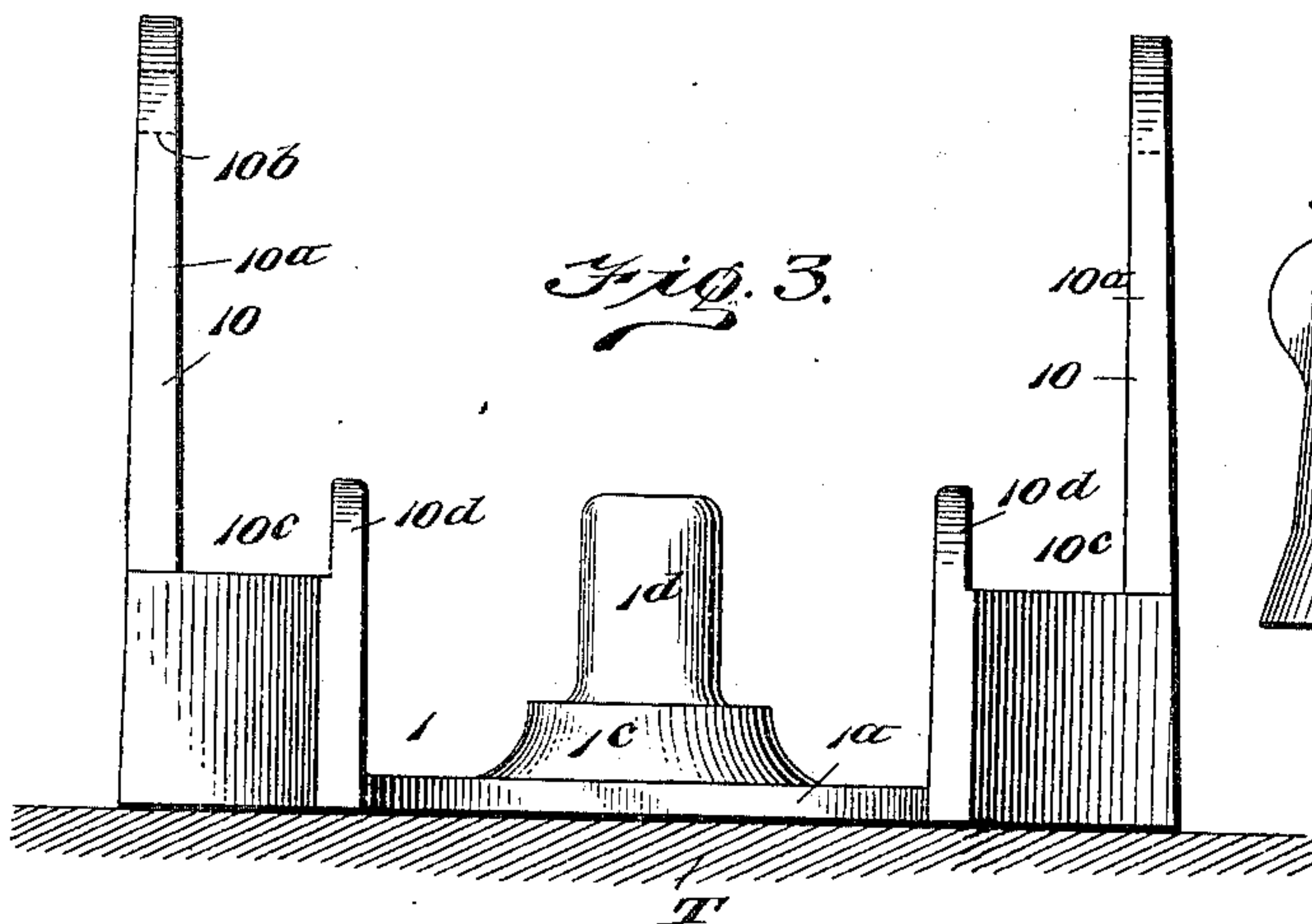
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WITNESSES:

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UNITED STATES PATENT OFFICE.

WALTER D. YOUNG, OF BALTIMORE, MARYLAND.

RAIL CHAIR AND INSULATOR.

SPECIFICATION forming part of Letters Patent No. 697,930, dated April 15, 1902.

Application filed March 5, 1901. Serial No. 49,926. (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 systems, and it primarily seeks to provide an appliance of this character of a very stable character that can be economically set up in position for use and which will effectively serve to rigidly clamp the third or conductor rail sections in position, insulate same from the contiguous rails and metal-work, and also serve as a simple and effective means for securely holding the guard-rails.

My invention comprehends in its generic make-up a metal bracket adapted to support an insulated rail-chair and guard-rails, and includes in its make-up a central spindle to receive the insulator-block, vertically-projecting ends having seats to receive the guard-rails, and means for conveniently securing the meeting ends of a pair of such rails.

The invention consists in certain combinations and peculiar construction of parts, all of which will hereinafter be described in detail and be particularly pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of a conductor-rail and one of my improved combined insulator and chair members and illustrates the manner in which the ends of the guard boards or rails are joined thereto. Fig. 2 is a cross-section taken substantially on the line 2 2 of Fig. 1. Fig. 3 is a side elevation of one of the metal castings. Fig. 4 is a side elevation of the rail-chair or hollow clamp member. Fig. 5 is a plan view of the casting shown in Fig. 3, and Fig. 6 is a plan view of the member shown in Fig. 4.

Referring now to the accompanying drawings, in which like characters indicate like parts in all the figures, 1 designates a casting having a flat base 1^a, adapted to extend transversely under the rail R and provided at each end with a spike-aperture 1^b, whereby said casting may be conveniently and securely made fast to the cross-tie T.

Centrally the casting 1 has a hub 1^c, from

which projects vertically a short spindle 1^d, adapted to receive an insulator-block 2.

3 designates a rail-chair, which is fitted upon the insulator-block 2, fixedly held thereon, and provided with claws 3^a to engage the flanges of the rail R.

To provide for conveniently and firmly securing the block 2 and chair 3 together, the surface of the said block 2 is made tapering and roughened, as at 2^a, and the chair 3 is made cup-shaped and of slightly-greater diameter or size than block 2, whereby an intervening space between the two members 2 and 3 is provided, the reason for which will presently appear.

So far as described the manner in which my improvement is operated is as follows: The chair 3 is first joined with the insulator-block and made fast thereto, which is accomplished by inverting the chair 3, pouring a coating of lead in the bottom to produce a closing and locking portion, (indicated by *a*.) The block 2 is then seated on the said portion 2 within the chair 3, and additional lead or other suitable packing and locking material is poured around the sides of the block to produce the seal portions *b b*.

While for economy in construction I prefer to join the members 2 and 3 in the manner shown and described, it is obvious they may be connected by any other means.

The rail-claws 3^a are disposed in diagonal relation to each other and so spaced apart that when their edges 3^x are placed parallel with the rail-flanges the claws will slip up over the said flanges, and when thus adjusted by giving the said chair 3 a partial turn the claws will engage the rail-flanges, as clearly shown in Fig. 2.

To provide against a flat bearing extending entirely over the chair-block and also to cause the said block to the more firmly clamp the rail, said block has longitudinally-extending ribs 3^c, as shown.

After the chair-blocks are fitted in the rail the block 3, together with the insulator-block 2, can be quickly fitted in position on the spindle 1^d. (See Fig. 2.)

The opposite ends of the casting 1 terminate in vertical standards 10, the upper ends of which have bifurcated extensions 10^a, having bolt-apertures 10^b, and the front and

rear edges at the lower ends have inwardly-projecting seats 10^c and upwardly-projecting flanges 10^d.

The object in forming the opposite ends of the casting 1 in the manner shown and described is to provide a simple and effective means for securing the guard rails or boards 6. These rails 6, as will be seen by reference to Figs. 1 and 2, are set on edge and rest upon the seats 10^c. Their lower ends are held from moving inwardly by the flanges 10^d, and their upper ends are made secure by the bolts and nuts 11 11^a.

In the practical application of my invention the adjacent ends of two boards or rails 6 are joined on each casting 1. (See Fig. 1.) Thus a simple manner for forming and supporting a protecting-trough for the conductor-rail is provided, and danger of accident by contact with any section that may be "alive" is reduced to the minimum, and to still further guard against accident the upper ends of the boards 6 are in a plane above the rail R.

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

1. An appliance of the character described, comprising a casting having means for detachably supporting an insulated rail-chair, and its opposite ends constructed to support guard-rails.

2. An appliance of the character described, comprising a casting, adapted to support a rail-chair, its opposite ends having seats to support guard-rails, and members to which said rails can be made fast.

3. An appliance for the purposes stated, having a central upwardly-projecting spindle and vertical end portions, as set forth.

4. An appliance of the character described, having a central hub and a spindle, seats 10^c at the outer ends and vertical portions 10, having bolt-apertures, for the purposes described.

5. The hereinbefore-described appliance, comprising a member 1, adapted to be spiked to a cross-tie, said member 1, having a spindle 1^d, seats 10^c, and vertical flanges 10^b, and having integral vertical members 10, having bolt-apertures, all being arranged substantially as shown and for the purposes described.

6. A combined rail holder and insulator, comprising a base member adapted to be secured to the cross-tie, a rail holder and support mounted on the base-plate and insulated therefrom, said base-plate having upturned portions provided with seats to receive the guard-rails, substantially as shown and for the purposes described.

7. A third-rail insulator having its base provided with means for supporting a guard-plank.

8. A third-rail insulator having its base provided with extensions adapted to support a guard-plank.

9. A third-rail insulator having on its base extensions provided with one or more flanges to support a guard-plank.

10. A third-rail insulator having on its base an extension provided with a pedestal, and means for securing a guard-plank on said pedestal.

11. A third-rail insulator having on its base an extension provided with a pedestal having one or more flanges to support a guard-plank.

12. A third-rail insulator having a base provided with extensions, pedestals on said extensions, and upright flanges on said pedestals.

13. The combination with a third-rail insulator having lateral extensions on its base, of a guard-plank supported on each extension, and rising above the top of the rail.

WALTER D. YOUNG.

Witnesses:

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