

(No Model.)

2 Sheets—Sheet 1.

J. POYSER.

RAILWAY AND TRAMWAY CHAIR, &c.

No. 321,247.

Patented June 30, 1885.

Fig. 5.

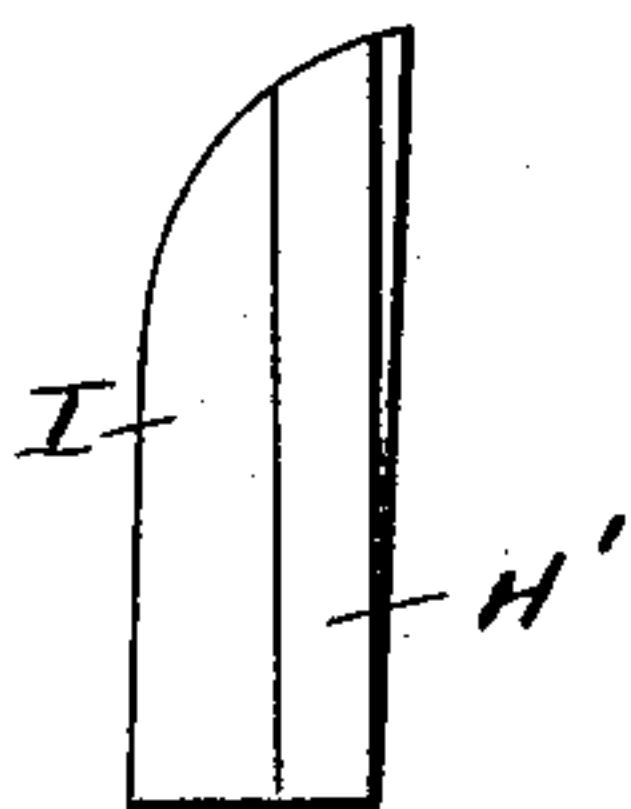


Fig. 1.

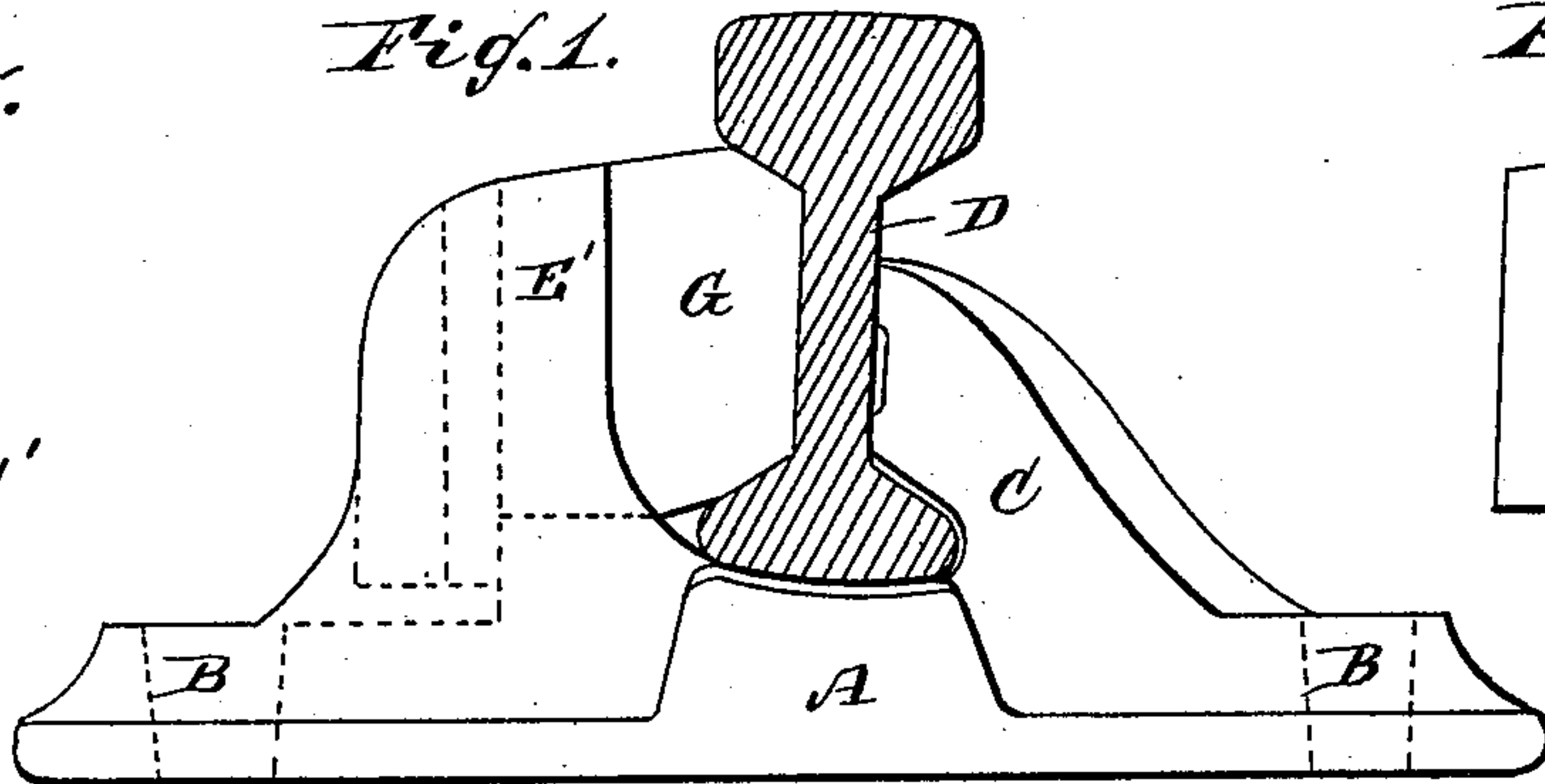


Fig. 4.

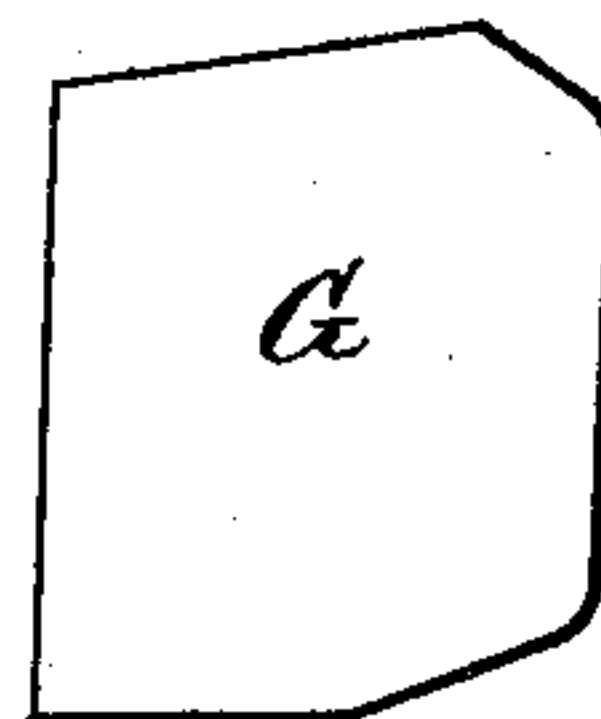


Fig. 2.

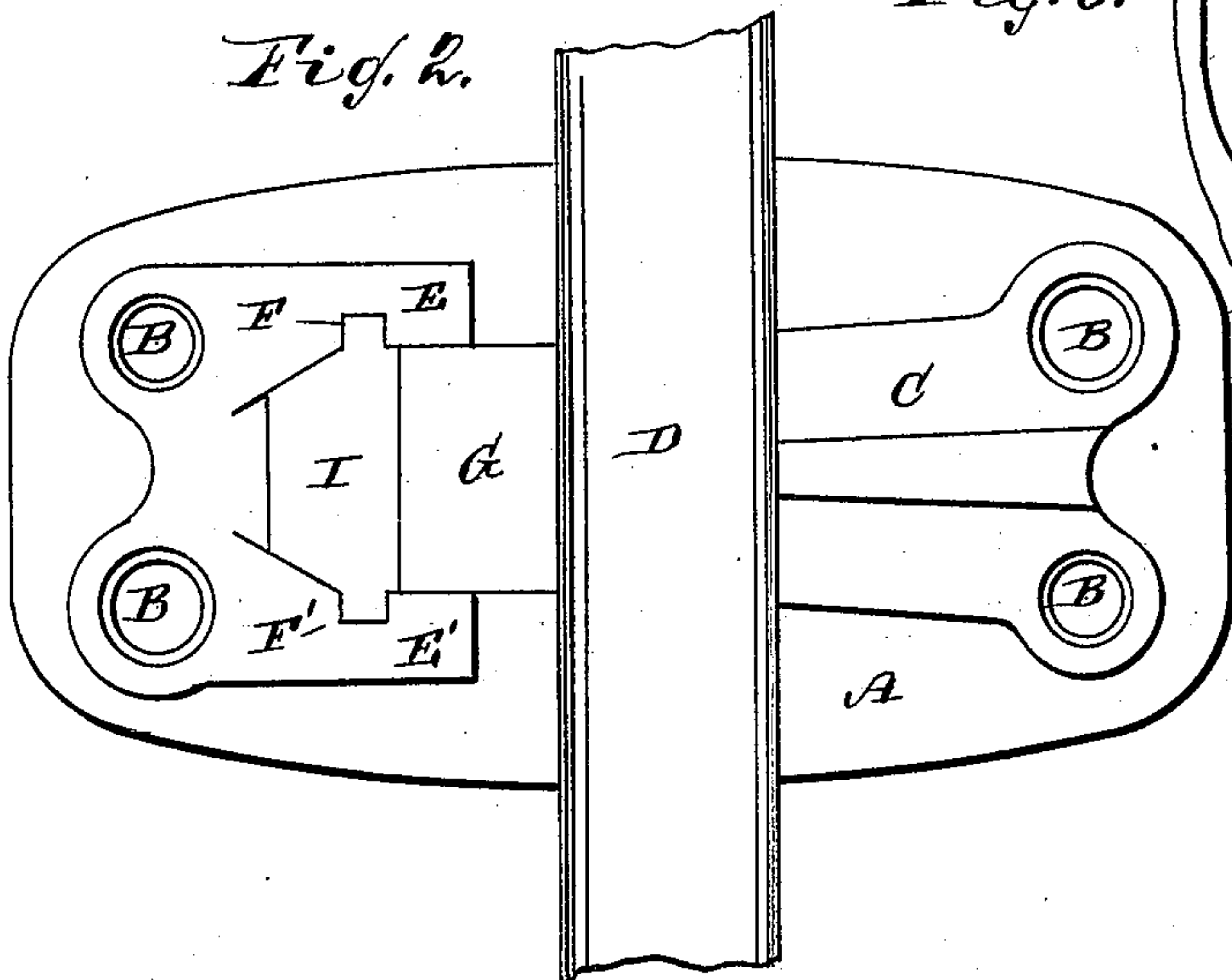


Fig. 8.

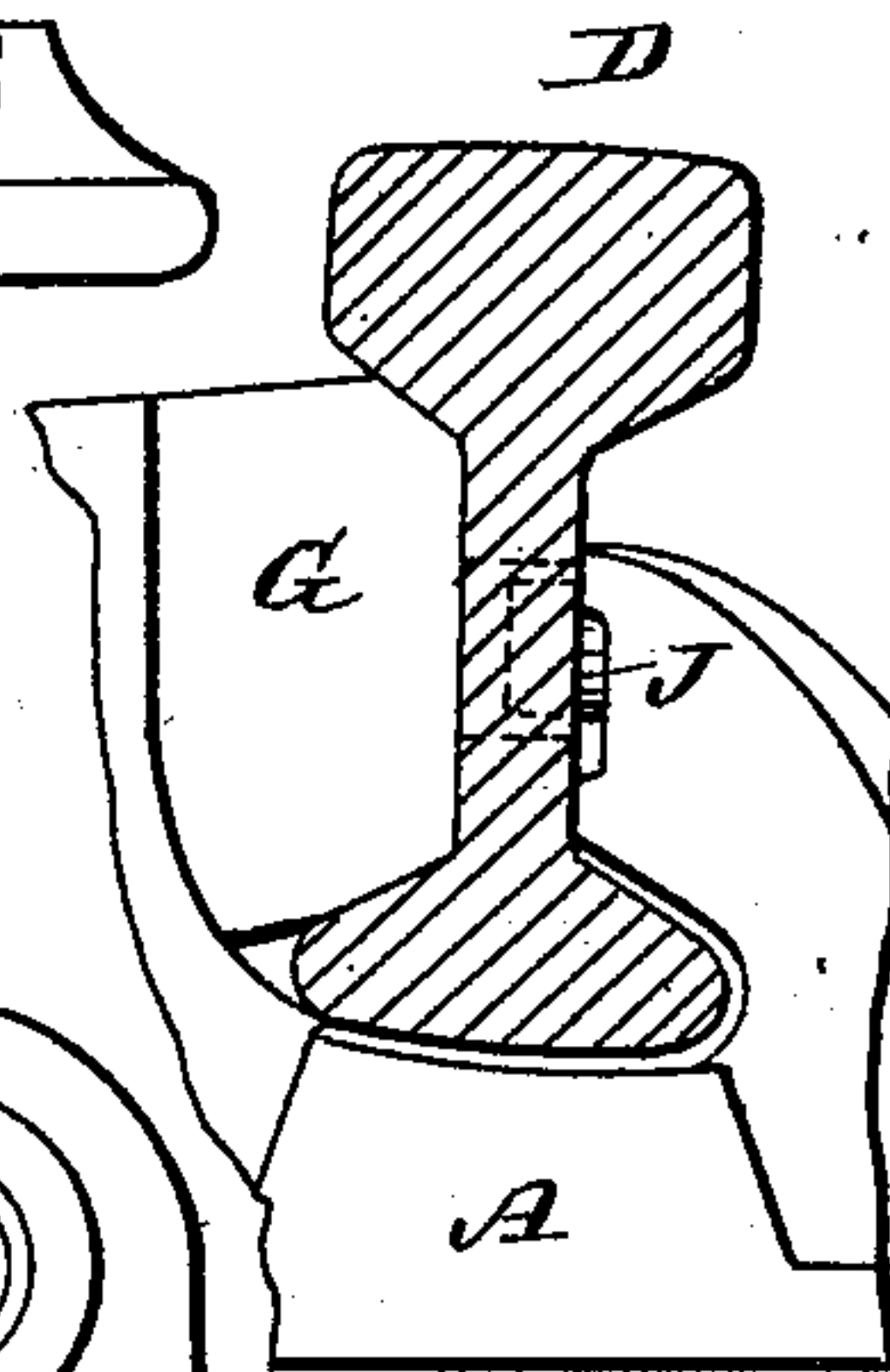


Fig. 6.

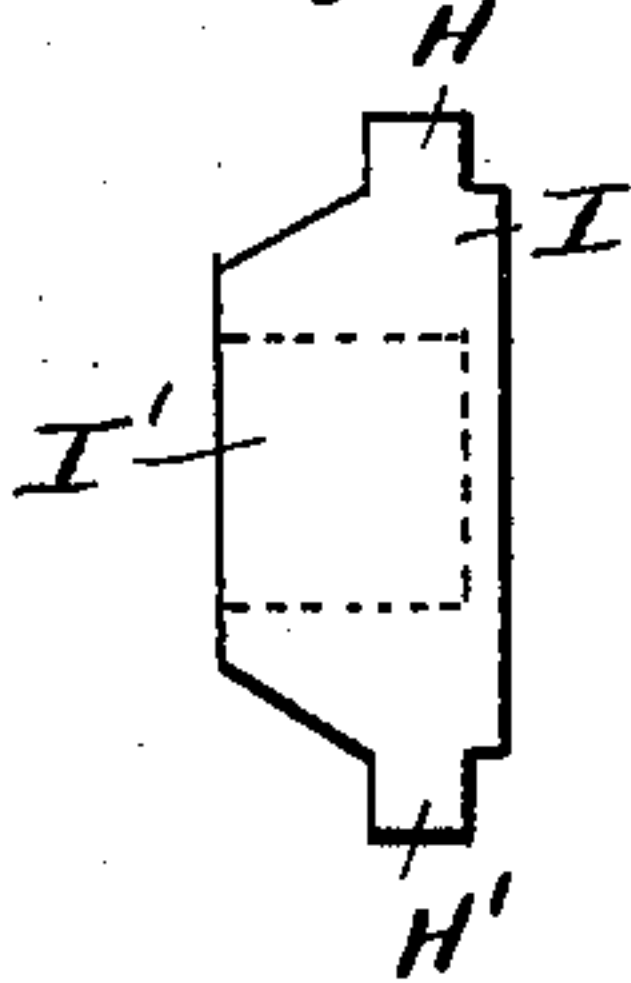


Fig. 3.

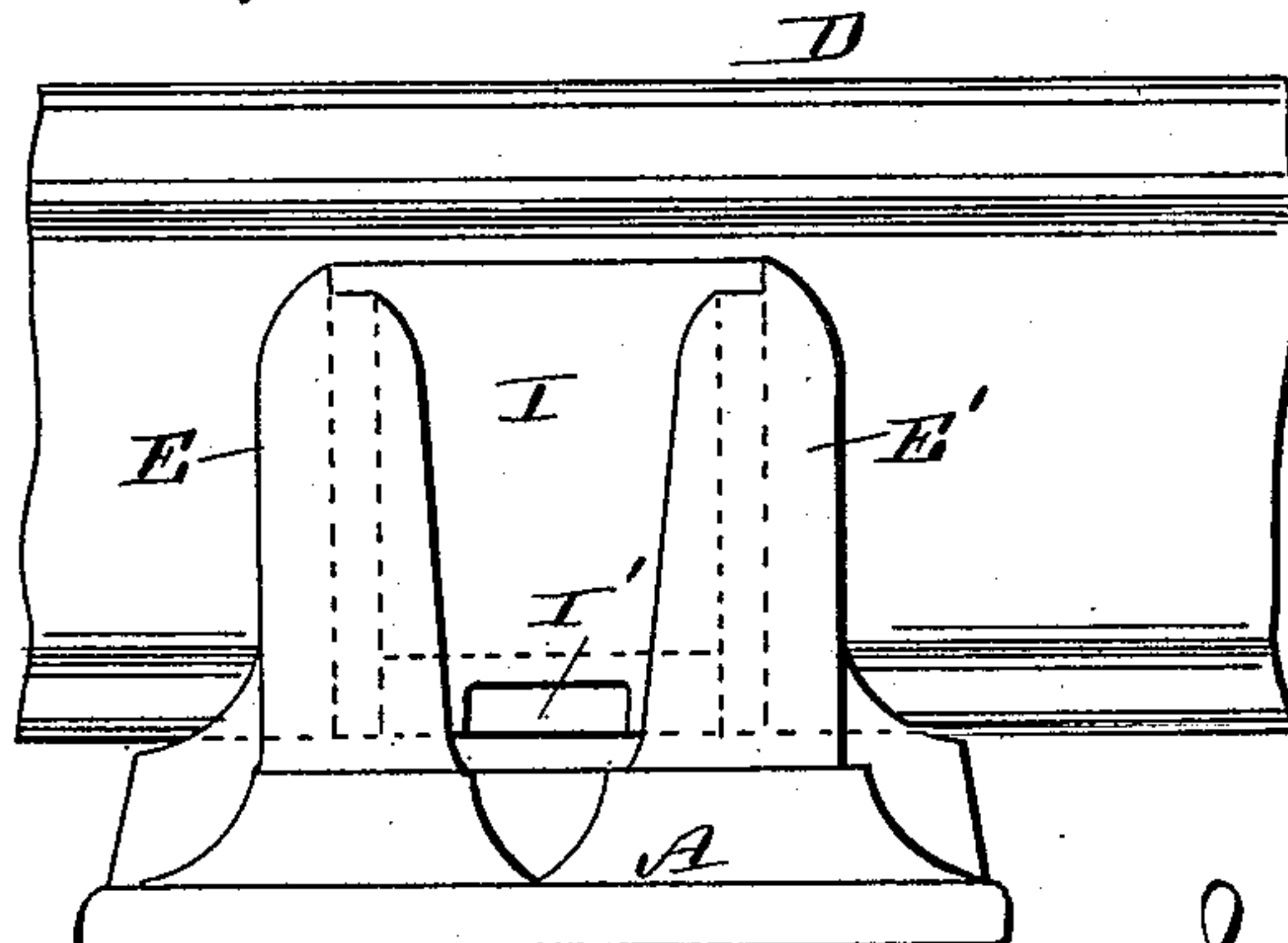
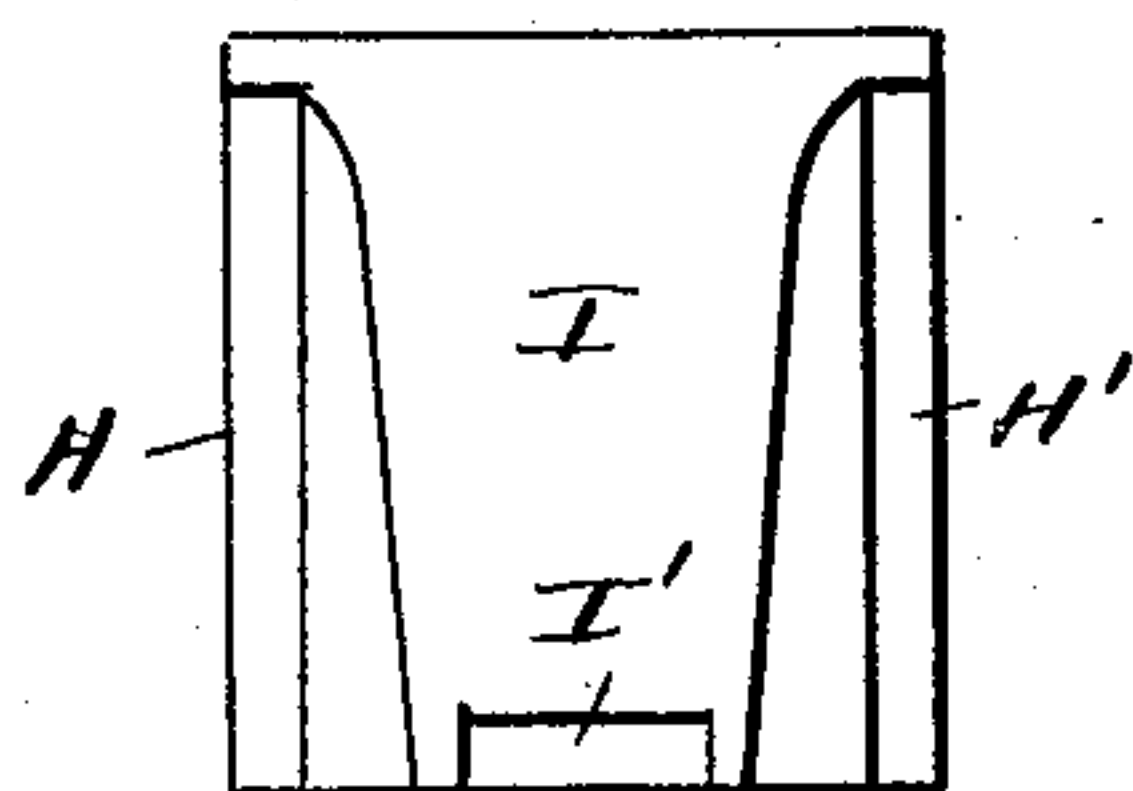


Fig. 7.



WITNESSES:

Theo. G. Hooster.
Amos W. East.

INVENTOR:

J. Poyser
BY Munn & Co.

ATTORNEYS.

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2 Sheets—Sheet 2.

J. POYSER.

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Fig. 9.

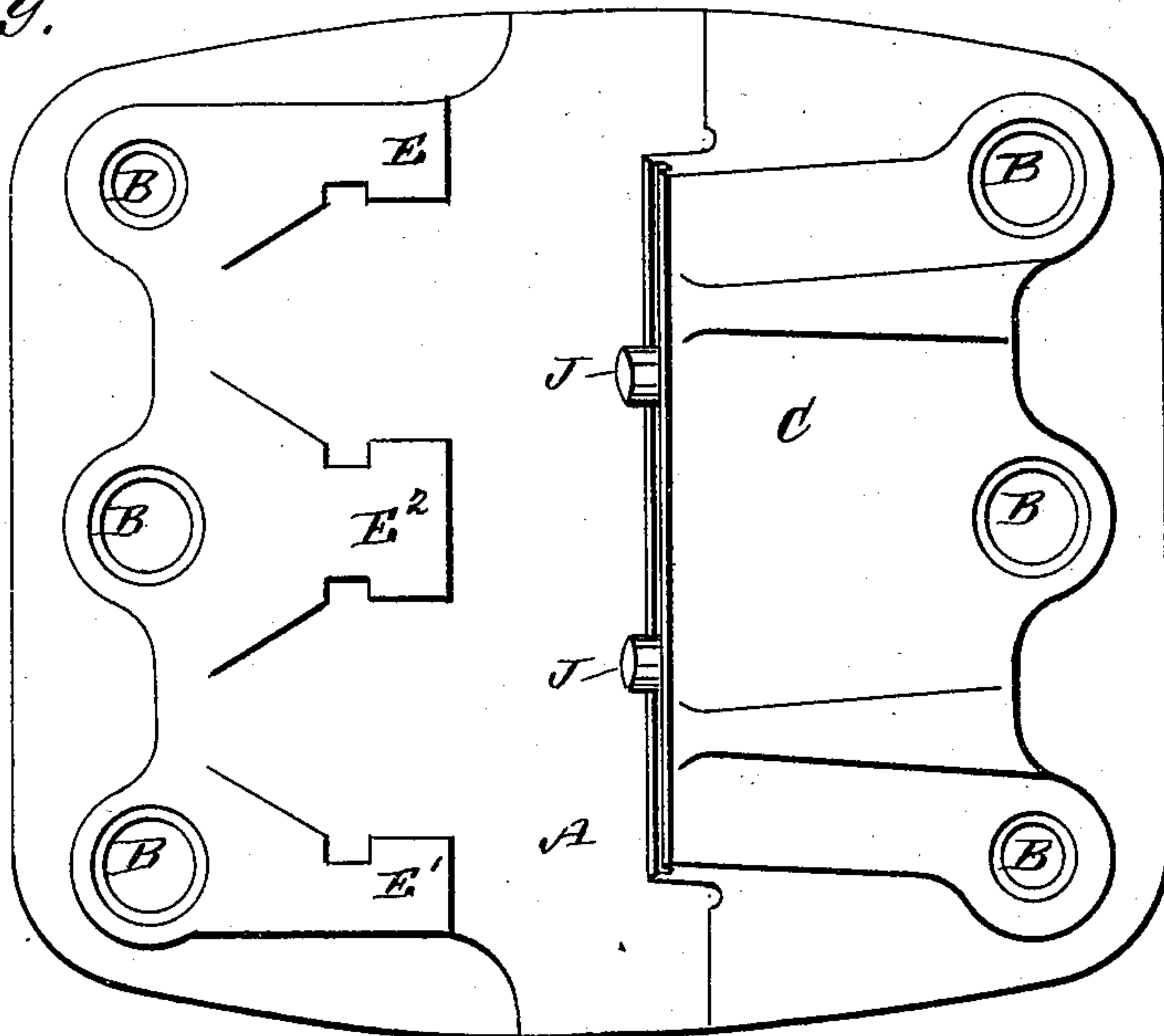
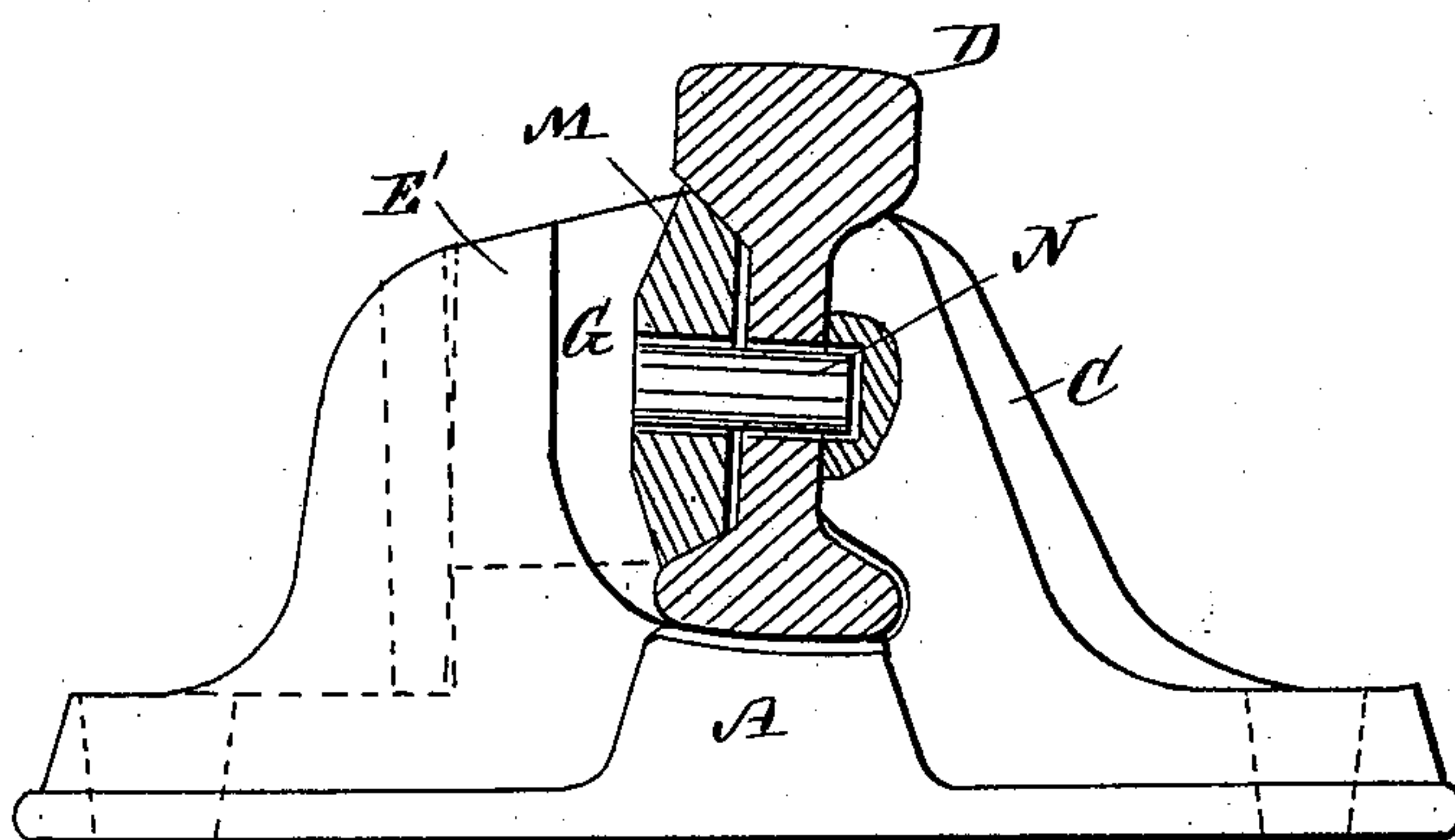


Fig. 10.



WITNESSES:

Theo. G. Hoster.
C. Sedgwick

INVENTOR:

J. Poyser
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN POYSER, OF SHERWOOD RISE, MANSFIELD, COUNTY OF NOTTINGHAM, ENGLAND.

RAILWAY AND TRAMWAY CHAIR, &c.

SPECIFICATION forming part of Letters Patent No. 321,247, dated June 30, 1885.

Application filed January 10, 1885. (No model.) Patented in England June 26, 1884, No. 9,420.

To all whom it may concern:

Be it known that I, JOHN POYSER, of Sherwood Rise, Mansfield, Nottingham county, England, have invented a new and Improved
5 Railway or Tramway Chair, of which the following is a full, clear, and exact description.

The object of my invention is to provide a chair and apparatus in connection therewith for securing more efficiently railway and tramway rails or sleepers. The rail may be of any
10 usual sections, such as double-headed, bull-headed, or flat-bottomed for railroads, or with grooved head for tramways.

My improved chair is ordinarily constructed
15 with three jaws, formed in one piece with or rigidly attached to a base of the ordinary form. One jaw is shaped to receive one side of the rail in the ordinary way, and the other two jaws are on the opposite side of the rail,
20 sufficient space being left between them and the aforesaid single jaw to allow of the easy admission and extraction of the rail. The said pair of jaws are arranged practically parallel to each other, and the inner side of each jaw
25 is grooved or recessed vertically about midway for the reception of a metal block, which will be described hereinafter. After the rail has been placed in position in the chair, with its sides abutting against the single jaw before
30 mentioned, a key, made of either wood or metal and adapted to fit against the side of the rail, is then inserted between the two jaws, and a metal block, provided with a vertical shoulder-piece, fillet, or projection on each side to
35 fit in the aforesaid grooves or recesses in the said jaws, is then driven down behind the wooden or metal key, and thus fixes the rail firmly in position in the chair. In order to hold the rail more tightly in its place I may,
40 if preferred, form the face of the block which comes in contact with the key with an incline or bevel; or the said face may be vertical and the grooves or recesses in the jaws may be inclined toward the key. Either of these meth-
45 ods will cause the block to act as a wedge and exert a greater pressure the farther it is driven down. If desired, in order to insure the block remaining in position when driven into its place, a horizontal hole may be provided
50 through the two jaws and the block and a bolt

or pin passed through the said hole. The bolt may be provided with a head, and may be fastened at the other end by means of a split pin. In practice, however, I do not find that
55 any such device is necessary. In order to facilitate the removal of the rail from the chair the metal block has an inclined recess formed on the under side, or the entire under side may be inclined so that a crow-bar can be inserted to act as a lever and force the block up,
60 when it can be lifted out and the key removed. When the said key is made of wood, I cause the end grain to abut against the side of the rail and the face of the block, so that the fibers are at right angles to the rail and the block
65 therefore unaffected by expansion or shrinkage produced by atmospheric or other causes, and cannot work loose like ordinary keys.

By increasing the width of my improved chair it is well adapted to act as a joint-chair,
70 and then may be used as a substitute for or in combination with the ordinary fish-plates and bolts, a double or multiple set of keys and blocks being used, if desired.

My improved chair is also applicable not
75 only as an ordinary or joint chair, but also as an intermediate crossing, joint, or check-rail chair. By modifying the form of the faces of the single jaws, keys, and base it can readily be adapted to any section of rail desired,
80 whether for use on railways or tramways. It can also be employed in any form of combined sleeper and chair, as where the chair and sleeper form one casting, or the chair or jaws are attached to a wrought-iron or steel sleeper.
85

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my im-
90 proved chair for a bull-headed rail, the rail being in section. Fig. 2 is a plan view of the same. Fig. 3 is an end elevation showing the rail, key, and block in position. Fig. 4 is a detail side view of the wooden or metal key.
95 Fig. 5 is a side view of the block. Fig. 6 is a plan view of the same. Fig. 7 is an outside view of the same. Fig. 8 is a side view of part of a chair provided with lugs, which prevent the rail from creeping. Fig. 9 is a plan view
100

of a chair for receiving two wedges and two blocks. Fig. 10 is a cross-sectional view of a chair for holding a rail and a fish-plate.

The base A of the chair is provided with 5 holes B, through which the spikes are driven into the sleeper or bolts of any kind are passed for holding the chair on metal sleepers. The jaw C is bent upward and shaped to receive the rail D. Two jaws, E and E', are formed on 10 the base opposite the jaw C, and are provided with vertical grooves or recesses F and F', adapted to receive feathers, splines, or projections H H' formed on the sides of the metal block I, the inner face of which is beveled from 15 the top to the bottom, as shown in Fig. 5—that is, the distance from the face of the splines H to the inner face of the block increases from the top to the bottom. A wooden or metal key, G, is placed between the jaws E E' and 20 against the rail. The key G, the inner surface of which is shaped to fit against the web, head, and base of the rail, is placed against the said rail, and the block I is inserted between the jaws E and E' and driven home tight. The 25 wedge-shaped or beveled face of the said block drives the key more firmly against the rail as the block is driven down further. The block I is provided in its bottom with a recess, I', for receiving the end of a crow-bar for lifting the 30 said block.

In order to afford additional surface to receive the thrust of the block I, the inner face of the jaws E E' may sometimes be inclined behind the grooves F F' toward each other, 35 and the sides of the block I are correspondingly inclined, as shown in Fig. 7; and I may even dispense with the grooves F F' and the splines H H' and rely solely upon the said inclined faces and sides. If desired, one or 40 more lugs or projections, J, may be cast on the inner end surface of the jaw C to enter holes in the rail D to prevent the said rail from creeping. If desired, the jaw C may be carried close up under the head of the rail to secure

more stiffness, as shown in Fig. 10. If a fish- 45 plate, M, is used, the key G is shaped and fitted against the outside of the fish-plate. To prevent creeping, a pin, N, is passed through the fish-plate and the rail and enters 50 a notch or recess in the jaw C, the other end of the pin abutting against the wooden key.

In Fig. 9 I show a metal jaw, E², in addition to the jaws E and E', and two lugs, J, are provided. In this case two keys, G, and blocks I 55 are used. If desired, the chair may be arranged for receiving three, four, or more keys G and corresponding blocks, I.

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

1. The combination, in a chair for securing 60 railway or tramway rails, of a jaw, C, with the jaws E E', having vertical grooves F F', the key G, and the block I, having projections or splines H H', adapted to be passed through the grooves F F', substantially as herein shown and 65 described.

2. The combination, in a chair for securing railway or tramway rails, of the jaw C with the jaws E E', key G, block I, and the lug J on the jaw C, substantially as herein shown and 70 described.

3. The combination, in a chair for securing railway or tramway rails, of the jaw C with the jaws E E', the key G, and the block I, having a recess I' in the bottom, substantially as here- 75 in shown and described.

4. The combination, in a chair for securing railway or tramway rails, of the jaw C with the jaws E E', the block I, having splines, feathers, or projections H H', and having its inner side 80 beveled, and of the key G, substantially as herein shown and described.

JOHN POYSER.

Witnesses:

JAS. HAYWOOD,
of Mansfield Woodhouse, Notts.,
E. P. DAVIS,
56 Park Road, Lenton, Notts.