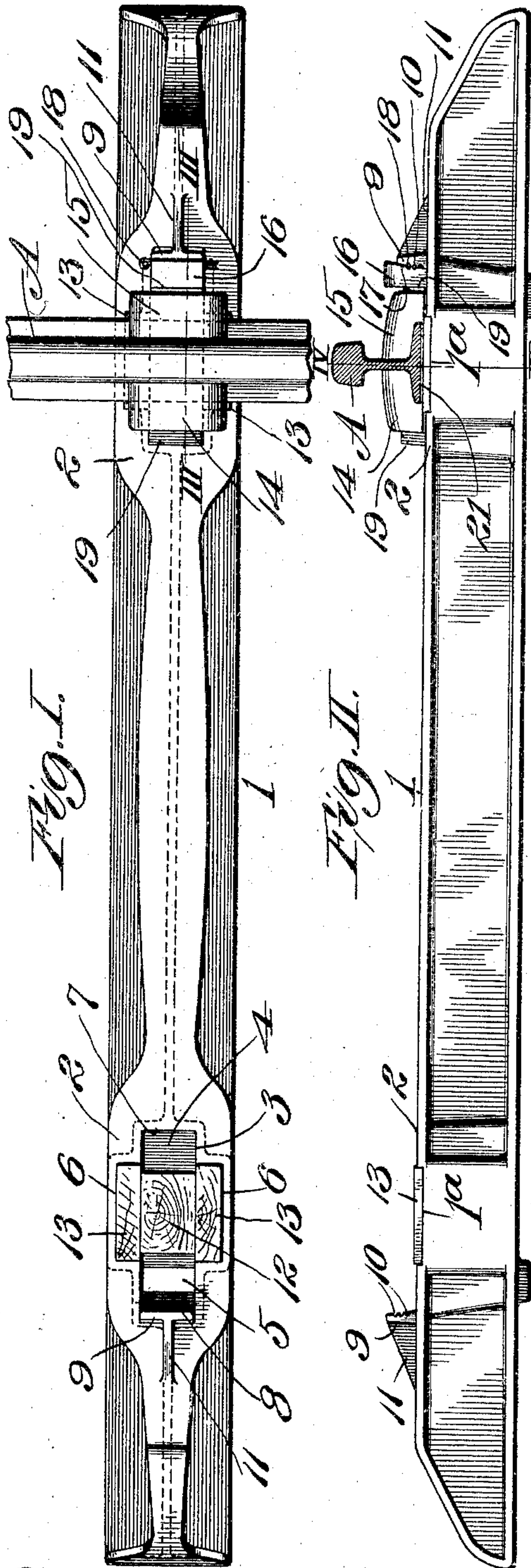


J. TIMMS.
RAILWAY RAIL TIE AND RAIL FASTENING.
APPLICATION FILED JAN. 14, 1909.

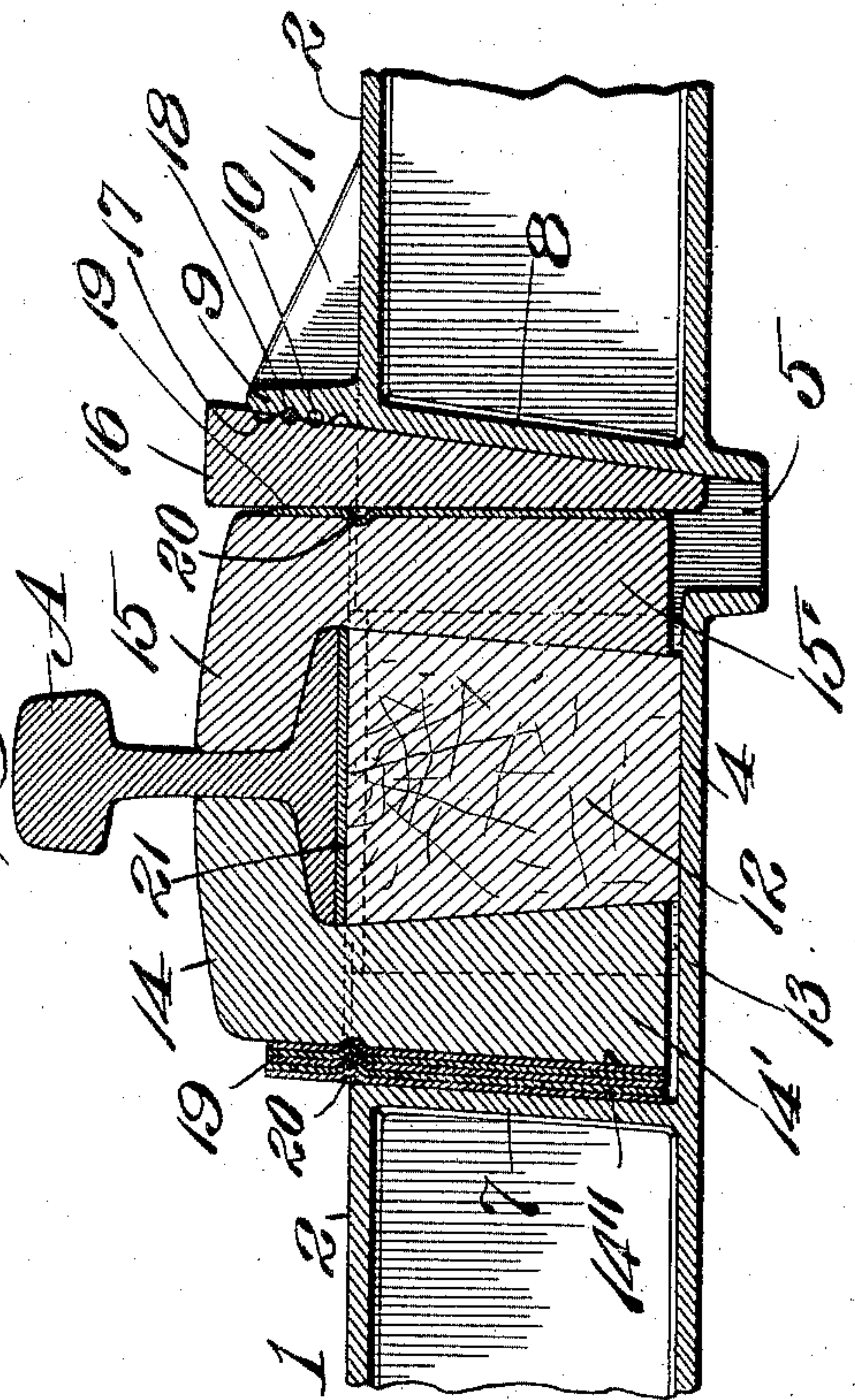
928,008.

Patented July 13, 1909.
2 SHEETS—SHEET 1.



Attest:
E. M. Harrington
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Fig. III.



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Fig. V.

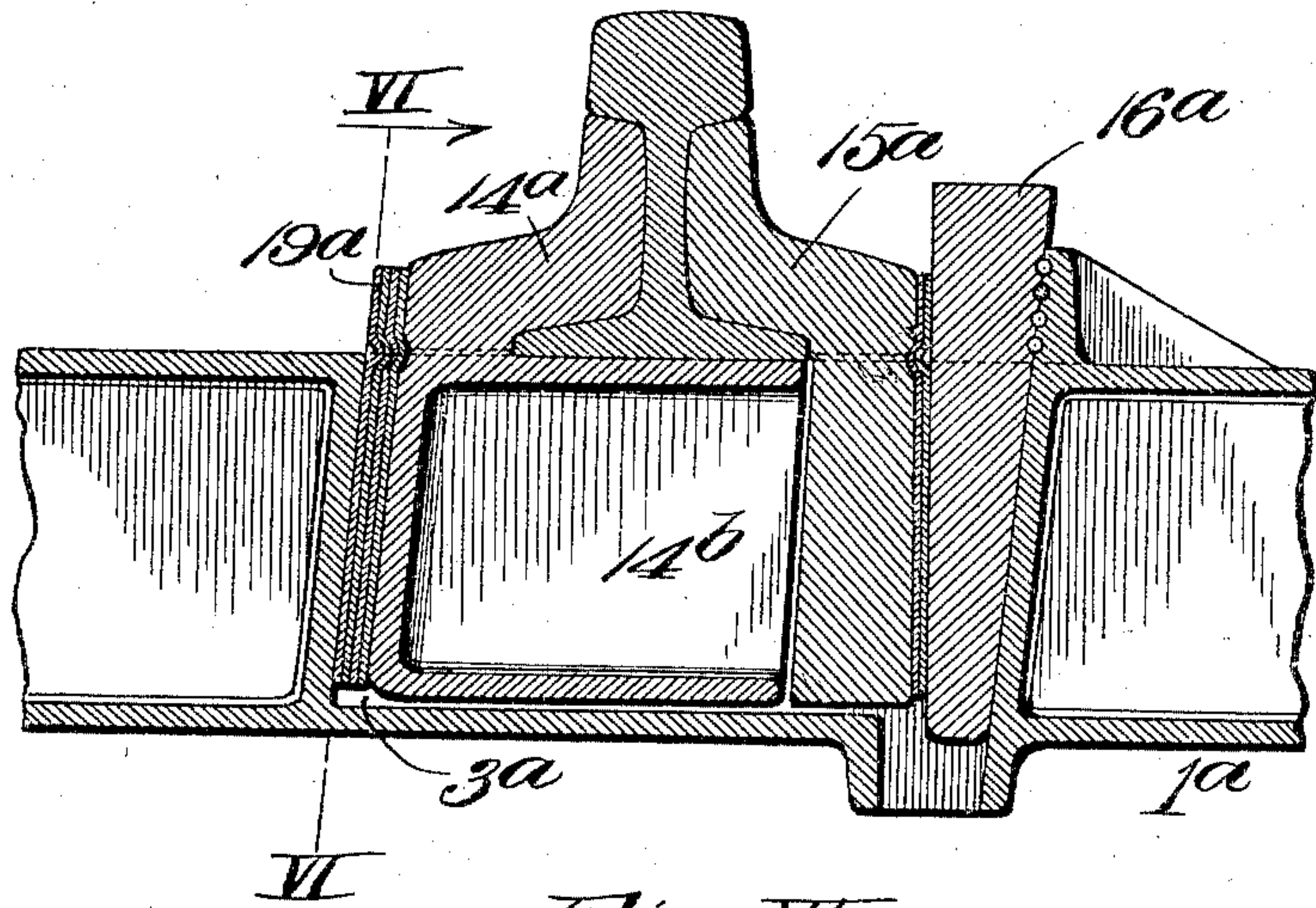


Fig. VI.

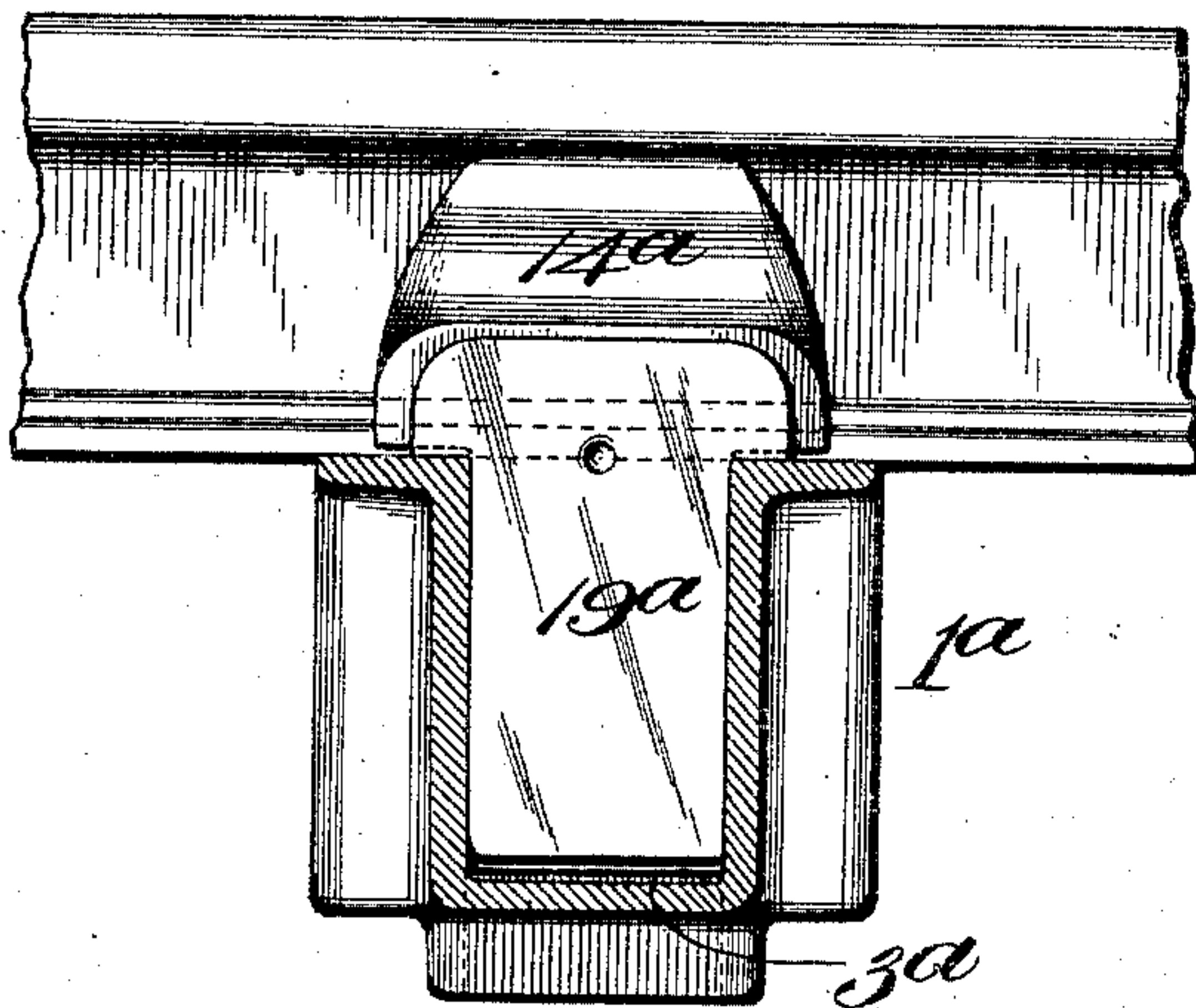
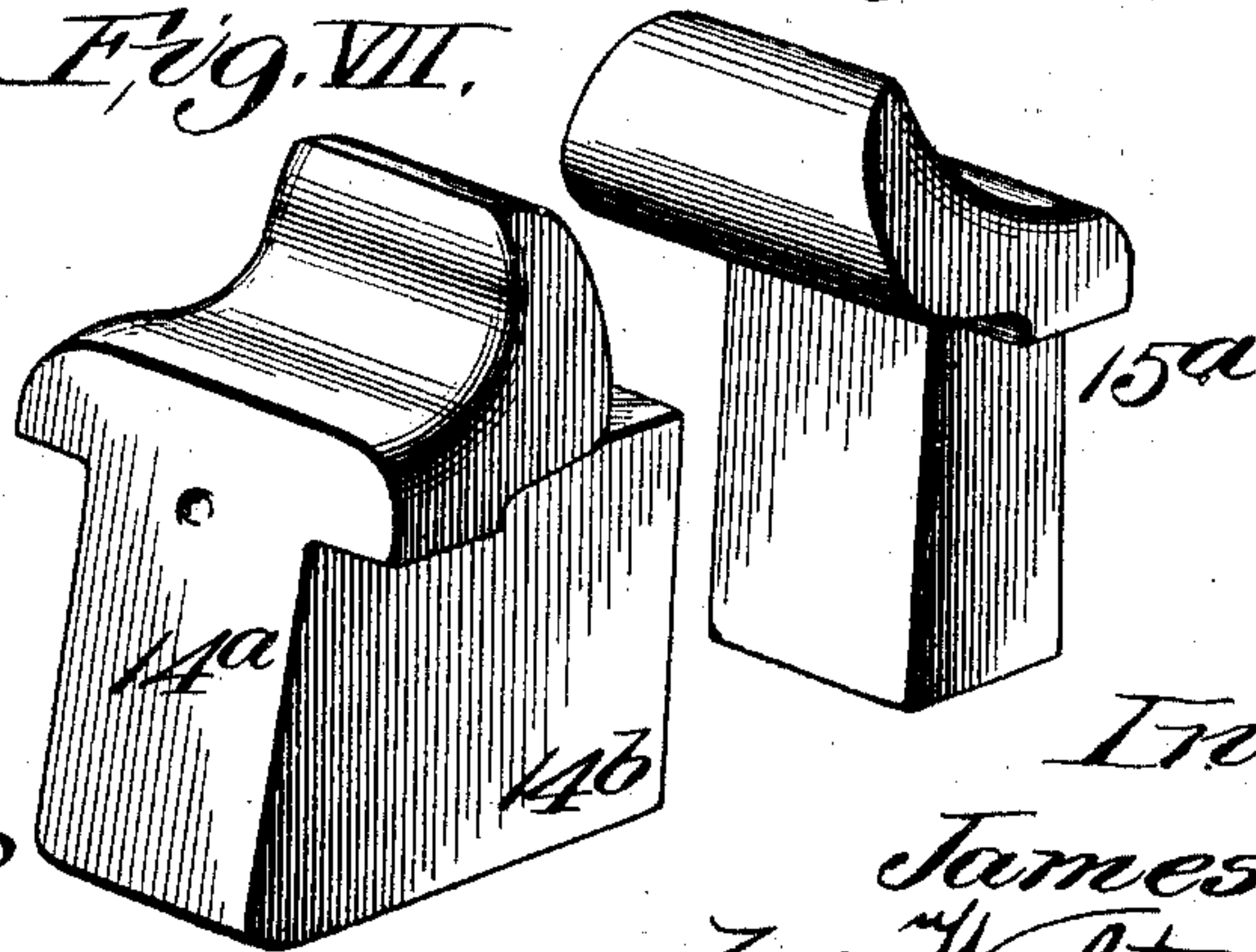


Fig. VII.



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UNITED STATES PATENT OFFICE.

JAMES TIMMS, OF COLUMBUS, OHIO.

RAILWAY-RAIL TIE AND RAIL-FASTENING.

No. 928,008.

Specification of Letters Patent.

Patented July 13, 1909.

Application filed January 14, 1909. Serial No. 472,198.

To all whom it may concern:

Be it known that I, JAMES TIMMS, a citizen of the United States of America, residing in Columbus, county of Franklin, and State of Ohio, have invented certain new and useful Improvements in Railway-Rail Ties and Rail-Fastenings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a railway rail tie and rail fastening constructed with the object in view of providing for accurate adjustment of railway rails upon the ties that support them to secure the proper alinement of the rails and the proper gage in a railway track.

My improvement is of especial merit in railway tracks at the curves thereof, at which points the rails are commonly spaced more widely apart than in the straight courses of the track, but it can also be advantageously used throughout the entire railway track.

Figure I is a top or plan view of one of my railway ties with the rail fastening means shown applied to a rail at one end of the tie and omitted at the other end of the tie. Fig. II is a side elevation of the parts seen in Fig. I. Fig. III is an enlarged vertical section taken on line III—III, Fig. I through the railway tie and rail fastening means. Fig. IV is an enlarged vertical cross section taken on line IV—IV, Fig. II. Fig. V is a vertical section taken longitudinally through my railway tie and illustrating a modification of the rail fastening means. Fig. VI is a vertical cross section taken on line VI—VI, Fig. V. Fig. VII is a perspective view of the rail clamping members of the fastening shown in Figs. V and VI.

In the accompanying drawings: 1 designates my railway tie which is constructed of metal and is preferably of I-shape in cross section. This tie is provided with rail bearers 2 separated from each other in the tie approximately the distance from each other at which the rails A are to be mounted upon it. Each rail bearer 2 contains a pocket 3 that is open at its upper end and is closed at its lower end by a bottom or floor 4, except for the presence of an opening 5 adapted to receive a member to be hereinafter more particularly referred to. At the sides of the pockets 3 in the rail bearers are cavities 6, see Fig. I. Each pocket 3 terminates at its

inner end or end nearest the center of the tie at a transverse wall 7, see Fig. III, which is inclined downwardly and inwardly relative to the longitudinal center of the tie and extends to the floor 4 at the bottom of the pocket 3. At the opposite or outer end of each pocket is an end wall 8 that is inclined downwardly and forwardly relative to the end wall 7 and extends to the opening 5 at the bottom of the pocket.

9 are brackets extending upwardly from the top of the tie at the outer ends of the pockets 3. The faces of these brackets that are located above the pockets are provided with key-ways or notches 10 and the brackets are reinforced by ribs 11.

12 designates rail supporting blocks of wedge shape that are centrally positioned in the pockets 3 of the rail bearers 2, these blocks being of greater length at their upper ends than at their lower ends for a purpose that will hereinafter appear.

13 are side rail supporting blocks which occupy the side cavities 6 of the pockets 3 in the railway tie. The side blocks and the central rail supporting blocks 12 and 13 are of sound deadening material, preferably wood, and they project above the upper surface of the railway tie as seen most clearly in Fig. IV, in order that the rails placed thereupon may be held out of contact with the ties. To obviate contact between the rails and ties, the ties are preferably cut away or notched at 1^a, see Figs. II and IV, adjacent to the side rail supporting blocks 13.

14 and 15 designate rail clamping members. These rail clamping members are provided at their upper ends with arms that project over the flanges of the railway rails, as seen most clearly in Fig. III, and they are provided with legs 14' and 15' which extend downwardly in the pockets 3 of the rail bearers 2. The legs 14' and 15' are inclined at their inner faces to correspond to the taper of the central rail supporting block 12, which is positioned between said legs in order that these parts may be interlocked with each other, after they have been placed in the cavities 3. The outer face of the leg 14' of each clamping member 14 which is located nearest the longitudinal center of the railway tie, is inclined at 14" to correspond to the inclination of the pocket end wall 7 that opposes said clamping member leg, after the leg has been introduced into

the tie, while the outer face of the leg 15' of the outer rail clamping member 15 is a vertical one and opposes the inclined outer end wall 8 in each cavity 3.

16 designates locking wedges that are introduced into the cavities 3 between the outer end walls 8 of said pockets and the vertical outer faces of the clamping members 15. These locking wedges may descend into the openings 5 at the bottom of the pockets and are provided with inclined faces that oppose the pocket end walls 8 and vertical faces that oppose the legs of the clamping members 15 and each locking wedge is provided with key-ways 17 which are complementary to the key-ways 10 in the brackets 9 on the ties and are adapted to, in conjunction with the last named key-ways, receive keys 18 by which the wedges are held in place, after they are introduced into the pockets 3.

19 designates adjusting plates that are introduced into the pockets 3 and adjacent to the legs of the rail clamping members 14 and 15 for the purpose of properly positioning said rail clamping members nearer to the inner pocket end walls 7 or the outer pocket end walls 8, according to whether the rails are to be positioned more or less closely to each other. The adjusting plates 19 are thin plates and any desired number of said plates may be introduced into the pockets 3 of the tie alongside of either the legs of the clamping members 14 or 15, according to whether it is desired to adjust the rails held by said clamping members either outwardly or inwardly relative to each other.

In Fig. III, I have shown four of the adjusting plates at the inner end of one of the pockets and a single adjusting plate at the opposite or outer end of the pocket. It is evident, however, that the number of adjusting plates may be increased or decreased at the inner ends of the pockets or increased at the outer ends of the pockets, and also that, if desired to provide greater outward adjustment of the rails, the adjusting plates may be omitted at the outer ends of the pockets. It is also obvious that the adjusting plates may be omitted at the inner ends of the pockets and used only at the outer ends of the pockets. The adjusting plates are preferably indented or provided with protuberances 20, so that they have interlocking engagement with each other when they are assembled in the pockets, and the legs of the clamping members are preferably provided with depressions to receive the projections upon the adjusting plates that are placed next adjacent to said legs, in order that said plates may be prevented from slipping after they have been put in place against the clamping members. I preferably employ above the rail supporting blocks 12 and 13 and beneath the bases of the rail-

way rails, metal plates 21 upon which the rails rest and which serve to protect the supporting blocks from injury and wear.

In Figs. V to VII inclusive, I have shown a modification in which one of the clamping members 14^a is provided with a rail supporting block or member 14^b that is formed integral with said clamping member and is adapted to receive the railway rail that fits into said clamping member above the rail supporting member and is held thereto by the rail clamping member 15^a which is constructed similarly to the rail clamping member 15 previously described. The railway tie 1^a is in this modification made similar to the tie previously described and provided with the pockets 3^a that receive the rail clamping and supporting members, the locking wedges 16^a and the adjusting plates 19^a.

I claim:

1. In a device of the character described, a railway tie provided with a pocket, rail clamping means in said pocket, and a plurality of removable adjusting members in said pocket whereby said clamping means and the rail held thereby may be adjusted longitudinally of said tie, substantially as set forth.

2. In a device of the character described, a railway tie provided with a pocket, rail clamping means in said pocket, and a plurality of adjusting plates removably seated in said pocket whereby said rail clamping means and the rail held thereby may be adjusted longitudinally of said tie, substantially as set forth.

3. In a device of the character described, a railway tie provided with a pocket, rail clamping means in said pocket, and a plurality of adjusting plates removably seated in said pocket whereby said rail clamping means and the rail held thereby may be adjusted longitudinally of said tie; said adjusting plates being provided with means whereby they are held to said rail clamping means, substantially as set forth.

4. In a device of the character described, a railway tie provided with a pocket, rail clamping means in said pocket, and a plurality of adjusting plates removably seated in said pocket whereby said rail clamping means and the rail held thereby may be adjusted longitudinally of said tie; said adjusting plates being provided with means whereby they are held assembled in series, substantially as set forth.

5. In a device of the character described, a railway tie provided with a pocket, rail clamping means in said pocket, means in said pocket for confining said rail clamping means therein, and adjusting plates removably fitted in said pocket and by which said rail clamping means may be held in varied positions longitudinally of said tie, substantially as set forth.

6. In a device of the character described, a railway tie provided with a pocket having at one end thereof a wall inclined longitudinally of the tie and extending downwardly from the top of the tie, rail clamping members in said pocket, one of which is downwardly inclined to correspond to the inclination of said pocket end wall, and means removably seated in said pocket between said inclined wall and the nearest rail clamping member, whereby said rail clamping members are confined in said pocket, substantially as set forth.

7. In a device of the character described, a railway tie provided with a pocket having a downwardly inclined wall at one end thereof, rail clamping members in said pocket, one of which is downwardly inclined to correspond to the inclination of said pocket end wall, means removably seated in said pocket

whereby said rail clamping members are confined in said pocket, and adjusting plates adapted to be interposed between said pocket end wall and the opposing rail clamping member and between the other rail clamping member and the means by which the rail clamping members are confined in said pocket, substantially as set forth.

8. In a device of the character described, a railway tie provided with a pocket, rail clamping members in said pocket, a central sound deadening rail supporting block interposed between said rail clamping members, and side sound deadening rail supporting blocks in said pocket alongside of said central block, substantially as set forth.

JAMES TIMMS.

In the presence of—

LILY ROST,
H. G. Cook.