

(No Model.)

2 Sheets—Sheet 1.

W. C. KEMBLE.  
RAIL FASTENING.

No. 590,106.

Patented Sept. 14, 1897.

Fig. 1.

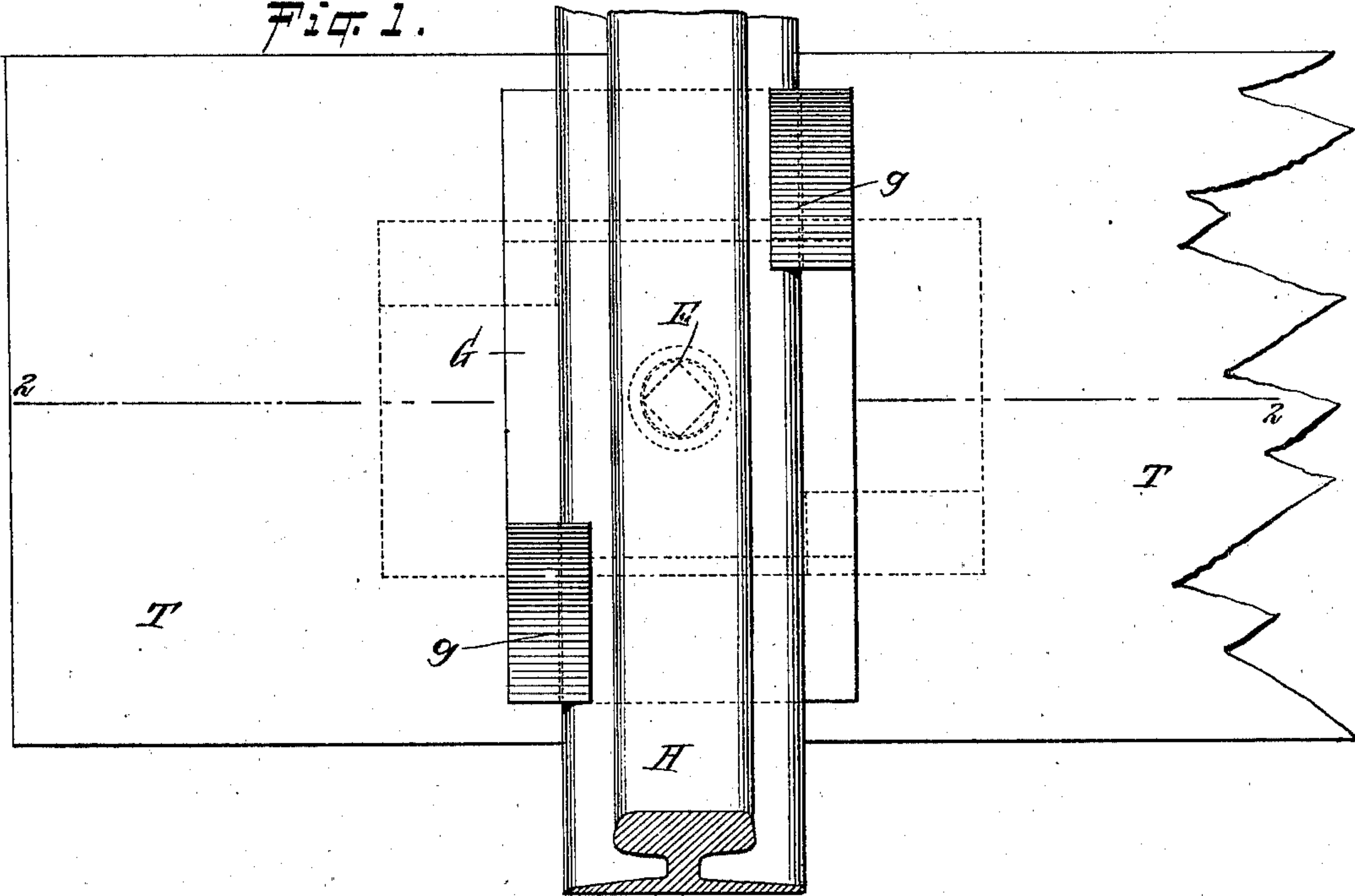
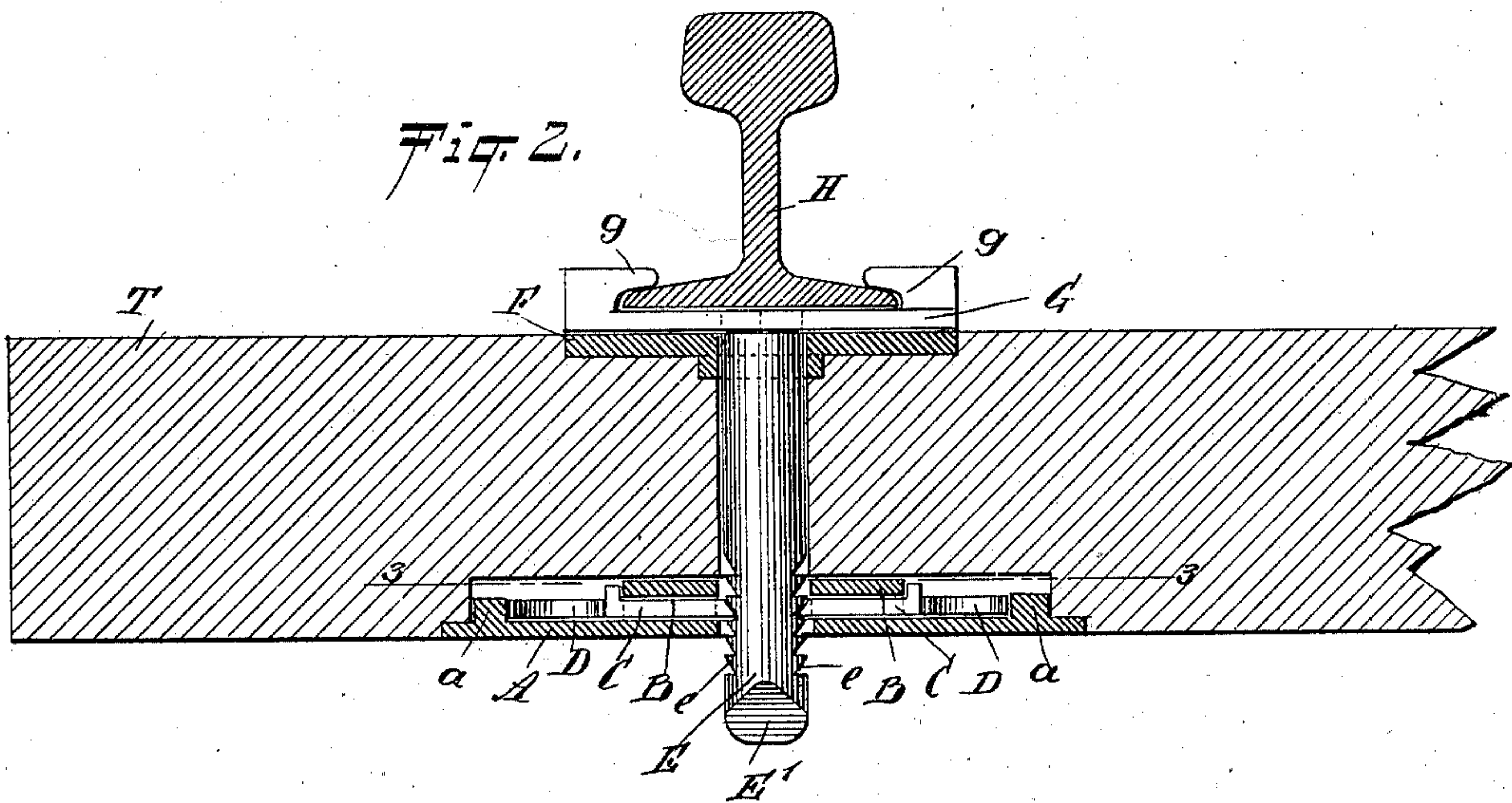


Fig. 2.



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Fig. 3.

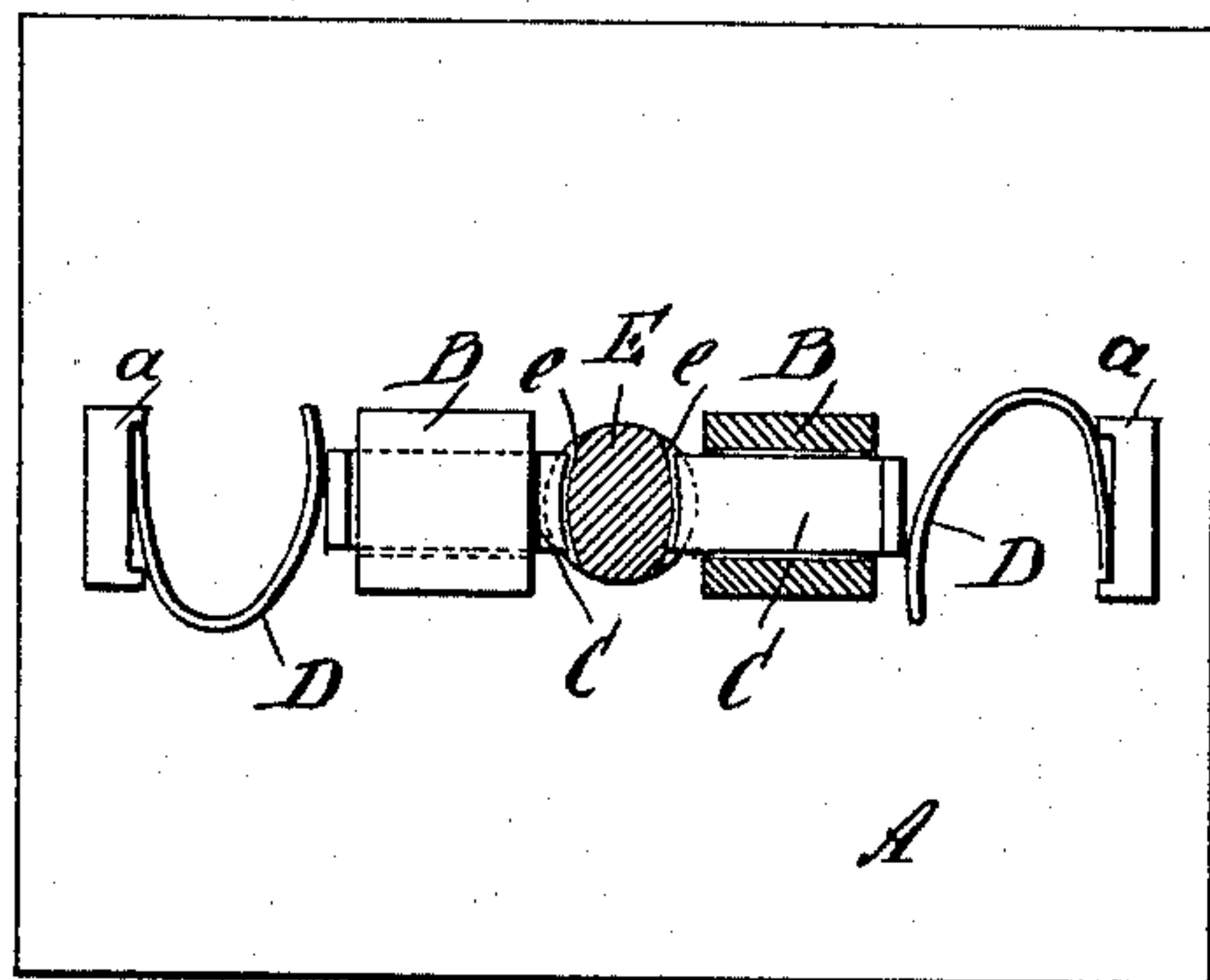


Fig. 4.

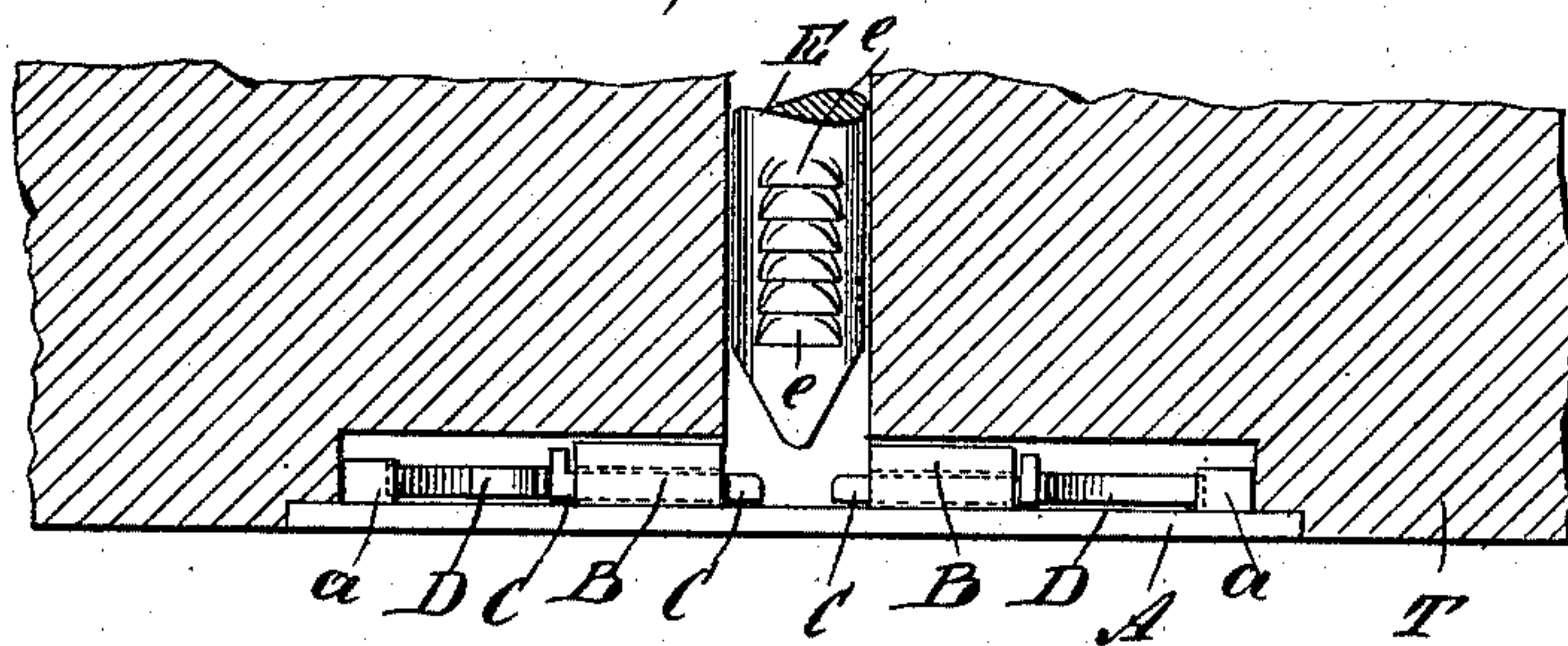
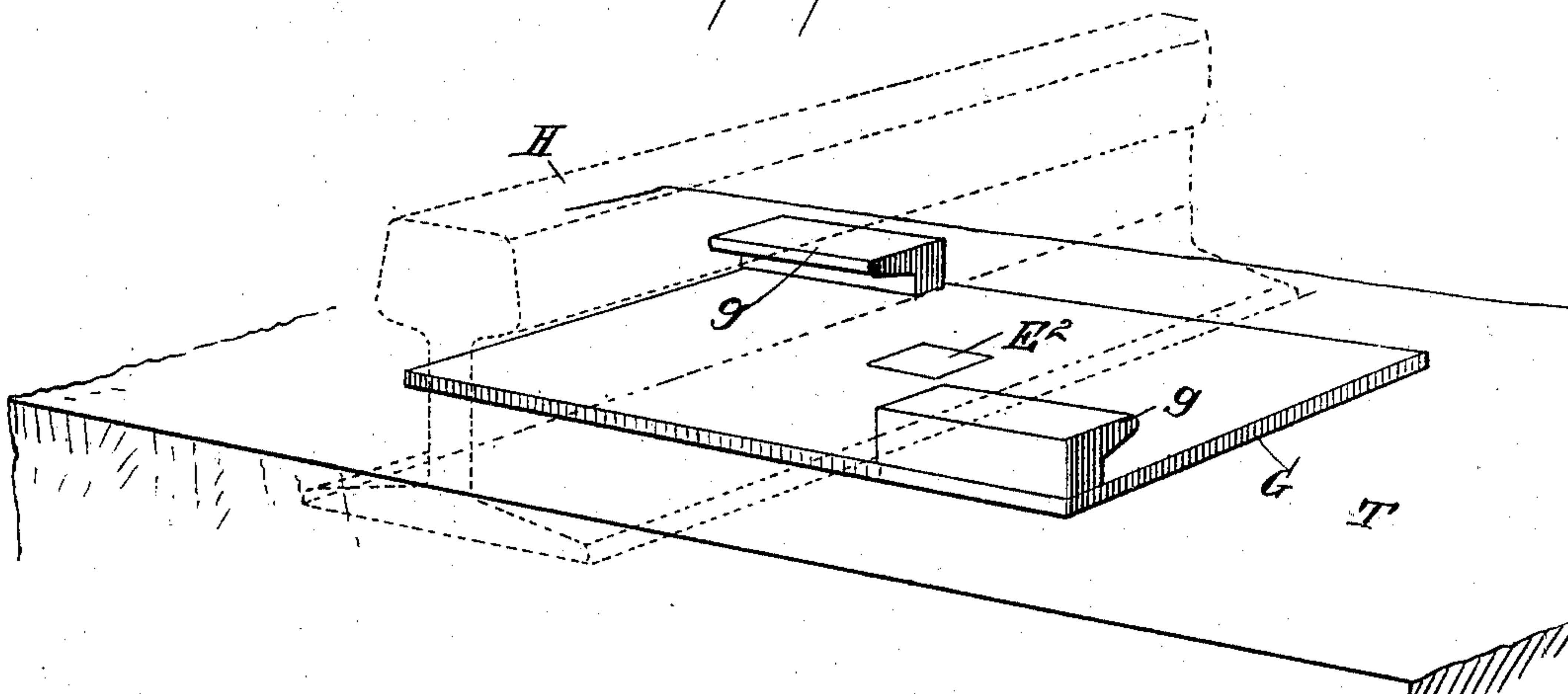


Fig. 5.



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# UNITED STATES PATENT OFFICE.

WALLACE C. KEMBLE, OF TRENTON, NEW JERSEY, ASSIGNOR OF ONE-HALF  
TO WILLIS R. DOYLE, OF SAME PLACE.

## RAIL-FASTENING.

SPECIFICATION forming part of Letters Patent No. 590,106, dated September 14, 1897.

Application filed July 6, 1897. Serial No. 643,570. (No model.)

*To all whom it may concern:*

Be it known that I, WALLACE C. KEMBLE, of Trenton, in the county of Mercer and State of New Jersey, have invented a new and Improved Rail-Fastening, of which the following is a full, clear, and exact description.

My invention relates to an improvement in rail-fastenings, and comprises a plate having upwardly-projecting lugs adapted to engage or disengage the rail-base by being revolved upon a pivot and having a pivot-bar fixed thereto and extending through the tie, at which point the bar is engaged by spring-catches, so as to hold the bar securely when the top plate is locked to the rail-base, and disengaging itself from said fastenings when the plate is revolved, so as to release it from the rail-base.

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

Figure 1 is a top plan view of the device, showing the same in locked position in full lines and in the position for releasing the rail in dotted lines. Fig. 2 is a section on the line 2 2 in Fig. 1. Fig. 3 is a top plan view of the lower plate, one of the guides and a pivot-bar being shown in section. Fig. 4 is a side elevation with the tie in section, and Fig. 5 is a perspective view showing the plate resting upon the upper part of the tie and indicating by dotted lines the position of the rail.

The object of my invention is to provide a method of fastening rails which will obviate the necessity for driving spikes into the tie and which will yet hold the rail in such manner that it may be readily released.

In carrying out my invention the rail is engaged and held by a plate G, which rests upon the top of the tie and which has upwardly-projecting lugs *g* adapted to engage the rail-base and hold the same down when the plate is revolved into proper position. This plate is provided with a central pivot-bar E, secured firmly at its upper end to the plate, said bar extending through an aperture *E*<sup>2</sup> in the plate and downward through a hole in the tie T slightly below the under side of the tie.

The lugs *g* are placed at diagonally opposite corners, so that the plate may be revolved upon its central pivot in such a manner as to swing each of the lugs *g* away from the rail and bring the plate into the position shown by dotted lines in Fig. 1. In this position both lugs clear the rail and the rail may be lifted from its fastening. Preferably a plate F is let into or rests upon the upper surface of the tie and has a central hole therein through which the bar E passes.

Beneath the tie is located the plate A, carrying the means for engaging and locking the lower end of the bar E. Preferably this plate is let into the lower surface of the tie, as shown in Fig. 2, although it might be applied directly to the under surface without cutting the same away. This plate A is provided with two staples or loops B, adapted to receive the slides C. These slides are thus held at right angles with the central hole, through which the bar E projects. The inner ends of the slides are preferably concaved slightly, so as to fit the bar E.

To the plate A are also attached springs D, which press against lugs *a* on the bottom of the plate and against the outer ends of the slides C, so as to force the slides toward the center of the plate. The lower end of the bar E is beveled, as shown in Fig. 1, forming a wedge-shaped end *E'*. The sides of the bar which are at right angles to these bevels are notched, as shown at *e*, and for a short distance above the lower end of the bar. These notches are adapted to be engaged by the inner ends of the slides C, thus securely holding the bar E against any tendency to rise.

In inserting the bar E through the tie it is to be placed so that the beveled ends *E'* will come in contact with the ends of the slides C. The slides C will thus be forced back against the pressure of the springs D and permit the bar E to pass between them. In this position the bar may be withdrawn, as the notches *e* are then upon the two sides not in engagement with the slide C. This is also the position in which the upper plate G is free of the rail-base or the position shown in dotted lines in Fig. 1.

If the plate G be revolved so as to engage the lugs *g* with the rail-base or turned to the



position shown in full lines in Fig. 1, the pivot-bar E will be revolved so that the teeth *e* will be brought in line with the slides C and engaged by the ends thereof. In this position  
5 the bar E cannot be raised, as it is securely held by the slides C. The bar may, however, be easily raised if the plate G is revolved to the position shown by dotted lines in Fig. 1.

The construction herein shown and described will securely hold the rail and will  
10 obviate the necessity of frequent re-driving of the spikes, which results in cutting up the tie, so that it must be thrown out of use before it has rotted.

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

1. A rail-fastening, comprising a plate resting upon the tie and having a pivot attached  
20 thereto and extending downward through the tie, said pivot having teeth upon opposite sides of its lower end, upwardly-projecting lugs upon said plate adapted to engage the rail-base when the plate is revolved, and  
25 spring-held slides beneath the tie adapted to engage the teeth of said pivot when the plate is turned to hold the rail-base, substantially as described.

2. A rail-fastening, comprising a plate rest-

ing upon the tie and having a pivot attached 30 thereto and extending downward through the tie, said pivot having teeth upon opposite sides of its lower ends, upwardly-projecting lugs upon said plate adapted to engage the rail-base when the plate is revolved, a plate 35 secured beneath the tie, having a hole for said pivot, and spring-held slides mounted upon said plate and adapted to engage the pivot, substantially as described.

3. A rail-fastening, comprising a plate rest- 40 ing upon the tie and having upwardly-projecting lugs adapted to engage and release the rail-base when rotated relatively thereto, a pivot-bar fixed thereto and extending  
45 through the tie, said bar having its lower end beveled or formed as a wedge, the edge thereof extending across the direction of the rail, and having the sides at right angles to these bevels notched to form ratchet-teeth, a plate beneath  
50 the tie having a hole for said pivot-bar, and spring-held slides adapted to project across said opening and engage the teeth upon the bar, substantially as described.

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Witnesses:

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CHAS. W. APPLEGET.